

RFA 2020-038: G6PD Mobile Results Interpretation App and Engine

Question and Answer Document

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STANDARD G6PD Device Information

Question: Where can I find additional information about the STANDARD G6PD Test?

Answer: Information about the STANDARD G6PD Test device can be found on the [SD BIOSENSOR website](#).

Digital Solution Information

Question: Does PATH have any preferred or not preferred mHealth applications?

Answer: There are no preference of mHealth applications but applicants are encouraged to look at the technologies in the [Global Goods Guidebook](#) and any technologies that meet the definitions of a global good as per the details on the [Digital Square Wiki](#).

Data Capture and Image Processing

Question: What data should be captured from the STANDARD G6PD device? Do the STANDARD G6PD Test device data and the mobile device data need to be captured or can one option be used?

Answer: The preference is to capture all data from the STANDARD G6PD device. The STANDARD G6PD Test data and mobile device data should both be captured and clearly labeled.

Question: Are there additional sample images of the STANDARD G6PD Test that can be shared?

Answer: Yes. Please see additional images below. These images were taken by an Android device in a variety of light settings. We have also included sample error message the user may encounter.



Image 1. Test result in fluorescent light.



Image 2. Control Test result in low light.



Image 3. Test result in natural light.

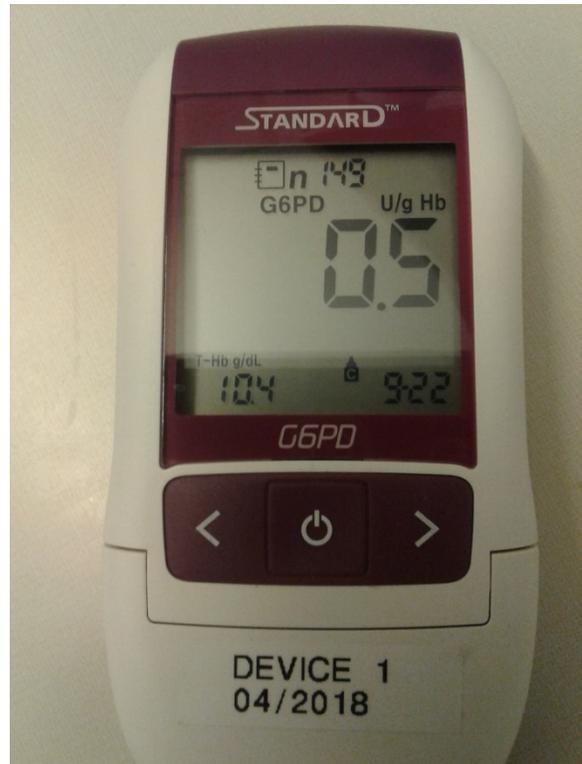


Image 4. Test result in low fluorescent light.



Error: Communication Error

Communication between the analyzer and external devices has failed.

If communication between the analyzer and the printer has failed, a printer icon will appear on the screen.

Image 5. Sample error message and explanation from user manual.

Question: Will error results be captured and if so, what details typically accompany an error result?

Answer: Error results should have the option to be captured. The digital solution should point the user to the manufacturer’s user manual to initiate troubleshooting. See Image 5 above.

Question: Are the STANDARD G6PD Test devices serialized and would the device ID be required to be captured along with the results?

Answer: Yes, the devices have serialized device ID numbers located on the back of the device that should be captured. The preference would be to use image capture technology to identify device ID and store with data. The ID is not in barcode format (Image 6).



Image 6. Sample device serial number.

Question: Is there a possible scenario for offline sync where two different devices capture information about the same patient before the unique ID is generated? In this case, what would be the logic for conflict resolution and merging the info from these devices?

Answer: This scenario is unlikely given the typical workflow for testing and can be further discussed with selected applicant.

Question: Would it be sufficient to provide an option within the application to select pictures from the photo gallery?

Answer: The preference is for an intelligent image capture solution similar to image capture of credit cards or checks for online shopping or banking. This is the preferred solution because it allows for real-time support to the health worker/user while they are with the patient.

Question: What is the utility of the Image Processing Engine?

Answer: The utility of an Image Processing Engine is that it is the boilerplate for a reusable library that may be adopted by other mobile technologies in the future who may wish to include the interpretation and analysis functionality in their tool. From a flow perspective it is the functional component that manages the reading, interpreting, and evaluating of the test results from the G6PD device. The overall flow provides a second option for data transfer on top of manual data entry. Automatic image processing and data capture also provides the potential to reduce errors in manual data entry. The preferred digital solution will incorporate both manual entry and image capture (with manual review) as options to input data.

Question: If the Image Processing Engine and Results Interpretation Module are integrated into an existing mHealth solution, how will facilities using alternative electronic solutions (e.g. web-based EMRs) be accommodated?

Answer: In the current phase, data exchange with facility based EMRs is out of the implementation scope. To accommodate this functionality in future phases, the requirements that the mobile solution have interoperability interfaces will provide a base for future data exchange with any existing solutions in facilities.

Technical Back-End

Question: Would a cross platform solution be preferable (Android/iOS) or is a native Android solution acceptable?

Answer: We are open to a cross-platform solution, but it must function on Android devices at a minimum.

Question: What hosting options are preferred?

Answer: You can choose either a cloud-based option or an on-site option but clearly indicate which option you are proposing. If you choose on-site, please provide illustrative travel costs.

Question: "Allow for data to be synchronized locally at a facility and central server" - Does this mean that a localized server is required at facility level? Do we need to plan for multi-tenant requirement? Will the facility level server be hosted on LAN and will the Android apps need to communicate with it instead of the central server?

Answer: The current implementation model is planned around a single instance per implementation (be it facility/region/province/national) and all android devices communicating

with that instance. Devices will only be required to communicate with a single instance/server and not require a multi-tenant synchronisation option.

Question: Do we need API documentation? For interfaces exposed for exchange of data, is Swagger documentation required? Or would Word/PDF document suffice?

Answer: Yes, we require documentation of all data exchange interfaces. At an API level, the format of documentation is up to the applicant. A minimum of Word/PDF is required but we are open to the Swagger and other industry standard formats.

Support

Question: For support phase, do we foresee any travel to provide onsite training to end users, that we (technical agency) need to undertake?

Answer: No.

Configurable Settings

Question: What level of configurability is required?

Answer: Additional patient demographics and intake fields as well as thresholds and treatment options should be configurable per implementation.

Data Reporting

Question: Is there a need for a self-service BI engine and or a pre-defined set of reports? If so, how many? Are these expected to be accessible on the android device or in the web interface?

Answer: A solution with a built-in reporting framework is preferable. At minimum, the application should anticipate up to 5 reports to be included. The format and details will be discussed and defined during the requirements phase of the project with the applicant. Access to the reports / dashboards will only be required from the web-interface.

Initial Requirements Checklist

Question: What does routing images to auto-capture data mean?

Answer: Routing means that images would be processed to automatically capture the data from the image and not require the user to switch between apps manually on the device.

Question: Does PATH have specific guidelines for password management that should be adhered to?

Answer: We do not have a singular management strategy and we are open to the applicant's proposal for password management strategies.