



Future of the Hospital

public summary report

Institute for the Future | April 2013



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ABOUT THE ...

INSTITUTE FOR THE FUTURE

The Institute for the Future is an independent, nonprofit strategic research group celebrating 45 years of forecasting experience. The core of our work is identifying emerging trends and discontinuities that will transform global society and the global marketplace. We provide our members with insights into business strategy, design process, innovation, and social dilemmas. Our research generates the foresight needed to create insights that lead to action and spans a broad territory of deeply transformative trends, from health and health care to technology, the workplace, and human identity. The Institute for the Future is based in Palo Alto, California.

ABOUT HEALTH HORIZONS

No single institution can solve the complex challenges facing the world today—particularly in the fields of health and health care. At the Institute for the Future, we believe that a wide variety of stakeholders can be brought together to work toward more resilient solutions for the complex challenges facing global health. For more than 30 years IFTF's Health Horizons Program has brought futures thinking to the world of health and health care. Our research has examined how health and well-being change and expand over time, across consumer electronics, health information technology, food manufacturing, consumer packaged goods, social media, and the retail experience. Through years of engaging experts in our Foresight to Insight to Action processes, we have intentionally built a network of future thinkers that reach far beyond the traditional health and health care industry. We believe that by bringing people, innovative ideas, and futures thinking together you can spark new insight into the challenges facing global health and contribute to positive change.

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introduction

Hospitals are an integral part of the health care and safety net infrastructure of the United States. In 2011, U.S. hospitals provided emergency care to 129 million people, treated 526 million people through outpatient care, performed 27 million surgeries, and delivered almost 4 million babies.¹ But in the last few decades, a number of social, economic, technological and epidemiological forces are slowly transforming the care delivery systems as a whole, creating an exciting opportunity for communities to reimagine their hospitals.

The many closed-door conversations taking place around the future of the brick-and-mortar community hospital rarely involve voices from communities they serve, but this doesn't have to be the case. Over the past several years, advances in communications technology have made global conversations and collaborations between thousands of people possible. Platforms such as Wikipedia, Kickstarter, and YouTube have demonstrated that amazing things can happen when millions of people around the world are given the chance to interact. At IFTF we see these as early examples of an entirely new way of organizing human resources to get things done. As part of putting that vision into practice, IFTF has developed an online platform called Foresight Engine to conduct open thought experiments that engage diverse participants in forecasting the future of health, science, and technology.

With financial support from our Health Horizons members as well as outside organizations including the California HealthCare Foundation (CHCF) and Guidon Performance Solutions, IFTF used Foresight Engine to create an open, global conversation about the future of the hospital. The goal of the Future of the Hospital Foresight Engine game was to inspire a conversation about a

new 21st century role for community hospitals, starting from the ground up, and drawing on the insights of experts as well as ordinary people all over the world.

The Future of the Hospital thought experiment used game dynamics to produce crowdsourced ideas about the future of community hospitals and, by extension, the health care delivery system in the United States. The game sought to bring together a large, diverse, geographically-dispersed group of players in a conversation about how to reimagine hospitals to meet the health and well-being needs of the 21st century. To spark these ideas, players were first immersed in a video scenario that illustrated how the current hospital model is unsustainable and in need of reinvention. Three predetermined challenges and open game play resulted in thousands of microforecasts generated by hundreds of players.

This public report summarizes some of the key themes that emerged from gameplay and highlights exceptional ideas generated by players.

¹ “The Economic Contribution of Hospitals,” American Hospital Association, January 2013, www.aha.org/research/policy/2013.shtml

game challenges

To drum up excitement and increase participation in the Future of the Hospital game, three pre-game challenges were launched in the weeks leading up to the January event. The challenges centered on three distinct capacities of hospitals: delivering emergency care services, providing inpatient procedures and routine screenings, and contributing to the R&D pipeline to advance scientific discovery and integrate it into clinical practice.

These capacities were chosen as challenge areas because they illustrated why certain aspects of the community hospital are in need of reinvention. The first challenge highlighted the difficulties faced by emergency departments as they struggle to deliver life-saving care to those who need it, while serving too many patients who are not experiencing an emergency but feel as if they have nowhere else to go for care. The second challenge focused on changing patient expectations, and how hospitals can participate more actively in providing wellness services inside and outside of clinical settings. And the third challenge centered on the role hospitals could play in reducing the delay in translating scientific discovery into clinical practice to improve outcomes.

