In Reply  Our Viewpoint was a summary of a comprehensive National Academies of Sciences, Engineering, and Medicine (NASEM) report. Time pressure and high workload are work system factors that contribute to clinician burnout and affect patient care; however, many other work system factors can also increase clinician burnout. The review of the evidence in the NASEM report showed that there is not a single root cause of burnout among clinicians, including physicians, nurses, pharmacists, dentists, and other health care professionals who provide direct care to patients.

Given well-established models of burnout and research in job and organizational design, in human factors and systems engineering, and in occupational safety and health, a clinician burnout is a multifaceted problem with multiple contributing factors (see the conceptual model in the eFigure and a list of work system factors in the eBox in the Viewpoint). The practice improvement example that Dr Arnold and colleagues provide involves “physician visit–centric approaches to population-based care delivered by practice teams.” This example fits with solutions described in the NASEM report (see chapter 5), which target professional relationships and social support, the organization of teamwork, and programs for positive clinical work environments. Because the factors contributing to burnout or affecting well-being will vary by clinical profession, organization, and even by individuals in the same work environment, the NASEM report does not provide a prescriptive approach, but rather offers stakeholders guidance to improve the well-being of clinicians in all disciplines.

The guidelines for designing well-being systems emphasize the need to align organizational structures and processes with organizational and workforce values of respect, justice, compassion, and diversity of views; this requires leadership engagement and commitment at all levels of health care organizations (see Box 5-1 in the NASEM report). We agree with Arnold and colleagues that solutions to address clinician burnout and improve professional well-being need to be designed with the involvement of clinicians (including physicians) at all system levels.

Clinicians together with patients and caregivers should be involved in developing and implementing system interventions as described in recommendations 1C, 2B, 3A, 3B, and 4A-B-C in the NASEM report. Decisions are made at all levels of the health care system from the sharp end (clinicians) to the blunt end (leaders of units or departments, health care organizations, education institutions, or the external environment). All decision makers should be involved in creating better work systems, reducing job demands, and enhancing job resources.

Pascale Carayon, PhD
Christine Cassel, MD
Victor J. Dzau, MD

Author Affiliations: Wisconsin Institute for Healthcare Systems Engineering, University of Wisconsin, Madison (Carayon); Department of Medicine, University of California, San Francisco (Cassel); National Academy of Medicine, Washington, DC (Dzau).

Conflict of Interest Disclosures: Dr Dzau reported being the president of the National Academy of Medicine and serving on the board of directors for Medtronic and Anylam Pharmaceuticals until 2014 with deferred compensation. No other disclosures were reported.


CORRECTION

Incorrect Affiliation: In the Original Investigation titled “Association of Initial Disease-Modifying Therapy With Later Conversion to Secondary Progressive Multiple Sclerosis,” published in the January 15, 2019, issue of JAMA, the institutional affiliation for Dr Lugaresi was incorrectly presented. This article was corrected online.


Imprecise Language: In the Original Investigation entitled “Effect of Ubrogepant vs Placebo on Pain and the Most bothersome Associated Symptom in the Acute Treatment of Migraine: The ACHIEVE II Randomized Clinical Trial,” published in the November 19, 2019, issue of JAMA, imprecise language was used in the Discussion section and a typographical error occurred in Figure 2. In the second full paragraph on page 1896, the penultimate sentence should have read, “These results were obtained in a population sample older than the US population and may therefore be overestimates.” In Figure 2, the word optimal should have read optional. This article was corrected online.


Incorrect Data and Presentation in Abstract and Figures: In the US Preventive Services Task Force Evidence Report titled “Screening for Hepatitis C Virus Infection in Adolescents and Adults: Updated Evidence Report and Systematic Review for the US Preventive Services Task Force,” published online in JAMA on March 2, 2020, data and presentation were incorrect in the abstract and figures. In the abstract conclusions, the value reported as 5% should have been reported as 95%. In Figure 1, the blue circle indicating key question 3 should have been presented on the first horizontal line at the left of the figure, just before the branch. In Figure 3, several percentages in the “Women” column were incorrect. This article was corrected online.
