A Conversation with Adele Waugaman, Senior Digital Health Advisor at USAID

Bea Spadacini: Hello and welcome to USAID Bureau for Global Health's podcast. My name is Bea Spadacini and I am a Senior Communications Advisor to the Bureau for Global Health at USAID. Today, I am delighted to be speaking with Adele Waugaman, Senior Digital Health Advisor at USAID. Adele is an affiliated expert and former fellow at the Harvard Humanitarian Initiative. She also has been a frequent commentator on technology and development trends, for a variety of news outlets including the BBC, the Financial Times, the New York Times, National Public Radio, and the Wall Street Journal. Prior to joining USAID, Adele was the founder and managing director of Catalyst Advisory, a firm that provides strategic, technical, and advisory support to organizations using communications technologies to strengthen global health, humanitarian assistance, and global development work. Well, Adele welcome to the global health digital podcast.

Adele Waugaman: Thank you.

Bea Spadacini: We are delighted to have you here and we are here to talk this week about the space of digital health, exciting space that is growing and affecting what we do. So, the term digital health sounds exciting and cutting edge but what does it exactly mean and how does it differ from mHealth or Information, Communication, Technology for Development or information systems in general?

Adele Waugaman: Sure, this is a field that has had different names as it has evolved. We started by talking about ehealth and as we started to see the integration of mobile phones into electronic or ehealth programming, people began talking about mHealth for mobile health and now we talk about digital health to encompass both of those fields and now new technologies, such as embedded sensors, the internet of things, as the technology that influences this space continues to grow. So, at a high level, digital health is the use of any information or communications technologies to support health service delivery or health information.

Bea Spadacini: So, how did you get involved in digital health Adele, what was your own personal journey?

Adele Waugaman: So, around ten years ago, I was working with the United Nations Foundation on a partnership with the Vodaphone Foundation, this was the foundation arm of the mobile phone Vodaphone, which has a very wide global footprint and we were looking at innovative uses of wireless technologies to help support UN program needs and so one of our areas of focus was around global health and we were looking at how to improve health data. So, our very first investments were in a data collection tool for palm pilots, because this was before we saw the rapid rise and uptake of mobile phone that we see today in sub-Saharan Africa and indeed in many other parts of the world and as that program evolved, we evolved our investments to eventually targeting more feature phones as more and more people got access to those phones and could use them for data collection purposes. So, we have seen a huge amount of evolution in the field over these ten years but that is how I got started.

When we think about digital health, we think about people and mobile phones but what about national governments and how they handle data, how do the two connect?

Adele Waugaman: Sure, so the technology we will be talking about will be relevant to the actor who is using the technology. So, if we are talking about a community health worker, we are probably talking about feature phones, if we are talking about ministries, we are talking about health systems, and we have seen a huge amount of activity in the introduction and scale up of digital technologies to support health systems. We are now seeing a push from countries themselves for greater coordination and for how we are investing in those digital systems to support Ministries of Health and we have a number of different examples of tools that have been used to enhance health data at the national level, tools like IRIS, which is a human resources tool to help governments understand where their health workers are and how they are trained and what those needs are. Tools like DHIS2, which is a tool for reporting and analysis and dissemination of data, aggregated data like teen health data or disease data so we are seeing a huge growth in electronic tools to support decision making at the national level.

Bea Spadacini: Why is data important for digital health and how does data contribute to create stronger data?

Adele Waugaman: So, digital technologies can help support stronger data in a few different ways. It can support the rapidity of data so you can have data that comes in faster, on a more regular basis than you would if it were manually collected. I can give an example from the Ebola outbreak response where you had a lot of the case data that was being reported on paper and then being sent to a district or sub district level where it was then digitized, then that data had to be aggregated where it was then sent up to the national level for decision-making and each one of those steps took time and presented the opportunity for error and when you have digitization of data from the point of data collection, then you have the ability not only to move data more quickly but also with less error. So, those are two important components.

Bea Spadacini: What about the issue of privacy and data?

Adele Waugaman: It is a big issue. It's one that has been identified in the Principles for Digital Development, which is a collection of best practice in the integration of digital technologies across sectors. It's an issue that I know USAID and other actors are thinking very carefully about and it is one that needs continued thought, but any time you digitize data, you need to be thinking about how it could be accessed and ways to protect the data, depending on what kind of data.

Bea Spadacini: So, in terms of U.S. Government, can you give us some examples of how USAID is investing in digital health?

Adele Waugaman: I will speak just about USAID and USAID's approach. Historically, the Agency, as other donors have, has taken a program-driven approach and so you have malaria programs looking at data systems for malaria, Office of HIV/AIDS and PEPFAR looking at their own data

systems and we are at a turning point now where we are thinking about how do we take a more coordinated approach to our investments in digital systems so that, at the country level, you have better coordination of data and what does that mean? It means that we are hearing increasingly from Ministries of Health in sub-Saharan Africa and elsewhere that rather thsan seeing a great number of different data systems, each of which has its own way of categorizing data and processing data and across which it is difficult to exchange data to get a common picture of health need, they want to see centralization into core systems that increasingly governments are themselves pointing the way toward and part of national digital health strategies. This is a really important shift and it is a great opportunity for donors and for implementing partners to be thinking how they can align their efforts behind these country-led strategies and that would be one way to help get around some of the challenges we see around a lack of coordination of systems at the country level.