The challenges were posted on the game's blog site on December 7, 2012; December 19, 2012; and January 3, 2013. During game play, one four-hour block of time was dedicated to each challenge, encouraging players to focus their ideas on addressing one challenge in each time block. The following is the text of the three pre-game challenges.



Flickr Creative Commons user francisco_osorio

Challenge #1: Reimagine the Nation's Emergency Medicine System

Players were issued this first challenge: Construct a 21st century safety-net system that is fair, that is economically sustainable, and that delivers high-quality emergency care services to all in need.

Many of the responses to this challenge leveraged the following strategies:

- **Leverage big data**
- **Build out emergency prevention services**
- **Train smart mobs in ER care**
- **Prepare for community disasters**
- **Move but maintain the safety net**



Flickr Creative Commons user CoquiTheChef

Challenge #2: Turn Hospitals Into Centers for Community Well-being

Players were issued a second challenge: reimagine the hospital as a center for community well-being, not just a place to get treatment for illness.

Many of the responses to this challenge leveraged the following strategies:

- **Build community wellness villages**
- **Restructure payment systems for wellness services**
- **Streamline hospital care for high acuity illness and serious medical conditions**



Flickr Creative Commons user Ant1_G

Challenge #3: Close The Gap Between Scientific Discovery and Improved Care

Players were issued a third and final challenge: reimagine the hospital as a focal point for closing the gap between scientific discovery and improved health outcomes.

Many of the responses to this challenge leveraged the following strategies:

- **Cultivate a culture of research**
- **Make research more open and participatory**
- **Operate social laboratories**
- **Gamify research design**
- **Partner with R&D organizations**

awards

IFTF created six awards payers could win for outstanding ideas in the following categories: care delivery, quality and cost, reinventing roles within the hospital, mobile innovation, patient advocacy, and community health. Six expert judges were recruited and each one was assigned a different award to confer. After gameplay ended, they reviewed the cards and made their selections.

Care Delivery Revolutionist

This is the award for the most revolutionary idea in care delivery. Jason Stein, quality and research director at Emory University’s division of hospital medicine, was the expert judge for this award. He chose to confer the award to @lshultz82 for the following idea:



“This series of cards combines the greatest creativity and pragmatism. A real-time database of available peri-hospital resources could bring powerful and much-needed transparency to hospital care,” Dr. Stein wrote. “What is new and potentially significant in this series of cards is the players’ perspective that access to hospital and post-acute care services could function more as a utility like a power grid, highway system, or water supply.”



Quality and Cost Czar

This is the award for the most creative idea for improving the delivery of cost-effective, high-quality care. Harold Luft, director of the Palo Alto Medical Foundation Research Institute, was the expert judge for this award. He chose the following card chains as winners:

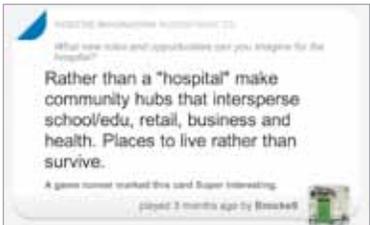


“[This idea] would have hospitals directly focus on what they can do keep people healthy. Hospitals are large employers, so they can identify with the needs of other large employers, both in terms of the costs of health care and productive employee time lost due to illness,” Dr. Luft wrote, explaining his first selection. They may also begin to realize that they can partner with others, e.g., by fostering the availability of healthy foods, or working to reduce gun and domestic violence, to improve population health. The health professionals within hospitals have the credibility push forward those agenda items.”

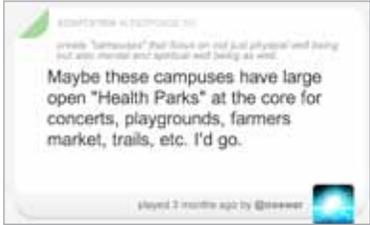
Dr. Luft had the following to say about his second selection: “The comments move the discussion from the somewhat simplistic notion of a single payer as a solution to focusing on the importance of better information for patients and consumers to make choices for their own care, and implicitly, to pressure the system to perform better.”

