

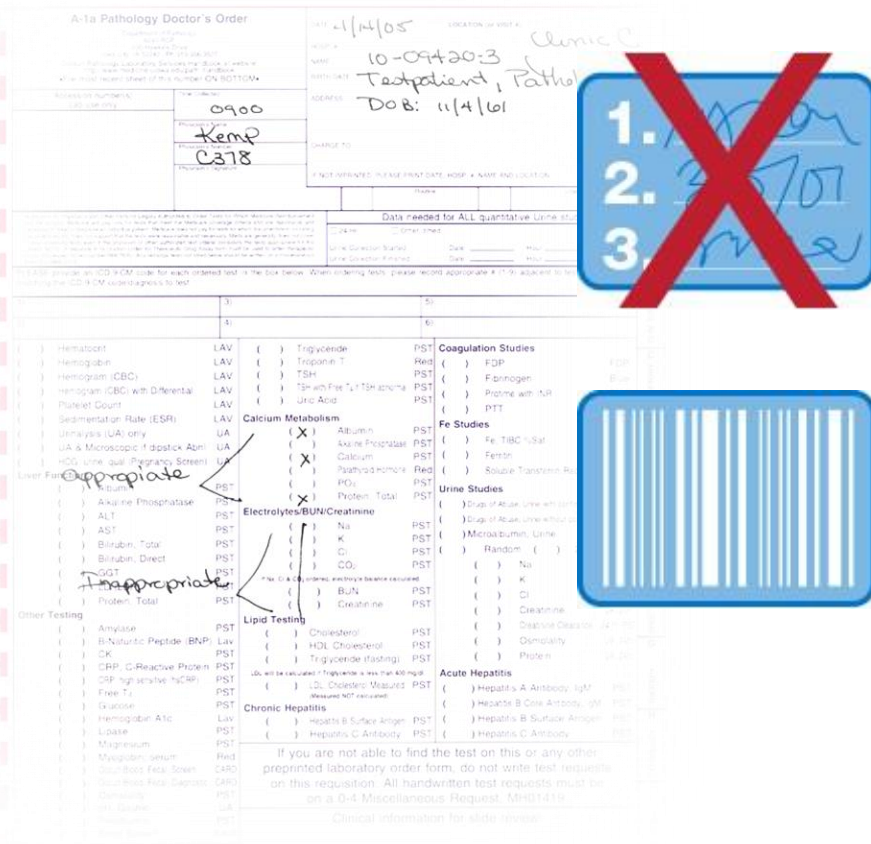
MediCapital Group

Providing medical solutions with perspective

Creating transparency and insight into sample collection & logistics

IDENTIFIED PROBLEMS

According to a study published in the Archives of Pathology and Laboratory Medicine, specimen labeling errors account for 55.5% of identification errors in the lab.



A-1a Pathology Doctor's Order

DATE: 11/4/05 LOCATION: Clinic 1

TEST: 10-09420-3

TESTPATIENT: Testpatient, Pathol

DOB: 11/4/61

Accession Number: 0900

Accession Number: C378

Data needed for ALL quantitative urine studies

Electrolytes/BUN/Creatinine

Lipid Testing

Acute Hepatitis

Chronic Hepatitis

Other Testing

Appropriate

Inappropriate

Barcode

- Handwriting can be hard to read and could be incorrect. Problems with date notation (mm/dd -vs- dd/mm), accidentally recording incorrect date, misspelling study information, incorrect subject ID

- Lack of barcodes makes it harder to identify samples. Besides identification, the lack of an extensive chain of custody record for the sample, makes it harder to identify and correct errors.

