Transforming Medicine Through Innovation: Looking Beyond the Chaos of the Moment

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Madam Speaker, Mister President, members of the Board, delegates, and guests: For more than 170 years the American Medical Association has been at the forefront of medicine.

From creating the first code of medical ethics and establishing the professional standard . . . to creating the coding backbone for tracking medical procedures.

From sweeping public health campaigns that sought to end smoking . . . to creating the medical school of the future and building partnerships with other leading institutions, such as the CDC and the American Heart Association, aimed at diabetes prevention and blood pressure control.

Such proof points show how the <u>history</u> of the AMA is intertwined with the <u>history</u> of American medicine.

In 2012, it was exciting to describe our "moon shots"; our comprehensive plan to transform medicine around three strategic priorities—improving health outcomes, creating thriving

physician practices, and creating the medical school of the future. I'll update our many successes across these domains at the Annual.

Dr. Barbe outlined how the AMA advocates on behalf of patients and physicians, using our policy portfolio to shape legislative and regulatory decisions. Our voice is a mitigating force for national chaos that we seem to tilt toward as of late.

The AMA's critical work to stem the waterfall of disturbing legislative health care proposals rightly occupied much of our time and effort; and was lauded from many quarters for being principled (which by the way, it was). It exemplified strong leadership in medicine.

But I'd like to pivot a bit and use my time today to focus on the longer time-line; on problems that are fundamentally important, but less apparent in the daily headlines.

I know you're all familiar with Google Earth and its use on your smartphone or iPad. It's fun to find where we live, then zoom out to our neighborhood, city, state, country, and finally, see our place in the world—to go from the granular to the broadest view possible.

I see some of you are on your smartphones now . . . you must be figuring out where *I'm* headed . . . that's great, thanks for following.

So, let's zoom out for a moment to examine the long game. There are long-term needs that must be addressed regardless of what specific future health system architecture we find ourselves in.

For example: We all know that clinical data sets need to be better organized for physicians, and that electronic health records have to assist us in better organizing what we need. We have a pressing need for interoperability, and interoperability defined by being able to transfer clinical meaning, and meaningful data objects, not just clinical data elements.

Currently, we confront oceans of data, but only puddles of clinical meaning.

And even if our data were better organized to be more meaningful, we lack the appropriate utility for the secure and timely flow of data—what experts refer to as "clinical data liquidity." Here's the problem: You see a new patient who may have hypertension. His blood pressure *is* elevated, but is this real or a white-coat effect? Or the fact that he ran across the parking lot from Starbucks?

Luckily, during the visit, given the fluid current state of interoperability, you're able to effortlessly capture his blood pressure readings in digital form from another institution . . . (I'm just joking. You can't do that.)

What's available to you isn't conclusive, and although he's been following his blood pressure at home, none of those data are connected to and embedded in an electronic record in any organized way. Instead, he scribbled his recordings down on paper somewhere, and recalls the "top" number always being about 125 . . . or, on second thought, maybe it was 155—his handwriting's not that good.

You bounce around the electronic record . . . history here, renal function there, searching for puddles of meaning.

So, what's the AMA doing to address these needs? Needs that become more urgent as the number of data elements grow?

Our work at the AMA over the last four years on hypertension has led to a greater understanding of the complexity in evaluating this condition. For example, hypertension alone requires roughly 75 data elements to provide a complete picture of a patient's state with regard to this diagnosis.

However, these data elements are scattered throughout the electronic record. Shockingly, a significant percentage of these vital data elements cannot be consistently captured at the level we need . . . self-measured blood pressure readings that automatically connect to and become organized in the record being just one such example.

Data is so critical to a physician's understanding of a patient's health, and when elements take time to track down or are missing, it's like the fable of the blind men touching the elephant. One feels the trunk. Another the tail. One the ear . . . and each one of the men has in his mind a completely different image. That's what health care data are today . . . each of us touching data, bit-by-bit, then spending time conceptualizing the elephant.

For everyone else we are living in the Information Age, and yet even for that small pool of digital devices that have been well characterized as validated, evidence-based, and actionable, even the best are largely not connected. And the data that's ultimately entered into the record tends to not be organized in any useful way . . . to say the least.

Instead, you're in that ocean of disconnected data points that seem to lack context or organization—that is, to lack true meaning. And your EHR isn't going to help you much . . . you're on your own. Go in there and find those puddles.

This is an obvious pain point for physicians and it's why the AMA has launched the Integrated Health Model Initiative—IHMI for short—an endeavor to create a common data model throughout health care that is unlike anything that exists today.

Our allies in the field are calling our IHMI solution both dearly needed and incredibly bold. It certainly could be a game-changer in health care delivery. IHMI can be accessed by any provider, group or organization, expert groups that propose data element models that then move toward conceptual solutions—i.e., assembling elements for meaning.

