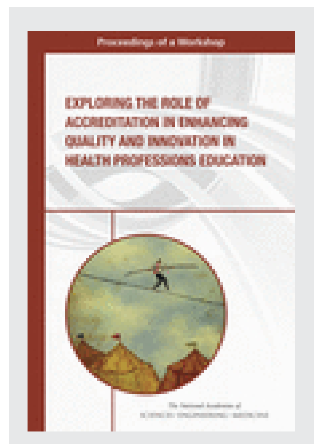
THE NATIONAL ACADEMIES PRESS

This PDF is available at http://www.nap.edu/23636

SHARE



Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

DETAILS

130 pages | 6 x 9 | PAPERBACK
ISBN 978-0-309-44925-0 | DOI: 10.17226/23636

BUY THIS BOOK

FIND RELATED TITLES

AUTHORS

Patricia A. Cuff and Megan M. Perez, Rapporteurs; Global Forum on Innovation in Health Professional Education; Board on Global Health; Health and Medicine Division; National Academies of Sciences, Engineering, and Medicine

Visit the National Academies Press at NAP.edu and login or register to get:

– Access to free PDF downloads of thousands of scientific reports
– 10% off the price of print titles
– Email or social media notifications of new titles related to your interests
– Special offers and discounts

Distribution, posting, or copying of this PDF is strictly prohibited without written permission of the National Academies Press. (Request Permission) Unless otherwise indicated, all materials in this PDF are copyrighted by the National Academy of Sciences.

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education

Proceedings of a Workshop

Patricia A. Cuff and Megan M. Perez, *Rapporteurs*

Global Forum on Innovation in Health Professional Education

Board on Global Health

Health and Medicine Division

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

THE NATIONAL ACADEMIES PRESS
Washington, DC
www.nap.edu

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

THE NATIONAL ACADEMIES PRESS 500 Fifth Street, NW Washington, DC 20001

This activity was supported by contracts between the National Academy of Sciences and Academic Collaboration for Integrative Health, Academy of Nutrition and Dietetics, Accreditation Council for Graduate Medical Education, Aetna Foundation, Alliance for Continuing Education in the Health Professions, American Academy of Nursing, American Association of Colleges of Nursing, American Association of Colleges of Osteopathic Medicine, American Association of Colleges of Pharmacy, American Board of Family Medicine, American College of Nurse-Midwives, American College of Obstetricians and Gynecologists/American Board of Obstetrics and Gynecology, American Council of Academic Physical Therapy, American Dental Education Association, American Medical Association, American Occupational Therapy Association, American Psychological Association, American Society for Nutrition, American Speech-Language-Hearing Association, Association of American Medical Colleges, Association of American Veterinary Medical Colleges, Association of Schools and Colleges of Optometry, Association of Schools and Programs of Public Health, Association of Schools of the Allied Health Professions, Athletic Training Strategic Alliance, Council on Social Work Education, Ghent University, Health Resources and Services Administration, The Jonas Center for Nursing and Veterans Healthcare, Josiah Macy Jr. Foundation, Kaiser Permanente, National Academies of Practice, National Association of Social Workers, National Board for Certified Counselors, Inc. and Affiliates, National Board of Medical Examiners, National Council of State Boards of Nursing, Inc., National League for Nursing, Office of Academic Affiliations—Veterans Health Administration, Organization for Associate Degree Nursing, Physician Assistant Education Association, Robert Wood Johnson Foundation, Society for Simulation in Healthcare, THEnet—Training for Health Equity Network, Uniformed Services University of the Health Sciences, and the University of Toronto. Any opinions, findings, conclusions, or recommendations expressed in this publication do not necessarily reflect the views of any organization or agency that provided support for the project.

International Standard Book Number-13:978-0-309-XXXXX-X
International Standard Book Number-10: 0-309-XXXXX-X
Digital Object Identifier: 10.17226/23636

Additional copies of this report are available for sale from the National Academies Press, 500 Fifth Street, NW, Keck 360, Washington, DC 20001; (800) 624-6242 or (202) 334-3313; http://www.nap.edu.

Copyright 2016 by the National Academy of Sciences. All rights reserved.

Printed in the United States of America

Suggested citation: National Academies of Sciences, Engineering, and Medicine. 2016. *Exploring the role of accreditation in enhancing quality and innovation in health professions education: Proceedings of a workshop*. Washington, DC: The National Academies Press. doi: 10.17226/23636.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

The **National Academy of Sciences** was established in 1863 by an Act of Congress, signed by President Lincoln, as a private, nongovernmental institution to advise the nation on issues related to science and technology. Members are elected by their peers for outstanding contributions to research. Dr. Marcia McNutt is president.

The **National Academy of Engineering** was established in 1964 under the charter of the National Academy of Sciences to bring the practices of engineering to advising the nation. Members are elected by their peers for extraordinary contributions to engineering. Dr. C. D. Mote, Jr., is president.

The **National Academy of Medicine** (formerly the Institute of Medicine) was established in 1970 under the charter of the National Academy of Sciences to advise the nation on medical and health issues. Members are elected by their peers for distinguished contributions to medicine and health. Dr. Victor J. Dzau is president.

The three Academies work together as the **National Academies of Sciences, Engineering, and Medicine** to provide independent, objective analysis and advice to the nation and conduct other activities to solve complex problems and inform public policy decisions. The Academies also encourage education and research, recognize outstanding contributions to knowledge, and increase public understanding in matters of science, engineering, and medicine.

Learn more about the National Academies of Sciences, Engineering, and Medicine at **www.national-academies.org.**

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

Reports document the evidence-based consensus of an authoring committee of experts. Reports typically include findings, conclusions, and recommendations based on information gathered by the committee and committee deliberations. Reports are peer reviewed and are approved by the National Academies of Sciences, Engineering, and Medicine.

Proceedings chronicle the presentations and discussions at a workshop, symposium, or other convening event. The statements and opinions contained in proceedings are those of the participants and have not been endorsed by other participants, the planning committee, or the National Academies of Sciences, Engineering, and Medicine.

For information about other products and activities of the Academies, please visit nationalacademies.org/whatwedo.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

PLANNING COMMITTEE FOR THE ROLE OF ACCREDITATION IN ENHANCING QUALITY AND INNOVATION IN HEALTH PROFESSIONS EDUCATION[1]

NEIL HARVISON (*Co-Chair*), American Occupational Therapy Association, Inc.
ERIC HOLMBOE (*Co-Chair*), Accreditation Council for Graduate Medical Education
JENNIFER BUTLIN, American Association of Colleges of Nursing, Commission on Collegiate Nursing Education
JUDITH HALSTEAD, National League for Nursing Commission for Nursing Education Accreditation
PAMELA JEFFRIES, George Washington University
DEBORAH KOCHEVAR, Tufts University Cummings School of Veterinary Medicine
MIGUEL PANIAGUA, National Board of Medical Examiners
JO ANN REGAN, Council on Social Work Education
ZOHRAY TALIB, George Washington University
PETER H. VLASSES, Accreditation Council for Pharmacy Education

[1] The National Academies of Sciences, Engineering, and Medicine's planning committees are solely responsible for organizing the workshop, identifying topics, and choosing speakers. The responsibility for the published Proceedings of a Workshop rests with the workshop rapporteurs and the institution.

Copyright © National Academy of Sciences. All rights reserved.

Copyright © National Academy of Sciences. All rights reserved.

GLOBAL FORUM ON INNOVATION IN HEALTH PROFESSIONAL EDUCATION[1,2]

MALCOLM COX (*Co-Chair*), University of Pennsylvania, formerly U.S. Department of Veterans Affairs
SUSAN SCRIMSHAW (*Co-Chair*), The Sage Colleges
ROBERT (BOB) ADDLETON, Alliance for Continuing Education in the Health Professions
MARY BARGER, American College of Nurse-Midwives
TIMI AGAR BARWICK, Physician Assistant Education Association
DAVID BENTON, National Council of State Boards of Nursing
MARY BETH BIGLEY, Health Resources and Services Administration
JOANNA CAIN, University of Massachusetts School of Medicine
MARILYN CHOW, Kaiser Permanente
THOMAS WARREN CLAWSON, National Board for Certified Counselors, Inc., and Affiliates
DARLA SPENCE COFFEY, Council on Social Work Education
DARLENE CURLEY, The Jonas Center for Nursing and Veterans Healthcare
JAN DE MAESENEER, Ghent University
MARIETJIE DE VILLIERS, Stellenbosch University
KATHRIN (KATIE) ELIOT, Academy of Nutrition and Dietetics
ELIZABETH (LIZA) GOLDBLATT, Academic Collaborative for Integrative Health
GARTH GRAHAM, Aetna Foundation
CATHERINE GRUS, American Psychological Association
NEIL HARVISON, American Occupational Therapy Association, Inc.
ERIC HOLMBOE, Accreditation Council for Graduate Medical Education
ELIZABETH HOPPE, Association of Schools and Colleges of Optometry
EMILIA IWU, The Jonas Center for Nursing and Veterans Healthcare
PAMELA JEFFRIES, George Washington University
DARRELL KIRCH, Association of American Medical Colleges
SANDEEP (SUNNY) KISHORE, Young Professionals Chronic Disease Network
MARYJOAN LADDEN, Robert Wood Johnson Foundation
ANDREW MACCABE, Association of American Veterinary Medical Colleges
LUCINDA MAINE, American Association of Colleges of Pharmacy
BEVERLY MALONE, National League for Nursing
MARY E. (BETH) MANCINI, Society for Simulation in Healthcare
ANGELO MCCLAIN, National Association of Social Workers
LEMMIETTA G. MCNEILLY, American Speech-Language-Hearing Association
MARK MERRICK, Commission on Accreditation of Athletic Training Education
DONNA MEYER, National Organization of Associate Degree Nursing
WARREN NEWTON, American Board of Family Medicine
BJORG PALSDOTTIR, Training for Health Equity Network (THEnet)
MIGUEL PANIAGUA, National Board of Medical Examiners
RAJATA RAJATANAVIN, Mahidol University

[1] The National Academies of Sciences, Engineering, and Medicine's forums and roundtables do not issue, review, or approve individual documents. The responsibility for the published Proceedings of a Workshop rests with the workshop rapporteurs and the institution.
[2] This is the list of Forum members as of April 22, 2016.

Copyright © National Academy of Sciences. All rights reserved.

SCOTT REEVES, Kingston University & St. George's, University of London
ELENA RIOS, National Hispanic Medical Association
EDWARD SALTZMAN, American Society for Nutrition
KAREN SANDERS, Veterans Health Administration
NELSON SEWANKAMBO, Makerere University College of Health Sciences
STEPHEN SHANNON, American Association of Colleges of Osteopathic Medicine
SUSAN SKOCHELAK, American Medical Association
HARRISON SPENCER, Association of Schools and Programs of Public Health
RICHARD (RICK) TALBOTT, Association of Schools of the Allied Health Professions
ZOHRAY TALIB, George Washington University
MARIA TASSONE, University of Toronto
GEORGE THIBAULT, Josiah Macy Jr. Foundation
DEBORAH TRAUTMAN, American Association of Colleges of Nursing
RICHARD (RICK) W. VALACHOVIC, American Dental Education Association
SATYA VERMA, National Academies of Practice
PATRICIA HINTON WALKER, Uniformed Services University of the Health Sciences
HOLLY WISE, American Council of Academic Physical Therapy
XUEJUN ZENG, Peking Union Medical College
BRENDA ZIERLER, University of Washington

Global Forum Staff

PATRICIA A. CUFF, Senior Program Officer
MEGAN M. PEREZ, Research Associate
BRIDGET CALLAGHAN, Research Assistant
BETTINA REDWAY, Intern
FAYE HILLMAN, Financial Officer
PATRICK W. KELLEY, Senior Board Director, Board on Global Health (until August 2016)

Copyright © National Academy of Sciences. All rights reserved.

Reviewers

This Proceedings of a Workshop has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published Proceedings of a Workshop as sound as possible and to ensure that the Proceedings of a Workshop meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the process. We wish to thank the following individuals for their review of this Proceedings of a Workshop:

YU-MEI Y. CHAO, Taiwan Higher Education Evaluation and Accreditation Center and National Taiwan University
DEBBIE L. HETTLER, Office of Academic Affiliations, Veterans Health Administration
MARY ANNE KODA-KIMBLE, University of California, San Francisco
MIGUEL PANIAGUA, National Board of Medical Examiners

Although the reviewers listed above have provided many constructive comments and suggestions, they did not see the final draft of the Proceedings of a Workshop before its release. The review of this Proceedings of a Workshop was overseen by **KATHLEEN DRACUP,** University of California, San Francisco. She was responsible for making certain that an independent examination of this Proceedings of a Workshop was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this Proceedings of a Workshop rests entirely with the rapporteurs and the institution.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

Copyright © National Academy of Sciences. All rights reserved.

Acknowledgments

The workshop planning committee pulled together an agenda that drew messages and lessons from past experiences for guiding the path forward, and the members are worthy of great appreciation. In particular, the workshop planning committee co-chairs, Neil Harvison and Eric Holmboe, deserve recognition for their leadership in this endeavor, as well as the planning committee members, Jennifer Butlin, Judith Halstead, Pamela Jeffries, Deborah Kochevar, Miguel Paniagua, Jo Ann Regan, Zohray Talib, and Peter H. Vlasses, for their support throughout the workshop. Such an event could not have happened without the keen dedication of the Global Forum on Innovation in Health Professional Education staff, including Patricia Cuff, senior program officer and Forum director; Megan Perez, research associate; Bridget Callaghan, research assistant; and Bettina Redway, intern. A special thank-you goes to Patrick Kelley, Board on Global Health director, for envisioning and establishing the Forum. And most importantly, the 45 sponsors and 57 members of the Forum are deeply appreciated, and they make it possible to host events like the workshop described in this Proceedings of a Workshop.

Copyright © National Academy of Sciences. All rights reserved.

Copyright © National Academy of Sciences. All rights reserved.

Contents

Acronyms and Abbreviations xv

1 Introduction 1-1

2 Varying Views on Accreditation 2-1

3 Competency-Based Accreditation and Collaboration 3-1

4 Engaging New Partners in Accreditation 4-1

5 Moving Forward 5-1

APPENDIXES

A Workshop Agenda A-1
B Speaker Biographical Sketches B-1
C Forum-Sponsored Products C-1

Copyright © National Academy of Sciences. All rights reserved.

Copyright © National Academy of Sciences. All rights reserved.

Acronyms and Abbreviations

AAVMC	Association of American Veterinary Medical Colleges
ACPE	Accreditation Council for Pharmacy Education
ARC-PA	Accreditation Review Commission on Education for the Physician Assistant
AVMA	American Veterinary Medical Association
CARF	Commission on Accreditation of Rehabilitation Facilities
DG	Directorate-General
EPA	entrustable professional activity
FDA	U.S. Food and Drug Administration
HPAC	Health Professions Accreditors Collaborative
IAWG	International Accreditors Working Group
ICM	International Confederation of Midwives
IOM	Institute of Medicine
IPE	interprofessional education
IPEC	Interprofessional Education Collaborative
NCSBN	National Council of State Boards of Nursing
OHCEA	One Health Central and East Africa
OIE	World Organization for Animal Health
PACT	patient-aligned care team
PCORI	Patient-Centered Outcomes Research Institute
THEnet	Training for Health Equity Network
WHO	World Health Organization

Copyright © National Academy of Sciences. All rights reserved.

Copyright © National Academy of Sciences. All rights reserved.

1
Introduction[1]

The purpose of accreditation is to build a competent health workforce by ensuring the quality of training taking place within those institutions that have met certain criteria (WHO, 2013). It is the combination of institution or program accreditation with individual licensure—for confirming practitioner competence—that governments and professions use to reassure the public of the capability of its health workforce (IOM, 2003). Accreditation offers educational quality assurance to students, governments, ministries, and society. For the accredited body, this recognition serves the purpose of instilling public confidence in the program, institution, or organization.

Given the rapid changes in society, health, and health care, members of the Global Forum on Innovation in Health Professional Education elected to take on the topic of accreditation and to explore the effect of societal shifts on new and evolving health professional learning opportunities to best ensure quality education is offered by institutions regardless of the program or delivery platform. Accreditation is a tool for monitoring and ensuring such quality.

The Forum-hosted workshop took place in Washington, DC, April 21–22, 2016. Titled Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education, this workshop aimed to explore global shifts in society, health, health care, and education, and their potential effects on general principles of program accreditation across the continuum of health professional education (foundational education, graduate education, and continuing professional development). Box 1-1 is the statement of task that provided the workshop planning committee members the structure on which to build the agenda found in Appendix A.

The workshop engaged health professional educators, accreditors, and others in discussions on innovations in accreditation. Unlike consensus studies that offer in-depth reviews of the evidence on somewhat narrowly defined topics, workshops at the Academies are designed to bring different voices together to illuminate topics and inspire creative thinking across professions and sectors. Previous workshops and activities of the Forum have explored such topics as interprofessional education (IPE) and training, collaboration among different sectors, and the continuum of health professional education from foundational education to continuing professional development (see Appendix C for a complete listing of Forum publications and sponsored products). This workshop builds on those earlier activities of the Forum to explore the implications of introducing innovations into the health professions' accrediting process.

[1] The planning committee's role was limited to planning the workshop. This Proceedings of a Workshop has been prepared by the rapporteurs as a factual account of what occurred at the workshop. Statements, recommendations, and opinions expressed are those of individual presenters and participants and have not been endorsed or verified by the National Academies of Sciences, Engineering, and Medicine. They should not be construed as reflecting any group consensus.

Copyright © National Academy of Sciences. All rights reserved.

BOX 1-1
Workshop Statement of Task

An ad hoc committee will plan and conduct a 2-day public workshop to explore global shifts in society, health, health care, and education, and their potential impact on general principles of program accreditation across the continuum of health professional education (foundational, graduate, and continuing professional development). The workshop will engage health professional educators, accreditors, and others to explore such topics as:

- Improving the efficiency and cost of accreditation (e.g., harmonization of competencies across professions, joint accreditation, etc.).
- Engaging new partners in accreditation (e.g., individuals, communities, and populations).
- The role of accreditation as an element in achieving quality health care delivery and quality health professions education.
- Challenges and opportunities for accreditation (e.g., accrediting nontraditional educational models, countries with no or inadequate accreditation systems).

The committee will develop a workshop agenda, select and invite speakers and discussants, and moderate the discussions. Following the workshop, a summary of the event will be prepared by a designated rapporteur in accordance with institutional guidelines.

Susan Phillips from the University at Albany, State University of New York, was the first speaker who laid the foundation for conversations taking place throughout the workshop. Phillips is uniquely qualified to play this role given her varied experience not only in regulatory oversight but also as a specialized and professional accreditor, as a university provost, and as a senior vice president of an academic health center. Her remarks were elaborated on by formal speakers such as David Benton, who was a leader in regulatory nursing for many years globally, and informal presenters such as Rajata Rajatanavin, who recently stepped down from his position as the Minister of Public Health in Thailand. Ideas of these and other speakers delved into numerous issues brought forth in the 2013 WHO policy brief *Accreditation of Institutions for Health Professional Education* (WHO, 2013). In it, WHO describes a worldwide focus on accreditation caused by increased demands for accountability and quality assurance in higher education. Much of this stems from changes in society and education caused by globalization, online learning, the proliferation of private educational institutions, and new approaches to learning within and among the health professions. How a country ensures that the education of their health professionals meets acceptable levels of quality in light of such changes represents both challenges and opportunities. This applies to all levels of education from foundational to graduate to continuing professional development. A number of these challenges were highlighted during two debates led by Rick Talbott, representing the Association of Schools of the Allied Health Professions, and Holly Wise from American Council of Academic Physical Therapy. The debate propositions looked at how accreditation could be a motivator for educators to innovate, and conversely, how accreditation might cause obstructions to innovations in education both locally and globally.

Accreditation offers educational quality assurance to students, governments, ministries, and society (CHEA, 2016; Hendel and Lewis, 2005). To explore what can and cannot be realistically accomplished through accreditation, Eric Holmboe from the Accreditation Council for Graduate Medical Education led a large-group discussion about potential trade-offs for

Copyright © National Academy of Sciences. All rights reserved.

accreditation, asking whether accreditation actually improves quality of education and healthcare and if so, how would that be recognized by accrediting bodies? For the accredited body, this recognition serves the purpose of instilling public confidence in the program, institution, or organization (CHEA, 2010). Directly involving patients, families, and communities in the accreditation process could further strengthen the public's confidence in the current and future health workforce (Alexander, 2015; Standards Council of Canada, 2003).

In 2014, the Josiah Macy Jr. Foundation brought together educators, health care delivery experts, patients, and patient advocates to explore partnering with patients, families, and communities for linking with interprofessional education and practice (Fulmer and Gaines, 2014). This Josiah Macy Jr. Foundation group concluded that accrediting organizations of health professions education institutions "can play a key role in fostering the development, spread, and improvement of competencies and curricula focused on building effective partnerships with patients, families, and communities." This was a driving force behind the session organized by Jo Ann Regan, vice president of education for the Council on Social Work Education. She led the discussion on identifying strategies to engage key partners in accreditation in order to enhance quality and innovation. Similarly, Maria Tassone, University of Toronto, guided the session for webcast viewers that explored how educational institutions could be measured and rewarded for their ability to produce a health workforce prepared to meet the needs of society. The presentations looked at the role of accreditation for social accountability, for professionalism, and as international midwifery educational standards.

During the Marketplace of Ideas, presenters volunteered to speak informally with participants during their lunch break about their individual innovations for using accreditation to facilitate interprofessional learning, improve quality, and link to high-stakes examinations. Some of these ideas were further elaborated upon within four, formally organized breakout group sessions. These small group discussions sought to engage health professional educators, accreditors, and others in discussions that explored challenges and opportunities to greater harmonization among and between stakeholders with vested interests in accreditation and quality improvement.

When workshop participants reconvened, they were provided an example of international accrediting harmonization from representatives of the veterinary community. The American Veterinary Medical Association (AVMA) Council on Education is the accrediting agency for veterinary medical colleges in the United States and Canada where a joint system of accreditation has been in place since the 1940s (AVMA, 2016). In the past 10 to 15 years, the AVMA Council on Education has accredited a total of 14 schools in Australia, the Caribbean, countries in Europe (France, Ireland, the Netherlands, and the United Kingdom), Mexico, and New Zealand. They also formed an International Accreditors Working Group (IAWG) to harmonize accreditation standards and create nonconflicting schedules for accreditation site visits. The IAWG includes the Royal College of Veterinary Surgeons (the accrediting agency for the United Kingdom) and the Australian Veterinary Boards Council (the accrediting agency for Australia and New Zealand). The lead on this session, Deborah Kochevar from the Cummings School of Veterinary Medicine at Tufts University, explored how the One Health Initiative[1]—a movement to forge co-equal collaborations among human health professionals, ecologists, and veterinarians to monitor and control public health threats—could be a model for cross-professions accreditation across nations.

[1] For more information on the One Health Initiative, please visit http://www.onehealthinitiative.com/about.php (accessed August 10, 2016).

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

After having engaged in multiple conversations over the course of the workshop, individual participants applied the proposed ideas to a discussion that explored issues of evaluating quality and what makes a good standard. This civil discourse set the stage for the final presentation of the workshop by David Benton of the National Council of State Boards of Nursing. His comments summarized how accreditation could potentially foster innovation within a movement toward greater competency-based education.

ORGANIZATION OF THE WORKSHOP PROCEEDINGS

The following four chapters summarize the presentations and discussions that took place during the workshop, not necessarily in the order they appear on the agenda in Appendix A. Chapter 2 provides the background for future discussions by explaining the realities of accreditation from multiple perspectives leading to challenges and opportunities for innovating through international, multiprofession, and multiaccreditor collaborations. Chapter 3 delves more deeply into concepts and ideas that could foster innovation specifically through collaboration, and Chapter 4 offers two ideas for how accreditation might be used for promoting collaboration. The first example involves linking individuals and communities with accreditation, and the second theorizes how One Health could be a model for greater accreditation collaboration. In Chapter 5, ideas presented throughout the workshop are summarized and applied by individual speakers to build the way forward for these workshop proceedings.

REFERENCES

Alexander, L. 2015. *Higher education accreditation: Concepts and proposals.* Washington, DC: Senate Committee on Health, Education, Labor, & Pensions.

AVMA (American Veterinary Medical Association). 2016. *COE accreditation policies and procedures: AVMA*. https://www.avma.org/ProfessionalDevelopment/Education/Accreditation/Colleges/Pages/coe-pp-the-AVMA-and-accreditation.aspx (accessed July 18, 2016).

CHEA (Council for Higher Education Accreditation). 2010. *The value of accreditation.* Washington, DC: CHEA.

CHEA. 2016. *Information about accreditation*. http://www.chea.org/public_info/index.asp (accessed July 18, 2016).

Fulmer, T., and M. Gaines. 2014. *Partnering with patients, families, and communities to link interprofessional education. Proceedings of a conference sponsored by the Josiah Macy Jr. Foundation in April 2014.* New York: Josiah Macy Jr. Foundation.

Hendel, D. D., and D. R. Lewis. 2005. Quality assurance of higher education in transition countries: Accreditation - accountability and assessment. *Tertiary Education and Management* 11(3):239-258.

IOM (Insititue of Medicine). 2003. *Health professions education: A bridge to quality*. Washington, DC: The National Academies Press.

Standards Council of Canada. 2003. *The benefits of accreditation for developing countries.* Ottawa, ON: Standards Council of Canada.

WHO (World Health Organization). 2013. *Transforming and scaling up health professional education and training: Policy brief on accreditation of institutions for health professional education.* Geneva, Switzerland: WHO.

Copyright © National Academy of Sciences. All rights reserved.

2
Varying Views on Accreditation

Key Messages Identified by Individual Speakers and Participants

- While accreditation of professional preparation programs can ensure that students are receiving what the profession thinks is necessary for entry into practice, accreditation alone cannot decide what those standards are. (Phillips)
- The interests and concerns of government and regulators are broader than those of individual professions. This context presents a critical set of challenges for accreditation. (Phillips)
- Each profession's dialogue addressing innovation within accreditation will vary depending on the culture of the individual profession. (Harvison)
- The trend in accreditation is moving from a focus on structure and content to a focus on process and outcomes. (Strasser)
- To improve quality of education in a particular area, it is not enough to identify a particular topic of education to be addressed through accreditation standards. There are issues that surround the topic—such as the accreditor's role in implementation and whether the accreditor provides guidance on quality improvements or a pathway to implementation—that also need to be considered. (Holmboe)

The workshop began with a keynote presentation by Susan Phillips, who understands accreditation from multiple viewpoints. She has worked in a regulatory capacity in health professional accreditation and educational quality assurance, and she has received accreditation services as a university provost and a senior vice president of an academic health center. An edited summary of her remarks are found below.

ACCREDITATION: REALITIES, CHALLENGES, AND OPPORTUNITIES

Susan D. Phillips, Ph.D.
University at Albany, State University of New York

Susan Phillips, professor of counseling psychology of the University at Albany, State University of New York, began her presentation by explaining that accreditation refers to a process for external quality review used by higher education to scrutinize colleges, universities, and educational programs for quality assurance and quality improvement (Eaton, 2011). Accreditation also refers to a status; it provides public notification that an institution or program has met the accepted standards of quality that has been judged acceptable or higher by profession-specific, education experts (ASPA, 2013).

The source of standards, the evaluation unit, and the focus of accreditation may differ for each country and region. In many countries, quality assurance in higher education is based on national or ministerial standards, and it is undertaken by a governmental ministry or a national quality agency. In the United States, accreditation is outside of the governmental structure, and it is focused on professionally driven standards carried out in nongovernmental associations, with

Copyright © National Academy of Sciences. All rights reserved.

peer review undertaken by volunteers. Some accreditation systems are more focused on quality assurance (compliance with standards), whereas others are more focused on quality improvement. In the United States, there is a focus on both compliance and improvement.

Role of Accreditation

Phillips stated that accreditation confers an academic legitimacy on the institution or program in question. It advances academic quality, it demonstrates accountability, and it encourages purposeful change and needed improvement. However, Phillips said, there are many expectations of this seal of approval. For example, students look to accreditation to provide confidence that they chose to pursue a good program, and that the program meets its educational goals. It may also provide students eligibility to access a licensure or certification process in their professions, she said. The expectation for programs and institutions is that accreditation will provide accountability, recognition that the program or institution is achieving its goals, and recognition that the program or institution is providing the quality of education mandated by the profession. Accreditation provides a framework for regular review and evaluation. It guides the program or institution to continuous improvement and process, and addresses innovation and change. Phillips said that accreditation also protects the institution or program from guidance from the outside—at times, accreditation may prohibit an institution from implementing well-meaning but misguided ideas about how a profession should work.

For the health professions, accreditation represents a concurrence within the profession about what academic quality means for that particular profession. It codifies what the profession expects in terms of the preparation of its practitioners, both in terms of process and outcome. It can also define the gates for entry into practice. Lastly, for policy makers and the public, it can provide confidence that quality education is being provided, which is a particularly important role when there is public or governmental financial investment in that education.

Challenges for Accreditation

While each of the functions described are reasonable expectations for a quality assurance and quality improvement process, said Phillips, there are also hopes and expectations placed on accreditation. In the United States, there are more students in higher education than ever, there is a wider range of preparation for those students, there are many types of programs offered to those students, and there are numerous ways to educate those students. There are new kinds of institutions, such as public, private, for-profit, embedded, and freestanding. There is also more money being directed toward higher education—more than $150 billion per year from the federal government, states, and localities (The Pew Charitable Trusts, 2015). These circumstances bring new hopes that the accreditation process will answer questions that it was never intended to ask, she said. For example, students and families ask: *Can I afford this? Will I ever graduate? Will I get a job? Will I make enough money to live? Will I repay my loans?* Policy makers ask: *Are students learning what we want them to learn? Are they completing their programs? Can they pay back their loans?*

Phillips focused on two main challenges for accreditors: first, challenges from and for the profession, and second, challenges from and for the larger governmental regulatory context.

Copyright © National Academy of Sciences. All rights reserved.

Challenges Relating to the Profession

Accreditation of professional preparation can have great influence; quality assurance can shape the resources and curriculum of professional preparation and ensure that students are treated fairly and educated well, and quality improvement can keep educators and professionals mindful of their progress in figuring out how to do things differently and better. However, said Phillips, accreditation cannot define the perfect direction of the profession, nor can accreditation hold back the profession's growth. While accreditation of professional preparation programs can ensure that students are receiving what the profession thinks is necessary for entry into practice, accreditation alone cannot decide what those standards are. Accreditation can reflect the concurrence of the professional community and its educators when through the convening and guidance of the accreditor, these two groups are brought together to reach that concurrence, she said. The federal standards from the U.S. Department of Education, for example, state that an accreditation agency must demonstrate that its standards, policies, procedures, and decisions are widely accepted by educators and educational institutions and by licensing bodies, practitioners, and employers in the professional fields for which the students are prepared.[1]

Phillips presented two examples of statements that reflect this. In physical therapy education, the comprehensive curriculum plan is based on information about the contemporary practice of physical therapy, standards of practice, and the current literature, publications, and other resources related to the profession (CAPTE, 2016)—none of which are created by the accreditor. The American Association of Colleges of Nursing's Commission on Collegiate Nursing Education's statement describes the goals for determining the accreditation standards—specifically, "enabling the community of interest to participate in significant ways in the review, formulation, and validation of accreditation standards and policies and in determining the reliability of the conduct of the accreditation process" (CCNE, 2013). Each of the accreditation standards in the profession has a statement such as these, said Phillips. Professions and their accreditors need to work together and be right in step.

The relationship between the profession, its accreditors, and its educators is an ongoing conversation and a continual challenge in which each element has a critical role, Phillips explained. The profession's role is to reflect practice now and to envision how professional practice will evolve going forward; the educators' role is to translate the needed competencies now and in going forward into a vibrant educational plan; and the accreditors' role is to reflect and hold up the concurrence across the profession and its stakeholders about what is needed in quality preparation. While a given individual may play all of these roles, it is important to consider the different functions for each category of individuals.

At times, professions and educators face challenges when accreditation standards seem to limit what they can do. Phillips suggests that in these circumstances, the professional community and educators think about what level of innovation is needed and how best to include this innovation in the accreditation system. One challenge faced by accreditors is how to convene the best conversation across all of the perspectives, both informally and ongoing, but also as required formally by government at regular intervals.

Phillips presented Figure 2-1 to show how she views the relationship between a profession and its accreditor. The arrow pointing to the right shows that the profession is in

---

[1] For more information about the U.S. Department of Education's federal standards, please visit www2.ed.gov/admins/finaid/accred/accreditation_pg13.html (accessed June 16, 2016).