Community Health Catalyst

This is the award for the most creative idea for reinventing emergency departments and population health management. Kristi Miller-Durazo, senior strategy advisor at the American Health Association, was the judge. She chose the following cards:



She liked that “this vision of community health removes this stigma from a visit to the hospital and encourages health lifestyles through social gathering or physical activity.”



“This concept could make health awareness part of the everyday routine, with little extra time-investment required,” Miller-Durazo wrote about her last selection. “It could be a great way to bring in hard to reach audiences.”



Hospitalist Hero

This is the award for the most creative idea for reinventing work and responsibilities for hospital employees. The winner was selected by Eric E. Howell, the director of the division of hospital medicine at John Hopkins Medical Center. He chose to confer the award for the following two card chains:

POSITIVE IMAGINATION
Battlefield technologies for treating trauma injuries in situ are diffused into communities. 90% of 'emergency care' is delivered locally
A game runner marked this card
played 2 months ago by [KiaOraOra](#)

MOMENTUM
Community based paramedics can video conference with all hospitals from their local emergency care centers for specialist support
played 2 months ago by [KiaOraOra](#)

ADAPTATION
Telemedicine is a great idea for rural communities. If we used this in urban areas, we can help alleviate spikes in ER visits.
played 2 months ago by [greenguy13](#)

ANTAGONISM
At this point, telemedicine is not often reimbursed by insurance companies. Though extremely valuable to evolution of hospitals #TeamDC
played 2 months ago by [MeWZ](#)

INVESTIGATION
What would encourage insurance companies to cover telemedicine?
played 2 months ago by [KiaOraOra](#)

MOMENTUM IN RESPONSE TO:
What would encourage insurance
Proven Quality and outcomes. Fed govt recognition as covered service (Essential health benefit). #TeamDC
played 2 months ago by [MeWZ](#)

CRITICAL IMAGINATION
It takes too long & is too expensive to train doctors; nothing less than a revolution in content & delivery of medical training is required
played 2 months ago by [Mcgheejo](#)

MOMENTUM
This is where mid-level providers come in. NPs and PAs will keep hospitals moving forward #FOH1
played 2 months ago by [fizzgig](#)

MOMENTUM
NPs and PAs can provide continuity of care for patients and relieve doctors to focus on subspecialty care.
played 2 months ago by [Jackay](#)

INVESTIGATION
What to do with the residents? Need a new teaching model to support more streamlined care for the patient.
played 2 months ago by [Jackay](#)

ADAPTATION
The current medical school model is changing. I know that some schools are even switching to a 3yr program
played 2 months ago by [fizzgig](#)

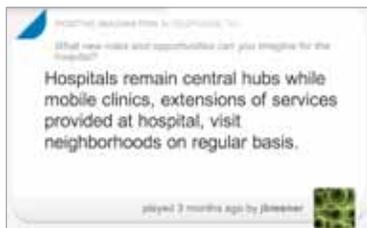
INVESTIGATION
That's interesting. How can we reassure patients that they're not getting a lower quality of fully-trained doctor moving to a 3 year course?
played 2 months ago by [Mcgheejo](#)

“I think the emergency care in the community meets several needs of society: reduces ED crowding, meets the needs of the patient in a more patient-centered environment (home usually), likely would involve the outpatient provider, and would likely cost less,” he said of the first chain.

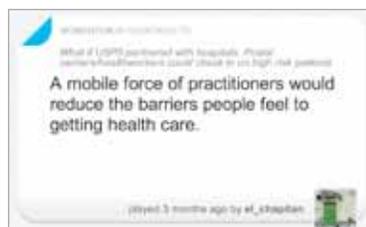
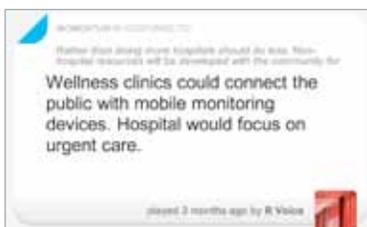
“I like the revolutionizing doctor training,” he said of the second chain, “because I think current doctor training costs too much (many-if not most- new MD grads have >\$100k in debt), takes too long (many specialists finish in their late 30’s or even 40s!!) and doesn’t include critical training for the 21st century (leadership, teamwork, quality improvement, medical finance).”

