Refocusing Medical Education Reform: Beyond the *How*

Marla Salmon, ScD, RN, David Williams, PhD, and Kyu Rhee, MD, MPP

Abstract

Integration of the basic and clinical sciences has been at the heart of medical education reform efforts for nearly a century. Neither the rate nor magnitude of actual progress suggests that reform is anywhere near completion, which presents a challenge to educators to seek ways to overcome significant obstacles to change. Robin Hopkins and colleagues, authors of the Perspective in this issue of *Academic Medicine* that has prompted this invited Commentary, are among those proposing interesting and useful answers to why integration has not been better achieved. This Commentary affirms the importance of finding better ways to accomplish curricular reform, while contending that real curricular reform must move well beyond the integration of basic and clinical sciences. Drawing from the 2014 report of the Robert Wood Johnson Foundation's Commission to Build a Healthier America, the authors cite evidence of significant disparities and growing health challenges facing Americans today. They discuss three key recommendations from the report: attending to early childhood experiences, providing healthy choices within communities, and, particularly, rethinking the education of health professionals. Next, the authors detail the implications of these recommendations for medical education, stressing both the urgency and importance of moving to adopt these as directions for real reform that will address today's health care challenges.

Editor's Note: This is a Commentary on Hopkins R, Pratt D, Bowen JL, Regehr G. Integrating basic science without integrating basic scientists: Reconsidering the place of individual teachers in curriculum reform. Acad Med. 2015;90: 149–153.

Commentaries afford authors the opportunity to contextualize and critique published works through the lens of their own unique knowledge and experiences. In this instance, our views reflect the experiences that we shared over the past year in our roles with the Robert Wood Johnson Foundation (RWJF) Commission to Build a Healthier America[1–3] (we have referred to these roles in the disclosure below). We want to highlight the deep concerns that we hold for the future health of Americans and the importance of getting health professions' education right … both the *what* and the *how*. With this goal in mind, we have written this Commentary and invite future engagement both within and beyond the academic medical community.

In their Perspective in this issue of *Academic Medicine*, Robin Hopkins and colleagues[4] address one of the obstacles to reforming medical education through the better integration of the basic and clinical sciences. They describe both the origins and decades-long history of efforts to advance this reform, noting its promise to heighten students' interest and improve their retention and transfer of basic science knowledge. Quoting others,[5] they summarize these reform initiatives as "change without difference," and they seek both to understand why progress is lacking and to identify more effective approaches to curricular integration.[4]

Hopkins and colleagues analyze the lack of progress in curricular transformation through the lens of educational change, reaching beyond conventional medical education research. Their thoughtful assessment provides important insights into *how* reform might be achieved, challenging current approaches and offering recommendations that, focusing on the importance of individual teachers (especially basic scientists), hold promise for future efforts in curricular integration.

Hopkins and colleagues' Perspective serves as a reminder that, often, what we in the medical education community need to know to improve what we do lies outside of our traditional disciplinary boundaries. Although Hopkins et al give us one example of the benefit of reaching beyond our intellectual comfort zones, they do not address an important question whose answer also likely requires some broader thought: whether the desired reform will actually improve students' future performance as physicians—and, ultimately, the health of those they serve. The fact that the drum for curricular integration has been beating for over a century calls for a second look at what types of educational reforms are important *now*. Clearly, the context for medical education is vastly different from that which Abraham Flexner[6] experienced when he first articulated the groundwork for curricular integration.

What would Flexner see today that is different, and how might medical education be guided by what is now known within and beyond medicine? Asked another way, what is necessary to improve the health of Americans today, and what does this mean for medical education? The recent report of the RWJF Commission to Build a Healthier America provides important insights and guidance in this regard.[1] Future reformers in medical education

Dr. Salmon is professor, Nursing and Public Health, University of Washington, Seattle, Washington.

Dr. Williams is Florence Sprague Norman and Laura Smart Norman Professor of Public Health, Harvard University School of Medicine, Boston, Massachusetts.

Dr. Rhee is vice president and chief health director, IBM, Armonk, New York.

Correspondence should be addressed to Dr. Salmon, 15930 41st Ave. NE, Lake Forest Park, WA 98155; telephone: (206) 755-9692; e-mail: msalmon@uw.edu.

Acad Med. 2015;90:136–138.
First published online August 19, 2014
doi: 10.1097/ACM.0000000000000466

will be well served by applying what the commission has learned and now recommends. These lessons and recommendations will help guide the way forward for reforming medical education and for improving the training of all health professionals now and in the future. Here we very briefly summarize three of the key findings of the commission and its related recommendations. Then, we examine how the commission's work should, along with knowledge of basic science and clinical care, be integrated into the education of the next generation of physicians and other health care providers.