IDENTIFIED PROBLEMS

- Sites have to store large amounts of study specific collection kits. This takes up a lot of space = inconvenience for sites
- Every visit, site personnel has to refer to a page in the protocol, to find what samples need to be collected and how they need to be processed = time consuming & inconvenient
- Upon a change of protocol, current kits have to be disposed and new kits will be sourced, packed and shipped to the site = slow & expensive
- Also when a protocol is amended, old protocol binders need to be disposed and new protocol binders will be printed and shipped to the site = slow & expensive

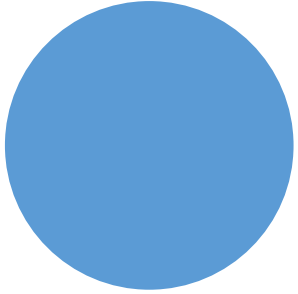


IDENTIFIED PROBLEMS

- For Project Managers it is virtually impossible to get real time insight in the progress of all sites participating in the study. Storage and shipment of samples takes time, Resulting in significant delays in the insight of actual site progress.
- Laboratories save a lot of valuable time if they receive an accurate forecast of when specific samples will be arriving at their facility. Unfortunately in most cases, this forecast generally happens at their receiving department.



IMPROVING THE PROCESS



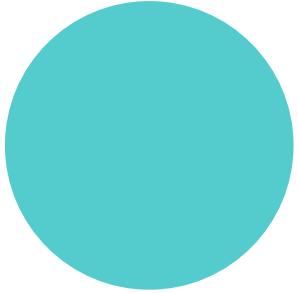
Database of subjects & visits

Utilizing a centralized database that holds all visit specific information, as well as anonymized subject data, provides several improvements:

- All sites are provided with the same visit instructions at all times
- Visit history instantly available based on subject ID
- Reduced risk of errors
- Full chain of custody record available per sample
- Reduced workload for site



IMPROVING THE PROCESS



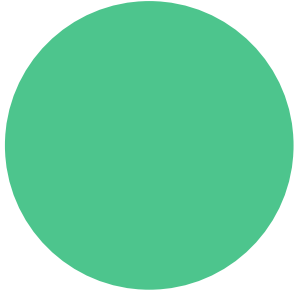
Printing labels & forms

Utilizing a label & document printer eliminates the need for handwritten labels, pre-printed labels and/or handwritten requisition forms. Eliminating handwriting and possibly adding barcodes, can significantly reduce human errors at the site & the laboratory.

- No more date/time stamp inconsistencies
- No more hard to read handwriting
- Study, subject, site, visit & sample specific information on labels



IMPROVING THE PROCESS



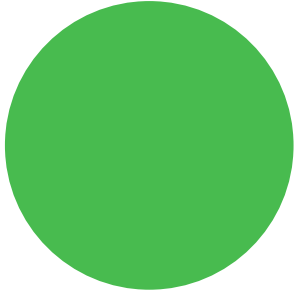
Visit specific collection & processing instructions

When visit specific instructions are pulled directly from a centralized database, it shows exactly which materials are needed for the visit, which eliminates the need for visit specific kits. At the same time, there is no longer a need to go find a printed protocol and find the specific instructions for a visit.

- More convenient for site personnel
- No need for visit specific kits = cost reduction & storage space reduction
- Instructions always up to date
- Instructions visualized helps to reduce processing errors



IMPROVING THE PROCESS



Sample collection, shipment & storage log

As soon as samples are processed a decision is made to either store or ship the samples. Keep a record of which samples were stored and which samples were shipped, helps to keep track of every single sample produces by the investigator site.

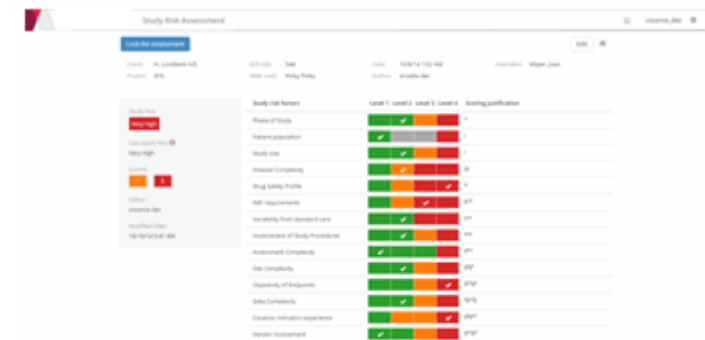
Together with the information of when a sample was shipped, recording the Airway Bill information can help keeping track of shipment progress and escalate as soon as a deviation is noticed.