Mobile Innovator

This is the award for the most creative idea for using mobile technologies in and out of hospitals. The judge for this award was Wil Yu, formerly of the White House’s Office of the National Coordinator for Health IT. He thought the following idea from @Parveen was most interesting:



And he chose the following as runners-up:

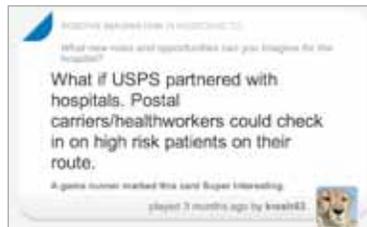


“The evolution of care delivery to new models that incorporate more mobile and decentralized elements will be shaped by the need for greater patient engagement and the viability of new workflows that do not cannibalize existing business lines,” Yu explained, regarding his selections. “Delivery systems will remain the trusted source for core services but will likely seek to augment that role by extending their reach into the community and home. Much of this will be enabled by an emerging IT infrastructure. A variety of partnership models and alliances with external care stakeholders will be tested to see if positive health outcomes can be achieved in a more efficient manner.”



Patient Advocate Warrior

This is the award for the most creative idea for reinventing patient experience. The award’s judge was Tim Rawson, lead designer at the Innovation Learning Network. He selected an idea generated by @krash63:



“I wanted to make sure the card I picked was not only unique, but also provided a large impact on patient experience ... This well-played card may very well not be the ultimate answer, but I think the novelty and

usefulness of the idea could lead to a larger discussion,” Rawson explained. “I see this idea as ‘half pain reduction, half joy induction.’ We would see reduced barriers to health care (i.e., rural settings, time off work, transportation issues, etc). Also, the mobile health teams could provide early detection to reduce the number of potentially expensive/traumatic emergency room visits. On the flip side, the potential joy created for patients could be huge.”

POSITIVE IMAGINATION IN RESPONSE TO

What new roles and opportunities can you imagine for the hospital?

What if USPS partnered with hospitals. Postal carriers/healthworkers could check in on high risk patients on their route.

A game runner marked this card Super Interesting.

played 3 months ago by krash63

[Edit Card](#)

Super Interesting

Scenario Fail

Common Knowledge

Hidden

PLAY MOMENTUM

If hospitals were to reinvent themselves as _____ what happens NEXT?

The trial is not open.

MOMENTUM CARDS

A mobile force of practitioners would reduce the barriers people feel to getting health care.

of_chapman

From a patient perspective, this is great b/c it requires very little behavior change (ie it fits right into most people's daily routines).

@noswlr

india does this. <http://www.narayanaahospitals.com/> sends distance medicine diagnostic tools through the mail.

Scott_Frankum

PLAY ANTAGONISM

Disagree? What's wrong with this approach?

The trial is not open.

ANTAGONISM CARDS

PLAY ADAPTATION

Yes, and ... how might this approach play out differently in your community?

The trial is not open.

ADAPTATION CARDS

Actually USPS is part of the nation's emergency disaster plan.

lgannetta

like the concept. Hospitals could employ APN's to better manage the chronic/acute pts...paid for by the insurance company

Parveen

Yes, or maybe Neighborhood Watch model is extended into a Neighborhood Health check, where both healthy and higher risk are checked in on.

DeltaDawn

PLAY INVESTIGATION

Curious? Ask or answer a FOLLOW-UP QUESTION ...

The trial is not open.

INVESTIGATION CARDS

Would they need additional training?

lgannetta

Love this idea. I wonder if public infrastructure (post offices, libraries, etc.) could play a similar role

bradganistan

Seems like an interesting fit, but what are the issues related to mail carriers visiting sick people along their routes?

