SUMMARY KEYWORDS

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Alberto Grignolo: A few years ago, Japan's Minister of Health, Labour and Welfare established an advisory panel for Japan Vision: Healthcare 2035 to develop a long-term policy vision to meet the healthcare needs of Japan society over the next two decades. At that time, certain challenges such as Japan's aging population were well known, but no one could have foreseen the impact of COVID-19 on Japan's patients and healthcare systems in 2020. Is COVID-19 a barrier to Japan's path to future healthcare?

I am Alberto Grignolo, Editor-in-Chief of *DIA Global Forum*. Today we are joined by Kanmuri Kazuhiro, Vice President of Clinical Development for Ascent Development Services, which is based in Tokyo and supports drug development initiatives throughout Asia. Kaz is a former Japan Regional Editor for *Global Forum* and joins us today to share his personal perspective on the future of healthcare in Japan. Kaz, thank you for joining us and welcome.

Kanmuri Kazuhiro: Thank you so much for inviting me to this wonderful opportunity today. I'm very honored to be here again.

Alberto Grignolo: Glad to be with you again. Kaz, in November 2020, you chaired a session at the *DIA Japan 2020 Annual Meeting*, a session with an intriguing title: *Beyond innovation - What is future healthcare?* So let's begin there. First of all, what does the phrase "future healthcare" mean in Japan?

Kanmuri Kazuhiro: That's a very good question. That DIAmond session in the last *DIA Japan Annual Meeting* was very much successful. I was really inspired by the ideas and efforts taken by presenters. They really focused on the social needs and their business competence to overcome challenges, to attempt to create a foundation for future healthcare.

I'd like to go with the phrase "future healthcare in Japan." We could say that healthcare is an essential of vitality for human life, politics, economics, education and culture, etc., so the enforcement and implementation of a healthcare system and its capability is closely linked to the development of a community, region or country. As you may know, the healthcare system in Japan has been evolving in our own unique way. As a result, the economy in Japan has grown and our lives have become quite affluent. I definitely think that the healthcare environment in Japan results in a major contribution to the nationwide lifespan extension.

Now, Japan has been facing an unprecedented situation with fewer children and our aging society. The Japan policy of Healthcare 2035 actually focuses on this problem. In Japan, there is the national health insurance system, which has started since 1961. (This is kind of history.) Under this system, everyone can receive high quality medical treatment equally. In 1961, the Japanese population aged more than 65 accounted for only six percent of the population. Now, it's become about thirty percent.

Actually, the Japan national health insurance system contributes to developed Japan. On the flip side, healthcare expenditure has been increasing dramatically. From statistics in 1985, the national healthcare expenditure was \$160 billion US. However, in 2018, it's more than \$420 billion US. The balance of demand and supply will become a serious problem in the near future in Japan. The real question is: How do we manage financing and make the quality of the healthcare system good?

Okay, then back to the question. The future healthcare in Japan to me sounds like a designed thinking to establish effective health-related measures, how we realize a sustainable and efficient healthcare system, which is our major goal for Japan Healthcare 2035. Our urgent need is to understand and implement the total optimization based on the present circumstances and the future aspect, which is a basic principle of a well-designed healthcare system, so we can easily see the benefit of a new treatment option when we launch it in a place where there is nothing. However, in a saturated market, it's challenging to provide valuable product or services to create an optimized healthcare system. I do expect that the leaders will continue to interpret the medical and economic trends accurately and implement adequate policies promptly to make our future healthcare reliable, sustainable and efficient. The key to success for the future healthcare should probably be establishment of ??? strategy, including the financial aspect.

Alberto Grignolo: Thank you, Kaz, for providing those interesting figures around the proportional increase of the population over 65 years of age in Japan between 1961 in 1985. And clearly, Japan's society has aged significantly. Now, let's turn to the pandemic which of course was an unexpected crisis all over the world, including in Japan. So I would like to ask you: Has the pandemic changed the thinking about future healthcare in Japan?

Kanmuri Kazuhiro: I would say yes. We faced difficulties in establishing new lifestyle implemented by people, society and government, and technologies–including a digital platform to risk communication led by government– has much room to improve. For a long time, the Japanese working style has been far from the concept of decentralization; for instance, the inefficient workflows in organizations like slow paperless situation and a poor internet environment, etc. I think that those are the underlying challenge to achieve future healthcare. Of course, now I can see the great improvement in these kinds of stuff soon after the pandemic situation. But I hope these will lead to better infrastructure development for the future healthcare.

Alberto Grignolo: How is Japan's aging population impacting future perspectives on healthcare in Japan, taking the pandemic into account? Vaccinations are just now beginning – has the pandemic in the context of an aging population changed the thinking in Japan about healthcare in 2035?

Kanmuri Kazuhiro: Yes. From the optimization standpoint, regarding the healthcare cost, the aging of the baby boom generation will drive up healthcare costs dramatically. We have already realized that problem as the year of 2007 problem when masses of a baby boomers reached retirement age, which will also cause a decrease in the labor force. Of course, those are globally known factors of economic impact. But under the current COVID situation, Japan needs to carefully consider how we create that future healthcare.

Alberto Grignolo: What about the impact of an aging population combined with a relatively low birth rate in Japan? Will this make healthcare in Japan more financially burdensome for the government? And is there a possibility that the delivery of healthcare would be impacted negatively because of this? In other words, healthcare will become more and more expensive, yet there will be fewer workers potentially in a declining overall population in Japan to be able to afford the delivery of sophisticated healthcare.