Bea Spadacini: So, are most of the countries where USAID works, do most of these countries have country-led strategies in digital health?

Adele Waugaman: I wouldn't say most but what I would point to is the development of a few different tools that are looking to help gage the maturity of the digital health ecosystem, some of which are focused on technologies, so there is a Health Data Collaborative working group focusing just in digital health and interoperability and one of the deliverables of this working group has been a maturity matrix for tools themselves to see to what extent are tools interoperable with one another. There is a parallel effort under way to documenting the maturity of countries. So, to what extent are countries moving along the maturity continuum in different respects, with regards to policy or to the regulatory environment or national strategy development. And so, this is important, because it help us as actors outside of these countries understand the extent to which these countries are requesting and requiring support in key areas. So, I would say there at a handful at this point, of these countries, who have fully articulated health strategies but there are many more that are contemplating it and that are requesting assistance from the donor community to support them in that process.

Bea Spadacini: Another question that I have for you, Adele, is related to this report on Ebola, after the Ebola outbreak in 2014. There was a study done, that USAID also participated in looking at information systems during Ebola and looking at how that worked. Can you tell us a bit more about this report?

Adele Waugaman: Sure, the report is called Fighting Ebola with Information. If you google it, you will find it online. One of the key findings that I want to hone in here is looking at how data could move differently once it was digitized in the Ebola response and, in addition to important differentiators like, being able to move data ore quickly, being able to move data with less error. There were some differentiators around the qualitative movement of data so how is that different qualitatively. What it showed was that there were new actors that participated in information exchange and also, enabled information to flow in different directions. So, in the context of Ebola case collection, reporting up from the community level about where new Ebola cases were originating, it showed that when you have digitization of data, the data can flow

back down to the point of origin. So, there was an example in Liberia where the Ministry of Health piloted a new technology that was based off two existing two open source technologies, one was IRIS, the human resource database, the other one was RapidPro, a text messaging platform and it stitched the two together to enable the Ministry to find out very quickly where were its health workers because you had health workers themselves who were falling sick and not reporting for work or had left their post and they needed to know where the community health workers were because those were the eyes and ears in the field that could tell the Ministry of Health where the news cases were originating. And so, you had for the first time, the Ministry of Health sending text messages directly to community health workers and community health workers able to respond with a text message, here is where I am, here is my level of training and then you can imagine all the different ways that communication could be useful; here is the amount of protective equipment that I have and this is what I need. It also created opportunity for the government to provide, contextualize information back to community health workers, such as, "are you aware of the fact that there were two new Ebola cases reported last week in a neighboring district" and you can imagine how that kind of contextualized information empowers the community health worker to make more informed decisions. So that differentiation and the way the information was flowing, up but also back down was really important. We also saw examples of digital technologies enabling peer to peer knowledge sharing that was very useful. There was an example of a program called the Ebola Community Action Platform that was a program to get social mobilizers out to the field to ask the community, what is your knowledge about Ebola? What are you perceptions about Ebola? And that information was then fed back into the international response and national response efforts to get accurate information about how people could protect themselves, and their loved ones, from the spread of the disease, and we saw a really great example of how social mobilizers were using the What's Up platform and the Facebook platform to communicate amongst themselves and we heard that, some of the social mobilizers said that was the most important things for them in terms of allowing them to go into the field to do their job in difficult and frankly, often times in dangerous settings, the stings of a highly contagious disease like Ebola and that this peer support they were able to get from those platforms is what enabled them to go in and continue to do their jobs. We also saw examples of the What's Up platform being used by Ministers in Sierra Leone and through that channel, Ministers learning of likely Ebola suspect who was being sent to a hospital that was not prepared and was because of this instantaneous connection they were able to reroute the likely patient to a clinic that was prepared, and you can imagine that might have saved lives so we saw lots of examples like that.

Bea Spadacini: Looking at the future, what does the future of digital health look like? What do you think. Where you stand from?

Adele Waugaman: I think it is incredibly exciting. We have seen a huge amount of growth in this space over the past decade alone. I think that will only continue to grow as the cost of hardware continue to fall and as access, including to broadband communications, in low and middle income countries continue to grow so people can get access to more data, faster, and price points there will continue to fall there as well. So, I think we will continue to see a continued fast growth in this space. From a donor perspective, I think we have an important

opportunity to heed the call of the countries that we serve to work more to coordinate within donors, and among donors, to ensure that we have as coherent as possible and approach to how we are funding digital systems so that it is logical from a Minister of Health perspective so we have coordination work to do there internally and externally as well. That's something that I am personally taking as apriority in my work with USAID but that I think many other people are thinking about as well and is really an important moment to be seized to make sure that, as we continue to make these investments, we are scaling proven technologies, rather than continuing to pilot.

Bea Spadacini: Thank you so much for your time today with us.

Adele Waugaman: Thank you. It is a pleasure to be here.

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