The intersection of quality and research in the era of COVID with Nancy Gin, MD

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In today's COVID-19 Update, Nancy Gin, MD, executive vice president and chief quality officer at the Permanente Federation, as well as regional medical director of quality and analysis at the Southern California Permanente Medical Group discusses how the COVID pandemic created a blueprint for accelerating innovation—and how we can keep that momentum going long term. AMA Chief Experience Officer Todd Unger hosts.


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Speaker

- Nancy Gin, MD, executive vice president and chief quality officer, Permanente Federation; regional medical director, quality and analysis, Southern California Permanente Medical Group

Transcript

Unger: Hello. This is the American Medical Association's COVID-19 Update video and podcast. Today we're talking about how the COVID pandemic created a blueprint for accelerating innovation and how we can keep that momentum going long term.
I'm joined today by Dr. Nancy Gin, executive vice president of quality and chief quality officer at the Permanente Federation, as well as medical director of quality and analysis at the Southern California Permanente Medical Group in Pasadena, California. She’s going to share how she’s leading that effort at Permanente.

I'm Todd Unger, AMA's chief experience officer in Chicago. Dr. Gin, it's a pleasure to have you today.

**Dr. Gin:** Oh, it's an absolute pleasure to be here Todd. Thank you.

**Unger:** You recently published an interesting commentary that looks at the intersection of quality and research in the era of COVID-19, and you opened by explaining that even prior to the pandemic, the U.S. spent more on health care than most high-income nations.

And yet, we haven't seen a return on that investment with improved outcomes. I'd say that's probably the billion or trillion question. Why don't you start by telling us what the kind of statistics are that paint that picture?

**Dr. Gin:** They're pretty sobering statistics, Todd. In 2020, CMS estimated that the United States spent some $4 trillion on health care accounting for about 19.7% of our gross domestic product. That is more than any other country in the world. The average for industrialized nations is really about 12.5%.

When you think about the actual dollars, though, because the U.S. economy is the largest in the world covering almost $21 trillion, we are more than 40% larger than second place, China, and four times larger than third place, Japan. So when you actually think about the true dollars that we're spending, you would think that we would have a healthier country but that's not the case.

In fact, pre-pandemic, we ranked out of 194 countries somewhere—depending on who you ask—between 40th and 46th in life expectancy. And during the pandemic in 2020, we fell even further to 54th place behind countries like Croatia, Colombia and Thailand. So for the dollars that we're spending, we can do better.

**Unger:** Those are very disappointing numbers and statistics, obviously. Costs of health care that seem to continue to rise and not seeing that output—certainly a huge challenge. One of the things that you point out in the underlying factors is that the profession has typically been really slow to translate research findings into clinical practice.

And in fact, you cite that it takes up to 17 years, which is pretty staggering figure. How is that possible? Is there some kind of systemic or other factor involved here that prevents quicker adaptation?
Dr. Gin: Now, that 17 year figure came from a study from the National Academy of Medicine back in 2001, so it's been a number that has been out there for a couple of decades, and unfortunately, probably really hasn't changed appreciably. There was identified at that time by the Institute of Medicine's Committee on Quality of Health Care in America that part of the problem created was this quality chasm that exists between what we know to be good quality care and what we're actually getting for care.

Some of the reasons are that research needs to be methodical. We have to have controlled trials or peer review. Those are necessary. We also know that there's some variability when we get evidence between that evidence and what the current community of practice is willing to accept.

We also find that there are oftentimes insufficient tools and incentives that are laid out for teams to adopt best practices along with, sometimes, resource constraints for personnel. You have to have an IT infrastructure in some cases and you really need sponsorship by your local leaders to really implement those kinds of changes and embrace something that's new.

Unger: That term, quality chasm—we'll make sure to note that. It's really interesting. In terms of that timing, I guess we should all thank our lucky stars it didn't take 17 years to create our vaccine for COVID, for instance. And we know through the pandemic that there actually there is the capability to respond very quickly to new developments.

We saw that on the medical side. We saw that certainly with the widespread and very, very fast jump in the usage of telehealth that happened. We've got the ability to do this. Were there are other kind of shifts there that made an acceleration possible and why does it take a crisis like COVID to jumpstart this?

Dr. Gin: I think you highlighted well, Todd, that many of these initiatives in telehealth as well as the science behind, for instance, mRNA vaccinations, had started years before the COVID pandemic came around. None of this started with the pandemic but you use the term accelerated.

And yes, the pandemic served as an accelerant, like throwing gas on a fire, that took those years of foundational work and really enabled us to implement it quickly. There were other factors, like some modifications of regulatory and governmental rules that allowed for fast tracking of some of these COVID treatments and vaccination efforts.

That term emergency use authorization, for instance, that the FDA employed so many times wasn't even on the lexicon in health care before the pandemic but was employed repeatedly during this process. So while we don't give all the credit to the pandemic for getting these implemented, it allowed us to put into context a little bit more why we needed to do this and why it had to happen now.
Unger: Is there a way that we can keep this pace of knowledge sharing going, this level of acceleration in terms of knowledge sharing post-pandemic?

Dr. Gin: That was one of the most gratifying aspects of an otherwise horrifying episode in history, which was the coming together of the global scientific community.

From the very earliest days of the pandemic, we saw researchers and physicians from all across the world, from countries like China and Italy, which saw the first outbreaks, and states like Washington and New York where personnel were so ready to share their observations and findings since SARS-CoV-2 was a novel virus at the time with very little established knowledge.

We do think that we can keep this going. In groups like mine, we quickly put up playbooks and best practices and shared with other health agencies and others shared with us research, for instance. At the Mayo Clinic, they put some of their earliest convalescent plasma research online for people to review during the first three months so that we could learn together and share that information and apply it quickly.