Delivering on this promise will not be easy. It won't be quick. But physicians aren't the type to shy away from such challenges, especially when the potential is so great to transform our practices.

We launched IHMI last month following two years of intensive work inside the AMA. And we're delighted that those from various sectors—who've already joined us—have expressed excitement for the project as well. These collaborators include **IBM Watson**, **Intermountain Healthcare**, **Cerner**, and the **American Heart Association**.

This initiative fills several other needs. Not only filling existing gaps, but also serving as a platform that will be patient-centric—capturing patient goals, for example. It seeks to assemble data elements into meaningful conceptualization of the patient's state.

It's been said that data is the oil of this century . . . and so harnessing the power of *health* data in a way that is both efficient for the physician and improves *patient* care is an enormous and important challenge . . . one that should be led by physicians.

And the result has to be a data solution that is easy and useful for physicians. IHMI seeks to accomplish this in three ways:

- Number one: it will deliver better-organized and more relevant information about a patient's clinical data, including social determinants, and patient goals, into the hands of physicians at the point of care. It will provide meaning and context, not just data—though all the data will be accessible, it will simply be better organized so the elephant is obvious.
- Number two: it will create collaborative digital communities to identify costly clinical burdens and identify solutions through a neutral, physician-led validation process. Our own internal work will, as you would guess, have some focus on prediabetes and hypertension.
- And number three: IHMI establishes a common data model that can be more easily shared across health systems, allowing the data elements of one vendor platform to be

meaningfully translated to another. This achieves interoperability . . . not simply by being able to share limited data elements, but by the ability to transfer <u>real</u> clinical meaning.

You can learn more about IHMI on our website.

IHMI is one critical node in our innovation ecosystem. There are several others now as well, but I'll keep this mercifully brief and I'll highlight just one more. I selected it because, as I foreshadowed earlier, it deals with data as does IHMI.

The ambitious Innovation Lab we helped launch in Silicon Valley, Health2047, now has two years of solid work behind it. If we are successful through IHMI in organizing clinically meaningful data in ways—tailored to help physicians <u>and</u> provide conceptual meaning—and, can create interoperability for meaningful data, then we need what experts call "a data liquidity system" —an inexpensive pipeline for data flow.

You might think of it as health care's utility for data transport.

This is exactly the thinking that created this Health2047 project and, with some early developmental success, it has just spun-off as a separate company. The project currently goes by the code name "SWITCH." The transformational promise of SWITCH had sufficient gravitational pull to attract senior leaders and engineers from companies such as GE and Intel.

SWITCH is a subscriber network that enables secure permissions-based sharing of health data among patients, physicians, payers and others in health care and technology. It will have the capacity to serve as an inexpensive utility for data movement in health care, not unlike our cities' power grids or underground water supply.

Another way to think about SWITCH is that it will bring to our health care sector what the currency utility called SWIFT has done for the financial sector. SWIFT is a platform for a permissions-based, secure transfer of currency and other financial data. The beauty of both

IHMI and SWITCH is that either could be transformative alone, but together . . . one can only imagine the impact! These tools will be in further development over the next two to four years.

As I said in the beginning, the AMA has many "immediate" projects—physician needs are very acute. The crafting of legislation, emerging regulatory frameworks, eliminating some of the common frustrations that contribute to physician burnout . . . these are NOW problems.

But while we do this important and urgent work, we simultaneously need to keep our eye on the future by taking on some of the biggest and most difficult problems we know physicians will face. Our immediate impact work—our NOW work—as well as our work looking to the future, share a common, high-level goal: To extract physicians from a good chunk of the mind-numbing administrative and data entry chores you face and shift that currently misused time to what we trained for—time with our patients.

I've noticed something wonderful over the last few years in strategic discussions with many leaders in different health care sectors. Over and over I heard that real solutions need a trusted and neutral player at the center if transformative change is going to occur. It needs a natural convener of ideas and objectives.

That's us. We're "Switzerland." But more than that, these leaders of other sectors are beginning to appreciate that the truth of health care is to be found starting at the patient-physician interface, not at the administrative level.

As one industry leader put it to me . . . "physicians are the knowledge force in the field but everyone tries to manage around them, and that's where we get off track."

His point was that physicians need to seize a more central role in crafting health care. That's why the work in the AMA Innovation ecosystem, such as IHMI and SWITCH, starts by flipping the standard model of development. It starts at the patient-physician level . . . getting it right

there first . . . before it moves to administrative and other systems requirements. Flipping the model.

We need to flip the model because physicians ARE the knowledge force in health care. We ARE the ones leading entrepreneurs and industry to the pain points in health care. We ARE the ones responsible for creating a system that continuously promotes the art and science of medicine and the betterment of public health.

And to get there, we just had to zoom out a bit.

Thank you.

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