Kanmuri Kazuhiro: Yes, so that's why I would like to emphasize that the establishment of the strategy, including the technology and financial, in the external environment or circumstance, those are all essential to creating this reliable strategy, including Asia.

Alberto Grignolo: What do you mean, including Asia? Can you elaborate a bit?

Kanmuri Kazuhiro: Now we are working as a global economy. That's why the healthcare system is not really worked out only for Japan, as a single country. This kind of stuff really impacts our global economy, including Asian regions.

Alberto Grignolo: Turning to clinical research: Where do you see the biggest gaps between clinical research and clinical care in Japan? And where do you see the best opportunities to close these gaps in the future? We're living in a time when vaccines become available and more of them will become available along with treatments for COVID-19. So the gap between clinical research and the application of that research in clinical care becomes very important. I'm curious about your thoughts about this?

Kanmuri Kazuhiro: That is the biggest question. I think that Japan is one of the countries which can provide high quality medical services and they're in the national healthcare insurance system. However, I'd like to raise that there are a lot of influencing factors between the clinical research environment and clinical care. I think that it is hard to clearly point out a strong correlation between clinical research and clinical care in Japan.

As you know, *Nature* reported that the number of publications for their scientific journal from Japan has been decreasing in the past decade. I think that a lot of clinical research is being made in Japan in fact. In contrast, the clinical research funding is much smaller than a US NIH grant. Sometimes such situation makes the quality of clinical research not good. Having said that, I'd like to emphasize that the proportion of articles published by international co-authorship and originating from Japanese institutions has increased since 2014. This is good effort to know. In addition, another analysis found that the number of the first IND for the medical development in Japan has been relatively stable in the past ten years. The trend of the proportion of global development program has been increasing, maybe affecting.

In Japan, drug lag is one of the greatest concerns from the standpoint of the future healthcare environment because the Japanese strongly believe that Japan should have high quality medical services which is globally first class. Nowadays, we can say that the Japanese are very much effectively implementing ICH policies or ideas in the medicine development field. On the other hand, we know that the Japanese regulatory environment has been uniquely developed on its own. I always feel difficulties when I explain a proposed clinical data package to colleagues outside Japan upon the clinical development program. Anyway, I think that many things are deeply correlated to future healthcare. For example, the technology or idea for the future healthcare is closely linked to the basic science. We fully understand that. However, it is said that Japan is not good at developing their product, the United States or something like that.

Alberto Grignolo: You mentioned the drug lag. Isn't it true that the traditional drug lag, specifically the delay in the arrival of innovation from other countries into Japan, that drug lag has been reduced in the last decade, thanks to the intervention of government policies that have encouraged sponsors to conduct global clinical trials that include Japanese patients? Hasn't this really sharply reduced the drug lag for Japan?

Kanmuri Kazuhiro: But looking at the fact that there is one publication which said that there are a number of early-stage clinical development programs between Japan and outside Japan – so Japan has a smaller number of early-stage clinical development. I think this is a kind of a potential drug lag in the near future.

Alberto Grignolo: That's a worrisome development if it happens, because it would mean that Japanese doctors and patients would have to wait for innovations from other countries to reach them. Finally: Kaz, Japan seems to have advantages in pursuing future healthcare, thanks to decades of really building a sophisticated

healthcare system, as you mentioned since 1961. Are there any disadvantages or challenges to face Japan in the pursuit of future healthcare? And if so, what are those disadvantages?

Kanmuri Kazuhiro: So the future healthcare cannot simply be created or designed by a single idea or technology entirely. Since we are living in a very complicated society, effort with collaboration from all aspects matters. So back to the question. Yes, Japan has a lot of advantages. The quality of healthcare is high. Among the developed countries, low mortality rate was shown in Japan due to the COVID-19 situation. Actually, experts outside Japan emphasize that the reason of low mortality in Japan is the Japanese standard of living and the cultural level of people is high. However, consideration is far from science.

Unfortunately, Japanese experts also don't point out the reason clearly. In my view, the disadvantage and the challenge for the future healthcare in Japan, is the lack of idea or concept of total optimization and system design with anticipated future event or environmental aspect to realize a sustainable and efficient healthcare system in Japan. Global is what exactly Japanese people really want. So I think the leadership to drive required changes should be demonstrated by everyone. Future healthcare will be established by tremendous effort by all players who want to drive required changes, not only by experts in a particular area. I have learned this through the DIA symposium.

Alberto Grignolo: So are you saying that Japan Vision Healthcare 2035, the panel established by the Minister, really has more work to do to realize that vision? That there are some gaps, some disadvantages that need to be addressed, and have not yet been addressed? Is that what you're saying?

Kanmuri Kazuhiro: Yes. At the concept level, I agree with that Healthcare Vision 2035. However, how we implement the idea is very much an important question for us.

Alberto Grignolo: And a question that has not yet been answered seems to be your message. Is that correct?

Kanmuri Kazuhiro: Yes.

Alberto Grignolo: Kaz, these are all my questions for today. And thank you very much for joining us. Wishing you the best of luck in your future endeavors.

Kanmuri Kazuhiro: Thank you very much. We cannot take our eyes off from the exciting situation and tremendous environmental changes coming in three or five years. I'm very much looking forward to reviewing these changes with our listeners. I hope the DIA will be successful and continuously act as a key driver for these changes and innovation. Thank you so much.