- Insight in sample location
- Allow for active track & trace of sample shipments

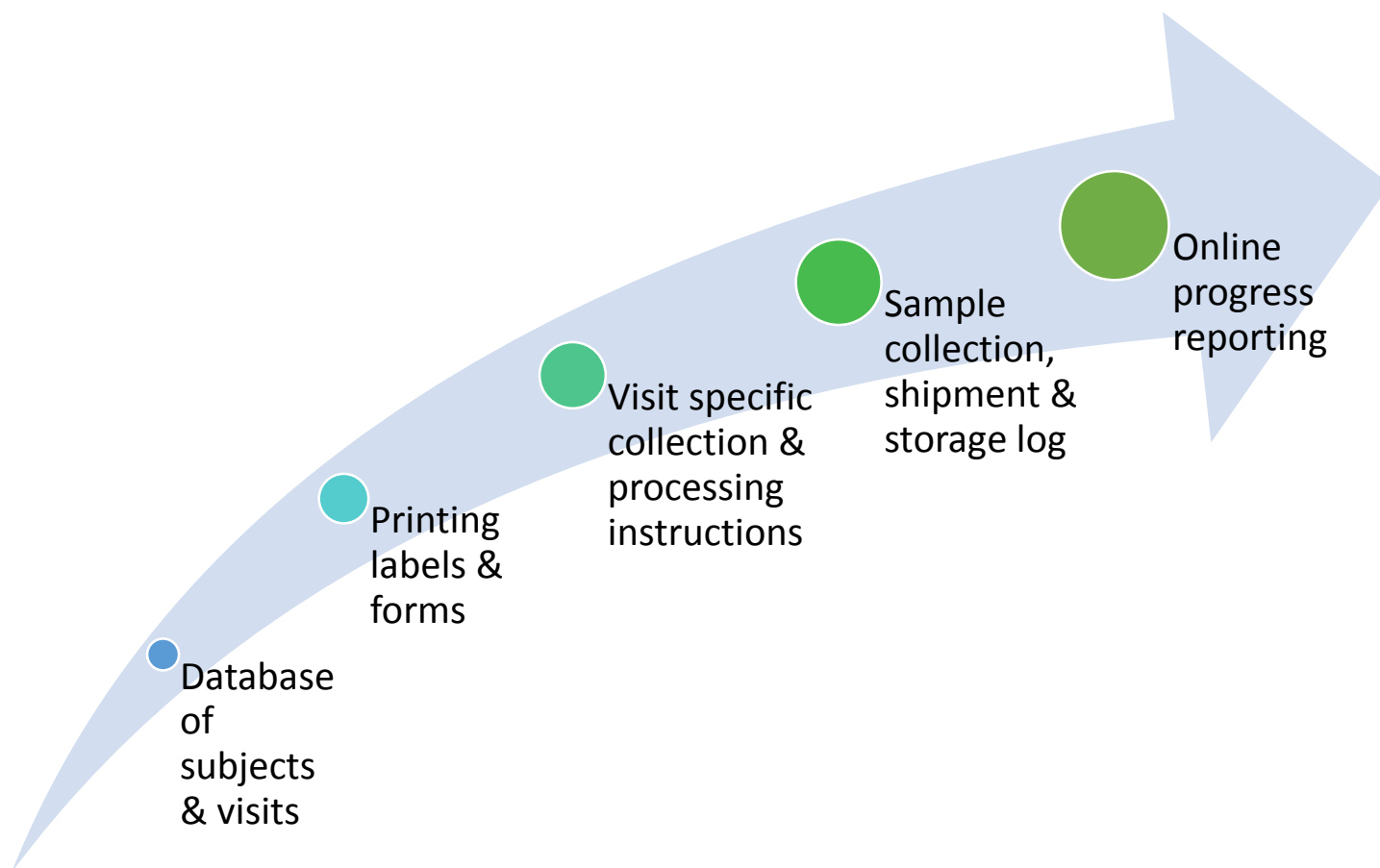




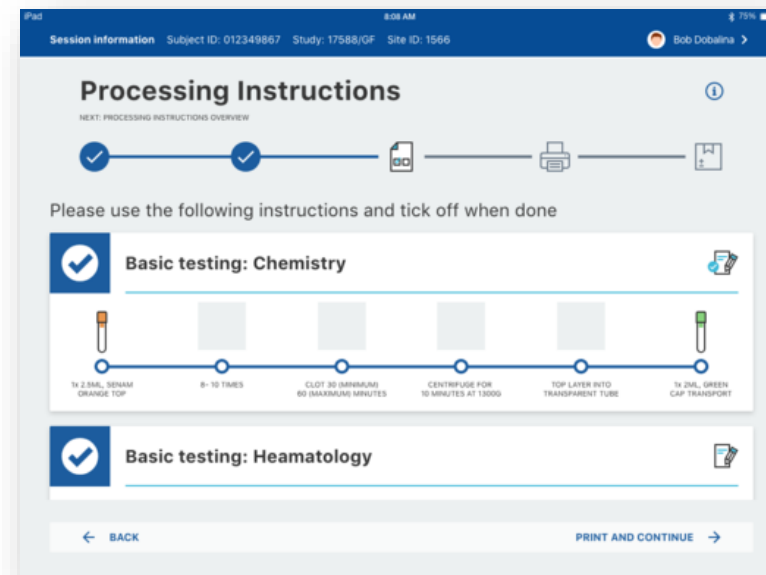
- Site progress reporting = improved timeline management
- Reduced lost to follow-up
- Real-time enrollment overview



IMPROVING THE PROCESS



Improved Process

A screenshot of a mobile application interface. At the top, a blue header bar contains "Session information" and fields for "Subject ID: 012349867", "Study: 17588/GF", and "Site ID: 1566". Below this, the main title is "Processing Instructions" with a sub-header "NEXT: PROCESSING INSTRUCTIONS OVERVIEW". A progress bar shows three steps: a checked box, a checked box, and a document icon. Below the progress bar, it says "Please use the following instructions and tick off when done". There are two sections: "Basic testing: Chemistry" and "Basic testing: Heamatology". Each section has a checklist of steps with icons and checkboxes. The "Chemistry" section includes: "Tx 2.0mL, SERUM ORANGE TOP", "8-10 TIMES", "CLOT 30 (MINIMUM) 60 (MAXIMUM) MINUTES", "CENTRIFUGE FOR 10 MINUTES AT 1300G", "TOP LAYER INTO TRANSPARENT TUBE", and "Tx 2mL, GREEN CAP TRANSPORT". The "Hematology" section is partially visible. At the bottom, there are "BACK" and "PRINT AND CONTINUE" buttons.