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

forward motion. The left side of the arrow represents what is considered "tried and true" to professional practice. As one moves toward the right of the figure, innovation and imagination

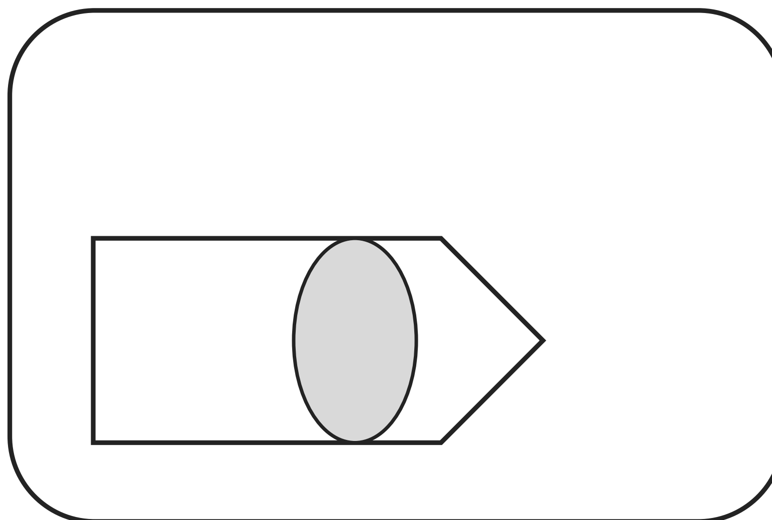


FIGURE 2-1 The profession, its accreditor, and their regulatory context.
NOTES: The arrow represents the profession, which is moving forward and encompasses what is "tried and true" (left side) as well as innovation and imagination (right side, the point). The grey oval represents accreditation, which includes what is "tried and true" in its standards; it is working to be more visionary, but it does not yet reach the far right side of the arrow. The box surrounding the arrow represents the governmental and regular context in which the professions and accreditation exist.
SOURCE: Phillips, 2016.

begin to come into effect. For example, the first section represents discussions about the emerging need for better promotion of health and wellness, more interprofessional collaboration, and a shift from inpatient to community care. The next section to the right would represent those who think about emerging technologies and treatment tools, new patterns of comorbidity, emerging health care jobs, and new providers. And at the tip of the arrow are the very innovative, imaginative, and future-thinking individuals. The figure shows how health and health care practice is shifting, showing the spectrum of "tried and true" to completely visionary.

Accreditation, represented by the grey oval, exists somewhere in the middle of this spectrum. It reflects all that is tried and true, and what is agreed upon as emerging in the profession, but it does not quite reach the visionary and imaginative thinking represented at the front of the arrow. Those ideas may or may not become fully embraced by the profession.

Phillips noted that it is important to remember that ideas and issues may fall in different places on this spectrum across each profession, and may vary in their categorization at any moment. One of the challenges of the accreditor, educator, and profession is figuring out exactly where accreditation should be on the spectrum.

Challenges Relating to Government and Regulation

The second challenge Phillips described involves government and regulators. Each of the professions—architecture, drama, theology, or the various health care professions—operates in a particular governmental and regulatory context, she said. This is represented by the box around the arrow in Figure 2-1. This context is specific to each country. The government regulators have

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

far less familiarity with the specifics of the professions, yet they have the responsibility for ensuring that accreditation—or at least the accountability, compliance, and quality assurance part of accreditation—has strong integrity and can be considered a reliable guarantor of educational quality.

The interests and concerns of government and regulators are broader than those of individual professions, said Phillips. This context presents a critical set of challenges for accreditation. Some of what the regulators expect of accreditation is very reasonable; for example, the insistence on professional engagement in the development and regular review of the quality standards. But some of the expectations are drawn from concerns that are much more removed from professional education, often relating to finances and learning outcomes; usually, these concerns are reflected in government or regulatory perspectives.

Phillips presented three examples of these concerns. First, she described governments' and ministries' desire to protect the student. Governments want to ensure that students are wise consumers who make informed choices about where their educational dollar is spent. The second example Phillips described is the government's desire to ensure that students learn and that targeted learning outcomes are achieved. While this is a common goal for all, it is difficult to agree on what those learning outcomes are and how they should be measured. The final example she gave was governments' concern to protect the federal dollar investment in higher education, particularly in terms of a student being able to pay the loans they have received.

These are all legitimate concerns, but they expand beyond the purview of a single profession or even a group of professions. The questions and metrics that are posed, Phillips said, are more often directed to the accreditation of institutions and, particularly in the United States, undergraduate institutions. Nonetheless, professional education programs (both undergraduate and graduate) and their accreditors—despite their different scope, focus, and levels of education—tend to be treated in the same way. To function, the professions and their accreditors need to operate within this regulatory context, which creates many challenges.

Opportunities for Accreditation

Phillips saw many unique opportunities for this workshop of the Global Forum on Innovation in Health Professional Education (the Forum) because of its international, multiprofession, and multiaccreditor participation. In addition, she said, Forum members and workshop participants share a common goal of quality preparation for health professional practice. She recommended that participants remain mindful of the important but different roles of countries and governments, of different professions, of the educators, and of the accreditors. With those relationships in mind, she said, there are also opportunities to work together toward common goals, to share challenges and solutions so all can benefit from each other's experiences, and to potentially collaborate on new solutions.

Phillips showed a second diagram (see Figure 2-2) to show that the health professions are both separate and coevolving. Their accreditors are represented by the grey circles, which all touch, and their larger government context wraps around them all.

Phillips highlighted three series of critical questions that she believes can and should be posed. First, she challenged stakeholders to envision how health care practice is evolving, and to then think about how this evolution could be reflected in professions, their practice, and their preparation. For example, she said, professions are thinking about innovative practices; emerging

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

practitioner roles; new venues of practice; and changing roles of patient, family, and community in the profession. Are there intersections and commonalities across the professions at the

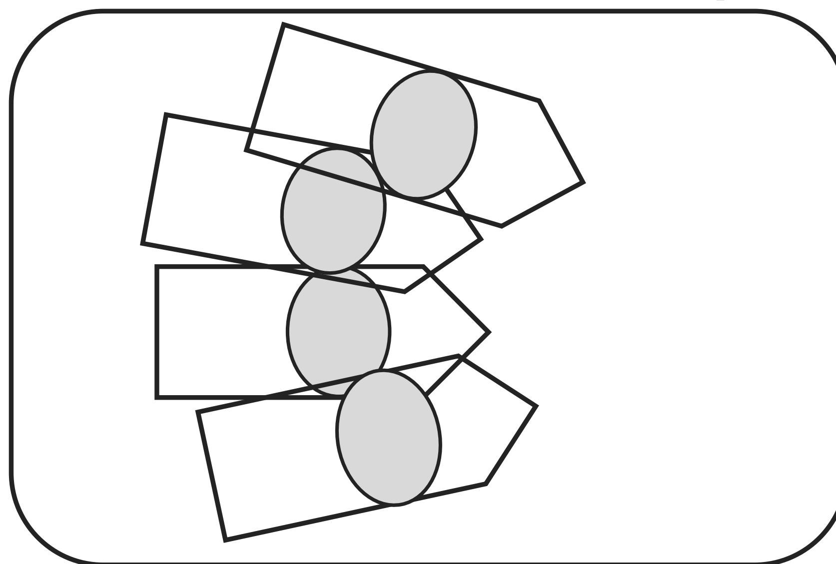


FIGURE 2-2 The professions, their accreditors, and their larger regulatory context.
NOTES: Each arrow represents a different health profession, as described in Figure 2-1. The grey ovals, representing the accreditation of each profession, all touch—meaning that they are all connected and related. The box surrounding the arrows represents the larger governmental context that each profession and its accreditation exists.
SOURCE: Phillips, 2016.

visionary end of the arrows in Figures 2-1 and 2-2 that eventually might move toward being part of the education of new professionals?

Her second series of questions surrounded the goal to turn needed practice competencies into educational plans. Phillips asked, how can we learn about emerging issues in practice in each profession, and how common issues are (or could be) addressed in professional education and reflected in the accreditation standards and processes? For instance, each profession identifies the need to practice in an interprofessional context. While that is a common issue, she said, it is addressed in different ways in different educational programs and is reflected differently in accreditation. She asked, what can we learn from each other in this that might improve our education and our practice?

The third series of questions were about thinking together about educational programs and the accreditors reflecting these programs in quality standards and processes. How can we study the ways in which professions are learning about and addressing common issues in the education and training process? How are these reflected in the accreditation standards and processes, or how could they be? For example, she said, by addressing common issues in education and training, other questions are raised; how can we ensure the quality of clinical supervision? How can we provide flexibility for different ways in which programs are trying to implement a given standard? How can we ensure tolerance for trying out new things?

There are several other questions one could pose about the evolution of the health and health care professions, about the educational strategies to ensure practice competencies, and about the reflection of these in the accreditation standards and process. She suggested that to

Copyright © National Academy of Sciences. All rights reserved.

enrich the discussions, stakeholders should listen for the intersections and commonalities that exist in quality preparation among each profession and each country, and where they might intersect going forward.

Discussion

Following Phillips' presentation, workshop Co-Chair Neil Harvison, American Occupational Therapy Association, opened the floor for questions and comments. Leading off the discussion was Malcolm Cox, University of Pennsylvania and former chief academic affiliations officer of the U.S. Department of Veterans Affairs. He asked Phillips to comment on the tension across different professions' accrediting bodies, which depends on where they are located in the arrow demonstrated in Figures 2-1 and 2-2. Cox noted that tension might be expected to be greatest when more traditional and more innovative accrediting bodies interact. Phillips noted that it is not the accreditors who place themselves in that spectrum between "tried and true" and visionary, but rather the call of the three players—the profession, the educators, and the accreditors—to find the right place for that particular profession. For example, she said, if a profession's accreditation circle is too far to the left on the spectrum, it means the profession is not sufficiently engaged in the conversation about what constitutes quality education. This is what Phillips calls a diagnostic symptom, and balance needs to be sought to position the three players so all are contributing an equal force of movement. If a group of constituencies think that the set of standards is not acceptable, they should speak up and have that conversation with their accreditors.

Phillips suggested stakeholders look at the professions in which the accreditation circle is in the right place—where accreditation, the profession, and education are in harmony. She then recommended that stakeholders examine the conversations that are happening among the players: how did they arrive at their standards, and how did they address where accreditation should fall on the spectrum? She gave an example of the American Psychological Association, where there were many visionary people wanting to put their ideas into the accreditation standards. While one might personally agree with what the visionaries believe and are doing to educate learners, the larger profession may be sitting more toward the "tried and true" end of the spectrum and may not be ready for the visionary ideas. In this case, there was a process in which a particular advocate for a curriculum component felt very strongly but did not engage the profession in collecting concurrence.

This example brought up the question of how professions address innovation. There are cultural differences within a profession that might make it useful to see how the exemplar professions have been able to bring together the "tried and true" and the visionary ideas through careful placement of accreditation. Harvison added that each profession's dialogue addressing innovation within accreditation will vary depending on the culture of the individual profession. In some professions, there are many forums and opportunities to have these types of discussions before consensus is reached; whereas in other professions, these opportunities do not necessarily exist. What is important, he said, is how the dialogue between stakeholders is facilitated.

Roger Strasser, dean of the Northern Ontario School of Medicine in Canada, noted an apparent continuing development of notions and definitions of quality education. The accreditation enterprise itself is also evolving. To Strasser, the trend in accreditation is moving from a focus on structure and content to a focus on process and outcomes. He asked Phillips how she sees these developments coming together to an accreditation system that is functional and

Copyright © National Academy of Sciences. All rights reserved.

effective, and that may improve the value of accreditation to all the professions and bring the professions together to improve health care and health outcomes. Phillips agreed with Strasser's points, and responded by first explaining that in the United States, accreditation started because of attempts to define what a college is. She noted some of the characteristics of what define a college—having a library, a faculty with certain qualifications, students, etc. These are what she calls "inputs to education." In the 1980s or 1990s, she said, accreditation began to move away from only thinking about inputs to education to instead think more about outcomes of education. Accreditation began to ask, "What are students learning?"

Education outcomes are measured in many ways. In some cases, it is with a single test; other times, it is on multiple measures. Typically, accreditation programs have many outcomes they are looking to establish, and programs are using many metrics to understand these outcomes. Phillips noted that outcomes measurement is harder to do in the liberal arts undergraduate institutions because outcomes are difficult to determine and they vary. However, health professions can measure specific competencies in the practice of the profession that are necessary for successful and good health care. These competencies can be reflected as outcomes in the programs, monitored, and then reflected in the accreditation process.

Warren Newton, American Board of Family Medicine, spoke about what he called the "burning issue in health care right now," which is finding the right relationship between accreditation processes for institutions and certification processes for individuals. He stated that this is particularly an issue at the interface between organizations, teams, and individuals where quality can be improved. He asked Phillips who regulates this issue, and what did Phillip sees as the right relationship? Phillips responded by noting that she has seen this tension in her professional roles, and that it is important to remember that accreditation focuses on the programs. While there are learners in those programs who hope to become licensed or certified, the specific learners, per se, are not necessarily considered when it comes to the accreditation of a program. She provided an example of what she called extreme—a program may prepare students to have all the competencies they would need to pass a certification test, and so a given student's failure on this certification test would not necessarily mean the program was not of high quality. As far as Phillips is aware, no accreditation system has an outcome criterion for quality that includes a 100 percent pass rate on certification exams.

Individual certification, in turn, is focused on the individual capacity. Phillips considered it almost a form of accreditation by the certifiers. To bridge these conversations, she said, one should remember that licensing boards are part of constituencies. These certifiers are part of the constituencies that need to be in the standard development for accreditors, she said. Licensing boards are part of who needs to be at the table as the accreditation standards are developed.

Pamela Jeffries, dean of the George Washington University School of Nursing, asked Phillips what she saw as the "sweet spot" when all of the professions' accreditors align, and what the metrics would be for measuring quality. When asked to provide exemplars of this, Phillips responded that she has not seen a set of professions that do this well. While collegiality and parallel play among accreditation, education, and professions does exist, she does not believe that there is yet a true incorporation of understanding about each other. In her mind, this is a huge challenge; conversations about best practices, common struggles and challenges, and feedback and metrics from graduates could enormously benefit the health professions.

Jan De Maeseneer from Ghent University in Belgium wondered to what extent accreditation processes should be contextualized according to the needs of the communities where the institution is working and how there can be a mix between universal dimensions and

Copyright © National Academy of Sciences. All rights reserved.

specific contextual dimensions in accreditation, especially when it comes to issues such as social accountability and addressing the social health gap. Phillips responded by saying that any education program should have a sense of what body of work it is preparing its students for; it should have a sense of what the places, challenges, and cultures are of where students are typically sent. The programs understand the social context and can use this context as a laboratory for understanding, as well as an opportunity to educate students on how to adapt their learning to a different environment and context. In psychology, for example, the accreditation standards show attention to individual and cultural diversity. But, she said, accreditors, professionals, and educators then need to think about making a difference in their communities and improving the health of their communities. In her opinion, one of the most important resources that these stakeholders have is their graduates, from new professionals to seasoned professionals. These seasoned professionals understand, because of their lived experience, how to make a positive difference in their communities, and will be able to convey how their education might have better prepared them for this. Phillips believes that this information would be very valuable to academic programs, which could use the information to see what innovations are needed in their programs and implement these to better prepare their students.

David Benton, chief executive officer of the National Council of State Boards of Nursing, sees educational delivery becoming a transnational product that is being offered in an increasingly globalized context. Based on his experience working in a global organization, he noted that while focusing on the accreditation of the professions is important, it is not the only factor in play in relation to the care delivery environment, the educational environment, and some of the legal frameworks. Phillips agreed, saying that there are enormous amounts of regulation, and this is all included in the larger context of education, profession, and accreditation.

Peter Vlasses, Accreditation Council for Pharmacy Education, described the Association of Specialized and Professional Accreditors, a network of accreditors that share best practices and are collectively looking at how to be on the side of innovation and visionary ideas. Association of Specialized and Professional Accreditors members frequently discuss the preparation of students and entry into practice, yet rarely do they discuss the continuing competence of seasoned professionals and continuing professional development, and the role of accreditation in that area—especially in the area of interprofessional education (IPE). According to Phillips, the rigor required to enter into professional practice is high, partly due to accreditation standards, but these expectations diminish significantly after the individual is a fully practicing professional While there are continuing education requirements for professionals, the concern is that professionals will stop becoming competent or that they will not continue to develop with the growth of their profession. The profession has an opportunity to reflect on accreditation and build on the notion of continuing education or lifelong learning, but there is little ability to enforce this beyond the point of graduation or licensure. This, she said, is actually the same argument that universities have against tenure, because there are few regularized ways of ensuring continuing contribution. Phillips suggested the possible solution of professions renewing their license every several years, and including certain requirements or retraining programs that would have their own midcareer recertification accreditation process.

The final question came from Kaiser Permanente's Marilyn Chow. She wondered how consumers of health care, who are also stakeholders of accreditation, might have input into the accreditation process. Phillips referred Chow and the participants to a session later in the program where this issue is being addressed (see Chapter 4), and then she responded to Chow's

Copyright © National Academy of Sciences. All rights reserved.

question. Consumers may not define what the practice is, she said, but they are stakeholders and ought to be at the table, which she believed is part of an ongoing conversation among professional accreditors.

TRADE-OFFS FOR ACCREDITATION

Eric Holmboe from Accreditation Council for Graduate Medical Education facilitated a discussion drawn from the Session II objective that questions what can and cannot be realistically accomplished through accreditation. According to Holmboe, such a conversation is necessary to begin to sort through the strongly held belief that adding a topic to the accreditation standards will improve education in that area contrasted with the belief that eliminating accreditation standards would remove the barriers to innovation and education reform.

To look at these opposing add versus subtract positions around standards, Holmboe asked the participants to talk among themselves for 10 minutes in groups of 8 persons or so to consider whether requiring attention to a topic through accreditation actually improves the quality of education in that area (see Box 2-1, question 1). Individuals reported their discussions to the larger group.

Question 1: Will Requiring Attention to a Topic Through Accreditation Actually Improve the Quality of Education in That Area?

Zohray Talib from George Washington University led off the reports with reactions to the first question stating that improving quality through increased attention would require a collective vision and definition of quality and would depend on the type of attention required. For example, addressing social determinants of health[2] or IPE requires first a clear vision that is agreed upon by everyone involved (i.e., accreditors, academics, professionals in the field, and government) and then consideration of what *attention* means so accreditors do not resort to simple checklists that lack any degree of flexibility. The combined vision also requires a clear, collective understanding of quality and a set of desired outcomes that can be used to measure degrees of improvement. Like Talib, Miguel Paniagua from the National Board of Medical Examiners reported using IPE as one of the frames to discuss this question. In response to whether requiring attention to a topic through accreditation will improve the quality of education, he said, “It depends, it’s possible, and it’s quite likely,” conveying that answers to this question are highly contextually dependent and conditional in nature. Paniagua then emphasized a desire to see accreditors move past individual professional identities to work jointly on something like IPE; however, strict and loose interpretations of IPE competencies by different accrediting bodies could be a source of tension. Without specificity, competency-based requirements are left to interpretation, but being more prescriptive lessens the flexibility of individual institutions for innovation. The key, he said, is to strike a balance, but where and how is the question.

---

[2] *Social determinants of health* are “the conditions in which people are born, grow, live, work, and age, including the health system. These circumstances are shaped by the distribution of money, power, and resources at global, national, and local levels, which are themselves influenced by policy choices. The social determinates of health are mostly responsible for health inequities—the unfair and avoidable differences in health status seen within and between countries” (WHO, 2016).

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

BOX 2-1
Table Discussion Questions

1. Will requiring attention to a topic through accreditation actually improve the quality of education in that area?
2. How can an accrediting agency know if an added topic or new criterion actually improved the quality of education? Should there be some sort of litmus test?

Katie Eliot with the Academy of Nutrition and Dietetics agreed with Paniagua's response of "it depends," but she added that addressing quality raises other issues, such as the need to educate the educators. There is also the question of how different constituencies define *quality* and how that definition is shared with educators, as well as the question: where is the line between assurance and quality? To start to answer these questions, it is important to know how any decision affects relevant programs and professions. For example, on the spectrum of prescribing to innovating, one might strive to strike a balance that does not limit programs and takes into account how the agreed upon balance affects patients and other constituents. Sara Fletcher with the Physician Assistant Education Association also endorsed "it depends," and rephrased it as "it could, but not necessarily." She said attention provides focus and such a focus would hopefully lead to uncovering exemplars of quality. For this to happen, there would have to be a focus on the topic, the process, the examples, outcomes, and measurement of quality. All aspects of the topic—how it is introduced to how it is evaluated—would have to be considered as well as the resources that would be needed to accomplish the desired outcomes. Fletcher used the example of preceptor shortages at clinical sites to make her point. She asked the audience to imagine a day when across the health professions there is a shared commitment for embracing the concept of profession-neutral preceptors—a model that de-emphasizes the importance of the professional identity of preceptors and instead focuses on the learning that needs to occur. In this model, physician assistant students may have dentists as preceptors, and nursing students could have physicians as preceptors, as long as the learning objectives are met. She followed by saying that though this may make sense from an educational vantage point, gaining traction for this idea in the broader academy of the health professions will require much more than attention to the topic.

The Jonas Center for Nursing and Veterans Healthcare representative, Darlene Curley, reported very similar perspectives as those previously stated. One slight difference was that requiring attention to a topic is just the first step that must happen, but that quality improvement depends on how it is implemented and what the outcomes are for patients, clients, and communities.

Holly Wise from the American Council of Academic Physical Therapy was the final reporter for question one. She began her remarks as the others did by saying "it depends," but she later adjusted her response to "yes, but frustratingly slow." She also reflected on the diagram presented by Susan Phillips in her opening remarks (see Figure 2-1). In particular, she noted the content or topic that was on the right edge of that circle of accreditation are the topics that are moving forward but not yet operationalized. Then she contemplated the direction of the arrows outside of the circle and whether they ultimately converge or diverge knowing that divergence would make the process even slower, especially for broader-themed topics. Finally, Wise raised the question of responsibility, asking "who is responsible for operationalizing the topic of interest?" Is it the accreditors' responsibility to demand it of the professions that are giving the

Copyright © National Academy of Sciences. All rights reserved.

input, or is it something that evolves from the profession? Regardless of who initiates it, making sure practitioners are part of the discussion would ensure that it is not solely academicians providing input.

Holmboe then asked the participants to resume their small group discussions to consider the second question (see Box 2-1, question 2) on recognizing quality improvement in education.

Question 2: How Can an Accrediting Agency Know If an Added Topic or New Criterion Actually Improved the Quality of Education? Should There Be Some Sort of Litmus Test?

Zohray Talib's initial response to the question built around individual programs. If a new criterion were required of a single program, improvements in quality would likely be gauged through self-evaluation, as there may not be a specific metric of performance but a required process the program would have to follow. Talib then considered it from an aggregate view. Her table's discussion and debate led her to report that in the short term one could again look at a process evaluation but in the medium and longer term, there might be practice analysis changes or health service delivery environment changes that could be used as measures of quality improvement in education.

Miguel Paniagua's report was again informed by his group's discussion where he admitted coming up with more questions than answers. He began by asking whether accrediting agencies would be the first to know whether an added topic or criterion improved education quality, and whether the question should be rephrased to say that the criterion should actually not focus on the quality of education, but the quality of care? His final question was about how to define quality and whether quality should be determined by outcomes of people served. Paniagua used the Triple Aim[3] as an example, but he was quick to clarify that many other definitions of *quality* exist, and it would be good to know which ones are most meaningful to patients. In follow-up, Holmboe asked how Paniagua would link the quality of education with the quality of care given the growing evidence that those two are intertwined? Paniagua agreed that both are equally important and mutually dependent, then after a pause, he added that both would be measured.

Building on Paniagua's comments and list of questions, Pamela Jeffries from George Washington University added that knowing quality would depend on the topic, who judges the quality of education, and how outcomes are measured. She brought up the notion of adaptive testing saying that in nursing there is computer-based adaptive testing. This kind of testing adjusts questions based on the ability level of the individual taking the examination (Glossary of Education Reform, 2014). But this is just one method for testing competency, said Jeffries, adding that many items go into proving competency in a defined area. When discussing quality of care, Jeffries suggested having the patient's or client's voice as part of educational assessment; in the same regard, she raised questions about whether patients have the understanding of quality to be able to judge competency within education. Likely some things they can judge and some things they cannot, she added, before going on to say that practitioners are another important group to include in the accreditation process. They may be best positioned to know whether a learner's performance meets a certain standard. The final set of measures Jeffries called out were assessing knowledge, skills, and attitude that go into quality education and care, as well as fitness for purpose and student progression.

[3] The Institute for Healthcare Improvement Triple Aim is a framework for health system performance involving (1) better patient care, (2) improved population health, and (3) reduced health care costs (IHI, 2014).

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

The Jonas Center's Darlene Curley emphasized the importance of clinical patient care for assessing quality thus elevating the importance of the practice component for monitoring such quality. To better ensure continuity, Curley reported the suggestion of having the same topic criteria threaded through education and practice accreditation. It might start with the Joint Commission identifying an item that is then incorporated into education accreditation.

In reporting her group's discussion, Maria Tassone from the University of Toronto emphasized the issue of a "litmus test." There is a need for some sort of litmus test, she said, but that delaying progress because the perfect test is not immediately available would be counterproductive. The example she provided to emphasize her point was problem-based learning. It has been used for 30 years, yet there is no evidence beyond the level-1 Kirkpatrick model—personal reactions to the educational experience—that it actually works.[4] While this example demonstrates that the intervention is "tried," it is lacking in evidence to say that it is "true." The suggestion she offered is to not wait until everything is perfect but to build in measurement and evaluation right from the beginning. One could perhaps start with more proximal or process measures before moving toward the more distal outcomes like patient quality and safety that involve different kinds of testing approaches, both qualitative and quantitative. Tassone closed with a recognition of the accreditation community by saying that accreditors are good at monitoring quality assurance, but providing input for quality improvement presents a challenge given the current accreditation structure. To move in this direction from assurance to improvement would require a culture shift involving all the stakeholders, which could be done but would be a large undertaking.

Summary of the Session

Holmboe summarized the session by bringing out three important themes he personally gleaned from each of the reporters' responses to the two questions. For question one, he said that it is not enough to identify a particular topic of education to be addressed through accreditation standards. There are issues that surround the topic—such as the accreditor's role in implementation and whether the accreditor provides guidance on quality improvements or a pathway to implementation—that also need to be considered. Should the accreditor be the driver of quality improvement or might that be the responsibility of the educators or a separate entity? There are different ways of doing quality improvement, but according to Holmboe this notion of who drives quality in education was an important area of discussion. Another key area Holmboe identified involved alignment. The concept he explained aligns education with patient care through accreditation that goes beyond just the programs and individuals but includes institutions like hospitals and The Joint Commission.[5] A final reflection offered by Holmboe harkened back to a comment made by Maria Tassone of the University of Toronto to build evaluation into education right from the beginning and, as she said, walk on the bridge as it is being built.

Warren Newton from the American Board of Family Medicine added to Holmboe's reflections by digging deeper into the issue of implementation and the importance of thinking through how institutions will address implementation. How implementation will happen is critical in determining whether or not to move forward. Tassone also provided additional

---

[4] Donald Kirkpatrick (1959, 1967, 1994) training evaluation model is frequently used as a model for the evaluation of learning interventions. For more information about the Kirkpatrick model, visit http://www.kirkpatrickpartners.com/OurPhilosophy/TheKirkpatrickModel (accessed September 21, 2016).

[5] For more information about The Joint Commission, visit www.jointcommission.org (accessed June 10, 2016).

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

thoughts on the idea of the interface between practice and education by drilling down on who the stakeholders are that actually inform the accreditation process, and how to better ensure that the practice community is at the table. Malcolm Cox, University of Pennsylvania and former chief academic affiliations officer of the U.S. Department of Veterans Affairs, shared a similar view as Tassone indicating that one of the most important commonalities he thinks about is better alignment between educators and the delivery system. Such alignment is critical for determining how to frame outcomes that are increasingly moving beyond health care delivery itself and toward the health and well-being of individuals and populations. According to Cox, there is a much broader alignment issue, one that represents concepts of health and well-being as opposed to health care alone. John Weeks, representing Academic Collaborative for Integrative Health, referred the group to a recent article, "Era 3 for Medicine and Health Care," by Donald Berwick (2016), that finds the current health care environment uses measurements not for quality improvement but for rewarding and punishing professionals. This caused Weeks to wonder whether too much oversight and regulation is contributing to the stress and burnout of health care administrators and health professionals. Holmboe speculated that such challenges may actually be opportunities to think more strategically about alignment across accreditors around topics such as stress and burnout, IPE, and the social determinants of health that are important to all the health professions. Holmboe stated maybe that is a good starting place for different accreditors to come together.

PROFESSIONAL DRIVERS OF ACCREDITATION

Neil Harvison from American Occupational Therapy Association opened the session that included two debates.[6]

The First Debate

The first debate was moderated by Rick Talbott of the Association of Schools of Allied Health Professions. It looked at how accreditation could be a motivator for educators to innovate, and, conversely, how accreditation might cause obstructions to innovations in education. In his introductory remarks, Talbott alluded to debates conducted at previous Forum workshops that were used to demonstrate pedagogy while raising challenging and sometimes contentious issues. He then reviewed the structure that his and the following debate would use while also introducing his debaters. Elizabeth Hoppe from the Association of Schools and Colleges of Optometry argued for the side that accreditation hinders innovation, and Karen Wolf from the Pennsylvania State University College of Nursing took the opposing position that accreditation does not hinder innovation.

Workshop participants, he said, would have 1 minute to cast their votes for which side of the debate they aligned with. The voting would then be followed by 9 minutes of lively and entertaining points brought up by each of the two debaters before the participants again cast their votes to see if the debate arguments changed any participants' views, and to hear from the debaters their true feelings on the topic.

[6] Videos of the full debates and the discussions that proceeded can be found on the Global Forum on Innovation in Health Professional Education workshop website, www.nationalacademies.org/hmd/Activities/Global/InnovationHealthProfEducation/2016-APR-21.

Copyright © National Academy of Sciences. All rights reserved.

Participant Perspectives

The debate provided fodder for an in depth discussion with the debaters. Eric Holmboe started by questioning Wolf about her use of the term *responsible innovation.*[7] Wolf responded that her use of the term involved looking at how accreditors and educators think about best practice evidence to support innovations. For instance, there are a range of innovations that are not necessarily good ideas. They need to be thought through and the evidence reviewed before integrating untested innovations that do not have a well-balanced base of support. At the same time, she added, flexibility is needed to support laboratories that try new ideas and in the process of implementing such innovations, the evaluative aspects of the innovation need to be examined to avoid widespread replication before the innovation has been tested.

In keeping with the theme of innovation, Susan Scrimshaw, the president of The Sage Colleges, questioned the speed of accreditation change as it relates to innovation. In general, there are long intervals between when criteria for accreditation are reviewed and when the implementation phase begins. This can take years. Given that, Scrimshaw asked whether the system can move quickly enough for accreditation to support innovation in a rapidly changing environment? Wolf agreed with Scrimshaw. The challenge, she said, is to provide enough flexibility in the standards, structures, and processes to assure that time constraints are not major barriers to responsible innovation.

Roger Strasser from the Northern Ontario School of Medicine in Canada made the observation that some people in education view the accreditation process very negatively. They see it as a strict mandate being forced upon them and if they do not conform to the defined requirements, they will suffer grave consequences. Hoppe responded to Strasser's remark from her own experiences both as a founding dean and an accreditation site visitor. From the accreditor's perspective, Hoppe was sensitive to the notion that accrediting bodies could support innovation; however, her experiences as a founding dean pushed her to the opposing view. Before she could recruit her first student or develop promotional materials, Hoppe had to meet accreditation standards that changed throughout the approval process. In addition, every 2 years she was required to perform a full self-study: there is a full site visit, there are in-depth reports that must be completed, and there are special focus site visits that must be attended. Hoppe also brought up the challenges of interprofessional, collaborative programs. She pointed out one particularly innovative college on her campus that constantly experiences tensions and ongoing difficulties with their accrediting agency. Based on what she has witnessed and gone through as a founding dean combined with her understanding about the importance of obtaining and maintaining accreditation, Hoppe admitted her inclination toward delaying approval of innovations proposed by her faculty. Her reluctance to approve is not because her program is not ready for innovations but rather because of the very close scrutiny she receives and the rigorous assessment her program continues to undergo. She also pointed out the difference between being at a well-established versus a new institution like her own. We can innovate, she said, just not yet.

---

[7] According to the KARIM project (Knowledge Acceleration and Responsible Innovation Meta-network), *responsible innovation* is "an iterative process throughout which a project's impacts on social, economic and environmental factors are measured where possible and otherwise taken into account at each step of project development" (KARIM, 2016).