Gardner

@krash63's idea sparked the following momentum, adaptations, and investigation cards

Longest card chain

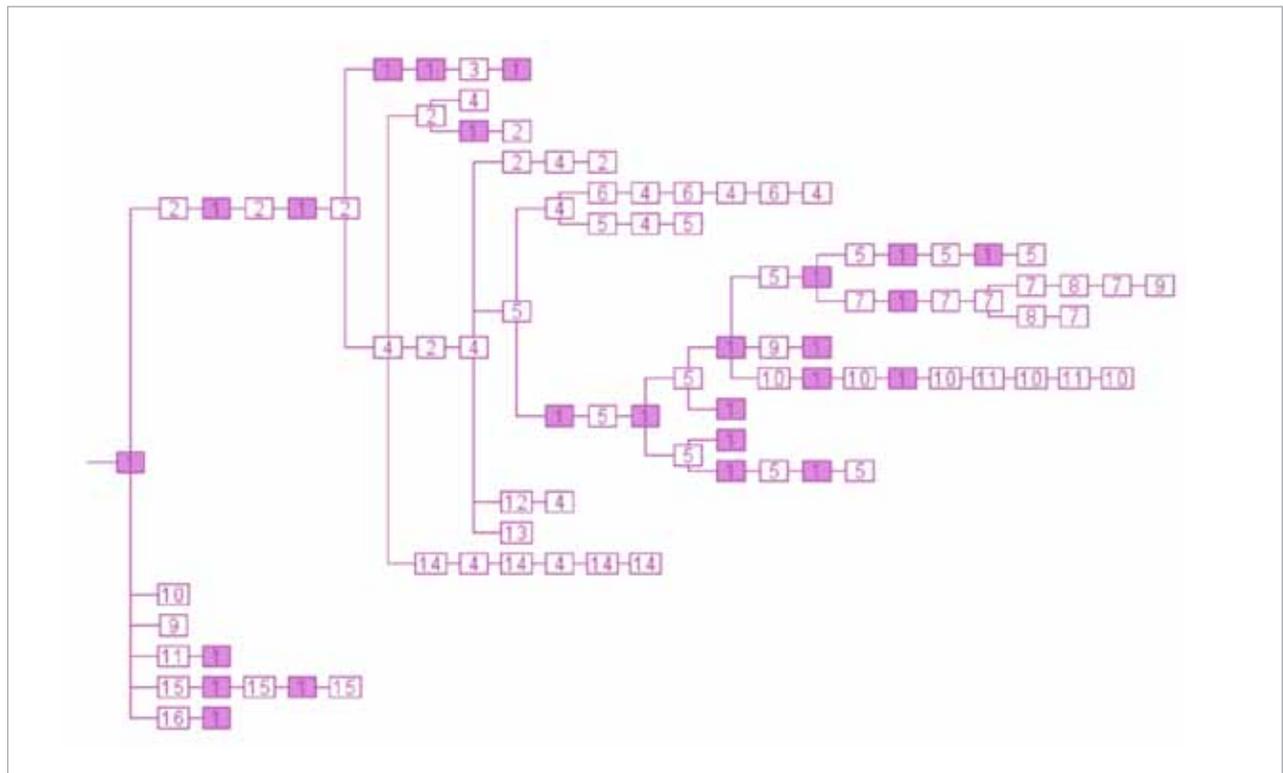
CRITICAL IMAGINATION IN RESPONSE TO:
What are the barriers to creating new roles and opportunities for the hospital?

Doctors are only paid when something goes wrong. Why aren't they paid when things go right?

A game runner marked this card Super Interesting.
played about 1 month ago by eI_chapitan



This player's question about the nature of reimbursement started the longest card chain of the game. The "parent" card is marked as [1] on the branching graphic below and led to responses from 16 separate participants. Some of these responses sparked further conversation between the participant [1] who submitted the parent card, and others who also joined the conversation.



conclusion

The Future of the Hospital challenged players to examine the physical infrastructure of our health care system and the role of the physical location in health care. As one player suggested, “just as we ask providers to work at the highest level of their credentials, buildings will do the same.” While not universal among all game players, ideas focused on building smaller physical hospitals that offer mobile care services with smart digital tools and technologies were expressed and supported by the majority of players. Ideas flowed around how to repurpose existing physical hospitals, the type of workforce that will be needed, and strategies to connect hospitals to local communities.

Some players were sensitive to the misconception that today’s hospitals are independent units. They encouraged other players to “differentiate between hospitals ‘the place’ and hospitals ‘the organization’,” reminding the game community that many hospital systems include other settings. Others clarified that the hospital should be “the epicenter for urgent care” but not “the only focus of a health care system.” Another player thought that the architecture of the health care system should be “reoriented to be more bottom heavy,” or more dependent on clinics and primary care physicians.

