

Q&A #1: RFA #2020-036 OpenHIE COVID-19 Standards & Data Exchange

Carl Leitner: Thank you all for joining today. This is the Q&A for RFA #2020-036 OpenHIE COVID-19 Standards & Data Exchange. This RFA came out to support the work of the OpenHIE COVID-19 Task Force. You can see the terms of reference, the chairs, and logistics here. In brief, what we are trying to do is accelerate the digital response for COVID-19 through the support of data exchange and standards for interoperability looking at both within country and cross border data exchange issues. The Task Force is working with the community to identify priority areas for specifying or identifying data exchange standards and trying to ensure that we are well positioned to support national deployments of these standards.

This RFA is one support mechanism for that and we will come to that in just a second. Some of the use cases that are mentioned in the RFA: there is a FHIR implementation guide for case reporting, which is aligned to the WHO COVID-19 case report form. You can see a link to that current draft build of that implementation guide there that is in progress. Next is a content profile for the ADX and mADX standards for aggregate reporting. This is based on the weekly situational reports that WHO requires from national governments. Third priority use case is the WHO care management guidelines for COVID-19 to reference there. Within those care management guidelines, screening and triage are likely to be early priorities but will likely be looking at all of them as time goes on. The fourth is a case report form for Multisystem inflammatory syndrome in children (MIS-C) as a use case. These use cases that are presented here are not the exhaustive list of use cases, but the basic start for where we are now. If there are other use cases that are emergent or other data exchange needs that come up, we can work through that Task Force to identify or develop any of the needed standards.

The purpose of this RFA is to provide core support to global goods that are actively being used as part of the digital response, and we are asking that applicants identify the key use cases that the tool or global good can be used for, to provide some information on that current deployment status, where it is being deployed and for those use cases at what scale to help ensure that we are funding things that do have an actionable need. Next is to describe the particular challenges that we're facing in terms of data exchange and interoperability in those contexts and provide a description of the scope and approach, as well as to describe how the applicant would interact with the Task Force so that we can both communicate back to the community as well as to ensure that we have feedback for priorities from the implementers. I should also note that this funding is not intended for actual deployment within countries. This is for core software support to ideally be used across multiple countries for a particular global good.

Just wanted to review the timelines for the RFA. The first round is active now. We expect several additional rounds based on resourcing availability and in funding availability. The second round is intended to start in August. So, we released last week. Today is the Q&A session, a letter of intent is due by July 10, and the full applications are due July 17. For notification, we intend for July 24. We're having multiple rounds because we are actively identifying additional resources in addition to the ones that are supporting this first round. We want to give further opportunities to apply for this funding. We also note that the turnaround time for these applications is relatively short and during COVID-19 response, that that is potentially a detriment because it doesn't necessarily give people time to apply. That's another reason for having the additional rounds of application. I just also wanted to note, one of the reasons for the letter of intent to apply is 1) to streamline communications as updates to the RFA may happen based on funding availability and timeline changes, but is also intended to 2) take to the potential investors and donors that are interested in this to help since succinctly indicate the need by countries

for these interoperable solutions. So with that, just wanted to go through one technical slide on type of approach that we can use for these global goods. On the left-hand side are the global goods, the input streams, for data exchange, so this could be your EMR or point of service applications, your mobile apps. Those may or may not adhere to the FHIR standards which are underpinning all of the identified data exchange standards and profiles. So if they're standardized, in particular for things like the case reporting in some of the care management workflows, the intention is that those point of service systems could submit data into a FHIR based data warehouse in which a CQL engine may interact to produce decision support case reporting or other artefacts such as measure reports based on submitted data. In the case where we have a non-standardized point of service system, something that is not adhering to FHIR, we also have a set of tooling leveraging both HAPI FHIR server and Open Concept Lab to take an extract of CSV files from a database or data store from that point of service system and move it into the required FHIR representations of that data. We are guessing that with this opportunity, we would see typically see one or the other, either the top or the bottom patterns being used to help support the adherence to the to the standards, but that is by no means that requirement. Just wanted to point out some of the existing tooling that is available for applicants. Now we can open it up for Q&A.

Q: Are the different rounds going to be funded at the same levels?

A: We do not know yet. We are going to continually look for new resources, so depending on how successful we are in an identifying those, and there are a number of conversations currently happening. It could be the same or more. Hopefully, not less.

Q: I'm wondering if you could describe a little bit more kind of the overall strategy. It seems to me that a lot of what you described is work that's currently in progress or attempting to be done in progress. It seems that many of the participants on the calls are sort of representing pieces of the ecosystem. And did you anticipate that applicants would band together and try to put together kind of an overall response to these use cases or just contribute their individual component to the ecosystem and that you would divide it up, I think you set up to three organizations would be receiving funds. Could you talk a little more about strategy on that?

A: Early on in the response we identified a number of systems that were, for example, doing case reporting and trying to get into contact tracing and we're using all sorts of different data models as well as coding standards. One part of the strategy was to try to regularize those data models and identify the correct codings and part of this funding is intended to help support those tools that are already being actively deployed to align better with international norms and standards. There is definitely an aspect of that there. I think the case reporting use case is relatively succinct, and is generally these systems reporting into the emergency operations centers and perhaps aggregating this for reporting up to WHO or the weekly situational reports. That being said, the care management aspects that we're only just getting into now are going to be a much more complicated set of interactions and interventions likely. And in those cases, more than a single system would be implicated. And I would imagine that a consortium of multiple systems, whether it is labs and EMR is interacting with each other, or mobile devices, those types of cases are going to be increasingly important.