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

Debater's Comments

For the last segment of the debate, Talbott asked each of the debaters to indicate their true opinions about the debate proposition. Hoppe went first. She started by describing the value of accreditation, that it gives programs structure and that programs benefit from the process. But because it is not what they are set up to do and because of her own personal experiences, she does not believe it is the accreditor's job to innovate. Talbott then turned to Wolf, who offered her view that it is the role of accreditation not to block or hinder innovation. In fact, there are times when it is appropriate to support innovation—for example, in terms of social accountability both locally and globally. What is important for her is flexibility in the standards and encouraging accreditors to have conversations that support common language and standards, and perhaps joint competencies. This may be one way to minimize repetitiveness across the health professions and possibly a way of bringing the different professions together that maximizes resources.

The Second Debate

Neil Harvison then thanked the first debate team and turned to Holly Wise of the American Council of Academic Physical Therapy to moderate the second debate. She began by explaining the proposition that involves examining benefits and risks associated with accreditation for health professional education in low-resource environments. The two debaters were Nelson Sewankambo from Makerere University in Uganda and Warren Newton from the American Board of Family Medicine. Sewankambo presented the position that accreditation stimulates progress in low-resource settings, and Newton argued the opposing side that accreditation does not stimulate progress in low-resource settings.

Participant Perspectives

In a similar structure to the previous debate, a group discussion followed the stated arguments. Malcolm Cox commented first. He was struck by Newton's description of the unintended consequences of the Flexner report (Flexner, 1910) that moved to a university-based system of health professional education. While many of the post-Flexner shifts were positive, it also resulted in the closure of all three medical schools for women and all but two of the seven schools educating African Americans (Finkel, 2013). An additional unforeseen consequence, Cox noted, was the halting of community-based or community-engaged education leading to present-day challenges of how to implement and fund learning in and with communities. Cox's remarks were followed by a question from David Benton representing the National Council of State Boards of Nursing. He prefaced his question to Sewankambo with a caution that when looking at accreditation, one needs to avoid getting stuck in a particular paradigm. The example he gave involved the use of technology for education. Benton encourages anyone interested in using this medium to first study how low- and middle-income countries, such as countries in sub-Saharan Africa, creatively employ technologies, rather than rely solely on the experiences of highly developed countries such as those in Australia, North America, or the United Kingdom. In drawing the link to accreditation, Benton said it is about making sure that accreditation systems can stimulate a development, which means having the flexibility to take advantage of opportunities that promote progress rather than being "stuck in technologies of the past."

Copyright © National Academy of Sciences. All rights reserved.

Sewankambo responded with his perspective on what low- and middle-income countries need to do to ensure that the accreditation process is structured, designed, and understood by accreditors in ways that appreciate what accreditation should do and not stifle progress or innovation. Similarly, the educational institutions need to understand how they can work within a flexible accreditation system that takes advantage of innovations while also achieving specific requirements set up through the accreditation process.

Following Sewankambo, Mary Barger spoke as a representative of the American College of Nurse-Midwives. Her remarks added the entire profession of midwifery to the list of casualties following the Flexner report. She pointed out the importance of midwives as women's care providers within the community, although she voted in favor of the proposition that accreditation stimulates progress in low-resource countries. She did so because of her experience where she saw firsthand how accreditation can inspire low-resource countries to move away from short-sighted, quick fixes that result in poorly trained midwives to high-quality programs that produce midwives who can care for 95 percent of the needs of a childbearing woman and her newborn. Barger pointed out how politically difficult it can be to enforce such standards. But, she added, having the backing of an international accreditation body makes it somewhat easier knowing that higher-quality training will lead to higher-quality outcomes for women and their families.

Jan De Maeseneer from Ghent University in Belgium did not enthusiastically endorse either side of the debate. To him, it is the context that dictates whether accreditation in low-resource areas can stimulate progress or not. De Maeseneer provided numerous examples from countries in Africa, Bolivia, Brazil, and countries in Europe where unaccredited, for-profit institutions at times deliver diplomas with no clinical training requirements or, in other instances, award diplomas with the backing of a central bank rather than the Ministries of Health and Education. In those cases, he is a proponent of international accreditation not necessarily to close those tracks, but to consider giving guidance for how the facility might improve its educational practices. He used the previously cited Flexner report to make his point. The African American and women's medical schools in North America that were closed because of the Flexner report should not have been closed; rather, they should have been supported to build their capacity so they could achieve high-quality goals and standards. To him, the answer is social accountability. It involves mobilizing the resources that can help schools serving communities of need become institutions providing high-quality training of the health workforce for those communities.

The last participant comment came from Gary Filerman of the Atlas Health Foundation who offered a word of caution to those who voted in favor of international accreditation standards. In his opinion, globalizing the product or the process of accreditation is a mischievous conversation in many regards. He used nursing as an example, stating that the profession has driven hard the notion that there is such a thing as an international standard for global nursing education. This has led some countries to inappropriately invest in nursing education for export to more developed countries. Such international standards may not be entirely appropriate for the nursing needs of that country, which led him to believe that obtaining international accreditation has to do with achieving status that he sees as irrelevant and essentially mischievous.

Debater's Comments

Following Filerman's remark, Wise gave the debaters an opportunity to make any final analysis about the debate proposition. Sewankambo led by restating his belief that accreditation

Copyright © National Academy of Sciences. All rights reserved.

can stimulate progress in developing country institutions provided the accreditation is done well and considers the context within which the institutions are functioning. He did not agree with the immediate closure of schools in the United States following the publication of the Flexner report. Institutions should have been given a specified time period within which to improve, but Sewankambo was quick to add that if a school is so bad that it is likely to do more harm than good to the population, that school must be closed. He pointed out the explosion in the number of for-profit health professional institutions now appearing in low- and middle-income countries. There is a need for ensuring these institutions will not be a risk to the population, he said, as might well be the case if there are no quality standards in place that can be overseen through an accreditation process.

Newton finished the discussion by stating his true position that an accreditation system is needed, and the issue is how to operationalize the process and navigate the tension between standards and available resources. Is it the process quality assurance (in which all institutions that do not meet standards suffer consequences) or quality improvement (in which there is a constructive discourse between schools and accreditors)? He expressed interest in how to use accreditation to learn about educational interventions then disseminate best practices. And while progress may be slow, Newton was heartened by Florida State and Northern Ontario School of Medicine, who he believes have revolutionized medical accreditation over the last number of years. It took them half a generation to have an impact but these two examples demonstrate that change is indeed possible. On that note, returned the floor to Holmboe who closed the session.

REFERENCES

ASPA (Association of Specialized and Professional Accreditors). 2013. *Quick reference: Standards, outcomes, and quality.* Chicago, IL: Association of Specialized and Professional Accreditors.

Berwick, D. M. 2016. Era 3 for medicine and health care. *JAMA* 315(13):1329-1330.

CAPTE (Commission on Accreditation in Physical Therapy Education). 2016. *Standards and required elements for accreditation of physical therapist assistant education programs.* Alexandria, VA: CAPTE.

CCNE (Commission on Collegiate Nursing Education). 2013. *Standards for accreditation of baccalaureate and graduate nursing programs.* Washington, DC: CCNE.

Eaton, J. S. 2011. *An overview of U.S. accreditation.* Washington, DC: Council for Higher Education Accreditation.

Finkel, M. L. 2013. *Public health in the 21st century*. Santa Barbara, CA: Praeger.

Flexner, A. 1910. *Medical education in the United States and Canada*. Washington, DC: Science and Health Publications, Inc.

Glossary of Education Reform. 2014. *Computer-adaptive test*. http://www.edglossary.org/computer-adaptive-test (accessed July 18, 2016).

IHI (Institute for Healthcare Improvement). 2016. *The IHI Triple Aim.* http://www.ihi.org/offerings/Initiatives/TripleAIM (accessed June 20, 2016).

KARIM (Knowledge Acceleration and Responsible Innovation Meta-network). 2016. http://www.karimnetwork.com/about (accessed June 9, 2016).

Kirkpatrick, D. L. 1959. Techniques for evaluating training programs. *Journal of American Society of Training Directors* 13(11):3-9.

Kirkpatrick, D. L. 1967. Evaluation of training. In *Training and development handbook*, edited by R. L. Craig and L. R. Bittel. New York: McGraw-Hill. Pp. 87-112.

Kirkpatrick, D. L. 1994. *Evaluating training programs: The four levels*. 1st ed. San Francisco, CA: Berrett-Koehler Publishers, Inc.

Copyright © National Academy of Sciences. All rights reserved.

The Pew Charitable Trusts. 2015. *Federal and state funding of higher education: A changing landscape*. Washington, DC: The Pew Charitable Trusts. http://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2015/06/federal-and-state-funding-of-higher-education (accessed September 21, 2016).

Phillips, S. 2016. *Accreditation: Realities, challenges, and opportunities.* Presented at the workshop: The Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education. Washington, DC, April 21.

WHO (World Health Organization). 2016. *Social determinants of health*. http://www.who.int/topics/social_determinants/en (accessed August 16, 2016).

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

Copyright © National Academy of Sciences. All rights reserved.

3
Competency-Based Accreditation and Collaboration

Key Messages Identified by Individual Speakers and Participants

- Accreditation bodies could be incentivized to work more collaboratively with individuals and groups outside of their professional siloes in an attempt to lighten the administrative burden on accredited institutions or programs who must answer to multiple accrediting agencies. (Paniagua)
- When encouraging interprofessional training and practice, it is important to first start with the process of building a vision and engaging the community, and then work backwards into competencies, including interprofessional competencies. (Talib)
- Competency-based professional standards could be incorporated across the continuum of education, from the pre-service degree level to residency programs, continuing education, and certification. (Vlasses)
- Where accreditors can fit into the process of competency-based professional standards, accreditors also could develop competency-based professional standards using evaluations from both a quality assurance and quality improvement perspective. These types of standards would vary across professions and countries, due to different health systems, practice areas, and professional competency expectations. Competencies can vary state by state and country by country in both practice and regulation. (Hinton Walker)
- There are many benefits to achieving greater collaboration among stakeholders, including cost savings and efficiencies through economies of scale as benefits, as well as developing a common understanding of what each entity or group does to add meaning to processes. (Butlin)

FOSTERING INNOVATION THROUGH COLLABORATION: BREAKOUT GROUP DISCUSSIONS

The following session focused on fostering innovation through collaboration. Demonstrating the session theme of collaboration, members of the Global Forum on Innovation in Health Professional Education and workshop participants gathered in small group discussions to explore challenges and opportunities for greater harmonization among and between groups with vested interests in accreditation and quality improvement. Participants in each group included health professional educators, accreditors, and others. Each group had a leader, and in some cases a colleague from another profession assisting the leader by providing context and background on the topic from their perspective. The four breakout groups were

1. Bringing education and practice accreditors together for achieving quality throughout the education to practice continuum
2. Building a competency-based accreditation system: balancing global standards with local relevance
3. Collaborating for harmonization of competency-based standards across professions

Copyright © National Academy of Sciences. All rights reserved.

4. Improving efficiencies of accreditation through greater collaboration among stakeholders.

The following are the reports from each of the breakout group leaders to the participants of the workshop. These comments are a summary of the group discussions presented by the group leaders, and they should not be viewed as consensus.

Bringing Education and Practice Accreditors Together for Achieving Quality Throughout the Education to Practice Continuum

Leader: Miguel Paniagua, M.D., National Board of Medical Examiners
Assisted by: Karen Sanders, M.D., Veterans Health Administration, and David Benton, R.G.N., Ph.D., FFNF, FRCN, FAAN, National Council of State Boards of Nursing

With the assistance of Karen Sanders and David Benton, Miguel Paniagua led his group through a series of questions related to bringing accreditation of education and practice closer together. The first question the breakout group addressed was, “What are the challenges in engaging the entire continuum of learners and organizations in the accreditation process?” Out of this discussion came the themes of compromise, incentive, simplification, importance of words, and capacity to influence accreditation (versus control). Paniagua said that accreditation bodies as a whole first need to agree upon processes and collaborative efforts, and then these ideas can be brought to the practice field. He raised the challenge of permitting accreditors to innovate while giving them the responsibility of regulating. He also stated that accreditation bodies could be incentivized to work more collaboratively with those outside of their professional siloes in an attempt to lighten the administrative burden on accredited institutions or programs who must answer to multiple accrediting agencies. The importance of word choice and the power of language was also raised as a challenge, as word choice should especially be considered when engaging other professions and trying to share competencies. Finally, said Paniagua, this type of engagement requires leadership, sharing of revenue, and understanding the differences in each of the systems.

The second question was “How do we align the requirements of accreditation standards with educational and practice programs, or vice versa?” The group talked about starting from an informed beginning first before coming up with a consensus. Paniagua expressed hope that stakeholders could find common ground and agree upon certain core competencies across the various accreditations within professions. There is also a need for public availability of information to ensure that there is buy-in, said Paniagua. He emphasized that patients should be asked for their thoughts and opinions when it comes to aligning education and practice, and that stakeholders should listen to the communities of interest when making these changes. The gap between accreditation of practice and accreditation of educational programs was a theme throughout their discussion, he said.

The third question asked was “How does one prove the worth of accreditation in protecting the health of the public?” The group discussed potential outcomes that could demonstrate value, such as getting a good job or showing strong performances of colleagues within the practice environment. It would not be possible to do a randomized controlled trial, said Paniagua, because it would be impossible to remove accreditation and wait to see how many errors occur. Paniagua stated that it is important to remain mindful of the positive effect

Copyright © National Academy of Sciences. All rights reserved.

accreditation has not only by promoting safety within accredited programs, but also through access to health care for communities—especially communities in need.

The fourth question was "What is the future of education and accreditation balance across the world?" According to Paniagua, a thought that emerged from the group discussion was related to the shift in demographics caused by the heterogeneity of practice sites and practices in culture as well as by the retiring workforce. He added that with experienced personnel and providers leaving the workforce, and with a shifting nature of roles brought about by technology and costs, the health professions and the work of professionals may be very different in 20 years. The group also discussed the term *international standard*, and how it would likely be difficult to devise a standard that fits every possible scenario although there will likely be commonalities that all can draw from.

The final question the breakout group discussed was "What is the best way to partner with patients, populations, communities, and governments in promoting the role of accreditation in ensuring quality education and training?" Paniagua reported on the need to refocus what accreditation is truly meant to do. He suggested that accreditors think about core principles of accreditation and why accreditation came into existence. Accreditation can begin with those willing to collaborate, he said, then work toward finding common ground with other stakeholders. In addition, motivation could be related to the populations served and not merely one's self-serving interests. He raised possible innovations for partnerships including joint commitments with other professions and looking to fields outside of the health professions, such as the airline industry or information technology, for best practices and lessons learned that could be incorporated into the accreditation process.

Building a Competency-Based Accreditation System: Balancing Global Standards with Local Relevance

Leader: Zohray Talib, M.D., George Washington University
Assisted by: Nelson Sewankambo, M.B.Ch.B., M.Sc., M.M.ed., FRCP Doctor of Laws (HC), Makerere University, Uganda, and Susan Day, M.D., Accreditation Council for Graduate Medical Education

The breakout group led by Zohray Talib focused its discussions around three main components: (1) key steps and resources in the process of establishing an accreditation system, (2) opportunities for encouraging interprofessional training through accreditation, and (3) lessons learned in balancing global and local standards in accreditation systems.

Potential Key Steps and Resources in the Process of Establishing an Accreditation System

The process of establishing an accreditation system, said Talib, begins with identifying the key stakeholders. The World Health Organization (WHO) pentagram lists the five key stakeholders for accreditation: academics, policy makers, health managers, health professionals, and communities. Once these stakeholders are identified, the process of how to engage them is critically important, said Talib. Stakeholders, including the community, can be brought together to define the vision for this initiative and the optimal functioning of health care professionals within the vision. Stakeholders can then identify competencies and begin to build the accreditation system that supports this vision.

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

In addition, building trust early with stakeholders facilitates the process, said Talib. When ministries of health, education, and finance—in some cases, competing stakeholders—are brought together, time upfront can build trust and co-ownership in the vision. Talib suggested that this process begin with defining the vision. Building and sustaining trust then requires feedback loops at multiple levels for individual programs and the accreditation systems—for example, at the level of practitioners in the field, their performance, in aggregate, could be shared with program leadership, and other stakeholders to gauge provider performance and to collectively address challenges. As the system grows and develops, there could be opportunities for feedback, to see if the system is working well and keeping up with the values and priorities of the society.

Opportunities for Encouraging Interprofessional Training

Talib said that when encouraging interprofessional training and practice, it is important to first start with the process of building a vision and engaging the community, then work backward into competencies, including interprofessional competencies. The accreditation system then reflects the vision and interprofessional goals. Nelson Sewankambo, Makerere University, shared the process that was used in Uganda where key stakeholders (including representatives from different health professions) in the country came together to develop their accreditation system based on the competencies that reflected local needs.

In the process of establishing an accreditation system, agreement in-country on common nomenclature for interprofessional education and training can advance the vision and can facilitate different professions to incorporate the same ideas into their programs.

New accreditation systems could also identify and include metacompetencies as an opportunity to strengthen interprofessional training; for example, certain leadership skills, cultural competencies, and communication skills might span different professions and could be part of the different accreditation systems. Identifying common areas of interest or common challenges could particularly allow those working in limited resource settings to reflect on how to work together to make the best use of their limited resources, and how interprofessional collaboration may be an opportunity for this.

To ensure ongoing relevance of an accreditation system, a platform for ongoing dialogue would be important to keep up with the evolving priorities in society, said Talib. As the societal value system or as the health system evolves, the accreditation system will need to reflect these changes. Similarly, to ensure the collective vision is realized, the service and practice environment would need to reflect interprofessional practice so the positive effect of these changes can be applied.

Lessons Learned in Balancing Global Standards and Local Relevance

The breakout group then considered how to reconcile global standards and local relevance. First, it is important to understand context, said Talib. Local resources, local culture and practice, scope of practice for professions, and the realities of the health service environment are all part of this local context. The accreditation system should consider this local context, yet still address priority local health needs ensuring high-quality, locally-relevant care. In low-resource settings, there is a tension between the desire to meet global standards while being locally relevant; to address this, one of the group members suggested that high quality, from a

Copyright © National Academy of Sciences. All rights reserved.

global perspective, should reflect the process of accreditation and the degree to which it is maintains local standards. The specific competencies required of a profession within a system, would then reflect local needs. Accreditation systems would then be judged on the degree to which they require a consideration of local health indices, resources and scope of practice.

Collaborating for Harmonization of Competency-Based Standards Across Professions

Leader: Peter H. Vlasses, Accreditation Council for Pharmacy Education
Assisted by: Patricia Hinton Walker, Uniformed Services University of the Health Sciences

The discussion reported by Peter Vlasses sought to have a better understanding of competency-based standards and interprofessional collaborative practice. To do this, the group addressed three main questions throughout its session:

1. What are competency-based professional standards? What is their purpose, and who develops them?
2. Where do competency-based professional standards occur in the lifespan of professionals? How are they evaluated?
3. How do competency-based standards relate to other types of standards or to entrusted professional activities?

Patricia Hinton Walker reported on several competency-based professional standards, including knowledge, skills, values, and ethics, that she and Vlasses identified from the group's discussions. These standards can be both general and specific. One of the challenges, she noted, is that much of the research is still being developed; therefore, standards are more evidence driven than evidence based. The group also discussed various purposes for competency-based professional standards that Hinton Walker reported as including ethics, leadership, and outcome-based competencies. Another purpose of these standards was to serve as a framework for curriculum development and an opportunity for improved assessment. The stakeholders who develop competency-based professional standards, she said, are educators, faculty, regulators, practitioners, and the public. She saw this as process driven, but ultimately competency based.

Vlasses then stated that competency-based professional standards could be incorporated across the continuum of education, from the degree level to residency programs, continuing education, and certification. He noted potential new avenues for competency-based professional standards that he drew from the group's dialogue. These include healthcare systems and financing, technology issues, simulation, gaming, standardized patients, objective structured clinical examinations, and team-based objective structured clinical examinations.

Competency-based professional standards, said Hinton Walker, can be global, multifactorial, and/or needs based. Having both generic and specific standards is key, and standards can be related to both standards of practice and regulatory issues. Medical schools are using entrustable professional activities (EPAs), she said, which are demonstrable skills such as being able to do a patient history and a physical, to enter patient information into a chart, and to prescribe appropriately. She added that medical schools are now preparing students to enter residency with 13 expected skills.

According to Hinton Walker, the group then discussed where accreditors fit into the process of competency-based professional standards. She saw that the accreditors could develop competency-based standards using evaluations from both a quality assurance and a quality

Copyright © National Academy of Sciences. All rights reserved.

improvement perspective. Ongoing monitoring and evaluation of the program and institutional level is important, she said. Specialized, professional, institutional, regional, national, international, and residency accreditors could all be involved in this process. These types of standards would vary across professions and countries, owing to the different health systems, practice areas, and professional competency expectations that exist. Competencies can vary state by state and country by country in both practice and regulation. Hinton Walker provided the example of compact licensure in nursing,[1] which could be a model for other professions that have wondered how to credential across settings and states rather than having many barriers.

The breakout group brainstormed many opportunities, noteworthy practices, and barriers for harmonization of competency-based professional standards. Vlasses discussed the difference between harmonization and standardization, noting that standardization is very specific, and harmonization concentrates more on desired competencies and accepting multiple processes for achieving those competencies. Vlasses listed the following opportunities for competency-based professional standards

- ethics;
- professionalism;
- moral agency at the level of the individual, the organization, and society;
- adaptive and independent learning;
- provider-to-person relationship and communication;
- foundational learning;
- cultural awareness, sensitivity, and humility;
- leadership;
- faculty development;
- communication, collaboration, and respect; and
- profession roles and responsibilities.

There are several noteworthy practices that exist that are doing this work well, said Vlasses. He listed centers of excellence, professional collaboration for licensure, the Interprofessional Education Collaborative (IPEC), the Health Professions Accreditors Collaborative (HPAC), and the National Academies of Sciences, Engineering, and Medicine's Global Forum on Innovation in Health Professional Education.

Some of the barriers to this work, identified by individual workshop participants, include payment structures, isolated small practices, medical hierarchy, varying scope of practices, varying criteria for licensure, curriculum space and openings for IPE, education scheduling, tuition and faculty credit for IPE initiatives, and cross-professional assessment of IPE initiatives by faculty. Opportunities include development of modalities on how to measure this work, sustainability of education and practice, improved quality and safety, joint continuing education, and interprofessional requirements.

[1] According to the National Council of State Boards of Nursing, the Nurse Licensure Compact "allows nurses to have one multistate license, with the ability to practice in both their home state and other compact states" (NCSBN, 2016).

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

Improving Efficiencies of Accreditation Through Greater Collaboration Among Stakeholders

Leader: Jennifer Butlin, Commission on Collegiate Nursing Education

The breakout group led by Jennifer Butlin, Commission on Collegiate Nursing Education, first identified various stakeholders of accreditation. This included the groups previously mentioned (the public, practitioners, faculty, educators, regulators, and communities), but also added the licensing and certification boards, federal agencies, the Council for Higher Education Accreditation, students, parents and families, employers and employees, patients and clients, consumers, accrediting agencies, institutional and program staff or officials, and professional or membership associations.

There are many benefits to achieving greater collaboration among stakeholders, said Butlin. She noted cost savings and efficiencies through economies of scale as benefits, as well as developing a common understanding of what each entity or group does in order to add meaning to processes. For example, if one group is requiring a certain type of report and another group requires a different sort of report, why is what they require different, and is there meaning behind that or is it just because it has always been done that way? So might there be a conversation in terms of streamlining reports and benefits to add meaning to why and how particular information is being collected, why certain data are being shared, and are the data meaningful?

One participant in her breakout group offered a perspective on her organization's decision to spend millions of dollars in preparation for an accreditation visit. The participant suggested having every professional accrediting body's efforts included in and accepted by one accrediting body in an attempt to reduce the amount of effort and work for all involved, which would lower administrative costs. A second breakout group participant provided another perspective based on reports that a number of accreditors are moving from accrediting for 5 years to 7 years, or from 7 years to 8 years, or from 5 years to 10 years. The point is they have lengthened the terms of accreditation, which saves time and cost. However, the participant added, putting in place other mechanisms to ensure program accountability over the long accredited period is an important to point to consider.

Butlin added that collaboration would promote a common understanding among stakeholders and create buy-in from stakeholders (such as practitioners and educators). This common understanding could be helpful in holding each other accountable. Sharing evidence of improved effectiveness and identifying and learning from best practices could benefit all stakeholders. In addition, collaboration could help streamline processes (such as having real-time data exchange), increase transparency of the processes, and add meaning to the processes so accreditation is better understood and appreciated. Students would be able to practice across borders, and stakeholders could learn from their peers in the international community. Ideally, these benefits would lead to improved performance of educational programs and accreditors.

While the benefits are clear, there are also many challenges to enhancing collaboration among stakeholders, said Butlin. A major issue within and across professions involves turf battles leading to a reluctance to negotiate, give up authority, or share funding. Competition for clinical sites, for attracting students, and among accrediting agencies may also exist. There can be unwillingness or a lack of understanding on how to collaborate. Logistics, incompatible systems, and scheduling create further barriers to working together. Stakeholders may also have a lack of flexibility to be able to collaborate, or collaboration may create more work for them, since it is an investment in time and energy. Organizations and stakeholders may have different

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

purposes, missions, and visions. Another challenge is that accreditors' roles and responsibilities are expanding, and there are increased pressures on accreditors to do more. Clear communication about roles, missions, and values is important, as there is often a lack of understanding about this. Lastly, Butlin raised the challenge of identifying key players to be part of the discussion. This involves getting all the key players involved, and more importantly, making sure to engage the people who have the authority to make decisions within their organizations.

She then reported on opportunities for collaboration identified by individual workshop participants during the breakout session. This includes dissemination of effective models that could save professions time and money, and could promote learning from each other about best practices. Other opportunities could involve leadership changes and evolving organizational missions that can allow for new opportunities in collaboration and improved efficiencies through collaboration. There are also research opportunities, Butlin said, that can identify not only best practices but evidence-based practice to improve collaboration. Joint site visits and collaborations with international partners are ways that stakeholders can learn from international colleagues and colleagues can learn from other professions.

According to Butlin, preparing stakeholders for successful accreditation collaboration requires an existent common understanding among partners and buy-in from stakeholders. Stakeholders, such as patients, families, and communities, would need to understand their roles and how they may differ, as well as understand why each one should care about accreditation. Additionally, the breakout group discussed how an orientation process may be helpful before collaboration is undertaken. Butlin closed by saying that key players would need to be identified before collaboration could begin, and students and employers should be informed ahead of time about the role of accreditation and their ability to participate in and influence accreditation.

MARKETPLACE OF IDEAS

The Marketplace of Ideas is an open space where participants of the workshop met informally during the lunch recess to discuss an accreditation innovation put forth by a Forum member or his or her affiliate. Anyone attending the workshop could join any of the discussion topics. Each topic was presented briefly to the entire audience just prior to breaking for lunch. The eight discussion topics were organized into four main themes: interprofessional education, enhancing quality and innovation, high-stakes examinations, and innovation. Similar discussion topics were grouped together but discussed separately as participants wandered from one discussion to the next, similar to an oral poster session. Below are the abstracts for each discussion topic. These abstracts were prepared by the individual workshop speakers listed, and have not been endorsed or verified by the Academies. They should not be construed as reflecting any group consensus.

Copyright © National Academy of Sciences. All rights reserved.

Interprofessional Education: Discussion 1
Assessment of Interprofessional Teamwork Competencies: A Role in Accreditation Systems?

Abstract submitted by Miguel Paniagua, M.D., Medical Advisor Test Materials Development, National Board of Medical Examiners
Assisted By: William Werner, M.P.A., National Board of Medical Examiners

In the Fall of 2014, the National Board of Medical Examiners hosted a 2-day meeting with thought leaders in the area of interprofessional collaboration within the health care setting. The aim of the meeting was to identify opportunities to assess and improve the clinical performance of teams of health care professionals and improve patient outcomes. This meeting produced a number of promising possibilities and ideas. Most notably, a collaborative process produced what was termed the eight pillars of effective teamwork—a list of concepts and competencies that the group believed to be the foundation of team assessment:

1. Leadership
2. Trust and respect
3. Communication/listening
4. Foundational knowledge
5. Performance
6. Flexibility/adaptability
7. Backup (supportive) behavior
8. Team/collective orientation

As most health care is delivered by a team of professionals from a variety of disciplines at a number of experience levels, identifying ways to assess their clinical performance is an integral part of the future of both health care provision and education across professions. The accreditation workshop presents a rare opportunity to take a deeper dive into the "eight pillars of effective teamwork" and understand where other members of the education and assessment community prioritize interprofessional team training and performance as part of the accreditation process.

Interprofessional Education: Discussion 2
Buy-in for Interprofessional Education (IPE) Standards in Accreditation

Abstract submitted by Lemmietta G. McNeilly, Ph.D., CCC-SLP, CAE
Chief Staff Officer, Speech-Language Pathology, ASHA Fellow, American Speech-Language-Hearing Association

The challenges and opportunities for consideration by each of the health professions, including IPE standards in accreditation are multifactorial. Implementation of IPE and interprofessional practice is variable and occurs in different capacities across the globe. Collaborative professional practice drives accreditation standards and is a significant component of the changes in some professional standards. Accreditors conduct practice analyses periodically, typically every 5–10 years. These include literature reviews and multiple data points as elements for considerations as standards are updated. With changing practice patterns and varying degrees of data available that support the efficacy of IPE, it is important that

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

accreditors and those that support inclusion of IPE standards clearly describe the rationale for inclusion of IPE in accreditation standards. It is also important for accreditors to use mechanisms that facilitate buy-in from academic programs regarding the standards that address interprofessional education and collaborative practice. Academic programs will employ the standards in ways that yield success for the university. Identification of key strategies and sharing of clear messages to convey the elements of IPE to all significant parties are necessary components that will result in successful outcomes.

Enhancing Quality and Innovation: Discussion 1
Is Accreditation Necessary for a Quality Training Program?

Abstract submitted by Debbie Hettler, O.D., M.P.H., FAAO
Clinical Director, Associated Health Education, Office of Academic Affiliations, U.S. Department of Veterans Affairs

The U.S. Department of Veterans Affairs (VA) Office of Academic Affiliation (OAA) established an innovative pilot program to provide residency training for physician assistant (PA) residents during the 2012–2013 academic year. The goal of the program was to increase the available pool of residency-trained and credentialed physician assistants able to assist in the advanced care of veterans in patient-aligned care teams (PACTs). It was also the hope of this pilot program to demonstrate that the training of physician assistants within the VA would promote their recruitment and retention within a PACT. Approximately half of those completing the program were hired by VA at the conclusion of their training. OAA is looking to expand this pilot to include a mental health physician assistant residency for the 2016–2017 academic year.

All affiliate-sponsored training programs that rotate trainees through VA usually must be accredited by the appropriate agency, which must be recognized by the U.S. Department of Education or the Council for Higher Education Accreditation. All VA-sponsored training programs must be accredited. In general, it is the program itself that must be accredited by the appropriate accrediting body for that discipline. Accreditation of the school by a regional accrediting body does not suffice. In some disciplines, accreditation cannot be granted before the program has graduated trainees. For these programs, as well as pilot programs, there must be a credible plan for achieving full accreditation within the first 3 years of its existence.

The Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) is the accrediting agency that protects the interests of the public and the PA profession by defining the standards for PA education and evaluating PA educational programs within the territorial United States to ensure their compliance with those standards. The ARC-PA is an independent accrediting body authorized to accredit qualified PA educational programs leading to the professional credential of PA. Accreditation is a process of quality assurance that determines whether the program meets established standards for function, structure, and performance. In July 2014 our six programs were informed that ARC-PA had decided that the current accreditation process for clinical postgraduate PA programs will be held in abeyance. They went on to state:

> Accreditation of clinical postgraduate programs is voluntary; it is one method of external validation and assessment of quality. The additional specialty education and training obtained by participation in formal postgraduate PA programs or residencies is not required for successful physician–PA teams to provide specialty

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

medical and/or surgical care. The ARC-PA is convening a workgroup to discuss alternative methods of recognition of educational quality for clinical postgraduate PA programs.

The questions for discussion are:

- Is accreditation necessary to guarantee quality training programs, or just an additional cost burden to the health care system?
- What alternative systems can assure quality if accreditation is not available?
- Can accreditation be properly done for one discipline by another discipline?
- Are there opportunities for multiple disciplines to share an accreditation process?