More than anything else, the game provided a sounding board on what the societal purpose of a hospital could and should be in the future. Players suggested that hospitals could be “the coordinator of care from birth to death, keeping in mind that we are mobile.” Or they could develop into “caregiver hubs: one stop to access services, support communities.” Or hospitals could become places that “collect health stories, instead of just collecting illness. A place to talk, a place to listen.”

“Differentiate between hospitals ‘the place’ and hospitals ‘the organization’.”

In the end, the predetermined limit on the number of words players could use to convey an idea (“140 characters is not enough!”) and the relatively short amount of time during which game play was open (“I’m sad to see Future of the Hospital go! Feel like there are a million ideas to drill down into.”) seemed to be the factors limiting further idea generation. During the final moments of the game, players reflected on the conversation. One remarked, “this forum is a microcosm of what it is like in the hallway discussions and mixers of health care professionals.” Another player speculated, “imagine this exercise held in each hospital across the country. Build on staff ideas, patient ideas, and clinical ideas in an open forum.” And some players started making plans (“If you’re looking to start something in this area, hit me up, I’d be game to throw some time at it.”) and taking action (“Time for a start-up?”). Players were motivated and ready to reinvent the community hospital.

appendix

This section summarizes game statistics from the Foresight Engine Future of the Hospital. All statistics refer to the game that took place on January 8–9, 2013.