The RWJF Commission to Build a Healthier America

First constituted in 2008, the RWJF Commission to Build a Healthier America convened a national, nonpartisan group of leaders from both the public and private sectors to identify better ways to improve the health of all Americans. The commission issued 10 sweeping recommendations in 2009 to improve health through improving the places where people live, learn, work, and play.[2] These recommendations sparked a national dialogue that has resulted in increased collaboration among a variety of partners (e.g., the Federal Reserve System) whose aim is to address a broad array of health determinants, including early childhood experiences, income, education, and access to health care.[1]

The impact and momentum of the commission's first report led to the RWJF's request that commissioners reconvene to continue their work, this time focusing on the significant differences in health among Americans and how these might be better addressed. The case for continuing to focus on finding better ways to improve health can be found in the fact that the life expectancy of Americans at birth has moved from 15th place among affluent countries in 1980 to 27th place in 2009.[3] This alarming decline both calls into question the effectiveness of current approaches to health care in the United States and challenges the medical community to keep searching for better strategies. For these reasons, the commission focused on three factors that play key roles in the reduction of health disparities and in the enhancement of the public's overall health: (1) experiences in early childhood, (2) opportunities that communities provide for people to make healthy choices, and (3) the mission and incentives of health professionals and health care institutions.

The commission met in June 2013 and deliberated over the course of the next several months, completing its work in December of the same year. Over the course of the deliberations, commissioners came to understand both the magnitude of the disparities in Americans' health and the urgent need to address these differences. The commission's findings reflect these insights and were released in January 2014.[1]

The Commission's Findings and Recommendations

The commission's report provides an in-depth exploration into each of the three key factors named above. Although medical and other health professions educators might be tempted to focus only on findings and recommendations relating to health and health systems, understanding the contributions of early childhood experiences and of community opportunities is also vital. Childhood and the choices available within a community affect health and health disparities, and understanding these correlations provides both the rationale and a sense of urgency for the changes proposed for health professions and health systems.

Let's pause for a moment, though, and return to the original "promise" of curricular integration as outlined by Hopkins and colleagues in their Perspective. At its heart is the notion that curricular integration will lead to students' more meaningful connections between basic and clinical science, ultimately improving their effectiveness as clinicians. Similarly, the importance of being able to connect basic knowledge with what needs to take place in actual practice is at the heart of the commission's report. The following brief summary of the report's findings and recommendations provides a glimpse into the evidence and the derivative actions that are needed to improve health.

Early childhood experiences

Findings. Research clearly identifies the link between health across the life span and early childhood experiences. Key health-supportive experiences include a well-regulated and responsive home environment; supports that build resilience by mitigating the effects of significant adversity (such as chronic poverty, violence, and/or neglect); and participation in high-quality early childhood programs.

Recommendation. Investing in America's youngest children must be a high priority. Focusing on the needs and experiences of infants and children will require a significant shift in spending priorities and the development of major new initiatives to ensure that families and communities build a strong foundation in the early years to support a lifetime of good health.

Health-promoting communities

Findings. Historically, revitalization in low-income communities has focused on building housing, schools, health clinics, and community facilities, but rarely on how such improvements can improve health and lives. People are better able to make healthier choices if they live in neighborhoods where the healthy choice is possible—communities, for example, where it is safe to be physically active, where healthy food is accessible, and where there is public transportation to jobs and health care. Ensuring opportunities for people to make healthy choices where they live should be a key component of all community and neighborhood improvement initiatives. Creating healthy communities will require players from a broad range of fields—urban planning, education, housing, transportation, public health, health care, nutrition, and others—to work together routinely and to understand each other's goals and skills.

Recommendation. Fundamentally changing how stakeholders revitalize neighborhoods and fully integrating health into community development will help develop communities such that those who live in them have better choices and can therefore more readily choose healthier options.

Health professionals and health care institutions

Findings. Health professionals have extraordinary expertise in treating disease and injury, but in most cases their training emphasizes patient care and dealing with the complex biological and physiological aspects of

health. This emphasis during medical training leaves little curricular time for understanding other important factors that affect people's lives and contribute to their health. Further, there is little time or reward in the current health care system for understanding the roles of public health, prevention, and health care delivery or for focusing on those foundations of lifelong health—a good education, access to healthy food, safe housing, etc.—that shape how long and how well people live. A healthier America requires health professionals and institutions to change what trainees learn and think about improving health and to engage in purposeful collaboration with others outside of the traditional medical community. Working together with professionals from other sectors, as well as with members of communities, will foster efficient use of shared resources to improve the opportunities for health for all Americans. This shift will also require developing and using new measures of health, as well as designing and implementing reimbursement systems that both reward collaboration and prevention and move beyond the current focus on care and cure. To change the actions of health professionals and institutions, it is critical to change the incentives that motivate them and the training that prepares them so that they have the will and the skill to improve health beyond the medical exam room.