Enhancing Quality and Innovation: Discussion 2
The Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education

Abstract submitted by Joseph A. Zorek, Pharm.D.[1]; and Cynthia L. Raehl, Pharm.D.[2]
[1]University of Wisconsin–Madison; [2]Texas Tech University Health Sciences Center

A comparative analysis of IPE accreditation standards throughout 10 U.S. health professions was published in 2013 in the *Journal of Interprofessional Care*. The IPE accreditation statements from nursing and pharmacy were most robust. Collectively, results indicated that graduates were not required to complete IPE and, therefore, may not have been prepared for collaborative practice. A common IPE accreditation standard was proposed as one mechanism to improve team readiness across professions. Since this publication, several U.S. accrediting bodies formed the Health Professions Accreditors Collaborative (HPAC).[2] This group has endorsed the Interprofessional Education Collaborative's (IPEC's) core competencies and pledged to pursue the common goal to better prepare students for collaborative practice. Several accrediting bodies also released updated standards at this time. Given these developments, the decision to pursue an update to the comparative analysis was made to explore the effect of these changes on quality and innovation in health professions education. Results showed a clear uptake of language and competencies from IPEC's expert panel report. The most notable changes were observed in the accreditation documents from medicine (both allopathic and osteopathic), pharmacy, and psychology. Trends observed indicate that innovation in IPE accreditation is occurring via adoption of a common competency framework alongside active coordination among several accrediting bodies. This raises important questions about the role of accreditation in enhancing quality and innovation in health professions education.

[2] Members of HPAC include the Accreditation Council for Pharmacy Education, the Commission on Collegiate Nursing Education, the Commission on Dental Accreditation, the Commission on Osteopathic College Accreditation, the Council on Education for Public Health, and the Liaison Committee for Medical Education.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

High-Stakes Examinations: Discussion 1
High-Stakes Testing: Implications for Accreditation Standards for Health Professions Education

Abstract submitted by Mary E. Mancini, R.N., Ph.D., NE-BC, FAHA, ANEF, FAAN
Associate Dean and Chair, Undergraduate Nursing Programs, Baylor Professor for Healthcare Research, The University of Texas at Arlington College of Nursing and Health Innovation

Accreditation standards associated with simulation centers, such as the Society for Simulation in Healthcare's accreditation program for simulation programs, and specialty accreditation programs for discipline-specific education should be used to define and monitor organizational proficiency in the use of high-stakes testing. While there is an increasing tendency towards the use of competency-based assessment models, there is little discussion about the requirements an organization should meet to have consistency among its assessors such that there is proficiency in doing these assessments in a manner that assures reliable and valid results.

Potential questions include

1. What standards should accreditation agencies consider applying to organizations that use high-stakes testing?
2. Are their minimum criteria for individuals involved in making high-stakes assessments?
3. What are the best practices for creating the environment for reliable and consistent high-stakes testing?

Schools for health professionals can demonstrate they are using evidence-based best practices when evaluating students' performance in the simulation setting through demonstrating adherence to accreditation standards for performance in the area of assessment.

Resources

American College of Surgeons. 2016. *Accredited education institutes*. https://www.facs.org/education/accreditation/aei (accessed August 29, 2016).

McLeod, G. A., J. Barr, and A. Welch. 2015. Best practice for teaching and learning strategies to facilitate student reflection in pre-registration health professional education: An integrative review. *Creative Education* 6(4):440-454.

National League for Nursing. *NLN fair testing guidelines for nursing education*. Washington, DC: NLN.

Sando, C. R., R. M. Coggins, C. Meakim, A. E. Franklin, D. Gloe, T. Boese, S. Decker, L. Lioce, and J. C. Borum. 2013. Standards of best practice: Simulation standard vii: Participant assessment and evaluation. *Clinical Simulation in Nursing* 9(6):S30-S32.

Society for Simulation in Healthcare. *SSH accreditation of healthcare simulation programs*. http://www.ssih.org/Accreditation (accessed August 30, 2016).

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

High Stakes Examinations: Discussion 2
Setting, Implementing, and Acting on a Bright-Line Outcome Standard[3] for Program Pass Rates on a National Board Exam
Abstract submitted by Mark Merrick, Ph.D., ATC, FNATA
President, Commission on Accreditation of Athletic Training Education

The call for transparency and accountability in accreditation has never been greater, and the focus for the public and governmental agencies centers on educational outcomes. Accreditation standards that set clear and understandable expectations for student outcomes and that establish accountability for educational programs are in demand. As a specialty accreditor, we noted a sharp disparity in performance of graduates of some programs on our profession's credentialing examination. In response, we examined metrics related to program performance and, in 2012, we implemented a bright-line standard that delineated a minimum 3-year aggregate first-attempt pass rate on the credentialing exam. In 2016, once programs had graduated three cohorts under the standard, we placed 26 percent of our accredited professional programs on probation for violation of this standard. We also created and shared a decision algorithm for accreditation actions relative to this standard that clarifies how decisions for probation, show cause, and withdrawal of accreditation for noncompliant programs are reached. Our experience in creating, implementing, and now enforcing the standard includes some difficulties and successes that may be informative to both accreditors and education associations when considering potential bright-line standards.

Innovation: Discussion 1
Accreditation Versus Innovation
Abstract submitted by Rick Talbott, Ph.D., FASAHP, FASHA, FAAA
Dean, Pat Capps Covey College of Allied Health Professions, University of South Alabama, ASAHP: Past President: President-Allied Health Professions PAC

The one issue that is of most concern to nonmedical programs and nursing programs is coping with the limitations that many of the professional accreditations agencies put on innovative ways to achieve clinical experience and competence. A major bottleneck in meeting the increasing demand for allied health professionals is the inherent restrictions that many professional accreditation standards put on alternative pathways to clinical competency—such as an unnecessary degrees or other discipline requirements of preceptors, limitations on the use of simulations and virtual-standardized patients, and sometimes inadvertent but controlling language that restricts innovative solutions to educationally efficacious and opportunity-expanding solutions.

Innovation: Discussion 2
Using Accreditation to Foster Well-Being and Address Burnout in Health Professionals, Students, and Educators
Abstract submitted by Elizabeth (Liza) Goldblatt, Academic Collaborative for Integrative Health

This discussion group will explore the role of accreditation in ensuring that schools or programs address the health, well-being, and resilience of health professional students and their

[3] Set by the accrediting body, a bright-line outcome standard is a clearly defined, objective measure of competence.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

educators. Such accreditation requirements could prepare the future health workforce to better deal with the known stresses of work in health care environments that lead to unhealthy or destructive behaviors and/or burnout of health professionals. Health professionals who are aware of the importance of health and well-being and have their own personal methods for cultivating resilience could, in turn, support skill building that will help the future health workforce assist their patients toward disease prevention, health, and greater well-being.

It is well known that many of today's health professionals experience high levels of job-related burnout caused by the stressful nature of their work. Parallel challenges are often evident in cohorts of students preparing for these professions. Such ongoing stress not only negatively affects their personal health, but also affects the health of the patients with whom they work. How well can health professionals be expected to focus on the health and well-being of their patients if they are not engaged in such practices in their own lives? In addition, highly educated health professionals in whom a significant societal investment has been made may choose, through dissatisfaction, to leave their primary profession in search of more work/life balanced careers at this time when there are multiple pressures on the health care workforce.

Based on a recent informal review of accrediting standards and competencies for a limited set of health professional education (M.D., R.N., N.D., D.C., L.Ac., massage therapy) it appears that programs may include content on self-care that is not reflected in accreditation documents (or *criteria*). Exceptions are the Commission on Massage Therapy Accreditation[4] that requires a self-care component within the curriculum competencies and the Council on Naturopathic Medical Education[5] that requires students have "a well-developed sense of personal wellness."

In addition, the Academic Council for Graduate Medical Education[6] has recently engaged a process that is developing "a pathway for moving forward to positively impact resident/faculty/practicing physician well-being." These and other examples from participants' institutions and professions will be used to inform the discussion on education accreditation standards for addressing well-being, stress, and burnout of health professionals, students, and their educators.

WEBCAST SESSION

While participants attended the Marketplace of Ideas, a side event provided opportunities for the webcast viewers to also consider innovations geared toward virtual participants from around the globe. The session was moderated by Maria Tassone, University of Toronto, Canada, and featured three presentations related to accreditation.[7] Below are the abstracts for each webcast session presentation. These abstracts were prepared by the individual workshop speakers

---

[4] For more information about the Commission on Massage Therapy Accreditation, please visit comta.org (accessed July 18, 2016).
[5] For more information on the Council on Naturopathic Medical Education, please visit www.cnme.org (accessed July 18, 2016).
[6] For more information on the Accreditation Council for Graduate Medical Education Symposium on Physician Well-Being, please visit www.acgme.org/Portals/0/PDFs/Symposium/Symposium_on_Physician_Well-Being_Summary_and_Proposal_Feb_2016_BOD.pdf (accessed April 8, 2016).
[7] Videos of the webcast session can be found on the Global Forum on Innovation in Health Professional Education workshop website, www.nationalacademies.org/hmd/Activities/Global/InnovationHealthProfEducation/2016-APR-21.

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

listed, and have not been endorsed or verified by the Academies. They should not be construed as reflecting any group consensus.

Social Accountability and Accreditation

Abstract submitted by Roger Strasser, A.M., Dean,
Northern Ontario School of Medicine, Canada

This brief presentation will explore examples of mechanisms that connect socially accountable education to accreditation. The World Health Organization (WHO) defines the "social accountability of medical schools" as "the obligation to direct their education, research, and service activities towards addressing the priority health concerns of the community, region, and the nation that they have a mandate to serve." Accreditation of medical and other health profession schools has the potential to encourage their programs to be socially accountable and guided by the values of quality, equity, relevance, partnership, and cost-effectiveness. In Canada, the Committee on Accreditation of Canadian Medical Schools now includes social accountability as an element in the standard on mission, planning, organization, and integrity of the medical education program. The Training for Health Equity network (THEnet) is a group of health profession schools worldwide that are guided by a social accountability mandate. THEnet developed, piloted, and published an Evaluation Framework for Socially Accountable Health Professional Education that assists schools in implementing and assessing their social accountability. The Northern Ontario School of Medicine (NOSM) has a social accountability mandate and engages the community as a key mechanism for development, delivery, and evaluation of NOSM's education programs. There is great potential for socially accountable education programs to produce a "fit-for-purpose" health workforce that is responsive to community health needs.

Accreditation and the Search for "New Professionalism"

Abstract submitted by Jan De Maeseneer, M.D., Ph.D. (Hon) FRCGP[1]; and Barbara Krekels, M.A.[2]
[1]Ghent University, Belgium; [2]Flemish Strategic Advisory Council Welfare, Health and Family, Belgium

Context

A comprehensive accreditation procedure should be able to assess whether professional education is responsive to the future needs of the population. Institutions for health professional education have the opportunity to engage in a reflection at policy level concerning the changes related to sociodemographic, cultural, and epidemiological developments in society. We report how such a process actually takes place in the Flemish region in Belgium.

Objective

The objective is to define the "professional profile" that will be needed in health care and welfare in the future to respond to societal change.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

Methods

Meetings and plenary discussion of the Strategic Advisory Council for Welfare, Health, and Family in Flemish region, composed of 28 stakeholders from the large civil society: supply; demand; personnel in the sector of well-being, health, and family; professionals; socioeconomic organizations (e.g., trade unions, employers, representatives of people living in poverty). Moreover, there are eight independent scientific experts in the council.

Results

The council reported that the changing society will be characterized by more complexity with an increasing ethnic and cultural diversity, an economic trend toward more competition, an ageing society, a change in family structures, increasing chronic conditions, and scientific and technological developments. The changes in society entail more individualization, a focus on autonomy and self-determination, but also more uncertainty and dysfunctioning of human beings.

Actually, the answers to the challenges have been sought in more specialization (as a strategy to reduce complexity), instrumentalization of professional work, and medicalization and therapeutization.

The priority of comprehensive care and support should be to contribute to the quality of life. This requires an eco-bio-psycho-social model where people value their possibility to function and their ability to participate in society.

The council decided that we need new answers: a more generalist approach is needed and emphasis should be on connecting people—connectedness as a precondition for autonomy. To achieve those goals, professionals require generalist competencies—enabling a professional to provide care and support, based on the general strategy, with the aim to address a broad range of unspecified health and/or well-being (related) problems. The care should focus on the quality of life, on supporting self-care and the care of informal caregivers, on strengthening social cohesion, on embracing diversity, and on the appropriate use of technology and information and communication technologies. The care provider should focus on functioning, pay attention to what really matters for people, support autonomy through information, and strengthen participation and inclusion. Finally, the council did not see the solution to the challenges in the creation of a “superprofessional,” but in stimulating interprofessional cooperation.

Conclusion

A comprehensive accreditation process should take into account important policy documents, describing how the society is going to respond to new challenges. Based on the experience in the Flemish region in Belgium, institutions for health professional education should focus on more generalism and an approach integrating personal autonomy with connectedness and social cohesion. Curriculum design, didactic approaches, clerkships, and skills training of health professionals should be assessed in the light of those developments.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

Educational Program Recognition for Meeting the ICM Midwifery Educational Standards

Abstract submitted by Mary Barger, Ph.D., M.P.H., CNM, American College of Nurse-Midwives

Well-educated midwives are capable of delivering nearly 90 percent of the essential care of women and their newborns before and after birth (UNFPA et al., 2014). Adequate numbers of midwives are the most cost-effective solution to reducing infant mortality and improving maternal health globally. However, only four of the countries with high rates of maternal and newborn mortality have enough educated midwives to meet the needs of the population (UNFPA et al., 2014). Thus, the urgent need to produce more midwives is met by some policy makers urging the development of truncated midwifery education programs to produce the quantity, but not the quality, of needed midwives.

In 2009, with an update in 2011, the International Confederation of Midwives (ICM) adopted and promulgated the ICM Global Standards for Midwifery Education (Thompson et al., 2011). Detailed companion documents were developed to assist educational programs to develop both their curriculum and their faculty to meet these standards. However, the literature is sparse, especially in less developed countries, about established processes to assure the public that midwifery educational programs meet these or any other standard of education.

In a first attempt to identify if midwife educators perceived a need for a program that would recognize if their programs met the ICM Education Standards, an Internet survey was untaken in 2014. The survey was developed by members of ICM's educational standing committee with feedback from persons on the committee's email list of educators. The survey asked four basic questions:

1. What is the perceived need for a recognition process?
2. What is the feasibility of the educational program to produce a self-evaluation report, and what resources would be required?
3. What are some ideas about how to verify the report, and what resources would be required?
4. What is the willingness of local midwives to be trained as program verifiers?

Invitations to complete the survey in English, Spanish, or French were disseminated through the committee's email list, the Global Alliance for Nursing and Midwifery email list, and through reaching out to individual educators in low-resource countries.

A total of 227 surveys from different countries with all regions of the globe represented were completed. English was the language used by the majority of respondents (69 percent), followed by Spanish (23 percent) and French (8 percent). Nearly 80 percent of respondents identified a need for a recognition program, and a similar percent agreed they were capable to prepare both a self-evaluation report and a verification process. However, less than 20 percent did not identify needing extra resources for either of these tasks. About half endorsed needing additional financial resources and additional staff time, with 46 percent identifying needing some expert consultation to prepare a self-evaluation report. Presumably any global recognition program would rely on electronic transmission of reports and documents, and 40 percent of respondents identified needing improved electronic capacity. Lastly, 82 percent felt midwives would volunteer to be trained and act as verifiers for the process but should be compensated.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

The results showed a large majority of educators would like a mechanism to demonstrate the quality of their midwifery education programs. This result was somewhat surprising given the large number of responses from countries that already have fairly strong midwifery education program accreditation processes, namely Australia and New Zealand, the European Union, North America, and the United Kingdom. Some respondents saw a recognition process as important for improving global practice and assisting with the movement of midwives among countries as well as identifying programs for student exchange experiences.

REFERENCES

NCSBN (National Council of State Boards of Nursing). 2016. Nurse licensure compact. https://www.ncsbn.org/nurse-licensure-compact.htm (accessed August 31, 2016).

Thompson, J. B., J. T. Fullerton, and A. J. Sawyer. 2011. The International Confederation of Midwives: Global standards for midwifery education (2010) with companion guidelines. *Midwifery* 27(4):409-416.

UNFPA, ICM, and WHO (United Nations Population Fund, International Confederation of Midwives, and the World Health Organization). 2014. *The state of the world's midwifery 2014: A universal pathway. A woman's right to health.* New York: United Nations Population Fund.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

4
Engaging New Partners in Accreditation

Key Messages Identified by Individual Speakers and Participants

- A person-centered philosophy [involves] a strong survey process and collaborative partnerships for enhancing the life of the individual who is being served through accredited programs. (MacDonell)
- Accreditation can stimulate innovative models, and One Health accreditation can be part of this. (Kochevar)
- The ability to work effectively across national and regional borders requires time, trust, relationships, understanding, respect for other's professions, an awareness of societal and professional needs, and sufficient resources to address challenges an create opportunities. (Sabin)
- There must be a single language used for an accreditation system. A challenge is going to be how the accreditation system will move from multidisciplinary into interdisciplinary through to transdisciplinary. (Reid)
- Breaking the barriers is difficult when professionals want to protect themselves, do their own research, and only work with individuals of their profession. (Bazeyo)

THE ROLE OF PATIENTS, FAMILIES, COMMUNITIES, AND POPULATIONS IN HEALTH PROFESSIONAL EDUCATION ACCREDITATION

Jo Ann Regan with the Council on Social Work Education led off the session on engaging new partners by focusing on the role of patients in accreditation. To explore the issue, she interviewed Christine MacDonell from the Commission on Accreditation of Rehabilitation Facilities on her involvement with persons, families, communities, and populations in health professions accreditation. Regan set the stage for the interview by describing how the session was formed. She referred the audience to proceedings from a 2014 Josiah Macy Jr. Foundation conference that recommended convening a summit of major education accreditors and professional certification bodies with education leaders, clinicians, patients, families, and communities to produce a framework and a position statement that reflects a commitment and action plan for incorporating partnerships with patients, families, and communities into accreditation, certification, or maintenance of certification (Fulmer and Gaines, 2014). To operationalize such an action plan, accreditors would have to think differently about their site visit teams. Accreditors tend to do the same thing, she said. Then, speaking from personal experience, Regan described her own education site visit teams that, like others, typically include practitioners and have less focus on public members. Even as social workers, her profession has not incorporated their eventual clients and constituents into their accreditation, and she sees that as a problem.

Copyright © National Academy of Sciences. All rights reserved.

A Person-Centered Approach to Accreditation

Regan then introduced MacDonell from the practice side of accreditation, and described the basic structure of the Commission on Accreditation of Rehabilitation Facilities (CARF). CARF is an international organization that accredits more than 50,000 programs and services from multiple health professions at 23,000 locations. They serve over eight million persons of all ages annually through 6,800 CARF-accredited service providers (CARF International, 2016a). The mission of CARF is to promote the quality, value, and optimal outcomes of services through a consultative accreditation process and continuous improvement services that center on enhancing the lives of persons served. As the managing director of the Medical Rehabilitation and International Aging Services/Medical Rehabilitation accreditation areas, MacDonell added that CARF was first established in 1966 because consumers were looking for reliable rehabilitation services; while there was an ample supply of providers, there were no baseline quality measures on which to distinguish one from another. CARF was started by individuals in the community and has remained heavily influenced by the people who are served by the organization. This includes a variety of different health and human services accredited by CARF as well as persons served by those agencies—clients, participants, residents, patients, and inmates, since CARF also works within the correctional system. Persons served are the primary consumers of services. When these persons are unable to exercise self-representation at any point in the decision-making process, *persons served* is interpreted to also refer to those persons willing, able, and legally authorized to make decisions on behalf of the primary consumer. Views of persons served by CARF are incorporated into all aspects of their governance structure. For example, CARF is a not-for-profit organization and wanted to identify their moral owners.[1] CARF asked the question, *who can we not fail to protect*? While a controversial question, it led to a healthy debate about CARF's responsibility in protecting the person who pays for the survey versus the person who actually receives the rehabilitative services. In the end they agreed that the person served is the one CARF cannot fail to protect through its accreditation process. This decision encouraged CARF to develop standards that were and continue to be person centered. For their accreditation process, CARF also includes personnel and other stakeholders. MacDonell speculated that stakeholders in education might include others professions at the university, university-affiliated community organizations and clinicians, and possibly the university's board of trustee. Using the CARF process of inclusion, she asked the audience, how do you get input from your self-identified stakeholders that go beyond just collecting the data?

In response to her own question, MacDonell emphasized her desire to know how data is used. If used well, data can either confirm that current practice is satisfactory or it can provide information that something different must happen. These changes might include performance improvement, strategic planning, reassessing the organization's resources, or conducting financial planning. At CARF, they are not satisfied with paper results, but rather want demonstrations of how groups are actively listening to their stakeholders and how such findings are taken forward. This includes looking at trends to assess how best to use the information received.

MacDonell described the three tasks of an accreditation survey. There is one-on-one, confidential interviewing; there is direct observation; and there is written documentation following the survey. While each element is important for developing a framework, what is most

[1] As a private, not-for-profit, CARF does not have shareholders, so *moral owners* are individuals that make up CARF's equivalent to shareholders in for-profit companies.

Copyright © National Academy of Sciences. All rights reserved.

critical for her is how the information is embedded into day-to-day practice. When asked whether CARF focuses more on performance improvement than quality assurance, MacDonell responded definitively that it is the former. They do not employ a punitive system, but a consultative process. The survey should be a collaborative learning process. In addition, they have different tiers of accreditation awards; the highest is 3 years of accreditation, followed by an award of 1 year accreditation, and finally nonaccreditation. Provisional accreditation is yet another category that occurs when a program receives two sequential, 1-year awards. The program is then put on notice that if they do not obtain the 3 year award within 1 year, they will be become nonaccredited. MacDonell added that CARF employees are there to offer assistance to organizations on improving quality and standards toward a 3-year award.

Competencies for Health Professional Students

In preparing for her presentation, MacDonell asked some CARF stakeholders what issues they would like her to share with the health professional educators in the audience that could be imparted to their students. Her stakeholders identified two key areas that health professional educators might want to consider as they develop individual competencies.

Active Listening

The first is to train students to actively listen so they actually hear the person being served rather than rely on a questionnaire to tell the person's story. After listening to a person's story, they suggested students use their professional expertise to consider how to incorporate the unique situation of that person into a meaningful, individualized care plan that will progress the person closer to his or her self-identified result. Such an outcome might be to resume a life role, or in the case of a child, to get back into school. Whatever the goal of the person is, they said, it is the job of the health professional to work with that person to get them closer to achieving that goal.

Learning from Persons Served

The second area involves a tension between time efficiency for conducting a health evaluation and a person's satisfaction with being heard during their visit. MacDonell acknowledged the reality that within the field of health and human services there is not a lot of time to listen to long stories; trying to find the right balance is a struggle. Her stakeholders summarized their thoughts by expressing a desire for health professional graduates to enter the workforce ready to learn from those they serve to make sure their competencies continuously increase. To make her point, MacDonell described a typical rehabilitation setting where the client-driven outcome is not based on the intervention of one individual health provider but the culmination of the interdisciplinary team working together toward the same outcome. New hires would be open to learning effective interdisciplinary communication and collaboration and how they fit within a team-based, outcomes-driven health system.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

Maintaining a Focus on Persons Served

MacDonell then went on to describe some practices CARF has found successful in connecting with their persons served. One came from a realization that parents of children in their rehabilitation programs are more open with other parents than with trained surveyors, so CARF now trains parents as surveyors. Another draws from the United Kingdom in partnership with the Care Quality Commission—the independent regulator of health and adult social care in England.[2] There, CARF relies on an adult liaison who has gone though the program and trained to interview the person in rehabilitation as well as his or her support network of family and caregivers. A third example involves the Patient-Centered Outcomes Research Institute (PCORI), a U.S. independent, nonprofit, nongovernmental organization set up to improve patient care and outcomes through patient-centered comparative clinical effectiveness research.[3] By using those enrolled in a study for peer-to-peer education, a person with a spinal cord injury or an adolescent may be better positioned to educate than the therapist. MacDonell emphasized the importance of letting go of ego in order to learn from those who have gone through the services.

Incorporating Input from Persons Served

Going back to her opening remarks of developing a patient-centered education framework for accreditation, Regan asked MacDonell if she could elaborate on how to get input from the persons served within the areas of quality and accountability. MacDonell responded by describing a CARF initiative promoted by their second chief executive officer. It involved developing an instrument that could provide a higher level of quality and accountability to all their stakeholders. The tool they created, called uSPEQ (pronounced *you speak*),[4] focuses on both the consumer experience and the employee climate. Data for each of these areas are drawn from surveys that are self-administered, voluntarily, and anonymous (CARF International, 2016b). Looking at the consumer experience tool, MacDonell explained that it can be used in a variety of settings to provide insight into client perceptions about the service they are receiving within key areas including informed choice, respect, dignity, participation, input, and satisfaction. MacDonell then described how such a survey might be used to assess the acceptability of technology and the digital literacy of a client population before employing the latest rehabilitation technology.

Regan directed the next question to the audience. She asked the participants to reflect on the philosophy presented by MacDonell and to consider whether and how the organization they work at incorporates the person or persons served into their assessment and evaluation measures. She took three comments from the audience. The first strongly endorsed the use of the word *person* and the need to change the medical lexicon to reflect the thinking behind using it to describe those served by health providers. The second, from David Benton at the National Council of State Boards of Nursing (NCSBN), expanded the term to *persons served*. He emphasized that for NCSBN, the standard process is to survey students, educators, employers, and board members, and they often attend events hosted by those groups where they can gain

---

[2] For more information about the Care Quality Commission, please visit www.cqc.org.uk/content/about-us (accessed July 1, 2016).
[3] For more information about the Patient-Centered Outcomes Research Institute (PCORI), please visit www.pcori.org/about-us/what-we-do (accessed July 1, 2016).
[4] For more information about uSPEQ, visit www.uspeq.org (accessed July 1, 2016).

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

access to these various stakeholders. MacDonell followed up with a question about whether the information gained is shared with the accreditor and used to improve curricula or other aspects of the educational process? The answer from Benton was yes. As the overarching body that supports the state regulatory authorities, NCSBN uses the data obtained to structure the content of the examination processes that students have to pass before they can get a license; it is a very direct and open process that allows NCSBN to determine where emphasis on particular aspects of its education is needed. This, said Benton, translates into change.

The third comment involved the practice side and the example of a local Virginia hospital that takes patient input very seriously—although it was also pointed out that things can go public within this sector. MacDonell used this comment as an opportunity to discuss "transparency." CARF standards require that facilities share information about their actual performance with the person served, with personnel, and with stakeholders. The measurements include effectiveness, efficiency, access, and satisfaction as viewed by the person served as well as a stakeholder group.

Opportunities and Challenges to Providing a Person-Centered Philosophy

In the final minutes of the session, Regan asked MacDonell to consider opportunities and challenges associated with providing a person-centered philosophy. She emphasized the value of a strong survey process and collaborative partnerships for enhancing the life of the individual who is being served through accredited programs. The process she encouraged obtains feedback about the accrediting organization itself and their methods for obtaining input as well as feedback from the surveyors on the health program and on their teammates. Such a collaborative approach is not without challenges. MacDonell expressed concern and desire that people understand why accrediting organizations exist, which is to protect the person served in the program. She also admitted that at times, egos of such highly accomplished professionals can get in the way of taking a collaborative approach and being open to more participatory methods for getting feedback on their program and their organization's performance. Another challenge is instilling passion and interest in demonstrating a lasting difference to individuals receiving their services that is confirmed through information gathering and data collection. Regan asked MacDonell to summarize her suggestions for a potential multiprofession accreditation framework containing a person-centered philosophy. Her response was to make sure people are prepared to really listen to the person served, make a difference in their lives, and be able to have the skills to do this throughout the accreditation process or survey. In her parting message to the audience, MacDonell asked, "How are you preparing the incoming workforce to work efficiently and productivity while demonstrating that they can listen?"

INNOVATIVE MODELS OF ACCREDITATION: VETERINARY MEDICINE AND ONE HEALTH ACCREDITATION ACROSS NATIONS AND SECTORS

Deborah Kochevar of Tufts University Cummings School of Veterinary Medicine and the Association of American Veterinary Medical Colleges (AAVMC) moderated a panel focusing on One Health accreditation. The One Health Initiative is a movement to forge coequal

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

collaborations among human health professionals, ecologists, and veterinarians to monitor and control public health threats.[5]

Kochevar believes that accreditation can stimulate innovative models and proposed that One Health accreditation can be part of this. She defined One Health as the collaborative effort of multiple disciplines working locally, nationally, and globally to obtain optimal health for people, animals, and the environment. Kochevar noted that the U.S. Agency for International Development has supported the concept that what is needed is a new breed of health professional students who no longer consider their profession as strictly defined in one sector but rather necessarily across several sectors.

There were three presenters on the panel. Panelists provided insights drawn from their experiences, harmonizing accreditation standards and operations across multiple continents, countries, and accreditors. Beth Sabin, Associate Director for International and Diversity Initiatives at the American Veterinary Medical Association (AVMA), is involved with the international Accreditors Working Group, which is a group that comprises representatives from national and regional veterinary medical accrediting bodies across several continents. Stuart Reid is the principal of the Royal Veterinary College in London. He has led AVMA-accredited international schools, is a leader in veterinary medicine, and has worked internationally in both the private and public sector. William Bazeyo is professor of occupational medicine at Makerere University College of Health Sciences School of Public Health, where he also serves as dean. He convenes, coordinates, and creates innovative programs, and is the principal investigator for One Health Central and Eastern Africa.

Veterinary Medicine: Council on Education, International Accreditors' Working Group, and OIE ad hoc Working Group on Veterinary Education

Beth Sabin, American Veterinary Medical Association

During her presentation, Beth Sabin explained the evolution of the AVMA Council on Education accreditation standards. She described the international efforts of the council over the last couple of decades, including the work of the International Accreditors Working Group. She also described the efforts of the World Organization for Animal Health (OIE) in veterinary medicine and One Health.

AVMA Council on Education

The AVMA Council on Education[6] is the accrediting body for veterinary medical education in the United States and Canada. The U.S. Department of Education has recognized it since the 1950s. The council is an independent accrediting body recognized by the Council on Higher Education Accreditation, and is a member of the Association of Specialized and Professional Accreditors. The purview of the council is on the first professional degree program (doctor of veterinary medicine (DVM) in the United States; in other countries, the equivalent to the first professional degree). It does not look at postgraduate education or continuing education.

---

[5] For more information about the One Health Initiative, visit http://www.onehealthinitiative.com (accessed August 16, 2016).

[6] For more information about the Council on Education accreditation process, visit www.avma.org/professionaldevelopment/education/accreditation/colleges/pages/default.aspx (accessed July 1, 2016).

Copyright © National Academy of Sciences. All rights reserved.

It functions in cooperation with the Canadian Veterinary Medical Association and the AAVMC. The U.S. Department of Education, U.S. state boards, and five veterinary schools in Canada use Council on Education accreditation as a means for identifying individuals eligible for licensure. There are 11 standards, and one of the standards is on outcomes assessment (see Box 4-1). In the past, said Sabin, most Council on Education members were appointed by the professional association. Currently, the AAVMC appoints the academic, decision-making body of the council.

Sabin then described the development of the Council on Education outcomes assessment standard. Prior to 2002, outcomes assessment was part of the larger curriculum standard and did not have its own separate standard. At that time, there was no requirement for a feedback loop from outcomes assessment to program improvement. The Council on Education added outcomes assessment for many reasons. First, the U.S. Department of Education required it, wanting more accountability. Second, said Sabin, society was changing in part because of increasing tuition; therefore, parents and students wanted measurable accountability. Finally, outcomes assessment is a great way to help innovative educators try different delivery methods for curriculum and assess students on learning both basic sciences and clinical sciences.

The Council on Education gathered stakeholders together (the public, the profession, the academicians) and spent about 2 years working toward the development of a standard. The next 5 to 10 years were spent in constant review and revision of the effectiveness of the outcomes assessment standard. In 2007, the Council on Education added nine clinical competencies to its outcomes assessment. Sabin stated that many colleges are creating innovative ways of measuring outcomes, both with clinical competencies as well as more of the basic science competencies. Many of the outcomes assessments tie into the curriculum standard.

BOX 4-1
Council on Education Requirements of an Accredited College of Veterinary Medicine

The Council on Education has established standards of accreditation for veterinary medicine colleges. The full description of these standards is available on the AVMA website. The categories of standards are as followed:

Standard 1: Organization
Standard 2: Finances
Standard 3: Physical Facilities and Equipment
Standard 4: Clinical Resources
Standard 5: Information Resources
Standard 6: Students
Standard 7: Admission
Standard 8: Faculty
Standard 9: Curriculum
Standard 10: Research Programs
Standard 11: Outcomes Assessment

SOURCE: AVMA, 2016.

Copyright © National Academy of Sciences. All rights reserved.