Game statistics

630 registered players

271 played at least 1 card

4,528 cards played

26,909 page views

72% of page views were longer than 30 minutes

Cards played



601
positive imagination



378
critical imagination



1205
momentum



756
adaptation

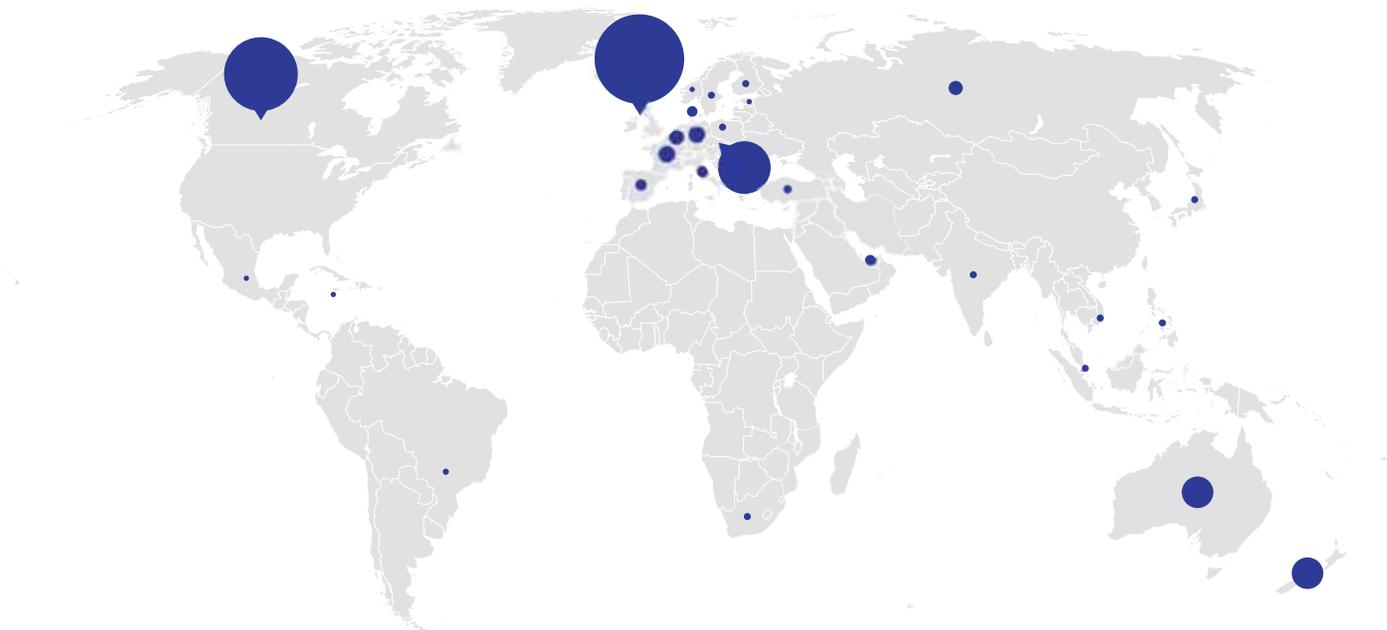


378
antagonism



1288
investigation

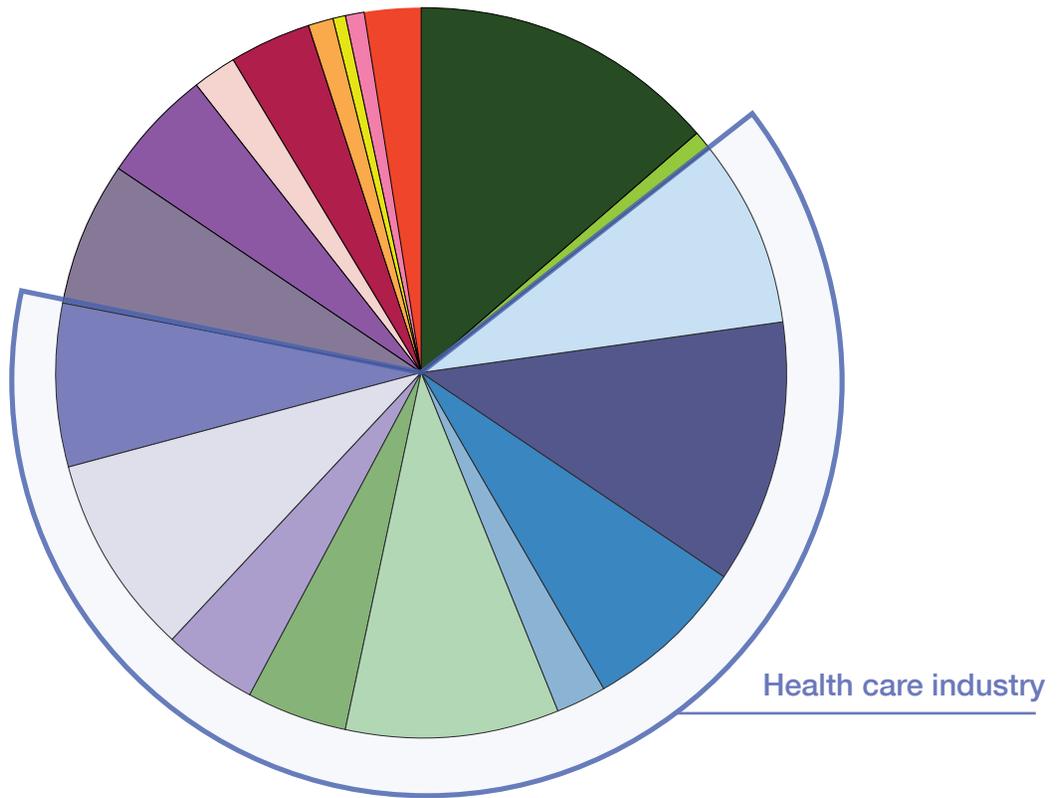
Non-US player locations*



UK	17	Denmark	2	Jamaica	1
Canada	14	Italy	2	Japan	1
Czech Republic	10	Russia	2	Mexico	1
Australia	6	Spain	2	Philippines	1
New Zealand	6	UAE	2	Poland	1
Turkey	4	Brazil	1	Singapore	1
France	3	Estonia	1	South Africa	1
Germany	3	Finland	1	Sweden	1
Belgium	2	India	1	Vietnam	1

* Self-reported at registration

Occupations*



- | | |
|---|---|
| Marketing | Health, Other |
| Game Designer/Developer | Healthcare Administration |
| Food Service | Consulting |
| Government | Pharmacist |
| Architecture/Urban Planning | RN/RNP |
| Data/Analyst | Physician |
| Art/Design | Health Policy/Research |
| Tech/IT | Scientist |
| Management | Academia/Students |
| Executive/Senior Leadership | |

* Self-reported at registration