We got underway. Scientists began getting used to this level of rapid collaboration and we really do hope that spirit continues well past the pandemic.

Unger: I want to dig a little bit more to this issue around speeding accelerating kind of research and practice. In fact, we know that Kaiser Permanente was focused on that kind of acceleration before the pandemic and you had what you called a quote, "blueprint," for innovation spread. Tell us a little bit more about that. Did that prepare you for what Mother Nature then threw at us?

Dr. Gin: Back in 2014, my quality predecessors challenged—we have an evidence based medicine group in Kaiser Permanente Southern California. They were challenged to develop a program to monitor and disseminate the high quality published studies.

There are more than a quarter million studies published every year, and now, probably even more. It's literally impossible for any physician or researcher to wrap their arms around the entirety of that and glean out, what are the best studies and the best new approaches to taking care of patients?

So in 2015 was born the Evidence Scanning for Clinical, Operational, and Practice Efficiency, or E-SCOPE, effort.

It really uses a strategic evidence search algorithm to conduct proactive literature searches of all of those quarter million studies every year, looking at the high value studies, and really pulling out about 50 to 70 each year that are then reviewed by content experts, clinical leaders, for appropriateness and feasibility of implementation.
The E-SCOPE team worked really closely with stakeholders. They developed an implementation plan, educational content for all of the physicians and team members who would be involved in this kind of practice improvement.

A few years ago in 2019, we published another study that showed that E-SCOPE efforts had effectively reduced that 17 year period of implementation of best practices down to four to 36 months.

**Unger:** That's fantastic.

**Dr. Gin:** Yes. I'm going to give you one example, for instance, of an effort. E-SCOPE team identified through a number of studies that hemodialysis patients who exercise during their dialysis sessions had improved physical conditioning. Sitting in a chair for dialysis 12 hours a week can really lead to weakness and fatigue.

They found that resistance exercise training, which includes resistance bands, and you have one of the care team who can make sure you're doing this properly and rounded on the patients during their dialysis, was implemented in a couple of our dialysis centers in Orange County.

Participants found that during this process, they had improvement in fatigue, physical functioning, mood and anxiety. It is very low cost. It empowers the patients to take control of their health, so it's really a win-win and very easy to implement. Since 2015, we've implemented about 71 initiatives or they're in process of implementation now.

**Unger:** That's really great news and I'm interested more in talking to you about this being able to pivot quickly. A memory of mine that I will never forget is the last day that we were kind of in office before leaving before the pandemic, we were talking to Dr. Steven Perotti in the Permanente Medical Group and hearing what was going on out in the hot spot in San Francisco very, very early in the pandemic and then just following the pivots as we learn more.

When you think about the work that you're doing, what did you learn discover about care during COVID that kind of framed your ability to pivot during that time period?

**Dr. Gin:** Steve is a really good friend of mine and we have worked very closely during the entirety of this pandemic. He was spot on. One of the biggest things that we saw was that—during the pandemic, we saw that patients, including those who come from underrepresented communities, were far more willing and receptive to the use of technology in receiving their care.

We also saw that our own team members—physicians and nurses, therapists, social workers and others—were also more receptive to using telehealth modalities to deliver care as well. We did a study in Southern California's Research and Evaluation Group that found that, interestingly, our Latinx community and low income patients had the largest percentage increase use of telehealth from
January 5 to October 31, 2020.

That was in the heat of the newness of the pandemic. It looked at a diversity of our membership, and it was fascinating that for Latinx patients, the increase in telehealth was 295%. For low income groups, the increase was almost 315% for telehealth visits.

It really demonstrated that virtual approaches like these that can go even beyond the pandemic and so we’ve taken those programs, like e-visits, where members can answer screening questions and be guided through almost a self-help approach to helping their own care, and then we’ve also expanded remote monitoring to include additional conditions, such as hypertension monitoring in pregnant patients.

The benefits of the pandemic continue to live on today as it has expanded our approach to thinking about how members are willing and want to receive their care.

**Unger:** Dr. Gin, last question. One of the other things in your commentary was this notion of virtuous cycle, which includes a key component being physician-led research. Talk to us a little bit about that concept and why it’s so important. How do we get more physicians interested in research?

**Dr. Gin:** The virtuous cycle that I talked about in the article really has to do with clinical practice where every day, as we go through taking care of patients, we ask ourselves questions. Is this treatment better than that treatment? Or is this the most effective? Why are we doing this? Is there science behind it?

Those clinical questions actually can inform research. Research, then, takes that question, fleshes out the evidence behind it and then provides that information back to the clinicians to enhance practice so that virtuous cycle continues.

It’s really important to make sure that there is a physician-led component to this, because it is the physicians who are really actively seeing the patients and providing that critical thinking as they pull questions from their real life experiences that help to sharpen those study questions.

Beyond that, research actually has been shown to provide an opportunity to fulfill that fourth pillar of the quadruple aim that brings joy back to medicine by allowing physicians to contribute to population health beyond simply that one on one patient care.

Studies have shown that diverse clinical and non-clinical activities, like research, can substantively improve career satisfaction, which ultimately leads to better patient care. That’s really what we’re here for.
Unger: You've hit on so many huge ideas, not the least of which is that last one you talked about with physicians having been through so much to reestablish and maintain that kind of joy and practice and the connections that you've talked about to the research and being able to do that.

I wish you the best of luck because I'd like to see that number, 17 years, come down dramatically like you talked about in your examples. It's exciting to think about the impact that can have on health care and the return that we see on our spending here.

Dr. Gin, thank you so much for joining us today. That wraps up our COVID-19 Update for this particular episode. We'll be back with more shortly. In the meantime, you can see all our podcasts and videos at ama-assn.org/COVID-19. Take care.

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