



# Home-Based Health Care Strategies Anticipate Welcome Era of Patient-Centered Personalized Medicine

By Christopher J. Wells

DURING THE COVID-19 pandemic, an increased reliance on telemedicine, decentralized clinical trials, and at-home cancer screening previewed a future in which patients can access health care without leaving their homes. By giving patients new ways to access doctors when in-person options are unsafe or inconvenient, home-based care

paradigms can augment the health system's ability to ensure that every patient can benefit from the right intervention at the right time, the essence of personalized medicine.

As we emerge from the pandemic with a renewed understanding of the importance of engaging historically underserved patient

populations in ways that align with their needs and preferences, we would do well to embrace telemedicine and other home-based health care paradigms.

According to a study published in *Health Affairs* on February 1 about telemedicine usage among 16.7 million patients covered by



During a PMC webinar in September titled *COVID-19 and Personalized Medicine: Current Status and Lessons Learned*, PMC Board Chairman Jay G. Wohlgemuth, M.D., Senior Vice President, Chief Medical Officer, Quest Diagnostics, emphasized how at-home testing paradigms give us “a new chance to put the needs of patients in their rightful place at the center of health care decision-making.”

commercial insurance or Medicare Advantage plans, the number of weekly telemedicine visits increased twenty-three-fold between January and June of 2020.<sup>1</sup> By giving patients the option to visit their physicians by telephone or through video conferencing software, telemedicine can make health care more accessible to patients in remote areas who may have difficulty traveling to in-person appointments with their physicians.

Similarly, decentralized clinical trials, which allow patients and their physicians to use digital technologies to report medication usage and associated outcomes, can make it easier for minorities and patients in remote regions to participate in research regarding new therapies, thereby increasing access and making clinical trials more meaningful to patient groups that have historically been less engaged in drug development research.

Thoughtful approaches are required to ensure that telemedicine and decentralized trials deliver cost-effective benefits. A study from the *Journal of General Internal Medicine* (October 2018) suggests

that around 15 percent of patients who utilize telemedicine would not have sought in-person appointments to address their concerns, which underlines the importance of ensuring that any increased costs associated with expanded insurance coverage for audio-visual visits are offset by successful interventions downstream.<sup>2</sup> To ensure that telemedicine and decentralized trials do not exacerbate the inequities associated with a growing digital divide, policymakers will need to bolster the telecommunications infrastructure in rural parts of the country. Cybersecurity concerns must also be addressed.

*“By giving patients new ways to access doctors when in-person options are unsafe or inconvenient, home-based care paradigms can augment the health system’s ability to ensure that every patient can benefit from the right intervention at the right time, the essence of personalized medicine.”*

To be sure, these challenges underscore the need for carefully calibrated approaches to integrating telemedicine and decentralized trials into the health care system. But they do not erase the benefits these paradigms can offer for diverse groups of patients.

At-home tests present additional opportunities to improve care for underserved populations.

To take one example, consider the prevalence of colorectal cancer in African Americans. According to the American Cancer Society, African Americans are 20 percent more likely to be diagnosed with colorectal cancer and 40 percent more likely to die from it, as compared to other racial and ethnic groups.<sup>3</sup>


The U.S. Preventive Services Task Force (USPSTF) has embraced the latest at-home tests for colorectal cancer, which are designed to detect blood and cancer-associated genetic changes in patients’ stool, as a viable alternative to colonoscopies for some cancer patients.

“The data show the tests are equally effective at saving lives,” USPSTF Chairman Alex Krist, M.D., told *The New York Times* in January.<sup>4</sup>

Although at-home screening for colorectal cancer cannot replace colonoscopies in all circumstances, the pandemic has underlined the significance of an at-home screening option for African American patients who may be wary of hospital visits that could expose them to COVID-19, another disease they have an outsized risk of dying from. As Jay G. Wohlgemuth, M.D., Senior Vice President, Chief Medical Officer,

Quest Diagnostics, emphasized last year during a webinar organized by the Personalized Medicine Coalition titled *COVID-19 and Personalized Medicine: Current Status and Lessons Learned*, at-home testing paradigms give us “a new chance to put the needs of patients in their rightful place at the center of health care decision-making.”<sup>5</sup>

Home-based paradigms cannot completely replace physical examinations of patients. Nor are they a cure-all for a health system that has failed too many Americans for far too long.

But in the coming months and years, decision-makers in the public and private sectors will be remiss if they fail to recognize valuable lessons in the wake of the horrible pandemic, namely that the adoption of home-based health care paradigms – under the right conditions – can improve the lives of underserved patients. Adopting these lessons will help advance the frontiers of personalized medicine, which has long promised to not only tailor health care to patients’ biological characteristics, but also to their circumstances and values. 



**Christopher J. Wells**

Christopher is the vice president of public affairs for the Personalized Medicine Coalition, a nonprofit education and advocacy organization in Washington, DC.

#### References

1. Patel, SY, Mehrotra, A, Huskamp, HA, et al. “Variation in Telemedicine Use and Outpatient Care During the COVID-19 Pandemic in the United States.” *Health Affairs*. Feb. 2021;40(2): <https://doi.org/10.1377/hlthaff.2020.01786>.
2. Martinez, KA, Rood, M, Jhangiani, N, et al. “Patterns of Use and Correlates of Patient Satisfaction With a Large Nationwide Direct to Consumer Telemedicine Service.” *Journal of General Internal Medicine*. Oct. 2018;33(10): <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6153236/>.
3. American Cancer Society. *Colorectal Cancer Rates Higher in African Americans, Rising in Younger People*. Accessed May 14, 2021, at <https://www.cancer.org/latest-news/colorectal-cancer-rates-higher-in-african-americans-rising-in-younger-people.html>.
4. Span, P. (2021, Jan. 11). “A Colonoscopy Alternative Comes Home.” *The New York Times*. Accessed May 14, 2021, at <https://www.nytimes.com/2021/01/11/health/colonoscopy-health-home-testing.html>.
5. Personalized Medicine Coalition. *COVID-19 and Personalized Medicine: Current Status and Lessons Learned*. Accessed May 14, 2021, at <https://www.youtube.com/watch?v=ABkRVabwLyyw>.