The competencies, said Sabin, fit into the One Health portfolio. One of the clinical competencies added to outcomes assessment, for example, is an understanding of health promotion and biosecurity, prevention, and control of disease including zoonosis and principles of food safety. That competency can be related to the curriculum standard, which states that the curriculum shall provide instruction in the principle of epidemiology, zoonosis, food safety, the interrelationship of animals and the environment, and the contribution of the veterinarian to the overall public and to professional health care teams.

While outcomes assessment was being developed and while the standards were being reviewed, the Council on Education was also becoming more involved in international education and international accreditation. Sabin stated that the Council on Education has offered accreditation to established international schools on a voluntary basis since the 1970s; Utrecht University Faculty of Veterinary Medicine in The Netherlands, for example, has been accredited since 1973 by the Council on Education. Currently, 14 schools outside the United States and Canada are accredited by the Council on Education.

The International Accreditors Working Group

In the late 1990s, the Council on Education and the Royal College of Veterinary Surgeons in the United Kingdom began to hold regular meetings. In the early 2000s, the Australasian Veterinary Boards Council, the accrediting body in Australia and New Zealand, the European Association of Establishments for Veterinary Education, and the South African Veterinary Council began to come to these meetings as well. The groups met to learn about each other's processes, to see their similarities, and to identify common challenges and opportunities. In 2007, the International Accreditors Working Group (IAWG) was formed to carry on the work of these informal meetings and to develop a way to do joint accreditation site visits at veterinary schools that were being accredited by the Council on Education, the Royal College of Veterinary Surgeons, and the Australasian Veterinary Boards Council (AVMA, 2013).

The first combined site visit was at Massey University in March 2007, in which a team from the Council on Education and a team from the Australasian Veterinary Boards Council did a site visit at the same time, side by side. The teams worked separately to prepare their reports of evaluation and remained independent decision makers. The IAWG thought this might work for a joint site visit, and recommended a protocol for joint site visits in fall of 2007. They suggested that the first one occur at Murdock University in Australia, which was conducted in 2009 (AVMA, 2009). Subsequent IAWG meetings recommended the now established protocol for Council on Education, Australasian Veterinary Boards Council, and Royal College of Veterinary Surgeons joint site visits at schools accredited by one or more of these accreditors.[7] To summarize, Sabin explained that these joint site visits include a single, combined site team with coleaders, onsite training. A single self-study and a single reported evaluation is developed. There are combined standards, though accrediting entities remain independent decision makers.

[7] The International Accreditors Working Group recommends protocols for joint site visits and is not a decision making body.

Copyright © National Academy of Sciences. All rights reserved.

World Organization for Animal Health (OIE) Veterinary Education Initiative

Sabin briefly described the OIE ad hoc Group on Veterinary Education,[8] which was formed in response to a recommendation adopted at the first OIE Global Conference on Veterinary Education. The OIE is interested in delivery of national veterinary services and public veterinary medicine, similar to the U.S. Department of Agriculture. To do this, OIE wants to build the educational infrastructure.

Sabin's Key Messages

Based on her experience and understanding of veterinary medicine and accreditation, Sabin presented her three key points. First, the ability to work effectively across national and regional borders requires time, trust, relationships, understanding, respect for other's professions, an awareness of societal and professional needs, and sufficient resources to address challenges and create opportunities. Secondly, entry-level competencies may vary across regions, but common ground can be found—perhaps more easily across countries and regions with similar societal and professional needs and resources. Lastly, she believes that One Health might be a key area to find initial common ground.

Creating the One Health Professional: Lessons from a Multilingual, Multicultural Setting

Stuart Reid, Royal Veterinary College, London

The One Health concept, said Stuart Reid, has been in existence for some time, but it is not evident how to accredit the new One Health professional in the current environment. Because of the diversity of One Health and its global scope, One Health brings forth the challenges of environment, context, and language. Given this diversity, Reid considered how accreditors function within that environment even on a basic level, such as accreditation of the veterinary medical degree and its specializations.

Reid explained the European context and the challenge that Europe faces. First, there are many different countries, currencies, and languages in Europe. There are different licensing requirements, societies and cultures, industries, and professions. In each of the European countries, the veterinary profession is addressing a pet population, a food animal population, or a society.

One Health: A Day-1 Skill

Reid considers One Health as a day-1 skill; in other words, it is a skill that veterinarians should be able to use immediately upon graduation. In Europe, the accreditation system includes the European Association of the Establishments for Veterinary Education and the Federation of Veterinarian in Europe, which both look at the 110 undergraduate veterinary schools across the continent of Europe. These schools produce roughly 10,000 graduates, all who are taught in different languages. They use a model with a common language for accreditation at the European level (English), and a common set of standards similar to those mentioned by Sabin during her description of the IAWG. There is a rubric or template that every school completes for the

[8] For more information on the OIE ad hoc Group on Veterinary Education, visit www.oie.int/en/support-to-oie-members/veterinary-education/ad-hoc-group-on-veterinary-education (accessed June 15, 2016).

Copyright © National Academy of Sciences. All rights reserved.

evaluation. There is no common licensing exam across the continent, however; the standards focus on bringing together the processes by which all countries meet in a coherent way, and it does not focus on any final assessment. The model is also a visitation scheme for accreditation, functioning as a process with interim measurements. In addition, the model allows for diversity and variation of practice, understanding that some issues apply only to certain countries. Because this is used at the undergraduate veterinarian level, Reid wondered how health would improve with these models being used within a DVM program or at an undergraduate program of medicine or environmental health.

One Health: A Specialty

Reid also considers One Health a specialty. For this topic, Reid presented the example of the European Board of Veterinary Specialization, which looks at the individual boards and colleges within Europe to accredit the specialist. As an accreditation scheme in Europe, it faces the same challenges that the undergraduate DVM model faced: language issues, diversity of disciplines, and several different colleges. The model that is used is a core postgraduate curriculum for each of the colleges functioning across the continent. There are several routes to credentials, but there is one single exam per college that is a capstone event for every college. These colleges are not visited in this case because the exams are somewhat virtual and approved by documentation.

Lessons Learned

Reid drew lessons learned for the One Health professional from these examples he presented. First, One Health needs to be both a day-1 skill and a specialty skill, he said. Second, he noted that the two different models are important; one model is built into professional education accreditation, and the second model is built into specialty and career progression. If there is no career progression and no career framework, then there will not be a meaningful accreditation system for a One Health professional since effectively there will be no profession in existence, he said. Finally, Reid believes that there must be a single language used for an accreditation system. A challenge, said Reid, is going to be how the accreditation system will move from multidisciplinary into interdisciplinary through to transdisciplinary.

Reid closed his presentation by reminding the participants that One Health is not new. He quoted text from the Glasgow Tuberculosis Trial of 1889:

> It is suggested by high authorities that possibly a number of human maladies may be traceable to animals…and the public would be best protected by conjoint action on the part of experts from the two branches of the medical practice. (Schwabe, 1978)

If accreditation bodies from the two branches of medical practice are brought tougher, he said, the answers may be found.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

One Health Accreditation

William Bazeyo, Makerere School of Public Health, Uganda

William Bazeyo also emphasized that One Health is not a new term. He congratulated the veterinarians on their work to integrate One Health into their practice. Bazeyo quoted 19th-century Germany physician Rudolph Virchow, who said "Between animal and human medicine there is no dividing line, nor should there be. The object is different, but the experience obtained constitutes the basis of all medicine." Bazeyo believes that professions, especially medicine, still exist in siloes that must be broken. The One Health approach, he said, is integrated and is beneficial to multiple health professionals. The challenges faced by One Health can be overcome through collaboration among multiple professionals.

One Health Central and East Africa

One Health Central and East Africa (OHCEA) has an integrated approach for promoting One Health, and in many countries OHCEA is looking at breaking the siloes that exist. Professions involved in One Health include veterinary medicine, human health, environmental health, and wildlife health. OHCEA has also included business schools and social scientists.

OHCEA is preparing future public health leaders with a common vision. It was formed in 2010 and was composed of 14 universities (7 public health schools and 7 veterinary schools) located in 6 countries (the Democratic Republic of the Congo, Ethiopia, Kenya, Rwanda, Tanzania, and Uganda) and recently added 2 more countries (Cameroon and Senegal). The countries are at different levels of development, speak different languages, and have different policies. They partner with the University of Minnesota and Tufts University. OHCEA collaborates with governments through One Health country coordination committees. The South East Asia One Health University Network is working toward a similar goal, and it is currently composed of 14 faculties of veterinary medicine, medicine, public health, and nursing from 10 universities in Indonesia, Malaysia, Thailand, and Vietnam.

Bazeyo explained that to break down the siloes that exist, OHCEA has worked through regional and country networks to support member universities. OHCEA aims to participate with government, academia, and other key partners in defining what is needed to create a One Health workforce. Engaging all stakeholders, especially the public, is important to Bazeyo; if they are not brought in, he said, accreditation is not serving the people it was mandated to serve. Another goal of OHCEA is to strengthen graduate and undergraduate preparation of future health workers to meet a country's need for a well-trained workforce. OHCEA aims to strengthen governments' provision of in-service preparation and improve the current One Health workforce, as well as help strengthen regional and national university networks to promote their sustainability.

OHCEA has worked with countries to revise their curricula and examine how the curricula could be standardized. The One Health model was added to the curriculum of OHCEA countries, and the next step is to bring governments and accreditation bodies together to discuss this and begin to understand the importance of a standard One Health curriculum across the countries. OHCEA is also exploring opportunities for multidisciplinary accreditation, as certain professions are already being trained together beginning at the undergraduate level.

Copyright © National Academy of Sciences. All rights reserved.

Requisites for Accreditation

Bazeyo then listed requisites for accreditation. Common training principles, he said, are helpful if a university's faculty is lacking someone with a particular specialty or skill. In this case, OHCEA uses its database to find an expert from other countries, Tufts University, or University of Minnesota who can go to the university and teach the specialty or skills.

Bazeyo echoed other presenters' call for agreed skills and competencies. He also emphasized the need for recognition by fellow disciplines, and seeing all professions as equal. In addition, accreditation must be recognized by policy makers, employers, and governments, said Bazeyo; this ensures that students will have jobs once they graduate. Professional standardization and a clear career path, as Reid mentioned, are other important requisites. Finally, cross-border recognition is needed for leadership communication.

Opportunities and Challenges for Accreditation

One Health accreditation faces many challenges. History, professional protection, and a tendency toward pride and secrecy could impede the growth of One Health accreditation. In addition, government policies regarding the training and recognition of accreditation bodies vary by country. Universities and institutions have different policies on curricula and teaching methods. Employers also vary in accepting the standards. There are international requirements and demands, and the level of development in each country and what is achievable varies.

However, there are also many opportunities in One Health accreditation. Bazeyo lauded veterinarians and medics for their extensive knowledge and understanding of disease processes and epidemiology. These health professionals also have experience diagnosing and managing diseases in large populations, both across Europe and across Africa. There have been successes in eliminating and preventing infectious diseases. In addition, both professions have access to local and national regulatory systems.

For moving the One Health accreditation standard forward, Bazeyo envisions developing centers of excellence for education and training in specific areas. Enhanced collaboration among colleges and schools of veterinary medicine, human medicine, public health, and allied health sciences might lead them to embrace agreed-upon standards for recognition and accreditation. He believes medical, veterinary, and allied health sciences curricula should be expanded to include more emphasis on One Health issues, without developing entirely new curricula. Lastly, Bazeyo believes all health professionals should be sensitized to embrace the One Health approach.

Discussion

Kochevar asked each presenter to describe one of the main difficulties with undertaking national accreditation or One Health accreditation. Reid described the challenge of mutual recognition. Using the word *harmonization*, he said, can be helpful in this situation. He reminded the group that harmonization means groups can "sing the same kind of song but play different parts that sound good together." Reid suggested starting with the harmonization element, and then moving toward mutual recognition of standards. Sabin agreed with Reid, and stated that this process takes time. People need to work together and understand where every group is coming

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

from, to learn the similarities and differences between each group, and to respect each group, she said.

Bazeyo also agreed with Sabin and Reid. The main difficulty that he has seen is protection; governments want to protect their own people and standards, he said. In addition, protection within the universities is an issue because universities want to be different from each other and also want to attract different applicants. Breaking the barriers, he said, is difficult when professionals want to protect themselves, do their own research, and only work with individuals of their profession. Sabin agreed with Bazeyo about the culture of protectionism that persists within professions. An additional challenge that feeds into this culture are the different levels of desire for globalization or understanding of globalization. The idea of looking outside one's borders as a tool for growth often conflicts with a country's desire to close its borders and protect its own, she said.

Environmental Health

Malcolm Cox raised the issue of environmental health, which is part of the One Health movement, as a critical potential facilitator for promoting forward movement in the climate change debate. He asked the presenters to what extent they have used One Health in trying to bring people and countries together. Bazeyo responded to Cox, sharing that environmental health brings together the different disciplines. When promoting One Health curriculum, he said, OHCEA has also encouraged universities to develop environmental health training programs. Reid expanded on this topic by describing the Food and Agriculture Organization of the United Nations paradigm within the One Health concept, which includes three levels: the technical level, the societal and behavioral level, and the intergovernmental or legislative level. At each of these levels, one must consider the host, the agent, and the environment. Bringing these three levels together, he said, is ultimately what delivers a One Health answer. One example of where these three levels have been brought together is the human papilloma virus vaccination for teenage girls.

One Health in the Educational Curriculum

Kochevar asked the panelists how to move from discussing an idea of One Health to actually incorporating One Health in a functional way into the educational curriculum to then examine the outcomes. Specifically, she asked Bazeyo about the mapping and the gap analysis that OHCEA conducted, and how OHCEA began to address this topic on a practical level. Bazeyo responded that the process of incorporating One Health into the curriculum was not easy. He then explained the long process, saying that first, the deans and advisors of the universities gathered together to discuss what was already being taught in their universities. Then, schools were nominated and also applied to be part of their network. Specialists examined the curricula and revised them, and included the skills and competencies that OHCEA leaders wanted in the curricula. The revised curricula and list of desired skills and competencies were given to the deans to take to their universities so the faculty and schools could discuss and eventually accept them. Bazeyo emphasized that everything OHCEA puts forward must be acceptable by the faculty, the universities, the individual countries, and the regulatory bodies. It is a long process that is not yet complete, he said. However, OHCEA encourages members to use any curricula that are completed and ready to use in the university setting. Finally, OHCEA developed short

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

courses, training programs, and continuing education programs for those already practicing in the field.

Sabin discussed the outcomes assessment that the Council on Education implemented. There has been a significant amount of dialogue between the schools and the accreditors. The Association of American Veterinary Medical Colleges (AAVMC), for example, has schools in North American and around the world coming together to discuss what it means to measure outcomes and how it can be done. Initially, she said, there was resistance to outcomes assessment, but now groups are beginning to see how outcomes assessment can actually drive innovation. She called for a better understanding of what the veterinary profession desires to see in their graduates, and how measurement can help to achieve that goal. Reid raised the idea of embedding the outcomes assessment in a feedback loop so outcomes can then affect positive change in the education and program. He noted that there is misunderstanding on what exactly the term *outcomes assessment* means, in addition to a lack of understanding on what One Health means. Because of this, he said that it is premature to develop a complete set of outcomes assessment for the One Health professional because it has different meanings in different contexts. This, he said, is the challenge of accreditation.

David Benton, National Council of State Boards of Nursing, asked Reid if he had considered using the knowledge and skills framework that was introduced to the health service as a bridge to have some of this further discussion (Department of Health, 2004). When it was discussed in the 1990s, said Benton, it enabled anyone working in the health service to be within a single common competency framework. This involved a core set of competencies that every practitioner, no matter the profession, had to possess, in addition to subject specific competencies. Reid responded that the Royal College of Veterinary Surgeons is in the process of modernizing and is looking at new models to improve its regulation. It is striving to look at the allied professions rather than paraprofessionals. It has added veterinary nursing to its portfolio, and it has the ability to regulate other professions should it wish. There is an opportunity, said Reid, for the framework Benton mentioned to become much more relevant than it is currently.

Building the One Health Movement

Eric Holmboe, from the Accreditation Council for Graduate Medical Education, commented that One Health fits naturally with the Triple Aim, where the health of the populations is a primary driver. He reflected on the effects of environmental changes, the current Zika virus epidemic, and the tragedy of the Ebola virus epidemic, and how these and many other current issues are directly related to the health and wellness of populations. Holmboe then asked presenters what recommendations they had for the human health professions to better engage with the One Health initiative.

Bazeyo suggested collaboration and cultivating a desire to address the issues and to be involved. He shared an example of when Ebola was in West Africa. Because of Uganda’s experience with the Ebola virus and success in containing it, they sent a multidisciplinary team with social scientists, environmental health experts, medics, and veterinarians to West Africa. He suggested that the various professions come together with a common vision and use what is available to each of them. Reid also responded to Holmboe’s question, suggesting that health professionals first tackle the “low hanging fruit.” In his mind, the low hanging fruit on the One Health agenda is antimicrobial resistance. It involves environmentalists, technologists, medics, veterinarians, pharmacists, other health professionals, and more. While there are other important

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

diseases to also be addressed, defining specific projects that are truly multinational and transdisciplinary is where he thought progress can be made.

Kochevar suggested that a new breed of student is needed—one who identifies across specialties. One Health student-led clubs are opportunities to involve students and pique their interest in One Health. She has seen students embrace the One Health initiative through their time participating with these clubs. Irene Naigaga, project manager with OHCEA, shared that every country in the OHCEA network has a One Health student club that is multidisciplinary, constituted of veterinary, medical, animal culture, and engineering students. Every year, they develop a work plan that OHCEA funds. Their activities range from sensitization in schools, community outreach, going to slaughterhouses, and even talking on the radio about One Health. Despite the silos that exist in the professions and in the faculty, the students have embraced the One Health, multidisciplinary work whole heartedly. Adding to Naigaga's comments, Bazeyo shared that OHCEA has also engaged students in outbreak investigations. They are trained in surveillance, outbreak investigations, and how to manage communities. He concurred, however, that the faculty is not typically interested in this work.

Many of the veterinary schools in the United States, said Sabin, are colocated with medical schools or other health professional schools. In these instances, they can incorporate problem-based learning and case scenarios that are One Health related. For example, rabies is currently on the rise in the United States, and Sabin sees it as a true One Health issue. Bringing students from various professions together to examine real studies and address the challenges that are identified can be a learning opportunity in One Health. Sabin sees this happening in many universities. She also suggested that perhaps this work is easier with younger students because they are not set in their ways, as are some of the more veteran professionals. Relationship building, she said, is very important for the One Health agenda to succeed.

Susan Scrimshaw of the Sage Colleges raised the issue of policy and the importance of students and health professionals being engaged in policy. Sometimes, policy makers may make it difficult for critical preventative work to be done. She asked, how do we include the ability to convince policy makers that these are critical issues? Ultimately, said Scrimshaw, the decisions of policy makers affect the outcomes that One Health and accreditation is trying to reach.

Bazeyo agreed that while policy makers can sometimes cause difficulty, they are critical partners in this work. OHCEA has formed country coordinating committees, which are groups formed with nominations from each country's government. Forming these groups required some sensitization. The groups discuss One Health, and then take the topic to the regional body, the East African community, and the African Union. The reason it has worked, said Bazeyo, is because they were successful in convincing ministers and other bodies that One Health is important. They have then asked OHCEA to also talk to the policy makers at the regional level about One Health, and it is now on the agenda for East Africa and West Africa. The reason policy makers resist, said Bazeyo, is because they think One Health has implications with financing. At OHCEA, they tell policy makers that the finances remain the same; however, by accepting and embracing One Health, there is a chance that the expenditures and budgets will be reduced.

Sabin noted the AVMA fellowships and externships that are available for veterinarians and students. The student externship is 1 month in Washington, DC, learning about policy, lobbying, and the workings of the federal government. The veterinarian fellowship is 1 year working in a congressional office on various issues, oftentimes related to animal or public health. This program, she said, has grown a cadre of veterinarians who understand policy. One of the

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

veterinary schools with AVMA has a public and corporate track, which focuses on public policy. These types of programs, she said, will help the profession be better prepared to positively affect policy. Also in response to Scrimshaw's question, Reid called for more diversity of gender and age in policy; he said that unless there is greater diversity at all of the levels of decision making, policy will not be engaged in the way that is desired and needed.

Kochevar concluded the discussion by expressing hope that the workshop participants will now think about One Health and interprofessional education, as well as the pros and cons of globalization and accreditation.

REFERENCES

AVMA (American Veterinary Medical Association). 2009. *Accrediting agencies join forces to promote veterinary education*. www.avma.org/ProfessionalDevelopment/Education/Accreditation/Colleges/Pages/coe-standard-newsletter-fall2009-accrediting-agencies.aspx?PF=1 (accessed July 19, 2016).

AVMA. 2013. *International Accreditors Working Group to meet in London. November 2013.* https://www.avma.org/News/JAVMANews/Pages/131201d.aspx (accessed August 16, 2016).

AVMA. 2016. *COE accreditation policies and procedures: Requirements. April 2016*. https://www.avma.org/ProfessionalDevelopment/Education/Accreditation/Colleges/Pages/coe-pp-requirements-of-accredited-college.aspx (accessed August 15, 2016).

CARF (Commission on Accreditation of Rehabilitation Facilities) International. 2016a. *Who we are*. www.carf.org/About/WhoWeAre (accessed July 1, 2016).

CARF International. 2016b. *About uSPEQ*. www.carf.org/About/uSPEQ (accessed July 1, 2016).

Department of Health. 2004. *The NHS knowledge and skills framework (NHS KSF) and the development review process.* Department of Health. http://www.libraryservices.nhs.uk/document_uploads/KSF/NHS_KSF_Document.pdf (accessed September 29, 2016)

Fulmer, T., and M. Gaines. 2014. *Partnering with patients, families, and communities to link interprofessional education. Proceedings of a conference sponsored by the Josiah Macy Jr. Foundation in April 2014.* New York: Josiah Macy Jr. Foundation.

Schwabe, C. W. 1978. *Cattle, priests, and progress in medicine*. Minneapolis, MN: University of Minnesota Press.

Copyright © National Academy of Sciences. All rights reserved.

5
Moving Forward

Key Messages Identified by Individual Speakers and Participants

- For accreditation standards to be in a position to include core competency concepts, there first needs to be agreement on what those core competencies should be; in order to achieve this, said Halstead, collaboration across disciplines and a linkage between education and practice has to exist. (Halstead)
- One Health and the social determinants of health are two examples where stakeholders are changing curricula and their approaches in order to incorporate these topics into education and improve health outcomes. (Hinton Walker)
- Institutions could start with a focus on the needs of the patients and communities, and then move their focus toward what competencies faculty require in order to train or mentor their students in how to address these needs. (Talbott, Palsdottir)
- Accreditation expectations of continuing education providers can be adjusted in order to incentivize groups and institutions to provide interprofessional continuing education. (Vlasses)
- Innovation in accreditation begins with new perspectives. By bringing people together with different perspectives, he said, one can see the problem in a different way, and devise more robust and more exciting solutions. (Benton)
- The operational elements of accreditation and the strategic thinking processes are important, but the discussion should be framed around social accountability, specifically health and well-being, instead of heath care alone. (Cox)
- There is an increasing sense of urgency to transform health professional education. (Vlasses, Cox, Talbott, Chow, Scrimshaw)
- The movement to adopt core competencies across professions and address common educational issues among professions is underway but moving too slowly relative to the rapid changes in the health care system. (Cox)

CORE COMPETENCIES THAT APPLY TO ALL HEALTH PROFESSIONS: "QUICK TAKES"

Pamela Jeffries, dean of the George Washington University School of Nursing, led the "quick takes" session that emphasized short responses in rapid succession. The panelists drew from three different professions and included

- Judith Halstead of the National League for Nursing Commission for Nursing Education Accreditation;
- Rick Talbott, representative of the Association of Schools of Allied Health Professions; and
- Peter Vlasses of the Accreditation Council for Pharmacy Education.

Copyright © National Academy of Sciences. All rights reserved.

This session focused on how accreditation could be used as a mechanism to advance interprofessional education (IPE) and health care quality, and to illuminate potential core competencies. It included four questions that were answered by the three panelists in "quick-takes." Each panelist had 2 minutes to respond to a question, and then the floor was opened for audience participation. The following sections are the speakers' responses to the questions noted in bold and the ensuing discussion that involved the entire audience.

How Can Including Core Competency Concepts in Accreditation Standards Be Linked to Improved Quality in Education and Health Care Systems?

Panelist Responses

In her response, Halstead focused on how to actually link core competency concepts to improved quality. For accreditation standards to be in a position to include core competency concepts, there first needs to be agreement on what those core competencies should be; to achieve this, said Halstead, collaboration across disciplines and a linkage between education and practice has to exist. Secondly, she believes that a long-term vision is key. She suggested that stakeholders first answer the following questions: what does improved quality mean, how is it identified, and what are some evaluation strategies to measure it? The value, she said, lies in the process of getting to where those competencies can be identified and then included in the accreditation standards.

Talbott went next, beginning with the definition of a competency:

> the cluster of related knowledge, skills, and abilities that affects a major part of one's job (a role or responsibility), that correlates with performance on the job, that can be measured against well-accepted standards, and that can be improved via training and development. (Parry, 1996, p. 50)

The goal, he said, is well agreed upon by most stakeholders, but how can quality of education be improved by including the core competencies? The U.S. Department of Labor has addressed this issue with a pyramid of competencies.[1] The base represents the basic competencies for someone interested in health care, such as general education requirements from any university. Each tier of the pyramid becomes more specific. At the top of the pyramid, he said, are the specialized accrediting competencies that need to be defined and analyzed by each professional association. Talbott believed that starting with a strong foundation and moving forward in small steps is the best way to reach the goal.

Peter Vlasses immediately followed Talbott. For his response, Vlasses brought up the Interprofessional Education Collaborative (IPEC) competencies,[2] published in 2011 (IPEC Expert Panel, 2011), that have been incorporated across the Health Professions Accreditors Collaborative. He presented a case study of the Canadian system, specifically the University of Toronto, where the medical school and the main hospital have collaborated to foster interprofessional education and collaborative practice. There is a single payer (government)

[1] For more information on the U.S. Department of Labor's pyramids of competencies, visit www.careeronestop.org/CompetencyModel (accessed July 19, 2016).
[2] Developed by six different professions that make up the original IPEC, these are the knowledge, skills, and attitudes needed to demonstrate effective teamwork across professions (IPEC, 2011).

Copyright © National Academy of Sciences. All rights reserved.

system in Canada, as opposed to the multipayer fee-for-service model in the United States that is evolving to be more value-based. Canada, he said, understands that health education should result in good financial and patient outcomes. The medical school and hospital collaboration in Toronto made the commitment to establish competencies and standards agreed upon by all stakeholders. In addition, the university committed to prepare team-based people who can be better practitioners and can give better patient outcomes. Vlasses commented that this idea is more than preservice education, but also it emphasizes continuing education.

Group Discussion

Jeffries then opened the floor for audience participation. Eric Holmboe, from the Accreditation Council for Graduate Medical Education, agreed with Vlasses on the value of the IPEC competencies. He saw this as "low hanging fruit," since there is already work going on in this area. He then asked the panel about their thoughts on competencies that accreditors need, which is a question that was triggered by the conversation with Christine MacDonell earlier in the workshop about the Commission on Accreditation of Rehabilitation Facilities and the competencies needed by the site visitors (see p. 4-2). With the current changing dynamic, Holmboe believes this is an area for greater exploration. Vlasses responded to Holmboe by noting the requirements of the U.S. Department of Education and the Council on Higher Education Accreditation. Accreditors must adhere to these requirements and standards in order to make sure processes are in place, are fair, and are not arbitrary. In addition, these standards help ensure that accreditors make good decisions. Board members of the Accreditation Council for Pharmacy Education (ACPE) include practitioners, educators, regulators, and a public member. According to Vlasses, they consider multiple perspectives and are willing to learn. The accrediting agency also allows them to take good ideas and implement these.

Halstead added to this comment, suggesting that organizations remain dynamic instead of static, and that anyone representing the work of the accreditation body should also be open to change and flexibility as part of their core values. She echoed her original comment about vision, emphasizing the importance of having a clear understanding of what it means to look at a process and an outcome. Talbott reminded participants that the first accrediting body in the United States was developed around 1880. Philosophically, accreditation has kept its focus and mission on protecting public health and safety and acting in the best interest of the public. He suggested that accreditors return to this benchmark of improving public health and safety and addressing public interest. This is a guiding light for future work and improvement, he said. He expressed hope that eventually accreditors will transition from being viewed as the policemen to instead being seen as facilitators and improvers.

What Would Be Necessary Components in the Education–Practice–Accreditation System to Improve the Quality of Health Professions Education and Health Care?

Panelist Responses

Talbott led off the responses to the above question. He saw the linkage to improved quality as a necessary component of the health, practice, and accreditation system. The process needs to start with the patient and public trust, he said. From there, stakeholders can work backwards to determine what actions need to be taken and what knowledge and skills are

Copyright © National Academy of Sciences. All rights reserved.

necessary for the workforce. From that point, the educational mission can then be aligned to match the goal of getting specific knowledge and skills to the practitioners in order to match public and societal needs. He emphasized the point he made earlier, saying that accreditation should continue to revisit the benchmark of improving public health and safety and addressing public interest, and the system should work backwards from that point. He suggested the possibility of creating linkages among licensure boards—the enforcement arms of accreditation in public protection—the accrediting bodies, and the certifying bodies. There is not yet the collaboration and consistency needed to achieve this, he said. Licensure boards are often the main controllers of continuing education and include requirements for continuing education in their licensure requirements; this is because most accreditation bodies do not see continuing education as part of its purview, since it happens after the formal education experience is complete.

Vlasses called for change that is interprofessional in nature and cited the Canadian health care system and specifically the University of Toronto as an example. Shifting to a value-based payment system over a fee-for-service model, they are acknowledging that improvement is important from a financial standpoint as well as a patient outcome standpoint. According to Vlasses, as mentioned, the dean at the University of Toronto and the CEO of their hospital agreed to establish standards for preparing a team-oriented health workforce that can work together to deliver better patient outcomes.. He believes that the changing health care financial system is the biggest driver creating urgent need for improved quality of health professions education and health care. To him, good communication and collaboration among stakeholders is critical. In addition, measurement and assessment can help track progress toward goals and ensure that stakeholders are on the right path. However, Vlasses cautioned that waiting for the perfect assessment instrument can sometimes delay and paralyze progress. He believes there should be incentives, such as promotion and tenure for faculty that are doing this work, and that faculty should be encouraged by leadership in a top-down approach. Otherwise, he said, it is a health system likely to fail.

Halstead was struck by the idea William Bazeyo, One Health Central & East Africa, raised about siloes, and how each stakeholder stands side by side without connections. She encouraged others to embrace the notion that this is a system of three interrelated components: (1) education, (2) practice, and (3) accreditation, and it is accreditation that brings the first two components together. She also referenced the diagram that Susan Phillips displayed during her introductory remarks (see Figures 2-1 and 2-2, Chapter 2) that emphasized finding the "sweet spot" and the ideal role for accreditation. She urged further exploration of this notion that could focus heavily on the implementation phase and the details of finding the ideal role for accreditation.

Group Discussion

Having heard the views of her panelists, Jeffries then encouraged the wider audience to contribute their thoughts and feedback. Patricia Hinton Walker, Uniformed Services University of Health Sciences, led off the discussion saying that two examples raised throughout this workshop and other Forum activities—One Health and the social determinants of health—are examples of where stakeholders are changing curricula and their approaches in order to incorporate these topics into education and improve health outcomes. David Benton, National Council of State Boards of Nursing, agreed with Hinton Walker. He asked the panelists if they

Copyright © National Academy of Sciences. All rights reserved.

would consider the issue of core competencies differently if the competencies focused on well-being and health instead of health care. Vlasses responded by first quoting a colleague who said, "It's not health care, it's health and care." Standards have been written in such a way that prevention, coaching, and chronic disease management are seen as being similar to inpatient care. There are specific rotations in each of these areas, requiring both learners and practitioners to be exposed to topics and experiences focusing on wellness and well-being, in addition to their exposure to secondary and tertiary care. He saw opportunities in digital communications, which can aid stakeholders and individuals in having more frequent communication and in trusting each other.

Halstead reflected on the shift from an emphasis on health care to one on well-being, and what effect that would have on curricula. Concepts of well-being are included in curricula, she said, but they are not currently the predominant focus for the majority of professions. It would be a significant shift to redesign curricula to meet that goal. Jeffries added to this statement, commenting that the emphasis on quality health care is part of the health provider culture. It will have to be a whole culture shift to move this focus to One Health, wellness, and health promotion, requiring curricula adjustments for all professions. John Weeks, Academic Collaborative for Integrative Health, stated that often health care systems focus more on production of services than on disease management or health care. This is important to consider, he said, in context of the movement toward the Triple Aim and value-based medicine. Health care delivery, in his opinion, can involve three separate elements: following the production values of industry, focus on reacting to disease, or seeking to bring the person to health. He urged participants to be conscious of their language in denoting the difference between reactivity to disease and on creating health. Health, he said, has many different definitions, and he challenged participants to analyze their interpretation of *health* to see if they mean health care, managing disease, or prioritizing what is good for the industry.