Q: It seems to me then that you're looking for kind of glue within the organizations or tools that perform a particular role inside of this ecosystem where anybody might produce a resource either a FHIR compliant resource or one that could be converted to a FHIR compliant resource and then to feed these downstream workflows and that if you could perform part of that transformation role or whatever is necessary, the glue, then you should apply. You do not necessarily have to do all the pieces of the pipeline essentially, to get to that final outcome, if there is somebody else in the ecosystem that performs conversion of the ADX to report, for example, that getting the FHIR resource into that correct format or that having the right tags on it to be transformed by that reporting tool could stand-alone essentially as a part of the submission or as a submission.

A: Yeah I think that would be a fair submission particularly around the resourcing levels that currently have. I think that makes most sense for the current status of the profiles. As we get into the clinical care management aspects, those will be a bit more complicated. And I think we'll likely see for example decision support services in there. It's not just let's generate data and put it in the FHIR format for downstream use, there's the feedback for that decision support.

Q: The example would be if we were talking about how to code things to execute coding guidelines. Those are two components of being able to transform data into a way that can trigger a guideline and produce a decision support engine that's can take the WHO guidelines and execute it. Then somebody theoretically has to implement that. At a later stage, you may envision taking these tools and taking any Open Source EHR or any kind of EHR that could potentially play a role in LMICs and implement the pieces. But right now, you are not thinking about that, you're only thinking about building the pieces.

A: Yeah, I mean to be fair, we have a lot of work to do in bringing all of the pieces together. A lot of that work is not specific to COVID-19, so there's other related efforts to try to actually bring all the pieces together, things like you know the Instant OpenHIE stack. Some of the tooling that is coming out of the PEPFAR patient level monitoring work. Some of that is some of the glue. There's also a lot of work being done on decision support under the auspices of WHO and developing implementation guides there so it definitely would be leveraging a lot of other infrastructure for this.

Q: Are you are you guys imagining that it's possible, since the scopes may be limited for what is proposed based on what the funding is and ability to execute on that proposal. Are you imagining that it's possible that the same global good may be within multiple proposals for each round or, that same global good is in proposals across all three rounds or multiple rounds?

A: We certainly envisage things like if we have got tool x that might want to adhere to use cases one, two, and three, it might make sense that use case one is only really scoped well enough right now or has the profile defined right now for round one. And then in future rounds, maybe the clinical care management becomes germane and the use cases in there and so there can be a subsequent application for that. So yes, I think we wanted to create a framework where there is enough flexibility in terms of time and scope to support what's the priority at the moment and go from there.

Q: It's really great to see Digital Square continuing to provide this certain enabling function given the amount of activity and need there is around COVID-19 that trying to figure out ways that we both can create resources or tools and global goods that support COVID response, but that these are things that are laying the groundwork for future pandemic or other types of responses. I think that one of the challenges is that people are very divided given all the number of activities that have to be formed right now and with the explosion and pandemic itself that I think a lot of people are distracted. So trying to figure out a way to be most effective with the funding so that people find it attractive enough to actually help them facilitate what they're trying to do or be able to do something quickly so that they can kind of accelerate whatever they're doing and get back to the longer term plan or whatever it is that they're working on, it's going to be one of the sort of challenges I think with this structure and having around one with not a lot of clarity as to what the other future rounds are going to be, but certainly hopeful about what those are. Just knowing what the big plan is, I know it is just harder to plan properly.

A: In terms of the future rounds, they would include both the scope that is in this round that was called out as well as things that are identified through that Task Force. If there are particular gaps that should be highlighted on that Task Force to be addressed, that would help with a strategy. I think there is also the complication of once a global good has support in the core software, deploying that in the country and doing the configuration and set up there, that's not being addressed here. That being said, we have reason to be optimistic that funding like that will be made available through a variety of donors. That would be considered as the larger strategy and where this fits in is just one narrow slice of that.

Q: Would you say that tool developers who have channels to those implementations and could potentially go to those future steps of country implementation this will be attractive or if that's the ultimate goal is to see these in use?

A: Yeah, and I think it was one of the reasons for asking countries where the tools are deployed and for the use cases so that we get some sense of that to figure out how there are ways that we can support the implementation as a follow on step to getting the core software done. I think what one thing that we want to avoid doing is that every implementation of a particular tool in a country and across multiple countries ends up being a bespoke solution to trying to be interoperable. And so that's where we want to stress, sort of the core software support for this RFA, and then the actual configuration implementation through other opportunities and there are a variety of mechanisms that we can explore for that country implementation work.

Q: I was putting myself in the shoes of the engine developers for having the guidelines be executable. And I was thinking if this is not attractive enough to spend much time in terms of the tool building if there was a plan to actually get these things implemented then that kind of a smart strategy for tool developer to sort of think hey I am investing now because then the later stages are going to help actually get the tool out to be used. I think that's an important kind of attraction, maybe for them and certainly a way that I will maybe communicate to other potential partners here.

A: That is definitely the intent, we just do not have any particular commitment at the moment that we can talk to. There's always the possibility of through the Digital Square as a global mechanism to have country buy-ins. So working with the USAID country offices if that is of interest. And one way to help support implementation of the work under this RFA. And as a follow-on step, that is certainly a possibility to explore. But we are pursuing lots of different strategies on this. It is not the only one.