Recommendation. The United States must take a much more health-focused approach to health care financing and delivery, broadening the mind-set, mission, and incentives for health professionals and health care institutions to go beyond treating illness to helping people lead healthy lives. This approach must include, but cannot be limited to, incorporating new health "vital signs" (e.g., employment, education, health literacy, and safe housing) into clinical practice to assess nonmedical indicators for health; creating incentives tied to reimbursement for health professionals and health care institutions to address nonmedical factors that affect health; and incorporating nonmedical health measures into community health needs assessments.

Implications for Medical Education Reform

The findings and recommendations of the commission must be incorporated into medical education reform. The commission challenges not only those in medical education but all health professions educators to reach beyond their previous concepts of reform to embrace what is foundational to teaching in health care: imparting knowledge that prepares students to make meaningful differences in the health of the people they serve. Very likely, this at-the-roots reform *does* mean curricular integration. If so, Hopkins and colleagues'[4] Perspective provides important insights into approaches for success. However, curricular integration aimed at advancing the impact of education will need to go well beyond basic scientists collaborating with physicians. Curricular integration means shifting learning from a focus limited to basic and/or clinical learning to this: a focus on health and well-being and what the physician *and others* together can bring to bear to improve and preserve health. To this end, curricular integration must also include scientists who do not study health but who study instead the determinants of heath. Curricular integration must better connect medical faculty and trainees with other disciplines (public health, sociology, economics, engineering, and more). Curricular integration must also provide the learner with a more holistic view of the patient. Integrating the social determinants, social and other sciences, and a whole-patient view is vital for students who, as residents, will likely encounter patients who are poor and underserved, whose illnesses stem from their housing, their food choices, their education—that is, social determinants of health.

We know that physicians will continue to play leadership roles in the health care system and that their success in these roles will require them to embrace and apply new knowledge. This learning and applying of new information requires continuous reorientation of medical education to impart the skills necessary to transform physicians' practices. Now, perhaps more than ever, the necessary changes represent a seismic shift in what physicians need to know and do, and how education must change if they are to learn that knowledge and those skills.[1] The stakes are high; urgency is reflected in the unnecessary suffering and death of millions of Americans every year. We simply cannot afford to wait another century for medical education reform to take place.

Acknowledgments: This article reflects the efforts and insights of many beyond the authors. The authors offer many thanks to Elaine Arkin, the staff of Burness Communications, and the Robert Wood Johnson Foundation for its continuing commitment to building a healthier America.

Funding/Support: None reported.

Other disclosures: Authors Salmon and Rhee are commissioners for the Robert Wood Johnson Foundation Commission to Build a Healthier America; author Williams is staff director for the commission.

Ethical approval: Reported as not applicable.

Disclaimer: The views expressed in this article are those of the authors alone and do not represent those of the Robert Wood Johnson Foundation or the authors' employers.

References

1 Arkin E, Braveman P, Egerter S, Williams D. Time to Act: Investing in the Health of Our Children and Communities. Princeton, NJ: Robert Wood Johnson Foundation Commission to Build a Healthier America; 2014.
2 Miller W, Simon P, Maleque S. Beyond Health Care: New Directions to a Healthier America. Washington, DC: Robert Wood Johnson Foundation Commission to Build a Healthier America; 2009.
3 Braveman P, Egerter S. Overcoming Obstacles to Health in 2013 and Beyond. Princeton, NJ: Robert Wood Johnson Foundation; 2013.
4 Hopkins R, Pratt D, Bowen JL, Regehr G. Integrating basic science without integrating basic scientists: Reconsidering the place of individual teachers in curriculum reform. Acad Med. 2015;90**:**149–153.
5 Woodbury S, Gess-Newsome J. Overcoming the paradox of change without difference: A model of change in the arena of fundamental school reform. Educ Policy (Los Altos Calif). 2002;16:763–782.
6 Flexner A. Medical Education in the United States and Canada. A Report to the Carnegie Foundation for the Advancement of Teaching, Bulletin No. 4. Boston, Mass: Updyke; 1910.