For Lemmietta McNeilly, American Speech-Language-Hearing Association, focusing on prevention of diseases and disorders and the activities that are involved with it were important components for improving education and health care quality. Currently, she said, the health care system in the United States is a fee-for-service model that pays health care providers to assess and treat a problem; it does not pay for problem prevention, nor reward engagement in healthy behaviors. McNeilly stated that the majority of health care dollars are spent at the disease end of the care continuum, and until priorities and resources are more overarching and include healthy living, these changes will be much more difficult to implement. However, she emphasized encouragement for individuals and organizations to proceed with efforts that include strategies targeting health and well-being into academic curricula, clinical practice, and accreditation standards.

Mary Beth Bigley, Health Resources and Services Administration, agreed that there is a lack of definition on what the education, practice, and accreditation system actually is. These have not been thought of as an entire system, she said. They each have different missions and values, and so effort and time is required to bring stakeholders together to decide what an education, practice, and accreditation system means.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

Should Accreditors Play a More Active Role in Fostering Faculty Development in Education Program Quality Improvement?

Panelist Responses

Vlasses took the lead in responding to the question stated above. He said that the ACPE has a standard for faculty development. Once someone becomes a member of the faculty at an educational institution, he said, they need to develop as educators and as researchers, and they need to understand what IPE is and how to provide it. New faculty hires may not have been initially trained in IPE, and so they may not have a vision for it; therefore, topics such as these are an important part of faculty development. Because a large percentage of curricula is external, said Vlasses, this standard has now been extended to external preceptors because preceptors need to be kept continually up to date on what the school is doing. Preceptors also must be aware of what the school standards are trying to accomplish, what competencies are being included, how they are being assessed, and the importance of working together with other health professions in order to model interprofessional behavior for their students.

Halstead agreed with Vlasses that faculty development is an acute need. She shared her perspective of how to play a more active role in fostering faculty development in program quality and improvement. Many faculty members may not understand what program quality improvement is. For faculty who only know their experience as clinical experts or experts within their discipline, it can be very challenging to enter an educational system where they are expected to consider accreditation and the meaning of accreditation standards. Concepts of program evaluation and continuous quality improvement should be outlined for faculty so they understand their role. Accreditation does have a role in helping faculty to understand these concepts, but Halstead believes that education in practice also has a responsibility to do this. Many are comfortable with their own individual contribution to the system, but they lack an understanding of how this contribution affects the entire system. There are also many novice educators entering the workforce, as well as a high turnover due to retirements; because of this, accreditors can play a significant role in faculty development related to program quality and improvement, she said.

Agreeing with the comments made by Vlasses and Halstead, Talbott focused on the term *active* in the question posed. From his perspective, accreditors should focus on the goal rather than the mechanism to get there, which would mean faculty development can include everything from improving research capabilities to gaining funding opportunities. When it comes to the role of the accreditor, however, Talbott believes this should concentrate on outcomes. If an institution is not developing faculty and this is interfering with quality improvement and therefore with outcomes, then accreditors should play an active role, he said. However, Talbott qualified this by stating that he does not believe accreditors should play a role in specifying the mechanisms by which faculty development is executed.

Group Discussion

Bjorg Palsdottir from the Training for Health Equity Network echoed Vlasses' point, saying that faculty may have mostly technical skills because of their experience, and they may not have skills involving education elements such as community engagement or communication. Referencing Talbott's point from earlier in the discussion, she said that institutions should start

Copyright © National Academy of Sciences. All rights reserved.

with a focus on the needs of the patients and communities, and then move toward what competencies the faculty should have in order to train or mentor their students in how to address these needs.

Elizabeth Hoppe from the Association of Schools and Colleges of Optometry raised the difference between having a standard requiring faculty development and having an accrediting body serving as a resource with services and support to develop faculty members. In some cases, the professional accrediting bodies may be conducting workshops on the role of accreditation and on how to perform a site visit and a site review. In these situations, the accreditors are relying on faculty volunteers to do the work of accreditation, so accreditors are motivated to hold these workshops. These same accreditors may receive questions from faculty members relating to specific issues or questions dealing with faculty development but refuse to respond because they do not think it is their role to serve as consultants. There is a gap, said Hoppe, between what is possible and what would be beneficial to institutions with limited resources that are struggling with faculty development. Talbott responded to her point, saying that there is almost a complete lack of homogeneity in accrediting bodies. From his experience, institutions are often responding to several or even dozens of accrediting bodies. He sees a difference among these accreditors and what they see as their role. Agreeing with Hoppe, he said that many times accreditors will refuse to answer a question or give their advice because they do not see this as part of their job. However, he has also seen accreditors finish an accreditation process and then offer to help the institution with whatever questions they have or advice they are seeking. According to Talbott, coordination across the different accrediting bodies is needed in order for their role to be clearly defined and understood.

John McCarty from the Accreditation Review Commission on Education for the Physician Assistant congratulated Talbott on identifying the issue of what an "active role" means. To McCarty, the active role that accreditors play is holding institutions responsible for developing faculty and reminding them through accreditation standards. Professional organizations and associations are equally responsible for helping those within their profession and within the educational arm of their profession to develop faculty, he said. Jennifer Butlin, Commission on Collegiate Nursing Education, also was grateful to the speakers for separating the accreditor's role from the institution or program's role. She believes that the accreditor's role is to have a nonprescriptive standard or criteria in place stating that faculty development is an expectation, but this criteria should also allow the program to define faculty roles and faculty's relation to teaching, practice, service, outcomes, and faculty achievements. The details of faculty development, she said, are the prerogative of the institution and the educational program. At her accrediting institution, there are many workshops and trainings offered about accreditation, but they leave consultation and discussion of best practices to their parent professional association.

Jeffries made one final comment about the National Council State Board of Nursing Simulation Study, which she called a landmark study that looked at the potential of substituting real clinical time with simulations. The evidence showed that simulations could be substituted, but there were qualifiers—specifically, the faculty needed to be developed, and there needed to be a theoretical basis for debriefing. In October 2015, the National Council State Board of Nursing published guidelines that were directed toward faculty development, the pedagogy of debriefing, and the equipment and simulation environment. She believed these guidelines were quite helpful for faculty and institutions who want to implement more simulation but did not know where to begin.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

What Commonalities Exist in Health Professions' Criteria and Principles for Core Competencies, and How Can These Be Leveraged to Drive Quality in Health Professions Education?

For the final discussion question, Jeffries opened the floor to the entire group to participate. Halstead mentioned ethics, moral agency, and cultural sensitivity as issues that cross health professions; Hinton Walker agreed, and brought up leadership, communication, and trust as additional cross-cutting priorities and competencies. Jeffries added patient safety to the list. Vlasses stated several of the aforementioned cross-cutting topics that are beginning to appear in coursework. For example, a class about the national health system, health informatics, or big data can be taught across health professions, and perhaps interprofessionally as well. He reiterated that continuing education is an area that requires attention in this space; rather than core competencies, to him the focus is more on joint commitment to collaborative work. In terms of IPE, he raised the possibility of incentivizing groups and institutions offering interprofessional continuing education by harmonizing the accreditation expectations of continuing education providers. He suggested that instead of being required to have three separate accreditations, a continuing education provider can now have just one accreditation if 25 percent of its continuing education activities were for interprofessional learners. Vlasses' accrediting agency is now offering joint continuing education provider accreditation with medicine and nursing,[3] and 25 organizations have become jointly accredited and are using outcomes-based interprofessional continuing education offerings, especially in the areas of patient safety and medication management. Participants are incentivized to do these projects because they know they also will receive continuing education credits. The jointly accredited continuing education providers are now beginning to measure outcomes coming out of their interprofessional continuing education initiatives, and are seeing changes that are improving the quality of care.

Vlasses provided a second example relating to the United States problem with opioids and death. Initially, the government produced a Risk Evaluation and Mitigation Strategy that placed responsibility on companies to improve the medication and reduce harm. When told by companies what they had to do, the medical community did not respond well. Therefore, the continuing education community met with the U.S. Food and Drug Administration (FDA) to develop the Conjoint Committee of Health Profession Continuing Education, which evolved from the Conjoint Committee of Continuing Medical Education. This committee is working with the FDA and with drug companies to develop continuing education trainings for practitioners that can receive accreditation. In part because of this, Vlasses said there has been a drop in improper prescription of opioids and a drop in opioid-related deaths during this time frame. Unfortunately he said, there was a rise in heroin-related deaths in the same time frame. Continuing education, in his opinion, is where change can happen quickly, and it is how attention can be brought to any important public health issue. He believes that focusing on working with practitioners in the field in addition to those in degree programs is the key to influencing outcomes and creating positive change. Hinton Walker added to Vlasses' points by encouraging stakeholders to consider the larger health professional group when addressing these sorts of problems. Harmonization would consider the contributions many different professional groups can make and therefore could be a way to address these types of problems.

Neil Harvison from the American Occupational Therapy Association participates in a committee that assesses a national competition on outcomes and quality improvement initiatives

[3] For more information about Joint Accreditation, visit http://jointaccreditation.org (accessed September 22, 2016).

Copyright © National Academy of Sciences. All rights reserved.

in institutions of higher education, as well as at a programmatic level. The evaluations for quality improvement focus on the ability of a student to demonstrate particular competencies related to interventions and procedures—a disease management-centric perspective. However, he said, the more distal measures, or what he called "the final step," is lacking. He stated that these measures apply to all health professions and stakeholders.

Talbott brought up the Council on Higher Education Accreditation's International Quality Group, which identifies five different competency areas they hope will become common to all international accrediting bodies. These areas include honesty and integrity, accountability, fairness and validity, clarity and consistency, and creativity and innovation. He views this as a good and hopeful step forward for the international accreditation community. Holmboe referenced the Institute of Medicine (IOM) report *Core Competencies for All Health Professions* (2003), saying that this report is a good place to start to respond to the posed question. Vlasses agreed, and shared that ACPE initially adopted the IOM core competencies as part of their standards, and then incorporated the IPEC competencies, which expanded on the interprofessional aspects of the IOM competencies. The desired competencies for health care practitioners will continue to evolve as more professions are involved and as education and health care advance, he said.

Vlasses urged participants and stakeholders to change their mindset that accreditors are barriers to innovation and simply add cost and burden. He believes accreditation can help advance the health professions toward innovation and positive change, and they can also help challenge institutions to continually self-evaluate and improve. One possibility, he said, is if accreditation is part of an ongoing rather than episodic quality improvement process.

To close the session, Jeffries professed that accreditation, to her, brings faculty together, helps highlight gaps, and guides program improvement. She applauded accreditors for their determined efforts to improve health education. Harvison thanked Jeffries and her colleagues, then turned the microphone over to David Benton to answer the question, "How can accreditation foster innovation?" To respond to this question, Benton relied on his past experiences in Scotland, the United Kingdom, and most recently in Geneva, Switzerland. While in Geneva, Benton consulted and then worked for the International Council of Nurses where much of his work focused on nursing and health policy with a focus on regulation, licensing, and education.

MOVEMENT TOWARD COMPETENCY-BASED EDUCATION: HOW CAN ACCREDITATION FOSTER INNOVATION?

David Benton, R.G.N., Ph.D., FFNF, FRCN, FAAN,
National Council of State Boards of Nursing

David Benton expressed his appreciation that this workshop provided the opportunity for shared experience and learning and for sharing and understanding the positions of different organizations and the commonalities among these positions. Benton saw both context and timing as critically important dimensions to consider relating to accreditation.

To provide context for his presentation, Benton reminded the participants that competence has been a topic of discussion and of literature since 1959 (White, 1959). He disclosed his personal belief that accreditation redesign is about creating a new paradigm and about thinking differently. Benton thinks accreditation redesign should do the following:

Copyright © National Academy of Sciences. All rights reserved.

- Use technology that enables instant communication across the globe.
- Align to a world where health needs are changing rapidly and where all would derive benefit.
- Capture data once and use it many times.
- Invest in tackling the social determinants of health to improve health and well-being.

Benton described a common assumption that legislation prevents innovation and creativity. From Benton's perspective, if an idea is in line with the general mission of an organization and if there is no explicit statement in the bylaws or legislation that does not prevent a certain activity, then why not try? He recommended that accreditors liberally interpret the regulations and rules that exist instead of viewing them as limiting growth and potential. "It is not organizations that reach agreement," he said. "It is individuals." To Benton, innovation in accreditation begins with new perspectives. By bringing people together with different perspectives, he said, one can see the problem in a different way, and devise more robust and more exciting solutions.

Reducing the Burden of Scrutiny

Benton pointed to the challenges and causes of the burden of scrutiny. There are now multiple layers of activities, perspectives, and regulation, but there is little communication among these various layers. Because of this, the similarities and the opportunities for collaboration are not discussed or even evident. There are also changing environments within institutions that can affect the way issues are viewed, can cause new burdens, and can provide new relief. In addition, continuing competence and continuing education is a challenge that regulators are being asked to pursue to ensure competence of health professionals. Revalidation as part of the regulatory, accreditation, and certification process should be considered, he said. While there are issues with this idea in terms of data collection, it would provide a systems perspective rather than simply viewing a single part.

Innovation in Accreditation

Innovation in accreditation, Benton argues, requires capturing data once and using it many times. He cited a common frustration of many health professionals in university teaching systems, who have to fill out numerous, time-consuming reports for accrediting agencies. They feel hard-pressed to deliver the education they need to provide to their students because of this bureaucracy. The added frustration is that often, their collected data and information is never reviewed or used for any research purposes or program improvement initiatives. When this happens, a great deal of time is lost that could have otherwise been directed to purposeful endeavors. Benton emphasized the need to streamline accreditation processes.

Working across sectors is another opportunity for innovation. Societies are changing the health and social interface, and this is becoming increasingly problematic with the aging population and nuclear families become more blended. The ability of families and communities to support each other is changing, and this should be considered when it comes to solution generation.

Copyright © National Academy of Sciences. All rights reserved.

Benton asked, how will individuals and systems be accredited in the future? Nursing and perhaps other professions have been moving from a model that looks at the regurgitation of knowledge to an ability to learn and to apply skills, and finally to judgment, said Benton. He presented a map of what the potential next generation of assessment will look like, developed by his director of testing, Phil Dickinson (2016), and his team (see Figure 5-1). They see it as developing into an unfolding case study where individuals have to identify cues and determine how technology can test their clinical judgment as part of that process. These kind of changes, said Benton, need to be reflected in the way that education systems are accredited. Change can be used as a vehicle to drive innovation and accreditation.

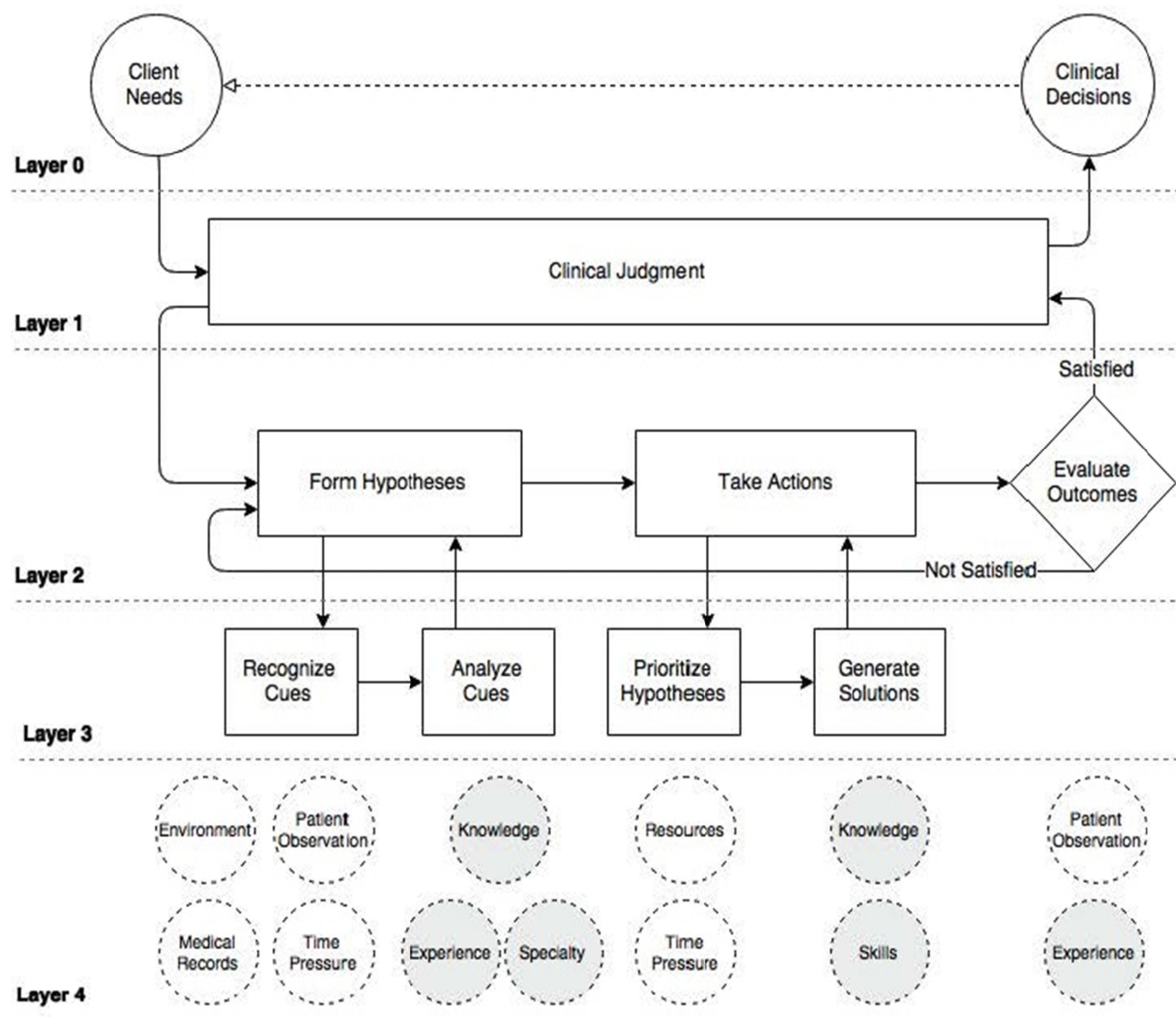


FIGURE 5-1 The assessment model of NCJ (nursing clinical judgment) with the multilayer representation of NCJ.
NOTES: Layer 0 represents the observation layer. Layers 1–3 are the construct layers—the unobservable elements in these layers may "generate observable 'outcomes' that are measurable and scorable; however, these outcomes differ from the *clinical decision* entity in Layer 0." Layer 4 is the context layer—this layer contains "factors that may affect the performance of cognitive operations in above layers." The individual factors are represented by grey circles, and the environment factors are represented by white circles.
SOURCE: Dickison et al., 2016, as presented by Benton on April 22, 2016.

Copyright © National Academy of Sciences. All rights reserved.

Examples of Innovation in Europe

Benton discussed the Lisbon[4] and Copenhagen Agreements and the Bologna Declaration,[5] stating that these are documents that are driving a large portion of the alignment within Europe and beyond. European ministers recognized that Europe has an increasingly elderly population, and they want to draw youth into Europe and make Europe more economically competitive. To achieve this goal, they decided to make education systems in the European Union more competitive. Benton described what they developed as a "tuning framework." This addressed three cycles of education: first, reviewing principles and reflecting on how to define a bachelor's degree, a master's degree, and a doctorate degree; secondly, agreeing on this definition across the member states, and examining the common core competencies associated with the bachelor's degree preparation of any discipline (such as theology, engineering, nursing); and third, listing subject-specific competencies within each discipline.

Benton described Directive 55,[6] a piece of European legislation that has existed in various forms since the late 1970s and has evolved over time. Within that legislation is a framework that facilitates the mobility of health workers, and it has started to deal with some of the standardization of approaches. The European Credit Transfer and Accumulation System (ECTS) facilitates movement from one educational institution to another without having to go back to the beginning of the process. ECTS is a tool of the European Higher Education Area for making studies and courses more transparent and thus helping to enhance the quality and portability of higher education. ECTS modularized programs and recognized prior learning through accreditation. These decisions were motivated by the desire to make education more competitive and also more mobile. The Directorate-General (DG) internal market and DG Sanco (Health and Consumer Affairs) supported this idea, and approached DG Development to spread the idea more widely. Many other countries use this "tuning framework," including 19 Central and Latin American countries, 44 countries in the wider Europe,[7] Australia, New Zealand, and some countries in North Africa and Asia. While often individuals use the term *harmonization* to describe these goals, Benton called it *calibration*—fitting different ideas and programs with one another to see where the gaps are, and then visit opportunities for harmonization.

Benton encouraged participants not to restrict themselves to their specific disciplines or specific countries, but rather reach out to each other, learn from each other, and apply and adopt innovations from other settings into new contexts. This is how to increase momentum to achieve goals. Benton sees an opportunity for individuals to see accreditation differently. He challenged participants with a request, saying "If you as an individual can change the way that you see accreditation, you can change the accreditation that we collectively see."

---

[4] Lisbon Agreement for the Protection of Appellations of Origin and their International Registration (Amended September 28, 1979).
[5] Bologna Declaration: Joint declaration of the European Ministers of Education. June 19, 1999.
[6] For more information about Directive 55, please visit eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32013L0055&from=EN (accessed June 15, 2016)
[7] "Wider Europe" refers to the European Union and its Eastern and Southern neighbors.

Copyright © National Academy of Sciences. All rights reserved.

FINAL THOUGHTS

Over the course of the workshop, individual participants talked about the benefits of accreditation as well as having an effective system with quality offerings in higher education. In addition, individual speakers and breakout group leaders discussed topics such as accreditation criteria through the institutions and programs, guidelines for best practices, and standards and expectations for student outcomes.

Pamela Jeffries offered her interpretation of key concepts and ideas she heard throughout the conversation she led. Bringing stakeholders together and fostering collaboration may be the first step in linking core competencies to the health system and accreditation. She added that using a common base, such as the U.S. Department of Labor competencies, can be the starting place for moving this forward. In addition, institutions can encourage faculty to understand and accept core competencies; however, in doing so, stakeholders would have to remember to keep a focus on the goal of accreditation—to protect public health and safety. Jeffries then reflected on the suggested common competencies that could be promoted among all professions and accreditors such as One Health and the social determinants of health. She also noted that accreditors can help with program quality improvement and can hold institutions responsible for faculty development. Lastly, she encouraged a change in perspective, believing that institutions can greatly benefit from accreditation, and should see accreditation as an aid and a guide rather than as a costly burden.

Malcolm Cox provided broader reflections on the workshop. He gleaned 10 points from the presentations and discussions; he began with the notion that vision is almost everything. "If you don't know where you are going, any road will get you there," he said, paraphrasing Lewis Carroll's famous line from Alice in Wonderland. Without a goal or destination, discussions on the topic of accreditation are "largely sterile," said Cox. The operational elements of accreditation and the strategic thinking processes are important, but Cox suggested that the discussion be framed around social accountability, specifically health and well-being, instead of heath care alone. He presented an increasingly accepted vision for health professional education with well-being as its most encompassing element. The overall health and well-being of individuals and populations and the focus of health professional education and training (see Figure 5-2).

There is a critical need to align clinical accreditation with educational accreditation, Cox noted. This point was raised by Karen Sanders in the breakout group led by Miguel Paniagua where she described the issue as two nonintersecting circles. David Benton took a slightly different perspective, picturing a Venn diagram with two circles overlapping. The overlapping section, said Cox, is where new ideas and innovation are likely to emerge. What holds these two circles together, said Cox, is social accountability, including person- and community-centered care and population health. Essentially, said Cox, these are socially accountability issues starting with the individual person and ending with the population at risk.

Conceptual models of accreditation generate many useful ideas and thoughts, said Cox. He referenced Susan Phillips' conceptual model of accreditation (see Figures 2-1 and 2-2, Chapter 2), which she presented during her brief overview of the accreditation terrain. The model showed the tension among professions, accreditors, other and regulators. Cox encouraged workshop participants to reflect on Phillips' model and to use it in their own work and at their own institutions.

Copyright © National Academy of Sciences. All rights reserved.

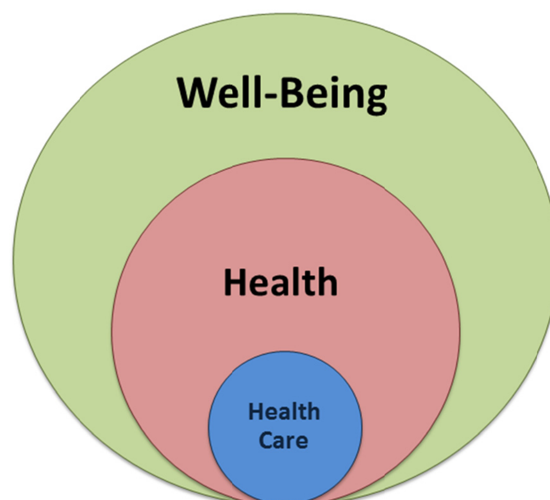


FIGURE 5-2 Cox's vision for health professional education.
SOURCE: Cox, 2016.

Collaborative partnerships diminish tensions and drive change, said Cox. Phillips and several other presenters discussed these benefits of collaborative partnerships. Some of the factors that can be used either strategically or at the operational level to leverage change are team-based care and IPE, he added. Cox specifically saw continuing professional development as the most important focus for IPE. To explain his perspective on the learning continuum and interprofessional education, Cox referenced one section of a model developed by the Institute of Medicine Committee on Measuring the Impact of Interprofessional Education on Collaborative Practice and Patient Outcomes (see Figure 5-3. IOM, 2015). In the foundational education stages, students are a captive audience, and IPE is easier to implement but by itself it is rarely enduring. As learners move to the graduate level and become part of the health workforce, IPE can be more difficult to incorporate unless the clinical learning environment is conducive to collaboration and outcomes oriented. By far the longest period of a health professional's working life is in practice, and it is here that continuing education is so central—not only to individual and collective competence but also the creation and maintenance of a clinical educational environment that nurtures all phases of the educational continuum. While many professional associations and organizations are encouraging IPE in continuing education, Cox believes that more attention is being given to the foundational stages of education and less to the graduate and professional development stages.

Cox sees the need for change as ubiquitous. Despite trying to get out of their silos and to work across barriers, most professions and groups continue to stay where they are most comfortable. Implementation strategies for change are scarce, though not absent; Cox remarked that people are beginning to tackle these challenges. "The *what* is clear, the *how* is much less so," he said. He suggested that individuals and organizations spend time thinking about how to facilitate transformative change.

Cox also saw a need for enhanced outcome measurement, as well as validated measurement toolkits. He believes that assessing distal outcomes—related to individual and population needs—should take precedence over proximal (learning) outcomes. While changes in behavior such as better collaboration and team function is important as an arbiter of (more distal) changes in health and well-being, in and of themselves they provide only an incomplete picture of IPE outcomes.

Copyright © National Academy of Sciences. All rights reserved.

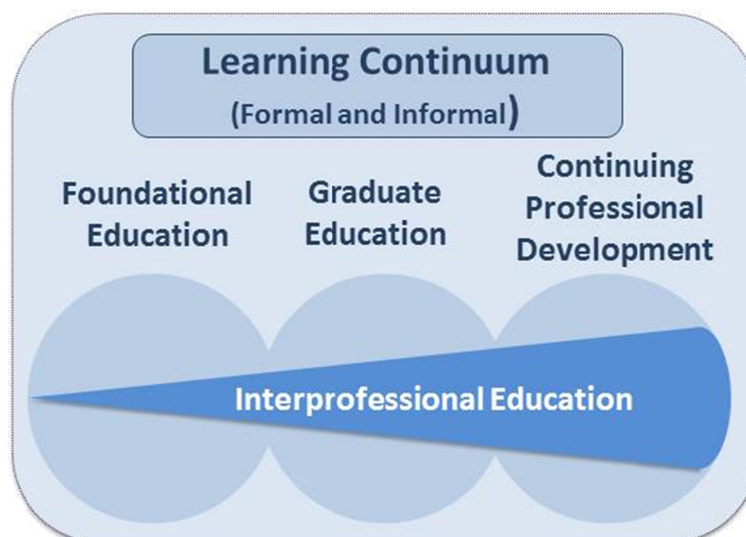


FIGURE 5-3 The interprofessional learning continuum model, adapted by Cox.
NOTE: For this model, "graduate education" encompasses any advanced formal or supervised health professional training taking place between the completion of foundational education and entry into unsupervised practice.
SOURCE: IOM, 2015. Adapted by Cox and presented April 22, 2016.

Blueprints for programs (created through pilot or demonstration projects) can be helpful, but culture will likely determine the transferability (or lack thereof) of these blueprints to different contexts. Sustainability and generalizability are critical concepts that should be more strongly considered, said Cox. In particular, clashing cultures can disturb innovation.

Resource redistribution is essential, said Cox. He warned that increased health professional education funding is unlikely at a time when many nations are struggling with their finances and have competing priorities. Moving funding to where it is most needed might be more successful but will require agreement among key stakeholders, he said. In Cox's opinion, much thoughtful policy work will be necessary, especially outcomes definition and measurement.

Leadership was another point that was raised by several speakers throughout the meeting. The main task of leadership, said Cox, is to manage uncertainty and foster collaboration. Not all current leaders have the skill set that is necessary, and he suggested that leaders be chosen largely on the basis of their communication skills and vision.

Cox illustrated the complex environment that health system leaders encounter by reference to Figure 5-4. The figure shows clinical microsystems (in blue), which are embedded in institutional or organizational mesosystems (in green), all of which is encompassed by the education and health care macrosystem (in red). Cox referenced David Benton's description of the patient as the center of, as well as the bridge between, each of these systems. Others have emphasized the centrality of "persons" rather than the more limiting "patient" and have noted the importance of communities or populations as well as individuals. Caring for and about individuals and communities is a major element of care, but Cox also emphasized the importance of the learning that is a result of this care. He sees this as a feedback loop with the patient or the community in the center. As providers care for patients and communities, they improve their skill set, thereby enhancing care as well. This feedback loop of learning and caring that exists within the microsystem is embedded in the greater mesosystem, thus including both practice

Copyright © National Academy of Sciences. All rights reserved.

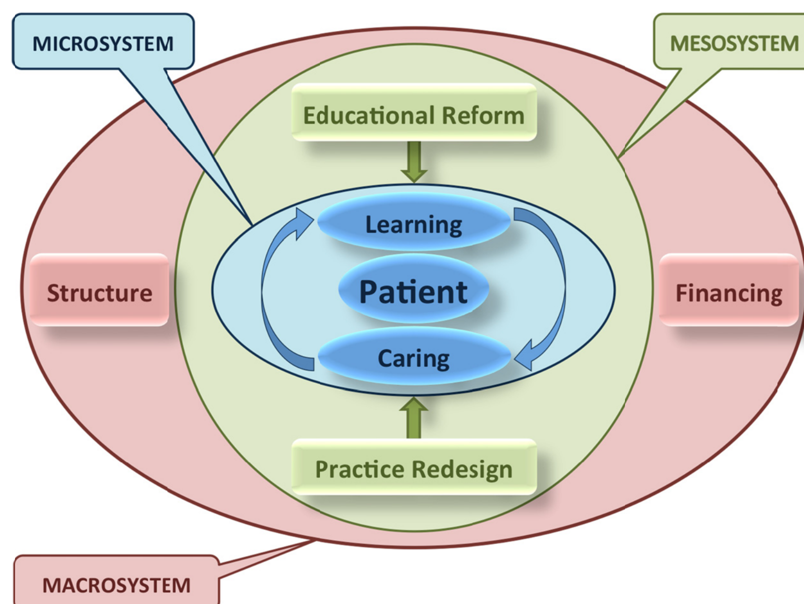


FIGURE 5-4 Model of the health and education systems.
SOURCE: Cox, 2016.

redesign and educational reform. However, these potentially transformative efforts are often forestalled by lack of communication between the education and practice bodies. He believes that many of the barriers discussed during the workshop are related to the lack of effective communication between these two groups, and the difficulty in achieving a common vision for the desired outcomes of learning within and across professions. Cox called for greater collaboration between education and practice groups. The linkage between education and clinical practice is in the clinical microsystem, he said—through patient or community.

