Interventions for Modern Times
Complex, Collaborative, and Culturally Appropriate
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Approximately 1 in 3 adults in the United States has cardiovascular disease (CVD), and this burden is more pronounced in those who are socioeconomically disadvantaged and from certain minority ethnic groups. Modest sustained lifestyle adjustments can decrease CVD burden, but initiating and maintaining these changes is challenging. A complex interplay of patient, provider, and system factors causes and can provide solutions to reduce CVD risk. Addressing social determinants of health and shifting to a collaborative model in which the individual is supported and enabled to engage in their own health care is an increasing focus of policy, practice, and research.

The Community Outreach and Cardiovascular Health (COACH) Study has tested a complex intervention to decrease CVD burden in an urban setting in the United States. Participants in the COACH treatment group improved their cholesterol, blood pressure, and glycemic control. However, increasing physical activity, improving dietary intake, and decreasing weight proved more challenging. The COACH intervention, using participatory action research (PAR) methods, involving a nurse practitioner (NP) and community health workers (CHWs), combined an approach of increasing adherence to evidence-based pharmacological recommendations (prescribing and titrating of medicines) and nonpharmacological strategies (targeting and tailoring counseling) to facilitate behavior change and decrease CVD risk. Motivational interviewing was also included as part of the intervention to address ambivalence and promote support for lifestyle changes.

Participants in the COACH Study were enrolled on the basis of their CVD risk profile rather than clinical diagnosis. This approach recognizes the coexistence of multiple risk factors and the increasing rates of diabetes and end-organ damage, particularly in minority populations. Furthermore, accessing multiple providers in specialist medical centers to address these risks can be challenging, costly, and time-consuming. This study and others suggest that the NP model may be preferable to other models of community care in achieving CVD risk reduction.

Allen and colleagues have addressed several factors that are critical to improving health outcomes for CVD: the need to consider new health work force models; the value of treating to targets; the necessity for tailoring and targeting behavior change approaches; investing in partnerships between academic medical and community health systems; and the need to consider cultural appropriateness.

The importance of cultural competence of health systems and health professionals has been endorsed for several decades. Numerous approaches have been proposed, but an important consideration in creating safe environments for patients and their families has been the use of CHWs. These workers assist in a range of ways, from providing introduction to communities through to the delivery of health care interventions. Although the need for CHWs has been well recognized in developing countries and among indigenous populations, their application in developed countries is less well described yet no less important. To date, many CHW interventions involve health promotion, screening, and obtaining access rather than working in models to achieve therapeutic targets. The work force partnership between the NP and CHW in the COACH Study is a novel and exciting approach.

The COACH study emphasizes partnerships and collaboration among health professionals, patients, and their families. Achieving work force culture change and building mutual trust and respect may be difficult to achieve and can take time. Ensuring that health professionals are prepared to work in these models to engage vulnerable communities is an important consideration in planning for the future.

The partnership model described by Allen and colleagues is promising as cultural pluralism, heterogeneity, and health disparities are increasing. Ensuring that health care is appropriate to local cultures and communities will be vital for the future. The team approach described in the COACH study acknowledges the unique skills and attributes of a cadre of health care workers.

Although CHWs are an important part of the solution in targeting minority groups, it is also important to recognize that using this approach can be complex and require not only an understanding of the community but also of the need to educate, indemnify, fund, support, monitor, and credential these health care workers in both research and practice settings. Unfortunately, many community studies are dem-
onstrual projects, where good things happen but are often not sustained because of short-term funding.

Sustaining the long-term engagement of target populations is important because researchers have been criticized for obtaining benefits without engaging in changing the fundamental processes that contribute to health disparities. This criticism can equally be leveled at health care providers undertaking short-term projects. Disengagement of researchers and workers at the end of a project can fuel the perception of alienation and marginalization for some minority groups. At the end of many PAR projects, communities can be primed for change and CHWs prepared for the challenge to be left without ongoing funding and support. Planning for sustainability is an important dimension of PAR, but it is not always well considered. The stumbling block is generally not commitment or engagement but the lack of funding. Therefore considering a health care intervention within the funding models of health systems is important for future implementation.