MOVING FORWARD

To close the workshop, Eric Holmboe, from the Accreditation Council for Graduate Medical Education, led a discussion on ideas for moving the conversation forward. Cox expressed concern about the slow movement of adopting these core competencies and addressing common issues among professions. In a plea for action, he encouraged participants to think about focused action around policy derivation and specific ways to move this work forward. Talbott shared his respect for the Forum, and called attention to its tremendous amount of brainpower, stakeholder representation, and leadership. He wondered how the leadership present in the Forum members could be harnessed in order for individuals to make a difference in health professional education and accreditation. Marilyn Chow, Kaiser Permanente, agreed with Talbott and Cox, saying that because of the rapid development of the health care delivery system, health, and health care, health professional educators are in a difficult position. It is a challenge to change curricula at the speed at which health care changes, she said. She urged the workshop participants to think of small actions they could take to promote positive change. Susan Scrimshaw from The Sage Colleges agreed with Cox and Chow that there is a sense of urgency to transform health professional education. Holmboe encouraged participants to take small actions within their everyday work environment at their organizations. One example is the area

Copyright © National Academy of Sciences. All rights reserved.

of health and well-being, said John Weeks, Academic Collaborative for Integrative Health. This topic is innovative, interprofessional, global, and related to the social determinants of health.

Looking at education, practice, and accreditation as a system was an especially meaningful perspective to Halstead; she believes that these stakeholder groups should be represented in any discussion about health education reform. Cox added to Halstead's comment that there is an opportunity for the health professional associations to be the platform to bring these different stakeholders together. Other organizations and institutions have the opportunity to create blueprints for actions and recommendations based on their knowledge, expertise, and shared experience, he said. Then with a last call by Holmboe and Harvison for individual workshop participants to act upon their expressed convictions, the workshop was adjourned.

REFERENCES

Cox, M. 2016. *Reflections.* Presented at the workshop: The Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education. Washington, DC, April 22.

Dickison, P., X. Luo, D. Kim, A. Woo, W. Muntean, and B. Bergstrom. 2016. Assessing higher-order cognitive constructs by using an information-processing framework. *Journal of Applied Testing Technology* 17(1):1-19.

IOM (Institute of Medicine). 2015. *Measuring the impact of interprofessional education on collaborative practice and patient outcomes.* Washington, DC: The National Academies Press.

IPEC (Interprofessional Education Collaborative) Expert Panel. 2011. *Core competencies for interprofessional collaborative practice: Report of an expert panel*. Washington, DC: Interprofessional Education Collaborative.

Parry, S. B. 1996. The quest for competencies. *Training* 33(7):48-56.

White, R. W. 1959. Motivation reconsidered: The concept of competence. *Psychological Review* 66(5):297-333.

Copyright © National Academy of Sciences. All rights reserved.

Copyright © National Academy of Sciences. All rights reserved.

Appendix A
Workshop Agenda

The Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: A Workshop

April 21–22, 2016

Keck Center of the National Academies, Room 100
500 Fifth Street NW, Washington DC 20001

DAY 1: April 21, 2016

Breakfast conversation with the recent Minister of Public Health, Thailand, Rajata Rajatanavin
8:00–8:30 am, Room 106

9:00 am	**Welcome** Susan Scrimshaw, Global Forum Co-Chair
SESSION I: MYTHS, TRADE-OFFS FOR ACCREDITATION, AND PROFESSIONAL DRIVERS	
Objective: To set a foundation of understanding about what accreditation is; what can and cannot be realistically accomplished through accreditation; and what is driving the calls to change accreditation (e.g., costs, need to promote innovation, interprofessional approaches).	
9:10 am 9:20 am 9:40 am	**Orientation to the Workshop** Neil Harvison, Workshop Co-Chair **Accreditation: Realities, Challenges, and Opportunities** Susan Phillips, University at Albany, State University of New York Facilitated Discussion and Q&A
10:00 am	**Trade-Offs for Accreditation** Facilitator: Eric Holmboe, Workshop Co-Chair **Question 1:** Will requiring attention to a topic through accreditation actually improve the quality of education in that area? **Question 2:** How will an accrediting agency know if an added topic or new criterion actually improved the quality of education? Should there be some sort of litmus test, etc.?
10:45 am	**BREAK**
11:15 am	**Professional Drivers of Accreditation** Objective: To consider how accreditation could be a motivator for educators to innovate,

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

<table>
<tr><td></td><td>and, conversely, how accreditation might cause obstructions to innovations in education

Debate 1 Proposition: Accreditation hinders innovation

Moderator: Rick Talbott, Association of Schools of the Allied Health Professions
Debater: Elizabeth Hoppe, Association of Schools and Colleges of Optometry
Debater: Karen Wolf, Pennsylvania State University College of Nursing

Debate 2 Proposition: Accreditation stimulates progress in low-resource settings

Moderator: Holly Wise, American Council of Academic Physical Therapy
Debater: Nelson Sewankambo, Makerere University, Uganda
Debater: Warren Newton, American Board of Family Medicine</td></tr>
<tr><td>12:00 pm</td><td>Marketplace of Ideas: Presentations and Instructions. Two-minute presentations on topics of interest in the main room followed by individual discussions in breakout rooms for all those interested in joining the conversation</td></tr>
<tr><td>12:15 pm</td><td>LUNCH</td></tr>
<tr><td colspan="2">Marketplace Optional Lunchtime Discussions
K100 will remain open for networking
Discussion 1 12:45 to 1:15 pm
Discussion 2 1:15 to 1:45 pm</td></tr>
<tr><td colspan="2">Room 1: Interprofessional Education (Room 101)
Discussion 1. Assessment of interprofessional teamwork competencies: A role in accreditation systems? (Miguel Paniagua, National Board of Medical Examiners)
Discussion 2. Buy-in for IPE standards in accreditation (Lemmietta G. McNeilly, American Speech-Language-Hearing Association)

Room 2: Enhancing Quality and Innovation (Room 105)
Discussion 1. Is accreditation necessary for a quality training program? (Debbie Hettler, Office of Academic Affiliations, Department of Veterans Affairs)
Discussion 2. Exploring the role of accreditation to advance interprofessional education: the role of accreditation in enhancing quality and innovation in health professions education (Joseph Zorek, University of Wisconsin-Madison)

Room 3: High Stakes Examinations (Room 102)
Discussion 1. High-stakes testing: Implications for accreditation standards for health professions education (Beth Mancini, Society for Simulation in Healthcare)
Discussion 2. Setting, implementing, and acting on a bright-line outcome standard for program pass rates on a national board exam (Mark Merrick, Commission on Accreditation of Athletic Training Education)</td></tr>
</table>

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

<table>
<tr><td colspan="2">Room 4: Innovation (Room 106)
Discussion 1. Accreditation versus innovation (Rick Talbott, Association of Schools of the Allied Health Professions)
Discussion 2. Using accreditation to foster well-being and address burnout in health professionals, students, and educators (Elizabeth “Liza” Goldblatt, Academic Collaborative for Integrative Health)</td></tr>
<tr><td colspan="2">Webcast only session
12:50–1:45 pm (Room 201)
Moderator: Maria Tassone, University of Toronto, Canada
• Social accountability and accreditation
Roger Strasser, Northern Ontario School of Medicine, Canada
• Accreditation and the search for “new professionalism”
Jan De Maeseneer, Ghent University, Belgium
• Educational program recognition for meeting the International Confederation of Midwives Midwifery Educational Standards
Mary Barger, American College of Nurse-Midwives</td></tr>
<tr><td colspan="2">SESSION II: COMPETENCY-BASED ACCREDITATION AND COLLABORATION</td></tr>
<tr><td colspan="2">Objective: To engage health professional educators, accreditors, and others in small and large group discussions that explore challenges and opportunities to greater harmonization among and between groups with vested interests in accreditation and quality improvement</td></tr>
<tr><td></td><td>BREAKOUT SESSIONS—Fostering Innovation Through Collaboration</td></tr>
<tr><td>2:00 pm</td><td>Breakout group instructions in main room
Instructions by Neil Harvison</td></tr>
<tr><td>2:15 pm</td><td>Groups:
1. Collaborating for harmonization of competency-based standards across professions (Room 101)
Leader: Peter H. Vlasses, Accreditation Council for Pharmacy Education
2. Bringing education and practice accreditors together for achieving quality throughout the education to practice continuum (Room 100)
Leader: Miguel Paniagua, National Board of Medical Examiners
Assisted by: Karen Sanders, Office of Academic Affiliations, Veterans Health Administration, and David Benton, National Council of State Boards of Nursing
3. Building a competency-based accreditation system: Balancing global standards with local relevance (Room 105)
Leader: Zohray Talib, George Washington University
Assisted by: Nelson Sewankambo, Makerere University, Uganda, and Susan Day, Accreditation Council for Graduate Medical Education
4. Improving efficiencies of accreditation through greater collaboration among stakeholders (Room 106)
Leader: Jennifer Butlin, Commission on Collegiate Nursing Education</td></tr>
<tr><td>4:00 pm</td><td>BREAK—Close small group session</td></tr>
</table>

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

4:30 pm	**Small Group Report Back and Facilitated Discussion** Moderator: Neil Harvison, Workshop Co-Chair 1. Collaborating for harmonization of competency-based accreditation standards across professions 2. Bringing education and practice accreditors together for achieving quality throughout the education to practice continuum 3. Building a competency-based accreditation system: balancing global standards with local relevance 4. Improving efficiencies of accreditation through greater collaboration among stakeholders
5:00 pm	**ADJOURN**

DAY 2: April 22, 2015

7:30 am	Breakfast
8:00 am	**Reflections of Day 1** Malcolm Cox, Global Forum Co-Chair
SESSION III: ENGAGING NEW PARTNERS IN ACCREDITATION	
Objective: To identify strategies to engage key partners in accreditation in order to enhance quality and innovation	
8:15 am	**The Role of Patients, Families, Communities, and/or Populations in Health Professional Education Accreditation** Facilitator: Jo Ann Regan, Council on Social Work Education Speaker: Christine MacDonell, Commission on Accreditation of Rehabilitation Facilities Discussion
9:00 am	**Innovative Models of Accreditation: One Health Accreditation Across Nations** The One Health Initiative is a movement to forge coequal collaborations among human health professionals, ecologists, and veterinarians to monitor and control public health threats. Question: How can this model of collaboration be applied to meet the needs of accreditation across the health professions? Question: Given the globalization of the workforce, how do professional groups and accreditors from different nations get past the different education systems in order to reach the common core clinical competencies? Moderator: Deborah Kochevar, Cummings School of Veterinary Medicine, Tufts University Panel: • Beth Sabin, American Veterinary Medical Association • Stuart Reid, Royal Veterinary College, London

Copyright © National Academy of Sciences. All rights reserved.

	• William Bazeyo, Makerere School of Public Health, Uganda
10:30 am	**BREAK**
SESSION IV: THE WAY FORWARD	
Objective: To explore issues involving evaluating quality and what makes a good "requirement"	
11:00 am	**Core Competencies That Apply to All Health Professions: "Quick Takes"** • How can including core competency concepts in accreditation standards be linked to improved quality in education and health care systems? • What would be necessary components in the system (education-practice-accreditation) to affect the quality of health professions education and health care? • Should accreditors play a more active role in fostering faculty development in program quality improvement in education? • Participant and panelist responses: What commonalities exist in health professions' criteria and principles for core competencies and how can these be leveraged to drive quality in health professions education? Moderator: Pamela Jeffries, George Washington University Panel: • Judith Halstead, National League for Nursing Commission for Nursing Education Accreditation • Rick Talbott, Association of Schools of the Allied Health Professions • Peter H. Vlasses, Accreditation Council for Pharmacy Education
12:00 pm	**Movement Toward Competency-Based Education** **How can accreditation foster innovation?** David Benton, National Council of State Boards of Nursing Discussion
12:30 pm	**Facilitated Discussion on Next Steps** Workshop Co-Chairs
1:00 pm	**LUNCH / ADJOURNMENT** Room 100 will remain open until 5 pm for networking opportunities.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

Copyright © National Academy of Sciences. All rights reserved.

Appendix B
Speaker Biographical Sketches

Mary Barger, Ph.D., M.P.H., grew up in the Middle East where her experiences shaped her intense interest in maternal and child health as well as sparked her interest in midwifery. She combined these passions by receiving a Master of Public Health and her nurse-midwifery training from Johns Hopkins School of Public Health after receiving her nursing degree from Stanford University and spending time as a nurse in Saudi Arabia and a refugee camp in Jordan. She furthered her interest in perinatal epidemiology by obtaining a Ph.D. in Epidemiology from Boston University. Clinically, Dr. Barger has practiced nurse-midwifery for an interdisciplinary comprehensive pregnancy program for low-income women in San Diego, provided care to Navy dependents through Balboa Naval Medical System, and worked a multispecialty practice in Boston, Massachusetts. She has held faculty positions at the University of California San Diego Department of Community and Family Medicine; Boston University School of Public Health Department of Maternal and Child Health; the University of California, San Francisco Family Health Care Nursing; and the University of San Diego Hahn School of Nursing. She served as a nurse-midwifery codirector for the University of California, San Francisco/University of California, San Diego Intercampus Program and director of the Boston University Nurse-Midwifery Program. In the areas of education and certification, Dr. Barger is a recognized leader. She currently serves on the board of the American Midwifery Certification Board and is chair of the Continuing Competency Program and has been responsible for major changes in competency requirements for midwives. She was a leader in adding primary care to the midwifery core competencies for the American College of Nurse-Midwives. She has served on the examination committees for NCC and the Board of Public Health Examiners. Dr. Barger has participated in a Fulbright Interprofessional Health project with health faculty in Malawi. Currently, she is a co-chair of the Education Standing Committee for the International Confederation of Midwives. Dr. Barger is a Fellow of the American College of Nurse-Midwives.

William Bazeyo, MBChB, M.Med. (OM), Ph.D., is a Ugandan physician, academician, and occupational health specialist. He is currently a professor of occupational medicine at Makerere University college of Health Sciences' School of Public Health where he is the dean of the school. Makerere University is the oldest university in Uganda. He is also the Lab Director and Chief of Party of ResilientAfrica Network (RAN), which brings together 20 universities in 16 African countries; the Director of the Center for Tobacco Control in Africa, Principal Investigator (Executive Director) of One Health Central and Eastern Africa, and PI for the Monitoring and Evaluation Technical Support program. In 1979, he joined Makerere University Medical School where he obtained the degree of Bachelor of Medicine and Bachelor of Surgery. He went on to obtain the Master of Medicine degree specializing in occupational health from the National University of Singapore in 1992. He later obtained the Doctor of Public Health (Ph.D.) degree from Atlantic International University in 2014. He also obtained a certificate in Authentic Leadership Development from Harvard Business School in August 2015.

David Benton, R.G.N., Ph.D., FFNF, FRCN, FAAN, took up post as Chief Executive Officer of the National Council of State Boards of Nursing (NCSBN) on October 1, 2015. Immediately prior to this he worked at the International Council of Nurses in Geneva, Switzerland, for the

Copyright © National Academy of Sciences. All rights reserved.

previous 10 years; firstly as their consultant on nursing and health policy specializing in regulation, licensing, and education, and then as CEO. He qualified as a general and mental health nurse at the then Highland College of Nursing and Midwifery in Inverness, Scotland. His M.Phil. research degree focused on the application of computer-assisted learning to postbasic nurse education and has over the past 30 years had articles published in relation to research, practice, education, leadership, regulation, and policy topics. He has a Ph.D. Summa Cum Laude from the Complutense University of Madrid for his work on researching an international comparative analysis of the regulation of nursing practice. Benton has held senior roles for 25 years across a range of organizations. These roles have included working as Executive Director of Nursing at a health authority in London, as a senior civil servant in the Northern and Yorkshire regions, as Chief Executive of a nurse regulatory body in Scotland, and as Nurse Director of a University Trust Health System. Benton is the recipient of several awards and honors. He is particularly proud of being awarded the inaugural Nursing Standard Leadership award in 1993. He was presented with Fellowship of the Florence Nightingale Foundation in 2001, awarded Fellowship of the Royal College of Nursing in 2003 for his contribution to health and nursing policy, and most recently became a Fellow of the American Academy of Nursing in 2015. Benton has held several visiting appointments and is currently a visiting professor of nursing policy at the University of Dundee in Scotland.

Jennifer Butlin, Ed.D., has served as Executive Director of the Commission on Collegiate Nursing Education (CCNE) since 1998. CCNE is a nationally recognized accrediting agency for baccalaureate and graduate nursing programs and nurse residency programs. CCNE accredits nearly 1,400 nursing education programs at more than 700 colleges and universities, as well as nurse residency programs in acute care settings in the United States and its territories. Prior to her tenure at CCNE, Dr. Butlin served as the Accreditation Coordinator at the Council on Education for Public Health, which accredits public health schools and programs. Dr. Butlin earned her Doctor of Education in Higher Education Administration from the George Washington University. Dr. Butlin has been elected or appointed to serve on numerous committees and task forces dealing with accreditation and quality in higher education. She has represented specialized accreditors in the orientation of the USDE National Advisory Committee on Institutional Quality and Integrity and has chaired the Association of Specialized and Professional Accreditors External Recognition Issues Committee. Dr. Butlin has presented at numerous national and international conferences about issues and trends in higher education and accreditation, and has served as a consultant to developing and long-standing accrediting agencies. She was recently appointed to serve on the Physician Assistant Education Association's Accreditation Task Force. Outside of accreditation, Dr. Butlin has been elected to serve on the Board of Directors of Reston Children's Center, a nationally recognized cooperative caring center serving children ages 6 weeks to sixth grade in Northern Virginia. She is also involved with the National Charity League, Inc., and serves as the assistant chair of the Recognition Committee for the Cherry Blossom Chapter in the Washington, DC, area.

Malcolm Cox, M.D., is an Adjunct Professor of Medicine at the University of Pennsylvania. He most recently served for 8 years as the Chief Academic Affiliations Officer for the U.S. Department of Veterans Affairs, in Washington, DC, where he oversaw the largest health professions training program in the country and repositioned the VA as a major voice in clinical workforce reform, educational innovation, and organizational transformation. Dr. Cox received his undergraduate education at the University of the Witwatersrand and his M.D. from Harvard

Copyright © National Academy of Sciences. All rights reserved.

Medical School. After completing postgraduate training in internal medicine and nephrology at the Hospital of the University of Pennsylvania, he rose through the ranks to become Professor of Medicine and Associate Dean for Clinical Education. He has also served as Dean for Medical Education at Harvard Medical School; upon leaving the Dean's Office, he was appointed the Carl W. Walter Distinguished Professor of Medicine at Harvard Medical School. Dr. Cox has served on the National Leadership Board of the Veterans Health Administration, the VA National Academic Affiliations Advisory Council (which he currently chairs), the National Board of Medical Examiners, the National Advisory Committee of the Robert Wood Johnson Foundation Clinical Scholars Program, the Board of Directors of the Accreditation Council for Graduate Medical Education, and the Global Forum on Innovation in Health Professions Education of the Institute of Medicine (which he currently co-chairs). Dr. Cox is the recipient of the University of Pennsylvania's Christian R. and Mary F. Lindback Award for Distinguished Teaching and in 2014 was recognized by the Association of American Medical Colleges as a nationally and internationally renowned expert in health professions education.

Susan Day, M.D., joined Accreditation Council for Graduate Medical Education (ACGME) as its Vice President, Medical Affairs, in October 2014. Prior to working at ACGME, Dr. Day worked for the California Pacific Medical Center where she was most recently the chair and Program Director for the Department of Ophthalmology. Dr. Day is also a practicing pediatric ophthalmologist. In addition to being President of the American Academy of Ophthalmology in 2005, Dr. Day has held numerous other positions in the academy: Board of Trustees from 1998 to 2001; chair of the Ethics committee from 1996 to 2000; Membership Advisory committee from 2000 to current; Instruction Advisory committee; Professional Liaison committee; Interspecialty committee; Allied Health committee; and Preferred Practice Patterns committee. Dr. Day has also served as President of the Association of University Professors of Ophthalmology in 2011, President of the American Association for Pediatric Ophthalmology and Strabismus in 2004, and on the board or on several committees, including Women in Ophthalmology, Ophthalmic Mutual Insurance Company, American Academy of Pediatrics (division of ophthalmology), Smith-Kettlewell Eye Research Institute, and Pacific Vision Foundation. She is also a member of the American Ophthalmological Society and the Association for Research in Vision and Ophthalmology. Dr. Day received her medical degree from Louisiana State University. Additional educational achievements include Letterman Army Medical Center, The Presidio Medicine Internship; Pacific Medical Center Ophthalmology Resident; The Hospital for Sick Children, England, David Taylor Pediatric & Strabismus Fellowship; and the University of Iowa, William Scott, MD Pediatric & Strabismus Fellowship. She has authored more than 40 peer-reviewed articles and papers. Dr. Day has previously served ACGME in a variety of capacities. She served as a member and chair of the ACGME Board of Directors and as both a member and chair of the Residency Review Committee, Ophthalmology. Additionally, Dr. Day was co-chair of the ACGME Duty Hours Task Force from 2009–2010, as well as an ACGME site visitor for the ACGME-I programs in Singapore and Beirut.

Jan De Maeseneer, M.D., Ph.D., FRCGP (Hon), earned his M.D. from Ghent University in Belgium in 1977. Since 1978, he has been working part-time as a family physician in the community health center Botermarkt in Ledeberg, a deprived area in the city of Ghent. From 1978 to 1981, he worked as a part- time research assistant in health promotion at the Department of Public Health. Professor De Maeseneer became the chair of the Department of Family

Copyright © National Academy of Sciences. All rights reserved.

Medicine (1991) and works there as a full-time professor. Since 2008, De Maeseneer has served as vice dean for strategic planning at the Faculty of Medicine and Health Sciences. He is a board member of the Interuniversity Flemish Consortium for vocational training of family medicine, and he chairs the working party for family medicine of the Belgian High Council for medical specialists and family physicians (1998). Professor De Maeseneer chairs the Educational Committee (since 1997) and directs a fundamental reform of the undergraduate curriculum (from a discipline-based approach to an integrated patient-based approach). In 2004, Professor De Maeseneer received the "WONCA award for excellence in health care: the Five-Star Doctor" at the 17th World Conference of Family Doctors in Orlando (USA). In 2008 he received a Doctor Honoris Causa degree at the Universidad Mayor de San Simon in Cochabamba (Bolivia), and in 2014, he received the Recognition for Excellence in Health Professional Education at the Prince Mahidol Award Conference in Thailand. He has written articles in several journals on health education, epidemiology, medical decision making, medical education, quality of care, community-oriented primary care, interprofessional team work, training in general practice, health and poverty, and health in developing countries. Professor De Maeseneer has authored over 150 scientific publications, 100 of which were published in international peer-reviewed journals. Professor De Maeseneer has served as chairman of the European Forum for Primary Care since 2005. In 1990–1991, he became an advisor on primary health care for the federal Minister of Health, and in 2010 became chair of the Strategic Advisory Board of the Flemish Minister for Welfare, Health, and Family. From 2006 to 2008, Professor De Maeseneer was a member of the Knowledge Network on "Health System" of the WHO Commission on Social Determinants of Health. He is currently Director of the International Centre for Primary Health Care and Family Medicine- Ghent University, a WHO Collaborating Centre for primary health care. Since October 2013, he has been the chair of the Expert Panel on Effective Ways of Investing in Health, advising the European Commission.

Elizabeth (Liza) Goldblatt, Ph.D., M.P.A./P.A., is the Executive Director of the Academic Collaborative for Integrative Health (ACIH, formerly known as ACCAHC). Goldblatt is a leading educator in the acupuncture and Oriental medicine profession. She was chair of ACIH for 8 years and one of the founding members of the organization. She served as vice president of the Council of Colleges of Acupuncture and Oriental Medicine (CCAOM) from 1990–1996, president from 1996–2002, and is currently on the CCAOM Finance Committee. Goldblatt also co-chaired the Education Committee of the North American Acupuncture and Oriental Medicine Council, from 1993 to 2007. She served on the board of trustees for Pacific University from 1994 to 2004. Goldblatt was president of the Oregon College of Oriental Medicine (OCOM) from 1988 to 2003, she was the vice president for academic affairs for the American College of Traditional Chinese Medicine (ACTCM) from 2003 to 2011, and currently serves on the faculty of the clinical doctoral program at ACTCM in San Francisco, California. Throughout this time, Goldblatt has been a strong advocate for interdisciplinary, collaborative, academic efforts. She assisted in creating three NIH NCCAM centers with Oregon Health & Science University (OHSU) and Kaiser Permanente that included representation from the complementary and integrative health care colleges. She helped OHSU and the other complementary health care educational institutions to create the Oregon Collaborative for Integrative Medicine (OCIM). Goldblatt also had the lead in creating two of the clinical doctoral programs in Acupuncture and Oriental Medicine (DAOM) at OCOM and ACTCM. These programs focus on collaborative and integrated medicine, which she views as a major step for educational programs in this field. In 2008–2009, she served as a member of the Planning Committee for the Institute of Medicine

Copyright © National Academy of Sciences. All rights reserved.

(IOM) National Summit on Integrative Medicine and the Public Health. Goldblatt is currently working with the Academic Collaborative for Integrative Medicine and Health (ACIMH, a national organization consisting of 66 medical academic centers with integrative medicine departments) on several collaborative projects that include educational, clinical, and research components. Dr. Goldblatt has a master's in Public Administration/Health Administration (M.P.A./H.A.) from Portland State University. She earned her Ph.D. from the University of California, Los Angeles in Ethnomusicology, which combined anthropology, medical anthropology, and the ritual arts.

Judith Halstead, Ph.D., R.N., FAAN, ANEF, has more than 35 years of experience in nursing education with expertise in online education, nurse educator competencies, and evidence-based teaching in nursing education. She is co-editor of the widely referenced book on nursing education, *Teaching in Nursing: A Guide for Faculty.* Dr. Halstead is the recipient of numerous awards including the Midwest Nursing Research Society Advancement of Science Award for the Nursing Education Research Section and the Sigma Theta Tau International Elizabeth Russell Belford Excellence in Education Award. She is a fellow in the National League for Nursing Academy of Nursing Education and the American Academy of Nursing. She served as the president of the National League for Nursing from 2011 to 2013.

Neil Harvison, Ph.D., OTR/L, FAOTA, is the Chief Officer for Academic and Scientific Affairs at the American Occupational Therapy Association (AOTA). In this capacity he provides leadership and direction for the accreditation, education, and research functions of the Association. Harvison holds a bachelor's degree in occupational therapy (hons.) from the University of Queensland (Australia), a Master of Arts in Developmental Disabilities Studies from New York University, and a Doctorate of Philosophy from the Steinhardt School of Education at New York University. Prior to joining AOTA in 2006, Harvison spent more than 24 years as a pediatric practitioner and hospital administrator. For 12 years he was the associate director for outpatient services at the Mount Sinai Rehabilitation Center in New York City. During this period, he held clinical faculty appointments at the Mount Sinai School of Medicine, Columbia University College of Physician and Surgeons, and Mercy College. Harvison served in number of volunteer leadership roles as a member of AOTA before joining the staff in 2006. He has also served on the Board of Directors of the Association of Specialized and Professional Accreditors (ASPA) as both the chairperson and vice chairperson. Harvison currently serves as a member of numerous national interprofessional advisory boards. He is the author of numerous publications and presentations in health care education and accreditation and is an associate editor for education with the American Journal of Occupational Therapy. In 2011, Harvison was recognized with the AOTA Fellows award for service to education and practice.

Debbie L. Hettler, O.D., M.P.H., FAAO, is the Clinical Director, Associated Health Education at the VA Headquarters in Washington, DC, where she is involved with the policy and oversight for more than 40 clinical education disciplines. Prior to this position, she established and developed an optometric education program in the VA, which evolved into optometric externships and residencies with four optometry schools, internal medicine rotations, nurse practitioner observations, and interactions with an ophthalmology teaching program. Dr. Hettler previously was a full-time educator, and has also worked clinically in interdisciplinary settings, including the VA, health maintenance organization, contact lens research clinics, union occupational health offices, and private practices. Currently, she is also a regional quality

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

assurance representative conducting office inspections, record audits, and consulting with eye care practitioners on improving clinical skills and documentation of patient care. Additional accreditation activities include acting as a consultant for the Council on Optometric Education and the Council on Education for Public Health, and a National Board of Optometry Examiner. Throughout her professional career, Dr. Hettler has continued to publish and present at professional conferences while maintaining her educational credentials. Dr. Hettler is recognized as an expert in Optometric Public Health as demonstrated by her Diplomate status in the American Academy of Optometry's Public Health and Environmental Optometry Section, as well as a Distinguished Practitioner in the National Academy of Practice in Optometry. She has served as chair of several committees and sections of the American Optometric Association, including the Multidisciplinary Practice Section and the Public Health Task Force as well as a member of several other national committees. She has been an elected leader in local optometric societies of the American Optometric Association in Illinois, Missouri, and New York.

Eric Holmboe, M.D., a board-certified internist, is Senior Vice President, Milestones Development and Evaluation of the Accreditation Council for Graduate Medical Education (ACGME). Prior to joining ACGME in January 2014, he served as the chief medical officer and senior vice president of the American Board of Internal Medicine (ABIM) and the ABIM Foundation. He is also professor adjunct of medicine at Yale University, and adjunct professor at the Uniformed Services University of the Health Sciences. Prior to joining the ABIM in 2004, he was the associate program director, Yale Primary Care Internal Medicine Residency Program; director of Student Clinical Assessment, Yale School of Medicine; and assistant director of the Yale Robert Wood Johnson Clinical Scholars program. Before joining Yale in 2000, he served as division chief of general internal medicine at the National Naval Medical Center. Dr. Holmboe retired from the U.S. Naval Reserves in 2005. His research interests include interventions to improve quality of care and methods in the evaluation of clinical competence. His professional memberships include the American College of Physicians, where he is a Master; Society of General Internal Medicine; Association of Medical Education in Europe; and he is an honorary Fellow of the Royal College of Physicians in London. Dr. Holmboe is a graduate of Franklin and Marshall College and the University of Rochester School of Medicine. He completed his residency and chief residency at Yale-New Haven Hospital, and was a Robert Wood Johnson Clinical Scholar at Yale University.

Elizabeth Hoppe, O.D., M.P.H., Dr.P.H., the Founding Dean of the College of Optometry, has several notable career accomplishments. She was the first woman chosen as editor of the Association of Schools and Colleges of Optometry's peer-reviewed journal, *Optometric Education*, and she is the first woman in optometry to hold the Dr.P.H. Dr. Hoppe joined WesternU from the New England College of Optometry, where she was the Associate Dean of Academic Affairs. Prior to her position there, she was a tenured professor at Southern California College of Optometry from 1990 to 2003. Dr. Hoppe has authored numerous peer-reviewed manuscripts and several text book chapters. She also serves on the peer-review board for professional journals and is a grant reviewer for several different granting agencies. Dr. Hoppe received her optometry degree from Ferris State University, followed by residency training in low-vision rehabilitation at the Eastern Blind Rehabilitation Center at the West Haven, Connecticut, VA Medical Center. She earned a Master's Degree in Public Health from Yale University and a Doctorate in Public Health from the University of Michigan.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

Pamela Jeffries, Ph.D., R.N., FAAN, ANEF, Dean and Professor at George Washington University School of Nursing, is nationally known for her research and work in developing simulations and online teaching and learning. Throughout the academic community, she is well regarded for her expertise in experiential learning, innovative teaching strategies, new pedagogies, and the delivery of content using technology in nursing education. Dr. Jeffries has served as PI on grants with national organizations such as the National League for Nursing, she has provided research leadership and mentorship on national projects with the National Council State Board of Nursing, and she has served as a consultant for health care organizations, corporations, large health care organizations, and publishers providing expertise in clinical education, simulations, and other emerging technologies. Prior to joining George Washington University , Dr. Jeffries was Vice Provost for Digital Initiatives and professor at the School of Nursing at Johns Hopkins University, where she was previously the Associate Dean for Academic Affairs. Dr. Jeffries is a Fellow of the American Academy of Nursing (FAAN), an American Nurse Educator Fellow (ANEF), and most recently, a Robert Wood Johnson Foundation Executive Nurse Fellow (ENF). She also serves as a member of the National Academies of Sciences, Engineering, and Medicine's Global Forum on Innovation in Health Professional Education, and serves as past president of the interprofessional, international Society for Simulation in Healthcare. She has numerous publications, is sought to deliver presentations nationally and internationally, and has just edited three books, *Simulations in Nursing Education: From Conceptualization to Evaluation* (2nd edition), *Developing Simulation Centers Using the Consortium Model,* and her newest book published by Lippincott being launched at IMSH, *Clinical Simulations in Nursing Education: Advanced Concepts, Trends, and Opportunities*. She has received federal and state grant funding to support her research focus in nursing education and the science of innovation and learning. Dr. Jeffries was inducted in the prestigious Sigma Theta Tau Research Hall of Fame and is the recipient of several teaching and research awards from the Midwest Nursing Research Society, the International Nursing Association of Clinical Simulations and Learning, and teaching awards from the National League of Nursing, Sigma Theta Tau International, and most recently, the American Association of Colleges of Nursing Scholarship of Teaching and Learning Excellence award.

Deborah Kochevar, D.V.M., Ph.D., DACVC, is the dean and the Henry and Lois Foster Professor at the Cummings School of Veterinary Medicine at Tufts University. Prior to her appointment as dean in August 2006, Dr. Kochevar was associate dean for Professional Programs and held the Wiley Chair of Veterinary Medical Education at Texas A&M University's College of Veterinary Medicine and Biomedical Sciences. She was also professor of veterinary physiology and pharmacology at the College of Veterinary Medicine, with a joint appointment in medical physiology. She was on the faculty at Texas A&M from 1987 to 2006 and served two stints as acting dean in 2004 and 2005. Dr. Kochevar was graduated Phi Beta Kappa with a bachelor of arts degree in English and biology from Rice University in 1978. She received a doctor of veterinary medicine degree from Texas A&M University in 1981, and a Ph.D. degree in cellular and molecular biology from the University of Texas Southwestern Medical Center in 1987. She was a National Institutes of Health National Research Service Award Fellow in 1984–1986. In the mid-1990s, she spent 1 year in Washington, DC, as a Congressional Science Fellow to the Senate Labor and Human Resources Committee. Heralded as an inspiring mentor to her students, Dr. Kochevar has won many teaching awards, including the Norden Distinguished Teacher Award, the Student American Veterinary Medical Association National Teaching Award in Basic Science, and the Former Students Distinguished Achievement Award in Teaching at

Copyright © National Academy of Sciences. All rights reserved.

Texas A&M. She has received numerous grants for education and curriculum development and participated in educational outreach projects funded by the National Institute of Environmental Health Science. Dr. Kochevar's research focuses on pharmacology and cellular and molecular biology. She has received research grants from the American Heart Association, the United States Department of Agriculture, and corporate sponsors. Dr. Kochevar is president of the American College of Veterinary Clinical Pharmacology and is active in the American Veterinary Medical Association, having chaired its Council on Education and the Educational Commission for Foreign Veterinary Graduates.

Christine M. MacDonell, FACRM, began her varied career in the health care industry as an occupational therapist after graduating from the University of Southern California. While in California, she became an administrator of a full rehabilitation continuum of care. MacDonnell came to the Commission on Accreditation of Rehabilitation Facilities (CARF) in 1991. She has served as the Managing Director of Medical Rehabilitation and International Medical Rehabilitation and Aging Services during her time with CARF. MacDonnell is a Fellow of the American Congress of Rehabilitation Medicine. MacDonnell has represented CARF at international, national, regional, and local meetings to promote and interpret standards and the use of accreditation as a quality business and clinical strategy throughout the continuum of care.

Mary E. (Beth) Mancini, R.N., Ph.D., N.E.-B.C., FAHA, ANEF, FAAN, is professor, senior associate dean for Education Innovation and chair for Undergraduate Nursing Programs at the University of Texas at Arlington College of Nursing. She holds the Baylor Health Care System Professorship for Healthcare Research. Prior to moving to an academic role in 2004, Dr. Mancini held progressive management positions in the service sector, including 18 years as Senior Vice President for Nursing Administration and Chief Nursing Officer. Dr. Mancini received a B.S.N. from Rhode Island College, a Master's in Nursing Administration from the University of Rhode Island, and a Ph.D. in Public and Urban Affairs from the University of Texas at Arlington. In 1994, Dr. Mancini was inducted as a Fellow in the American Academy of Nursing. In 2009, she was inducted as a Fellow of the American Heart Association. In 2011, she was inducted as a Fellow in the National League for Nursing's Academy of Nurse Educators. Dr. Mancini is active in the area of simulation in health care, including serving as President of the Society for the Society for Simulation in Healthcare, past member of the Royal College of Physicians and Surgeons of Canada's Simulation Task Force, Sigma Theta Tau International's Simulation and Emerging Technologies Content Advisory Group, the World Health Organization's Initiative on Training and Simulation and Patient Safety, and co-chair of the Education Task Force for the International Liaison Committee for Resuscitation. Dr. Mancini has more than 90 publications to her credit and is a sought-after speaker at local, national, and international conferences on such topics as simulation in health care; health professions education; patient safety; teaching, retention, and outcomes related to basic and advanced life support education; emergency and critical care nursing; nursing research; and work redesign.

Lemmietta G. McNeilly, Ph.D., CCC-SLP, CAE, serves on the American Speech-Language-Hearing Association's (ASHA's) Facilitating Team as the chief staff officer, Speech-Language Pathology, and is responsible for the following units: Governmental Relations and Public Policy, Speech-Language Pathology Practices units (Clinical Issues, Health Care, and School Services), Special Interest Groups, and International Programs. She is a fellow of the ASHA and a Certified Association Executive. She serves as chair of the American Society of Association Executives

Copyright © National Academy of Sciences. All rights reserved.

International Section Council and a Diversity Executive Leadership Scholar. She also serves as Secretary/Treasurer of the National Coalition of Health Care Professionals Executive Board and is a member of the Executive Committee. She serves as the ex-officio for ASHA's International Issues Board, Health Care Landscape Summit, and the Speech-Language Pathology Advisory Council. Previous appointments include serving as the founding chair of the Department of Communication Sciences and Disorders at Florida International University. Her administrative experiences span higher education, health care systems, and educational settings. Her research and clinical expertise are in the areas of language development and dysphagia for medically fragile pediatrics. She has published and conducted seminars internationally for leaders in health care and academic arenas on several topics including genomics for health care professionals, speech-language pathology support personnel, culturally and linguistically diverse populations in neonatal intensive care units, and communication disorders of children with prenatal exposure to drugs and human immunodeficiency virus.

Mark Merrick, Ph.D., ATC, FNATA, became the President of the Commission on Accreditation of Athletic Training Education (CAATE) in the fall of 2015. He was elected as a CAATE Commissioner in 2013 after a long history as a site visitor and site visit chair. He is also a tenured Associate Professor in the School of Health and Rehabilitation Sciences at the Ohio State University where he has served as the Director of the Division of Athletic Training since 2000. He is an National Athletic Trainers' Association (NATA) Fellow with extensive contributions to the athletic training profession in both scholarship and service. He has been a member of the editorial board of the *Journal of Athletic Training* for more than 20 years and served as an Associate Editor for more than a decade. He is also a member of the editorial board of the *Journal of Sport Rehabilitation* and serves as a reviewer for more than a dozen additional journals. He has held many state, district, and national service and leadership positions with the Ohio Athletic Trainers Association, Great Lakes Athletic Trainers Association, National Athletic Trainers Association, NATA Research and Education Foundation, and the Board of Certification. He holds a Bachelor's Degree in Exercise Science and Athletic Training from the University of Toledo, a Master's degree in Athletic Training from Indiana State University, and a Doctorate in Exercise Physiology from the University of Toledo.

Warren Newton, M.D., M.P.H., serves as the vice dean of education at the University of North Carolina–Chapel Hill (UNC) School of Medicine, responsible for the medical students and continuing medical education. He also provides strategic direction for graduate medical education at UNC hospitals. He has led the expansion of UNC School of Medicine, development of a competency-based curriculum, including improving the health of populations and a new integrated clinical clerkship. Dr. Newton also serves as the William B. Aycock Distinguished Professor and chair of Family Medicine. UNC Family Medicine has 8 campuses, 150 academic faculty, and 16 residencies and fellowships. He is an adjunct professor of epidemiology, and serves as the chair of the Advisory Board for the Cecil G. Sheps Center for Health Services at UNC. Nationally, he has served as president of the Association of Departments of Family Medicine and founding chair of the Council of Academic Family Medicine. In 2007, he was elected to the Board of Directors of the American Board of Family Medicine. He now serves as chair of the American Board of Family Medicine. In the fall of 2011, he was named to the Board of Trustees of the State Employees Health Plan. Dr. Newton's major scholarship focus is the organization and effectiveness of health care. He has obtained over 130 publications, and more than $30,000,000 in external support. Over the past 6 years, his major focus has been care

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

redesign at the practice, community and statewide level. He has led the I^3 Collaborative of Family Medicine, Internal Medicine, and Pediatrics residencies dedicated to dramatic improvement of quality of care in academic settings. As chair of the North Carolina Improving Performance In Practice (IPIP) Steering Committee, he has worked with Community Care of North Carolina, Area Health Education Centers, public health, and physician specialties to improve quality in all primary care practices across the state and now chairs the Board of the North Carolina Health Quality Alliance. North Carolina IPIP is now working to improve quality of care in more than 1,000 practices with over 4,000,000 patient visits.

Miguel A. Paniagua, M.D., FACP, is an internist, geriatrician, and palliative medicine physician who serves as Medical Advisor for Test Development Services at the National Board of Medical Examiners (NBME). His work at the NBME includes development of assessments of procedural skills, communication skills, interprofessional team work, and professionalism in the computer-based examinations. Dr. Paniagua served as the internal medicine residency program director at Saint Louis University, Missouri, for 5 years prior to his appointment at NBME. He graduated from Saint Louis University and received his M.D. from the University of Illinois College of Medicine, Chicago. Dr. Paniagua completed his internal medicine residency and gerontology and geriatric medicine fellowship at the University of Washington, Seattle. He is a Diplomate of the American Board of Internal Medicine, with subspecialty certifications in Geriatric Medicine and Hospice and Palliative Medicine. He practices consultative Hospice and Palliative Medicine at the Hospital of University of Pennsylvania and holds adjunct appointments to the faculties of both Saint Louis University School of Medicine and the Perelman School of Medicine at the University of Pennsylvania. Paniagua has served on multiple item writing and reviewing committees at the NBME in the past 10 years, and he has served as a representative member of the National Board (2011–2014) as well as a year on the NBME Executive Board (2013–2014).

Susan D. Phillips, Ph.D., currently chairs the National Advisory Committee on Institutional Quality and Integrity, and has served as the Provost and Vice President for Academic Affairs and the Vice President for Strategic Partnerships at the University at Albany/State University of New York System, and the Senior Vice President for Academic Affairs at the SUNY Health Science Center at Brooklyn. A professor and recognized scholar of vocational psychology and career development, she has also worked in accreditation and educational quality assurance for the Regents of the State of New York and for professional/health service provider psychology. She holds degrees from Stanford University (B.A. in Human Biology), Teachers College (M.A. in Psychology), and Columbia University (M.Phil. and Ph.D. in Counseling Psychology). She is a Fellow of the American Psychological Association and a licensed psychologist.

Jo Ann Regan, Ph.D., M.S.W., is the Vice President of Education at the Council on Social Work Education (CSWE). CSWE is the national association representing over 750 accredited social work programs and 2,500 individual members and the sole accreditor for baccalaureate and masters-level social work education in the United States. As Vice President, Dr. Regan oversees all education and research initiatives, social work accreditation, and publications, including the *CSWE Press*. Dr. Regan previously served as the director of accreditation at CSWE and as an accreditation specialist. Prior to joining CSWE in 2011, she taught in several social work programs including the University of South Carolina, University of Hawaii, and California State University-Long Beach. In her professorships at these universities, her research and publications

Copyright © National Academy of Sciences. All rights reserved.

have focused on distance education and the use of technology for social work education and practice, which was the focus of her dissertation work. She coauthored the book *Integrating Technology into the Social Work Curriculum* and has a number of peer-reviewed publications on the use and evaluation of technology in social work education, competency assessment, and accreditation. Prior to entering academia, she practiced as a social worker in various settings including child protective services, state hospitals, and residential treatment centers in Texas.

Stuart W. J. Reid, Ph.D., D.V.M. (Hons), DipECVPH, FRSB, FRSE, MRCVS, is Principal of the Royal Veterinary College, London. Previously Dean of the Faculty of Veterinary Medicine in Glasgow, he has led two American Veterinary Medical Association-accredited schools and has played an active role in the Association of American Veterinary Medical Colleges. A veterinarian who has worked in both the private and public sector, Reid has experience in Australasia, Africa, and North America and has served on the executive committees of the professional regulatory bodies in Europe and the United Kingdom. He currently chairs the European Committee on Veterinary Education, and he served as President of the Royal College of Veterinary Surgeons in 2014–2015, the governing body for the veterinary profession in the United Kingdom.

Beth Sabin, D.M.V., Ph.D., currently serves as the Associate Director for International and Diversity Initiatives at the American Veterinary Medical Association (AVMA) in Schaumburg, Illinois. She has worked for the AVMA since August 1998, first as an Assistant Editor in the Publications Division, then as an Assistant Director in the Education and Research Division before moving to her present position within the Office of the Executive Vice President in August 2012. As Assistant Director in the Education and Research Division for 11 years, Dr. Sabin worked closely with the AVMA's Educational Commission for Foreign Veterinary Graduates and Council on Education, the latter of which is the sole USDE-recognized accrediting entity for veterinary medical education. Through her efforts with these two entities, Dr. Sabin gained significant expertise in accreditation processes and certification and licensure requirements for veterinary medicine within the United States and Canada. She has also participated in meetings of the International Accreditors Working Group, which comprises representatives from a number of national and regional veterinary medical education accrediting or assessment agencies from around the world, and has spoken about accreditation issues at national and international meetings. Dr. Sabin is a 1992 graduate of the University of California School of Veterinary Medicine, and earned her Ph.D. in immunology from Cornell University in 1997. She is also a Certified Association Executive (CAE), a designation conferred by the American Society of Association Executives.

Karen M. Sanders, M.D., is the Deputy Chief Academic Affiliations Officer for the U.S. Department of Veterans Affairs, in Washington, DC, where she oversees the largest health professions education program in the United States, including nearly 120,000 trainees annually in more than 40 different health professions. Dr. Sanders has more than 30 years of experience in health professions education and health care administration. She functions as the Chief Operating Officer for the Office of Academic Affiliations, overseeing day-to-day operations and policy development. She also plays other key roles in the Veterans Health Administration, especially as a subject matter expert on mandatory training. She is a Professor of Medicine at the Virginia Commonwealth University School of Medicine.

Copyright © National Academy of Sciences. All rights reserved.

Susan C. Scrimshaw, Ph.D., is President of The Sage Colleges, Troy, New York. Previous positions include President of Simmons College, Boston, Massachusetts; dean of the School of Public Health at the University of Illinois at Chicago; and associate dean of public health and professor of public health and anthropology at the University of California, Los Angeles. She is a graduate of Barnard College, with a Ph.D. in anthropology from Columbia University. Her research includes community participatory research methods, health disparities, pregnancy outcomes, violence prevention, and culturally appropriate delivery of health care. She is a member of the National Academy of Science and a fellow of the American Association for the Advancement of Science and the American Anthropological Association. She served on the Chicago and Illinois State Boards of Health. She is past president of the board of the U.S.-Mexico Foundation for Science and of the Society for Medical Anthropology, and former chair of the Association of Schools of Public Health. Her honors include the prestigious Yarmolinsky Medal, given by the National Academy of Medicine for distinguished service; the Margaret Mead Award, and a Hero of Public Health gold medal awarded by President Vicente Fox of Mexico. Dr. Scrimshaw lived in Guatemala until age 16. She speaks French, Portuguese, and Spanish.

Nelson K. Sewankambo, M.B.Ch.B., M.Sc., M.M.ed., FRCP Doctor of Laws (HC), was trained in general medicine and internal medicine at Makerere University (MU) in Uganda and later graduated with a degree in clinical epidemiology from McMaster University, Canada. He is a fellow of the Royal College of Physicians, United Kingdom, a professor of medicine at MU, and is the principal (head) of Makerere University College of Health Sciences. He has devoted the last 15 years of his career to the advancement of medical education and research capacity development. Until 2007 he was dean of Makerere University Medical School for 11 years. As dean, he was responsible for change from a teacher-centered, lecture-based medical curriculum to student-centered education grounded in problem-based learning and community-based education and service. During his deanship he introduced multidisciplinary student education in teams and started joint doctoral degree programs between Makerere and Karolinska Institute (Sweden) and Bergen University (Norway). He contributed to the seminal work of the Sub-Saharan African Medical Schools Study (2008–2010). As co-chair of the education/production subcommittee of the Joint Learning initiative he contributed to the landmark report entitled *Human Resources for Health; Overcoming the Crisis*, which had a major influence on the World Health Organization (WHO) and its subsequent 2006 report, *Together for Health*, which focused on the global crisis of health workers and the need for urgent action in order to enhance health of populations. He is a founding Principal Investigator in Uganda for the internationally known Rakai Health Sciences Program (formerly Rakai Project), where he continues to be an active researcher and has contributed to a large pool of publications in peer-reviewed journals. Dr. Sewankambo also initiated a successful research capacity-building consortium involving seven African institutions (four universities and three research institutes) and two universities in the United Kingdom. He is providing leadership for the Africa-wide Initiative to Strengthen Health Research Capacity in Africa (ISHReCA). In 2010, with NIH funding he spearheaded the start of a national Medical Education Partnership Initiative (MEPI) consortium of Uganda Universities to jointly address the country's health professional education needs. He served as a member of the IOM report on the U.S. Commitment on Global Health. He is a board member for the Foundation for Advancement of International Medical Education and Research (FAIMER) and for Accordia Global Health Foundation.

Copyright © National Academy of Sciences. All rights reserved.

Roger Strasser, A.M., is a leader in the global reform of health professional education. Recognizing the importance of context and community in medical education and research, Dr. Strasser has gained an international reputation for developing and refining novel strategies to train health professionals in and for rural communities. As a result of his formative work in his field, Dr. Strasser has become one of the world's foremost authorities in rural, socially accountable medical education, as well as a sought-after speaker and advisor. Prior to moving to Northern Ontario in 2002, Strasser was Professor of Rural Health and Head of the Monash University School of Rural Health in Australia and had an international role with the World Organization of Family Doctors (WONCA) as chair of the Working Party on Rural Practice from 1992 to 2004.

Richard (Rick) Talbott, Ph.D., FASAHP, FASHA, FAAA, is currently the Dean of the College of Allied Health Professions at the University of South Alabama, Past President of the Association of Schools of Allied Health Professions (ASAHP), and current President of the ASAHP political action committee. He also serves on the American Speech and Hearing Association (ASHA) Financial Planning Board, is past chair of the ASHA Committee on Honors, and is a founding past board member of the American Academy of Audiology. He has previously served as President of the Council of Academic Programs in Communication Sciences and Disorders; President of the Speech and Hearing associations of Oklahoma and Georgia; Head of the Division for Exceptional Children at the University of Georgia; and chair of the Communication Sciences and Disorders programs at the University of Virginia and Oklahoma Health Sciences Center. He has served in leadership roles on more than 60 professional boards and committees. Dr. Talbott received his doctoral degree in audiology with an emphasis in auditory neurophysiology from the University of Oklahoma Health Sciences Center in 1973. He has published and/or presented more than 100 scientific papers, including topics ranging from the role of the Rasmussen's bundle in audition, efficacy of otoacoustic emissions in newborn hearing screening, and controlling variables affecting hearing aid performance.

Zohray Moolani Talib, M.D., FACP, is associate professor of Medicine and of Health Policy at the George Washington University (GWU) Medical School in Washington, DC. Dr. Talib is a board-certified internal medicine physician and primary care doctor at GWU. Dr. Talib oversees Internal Medicine Residency's Global Health Program where she directs a global health course and mentors residents in global health research. Dr. Talib has more than 10 years' experience in medical education. Her research focuses on health system strengthening and health workforce issues both in the United States and globally. In particular, her interests include examining ways to scale up the global health workforce and linking investments in medical education to health outcomes. She currently leads a study across 10 African countries examining the impact of bringing academic resources and rigor to community health facilities. In addition to her academic responsibilities, Dr. Talib has worked with the Aga Khan Development Network for more than 6 years overseeing global health projects in East Africa and South–Central Asia aimed at strengthening the education, research, and clinical capacity of health facilities in these countries. Projects include a research mentoring program for faculty in Kenya, management training for health care providers in Kenya and Tanzania, tele-consults in East Africa and Tajikistan, and establishing a community-based cancer prevention program with family medicine doctors in Tajikistan. Dr. Talib received her Bachelor of Science in physical therapy from McGill University, Montreal, Canada, and her Doctor of Medicine from University of Alberta, Edmonton, Canada. She completed her residency in Internal Medicine at GWU Hospital. She is

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.

board certified by the American Board of Internal Medicine, and a Fellow of the American College of Physicians.

Maria Tassone, M.Sc., B.Sc.P.T., is the inaugural Director of the Centre for Interprofessional Education, a strategic partnership between the University of Toronto and the University Health Network in Toronto, Canada. She is also the Senior Director, Interprofessional Education and Practice at the University Health Network, a network of four hospitals comprising Toronto General Hospital, Toronto Western Hospital, Toronto Rehabilitation Institute, and the Princess Margaret Cancer Centre. Tassone holds a Bachelor of Science in Physical Therapy from McGill University, a Master of Science from the University of Western Ontario, and she is an Assistant Professor in the Department of Physical Therapy, Faculty of Medicine, University of Toronto. Tassone is the colead of the Canadian Interprofessional Health Leadership Collaborative whose work focuses on models and programs of leadership necessary to transformation health education and care systems. Her collaborative work and leadership has been recognized through the Ted Freedman Award for Education Innovation, the 3M Quality Team Award, and the Canadian Physiotherapy Association National Mentorship Award. Her graduate work and scholarly interests focus on continuing education, professional development, and knowledge translation in the health professions. Throughout her career, Tassone has held a variety of clinical, education, research, and leadership positions across a multitude of professions. She is most passionate about the interface between research, education, and practice and leading change in complex systems.

Peter H. Vlasses, Pharm.D., D.Sc. (Hon.), BCPS, FCCP, received his Bachelor of Science and Doctor of Pharmacy degrees from the Philadelphia College of Pharmacy and Science (PCPS) and served a residency in hospital pharmacy at Thomas Jefferson University Hospital in Philadelphia, Pennsylvania. His professional experience includes service as a clinical faculty member at the Ohio State University College of Pharmacy and PCPS. He served as Head of the Clinical Research Unit and Research Associate Professor of Medicine and Pharmacology, Jefferson Medical College, in Philadelphia, and then as Associate Director, Clinical Practice Advancement Center, and Director, Clinical Research and Investigator Services, University HealthSystem Consortium, Oak Brook, Illinois. In each of his positions, Dr. Vlasses was involved in innovative education, practice, and research initiatives. Dr. Vlasses is a Founding Member, Fellow, and Past-President of the American College of Clinical Pharmacy (ACCP). His awards include the Russell R. Miller Award from ACCP in recognition of his sustained and outstanding contributions to the biomedical literature, the ACCP Service Award, the PCPS Alumnus of the Year Award, and an Honorary Doctor of Science degree from Mercer University, Atlanta, Georgia. Dr. Vlasses is a board-certified pharmacotherapy specialist, an ACCP Fellow, and a member of the National Academies of Practice. He was elected to the Board of Directors of the Association of Specialized and Professional Accreditors, has served as chair and then Treasurer of the board and is a recipient of ASPA's Cynthia A. Davenport Award. He serves on the National Advisory Council for the National Center for Interprofessional Practice and Research and the O'Neil Center Get Well Network Clinical Advisory Council. ACPE is the U.S. agency for the accreditation of professional degree programs in pharmacy and providers of continuing pharmacy education and the evaluation and certification of professional degree programs internationally. ACPE, the Accreditation Council for Continuing Medical Education (ACCME), and the American Nurses Credentialing Center (ANCC) jointly accredit continuing education providers committed to interprofessional team continuing education. ACPE and the American Society of HealthSystem Pharmacists have recently formed a collaboration for the accreditation of pharmacy technician

Copyright © National Academy of Sciences. All rights reserved.

education and training programs. ACPE is an observer member of the International Pharmaceutical Federation.

Holly H. Wise, P.T., Ph.D., FNAP, is the representative for the American Council of Academic Physical Therapy (ACAPT), a component of the American Physical Therapy Association. She is an academic educator and physical therapist with a breadth of experience interprofessional education (IPE) and collaborative practice and is currently a professor at the Medical University of South Carolina (MUSC), an academic health center with six colleges: Dental Medicine, Graduate Studies, Health Professions, Medicine, Nursing, and Pharmacy. A graduate of Wake Forest University, Duke University, and the University of Miami, Dr. Wise has worked in settings ranging from acute care to rehabilitation centers, co-owned a private practice for 13 years, and cofounded two interprofessional postpolio evaluation clinics. Dr. Wise serves as the Associate Director for Collaborative Practice in the MUSC Office of Interprofessional Initiatives and is a member of the MUSC incubator team with the National Center for Interprofessional Practice and Education. Dr. Wise has multiple publications and presentations related to the scholarship of teaching with a focus on IPE/collaborative practice and is actively involved in interprofessional funded research initiatives.

Karen Anne Wolf, Ph.D., CRNP-ANP-BC, DFNAP, is a nurse and sociologist with more than 35 years in nursing practice and nursing education. From a rural farming community in central Pennsylvania, she recently returned to the area and is an associate professor at Pennsylvania State University where she teaches courses in population health and evidence-based practice via the World Campus System. Dr. Wolf was formerly chair of the National Academies of Practice-Nursing Academy and 2012–1014 Forum. Her previous positions include professor and coordinator for faculty development at Samuel Merritt University in Oakland California and Associate Director for Administration and planning for the Programs in Nursing at the Massachusetts General Hospital Institute in Boston. Dr. Wolf was a fellow in the Stanford University ethno-geriatrics faculty development program and a faculty member in the University of California, Berkeley Interdisciplinary Team Training Course. She is a graduate of Johns Hopkins Hospital, Boston University (B.S.N. and M.S.), and Brandeis University (Ph.D. in Sociology). As an advanced practice nurse (nurse practitioner and clinical nurse specialist) Dr. Wolf has held practices in the care of older adults and vulnerable populations in urban and rural community primary care, home care, and long-term care settings. She lectures and publishes on the history, trends, and issues related to community nursing and advanced practice, professionalization, and nursing as work. She is an advocate for open access education and use of technologies to reach nursing and health care providers, and served as a was a consultant to media projects such as the *PeRX* project on safe prescribing, *Community Voices*, *OurBodiesOurselves* website, *Nursetogetheri* and *Nursing the Politics of Caring*.

Joseph A. Zorek, Pharm.D., joined the faculty at the University of Wisconsin-Madison (UW–Madison) School of Pharmacy following completion of a 2-year Pharmacotherapy Residency at Texas Tech University Health Sciences Center, where he developed a clinical specialty in geriatrics with a research focus on interprofessional practice and education (IPE). Zorek serves as the School of Pharmacy's IPE Liaison, and he co-chairs a schoolwide IPE taskforce. He is a founding member of the UW–Madison Center for Interprofessional Practice and Education, which is in development and scheduled to launch in 2016. Zorek's practice interests include incorporation of pharmacists into interprofessional health teams, leveraging pharmacists to

Copyright © National Academy of Sciences. All rights reserved.

facilitate effective transitions of care, and the implementation of population health initiatives to mitigate medication-related risks in older adults. He currently practices at St. Mary's Hospital in Madison, Wisconsin, and serves as the School of Pharmacy’s liaison to the St. Vincent de Paul Charitable Pharmacy in Madison. Zorek’s primary research interests center on IPE, with secondary foci on health outcomes from practice-based innovations and curriculum assessment. His most productive line of research stems from an analysis of IPE accreditation standards he coauthored in the *Journal of Interprofessional Care* in 2013, which highlighted opportunities to use the accreditation process to advance IPE throughout the health professions and drew attention to the need for valid and reliable measurement instruments to satisfy IPE mandates. Zorek and his collaborators won the 2014 Rufus A. Lyman Award for best paper published in the *American Journal of Pharmaceutical Education* for their work developing and validating the Student Perceptions of Physician-Pharmacist Interprofessional Clinical Education (SPICE) instrument. Zorek recently won a New Investigator Award from the American Association of Colleges of Pharmacy (AACP) to support a prospective study exploring the utility of Mimycx, a massively multiplayer online serious video game, to address this issue and advance interprofessional experiential education for early learners. Zorek is an active member of AACP, through which he is currently co-chairing a national taskforce dedicated to implementing intentional IPE in experiential education settings. He serves as an Associate Editor for Interprofessional Education for the journal *Currents in Pharmacy Teaching & Learning*, as well as a Community Moderator for the National Center for Interprofessional Practice & Education. Zorek is a charter member of the American Interprofessional Health Collaborative, and he is a member of the American Pharmacists Association, the American Society of Consultant Pharmacists, the International Pharmaceutical Federation, and the Pharmacy Society of Wisconsin.

Copyright © National Academy of Sciences. All rights reserved.

Appendix C
Forum-Sponsored Products

Convening Activity Publication: ***Interprofessional Education for Collaboration: Learning How to Improve Health from Interprofessional Models Across the Continuum of Education to Practice: Workshop Summary*** **(2013)**
In 2012, the Global Forum on Innovation in Health Professional educationheld its first two workshops, focusing on linkages between interprofessional education (IPE) and collaborative practice. The workshops set the stage for defining and understanding IPE and provided living histories of speakers from around the world who shared experiences working in and between interprofessional education and interprofessional or collaborative practice. This publication summarizes the workshops.

Convening Activity Publication: ***Establishing Transdisciplinary Professionalism for Improving Health Outcomes: Workshop Summary*** **(2013)**
This publication looks at professionalism among the different health professions and considers whether it might be possible for all the health professions to share a common understanding of professionalism with each other (in a transdisciplinary fashion) and with society (through a social contract), and have that understanding be practiced and promoted in the education of all health professionals.

Convening Activity Publication: ***Assessing Health Professional Education: Workshop Summary*** **(2013)**
The content covered at the workshop and captured in this publication involves assessing core competencies particularly within interprofessional education and health professional collaborations that include patient-centered health care teams. Discussions at the workshop helped describe these competencies and explored the challenges, opportunities, and innovations in assessment across the education-to-practice continuum.

Convening Activity Publication: ***Building Health Workforce Capacity Through Community-Based Health Professional Education: Workshop Summary*** **(2014)**
In setting the stage for the workshop that is summarized in this publication, the first speaker reminded participants of the importance of learning from and with communities for understanding the values and challenges faced by the community they serve. It was later remarked that health systems are *of* the community thus reinforcing the importance of bi-directional learning. Innovative examples of community-based learning that followed this idea were presented and discussed.

Convening Activity Publication: ***Empowering Women and Strengthening Health Systems and Services Through Investing in Nursing and Midwifery Enterprise: Lessons from Lower-Income Countries: Workshop Summary*** **(2015)**
Experts in women's empowerment, development, health systems' capacity building, social enterprise and finance, and nursing and midwifery explored the intersections between and among these domains. Innovative and promising models for more sustainable health care delivery that embed women's empowerment in their missions were examined. This publication highlights examples and explores broad frameworks for existing and potential intersections of different sectors that could lead to better health and well-being of women around the world, and how lessons learned from these examples might be applied in the United States.

Consensus Study Report: ***Measuring the Impact of Interprofessional Education on Collaborative Practice and Patient Outcomes*** **(2015)**
Whereas considerable research has focused on student learning in interprofessional (IPE), only recently

Copyright © National Academy of Sciences. All rights reserved.

Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: Proceedings of a Workshop

have researchers begun to look beyond the classroom and beyond learning outcomes for the effect of IPE on such issues as patient safety, patient and provider satisfaction, quality of care, health promotion, population health, and the cost of care. The Forum members wanted to know what data and metrics are needed to evaluate the effect of IPE on individual, population, and system outcomes. To answer this question, the individual sponsors of the Forum sponsored an Institute of Medicine study to examine the existing evidence on this complex issue and consider the potential design of future studies that could expand this evidence base.

Convening Activity Publication: *Envisioning the Future of Health Professional Education: Workshop Summary* (2015)

This publication summarizes a workshop where Forum members focused on envisioning the future of health professional education in light of the *Lancet Commission Report*. The workshop aimed to explore the implications that shifts in health, policy, and the health care industry could have on health professional education and workforce learning; to identify learning platforms that could facilitate effective knowledge transfer with improved quality and efficiency; and to discuss opportunities for building a global health workforce that understands the role of culture and health literacy in perceptions and approaches to health and disease.

Consensus Study Report: *A Framework for Educating Health Professionals to Address the Social Determinants of Health* (2016)

The World Health Organization defines the social determinants of health as “the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life.” These forces and systems include economic policies, development agendas, cultural and social norms, social policies, and political systems. Educating health professionals in and with communities negatively affected by the social determinants of health can generate awareness among those professionals about the potential root causes of ill health, contributing to more effective strategies for improving health and health care for underserved individuals, communities, and populations. This is the context in which the expert committee of the National Academies of Sciences, Engineering, and Medicine developed a high-level framework for educating health professionals to address social determinants of health. The committee’s framework aligns education, health, and other sectors to better meet local needs in partnership with communities. The individual sponsors of the Forum sponsored this study.

PREPUBLICATION COPY: UNCORRECTED PROOFS

Copyright © National Academy of Sciences. All rights reserved.