Increasingly, health care interventions are recognized for their complexity. Complex interventions are defined as those health approaches that include a range of related components. This complexity has led to position statements and guidelines to assist in intervention development, testing, and replication. When designing, implementing, and replicating these complex interventions, it is important to consider that they are more than an amalgam of discrete elements but rather a conceptually congruent approach to organizing and delivering health care. Disregarding the relationship between elements of an intervention may result in failure and unintended consequences. This is an important consideration when implementing and testing new work force models.

Although the value of advanced practice nurses has been well described, the COACH study has extended this concept, demonstrating the effectiveness of the collaboration between NPs and CHWs as well as the partnership between academic and community health centers. This study has implications for the education of the health work force. Learning to work as a team is not an easy task and challenges the professional silos in which we were all trained. A recent international, interdisciplinary Lancet Commission has argued for a "new professionalism" that uses competencies as the criterion for classifying health professionals rather than disciplines. Interprofessional education that breaks down professional silos and promotes teamwork is seen as critical for driving health care reform.

The COACH study has implications for the nursing work force. The Future of Nursing: Leading Change and Advancing Health describes how nurses' roles, responsibilities, and education are required to adapt to meet the increased demand for health care and the increasing complexity of the health care system. This report recommends that nurses should achieve higher levels of education and partner with physicians and other health professionals. An important recommendation is that nurses should practice to the full extent of their education and training. The COACH study provides an example of nurses working in collaborative environments and at a level of advanced practice. However, the capacity of the education system in the United States to prepare the numbers of nurses to practice in these roles has been questioned because of faculty shortages and budget constraints.

Although we have clear demonstration of the challenges faced by our health care system, solutions are less well described. The COACH study describes a strategy to address the needs of a high-risk population, provides some potential solutions, and emphasizes the challenges of applying evidence-based risk reduction strategies tailored to individuals. Increasingly, there is a need to clearly define complex interventions to ensure intervention refinement, replication, and fidelity as well as effectiveness. Describing work force configurations including skills, competencies, and ways of working are also needed as part of this reporting.

Although complex interventions are clearly the way of the future, translating research findings to the real world is dependent on a range of factors, including clear and transparent methods of reporting; demonstration of effectiveness; a taxonomy to assist in translation and implementation; a clear understanding of the scope of practice of health care workers; and identifying mechanisms of funding and monitoring.

Internationally, as we struggle to address the burden of CVD, several crucial steps are evident: first, documenting the needs of individuals, families, and communities; second, developing and testing innovative, interdisciplinary interventions to meet their needs; and third, but perhaps most challenging, is convincing policymakers to fund and deliver services that promote adherence to guidelines and monitoring performance.

Adhering to evidence-based treatment recommendations through treating to target, engaging at-risk and vulnerable populations, and reducing health disparities are important factors in improving not only the outcomes of individuals, their families, and communities but also decreasing the societal costs of CVD.

Translating research findings remains a challenge, and, in complex interventions, these issues are likely to be more pronounced. The funding of complex interventions, as described in the COACH Study, is likely to be problematic because of their multiple elements and cross-sector implications. The complex interplay of treatment modalities and work force characteristics is much more challenging to communicate to funding bodies than a new drug or device. Equally, there is always the allure of the quick fix and a magic bullet rather than a sustained commitment to system change and the social determinants that contribute to health disparities.

For those promoting multidisciplinary interventions, it is critical that we can describe to funders and communities not only the rudiments of interventions but also the interactions of elements, dosing, and intensity. Decreasing the silos between health and social care systems will be equally as important in decreasing professional demarcations. Engaging cultural groups, faith-based organizations, and the nongovernment sector is also likely to be important for the recruitment of CHWs and a focus for development of interventions such as the COACH model. Vision and courage is also needed to ensure that work force models are configured to
meet the needs of individuals and communities and not those of health professionals, lobby groups, and funding agencies.

**Disclosures**

None.

**References**


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