Session information Subject ID: 012349867 Study: 17588/GF Site ID: 1566

Processing Instructions

NEXT: PROCESSING INSTRUCTIONS OVERVIEW

Please use the following instructions and tick off when done

Basic testing: Chemistry

Tx 2.0mL, SERUM ORANGE TOP

8-10 TIMES

CLOT 30 (MINIMUM) 60 (MAXIMUM) MINUTES

CENTRIFUGE FOR 10 MINUTES AT 1300G

TOP LAYER INTO TRANSPARENT TUBE

Tx 2mL, GREEN CAP TRANSPORT

Basic testing: Heamatology

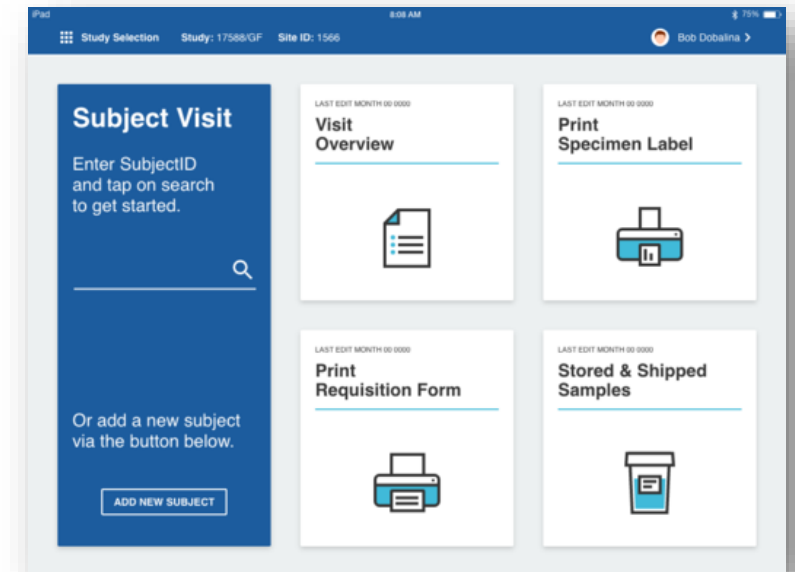
BACK PRINT AND CONTINUE

RF EEZEE SAMPLE MANAGEMENT

In an attempt to reduce manual data entry, simple miscommunications and clerical errors, the MediCapital Group has developed a mobile application called RF Eezee.

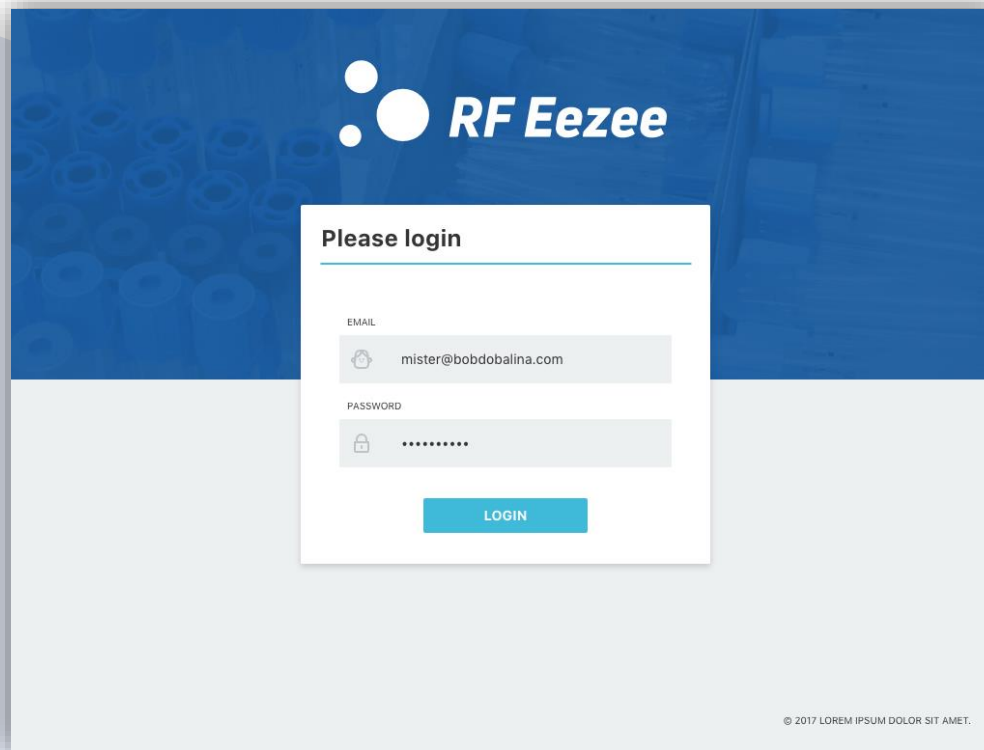
The purpose of this application is to:

- Reduce errors caused by following incorrect instructions at the site
- Reduce errors caused by incorrect re-entry of handwritten data
- Reduce manual data entry at the end of the investigator site
- Reduce required storage space at the end of the investigator site
- Reduce waste (visit specific kits) upon protocol amendment
- Provide real-time high level insight into site progress
- Provide a more detailed chain of custody in for data analysis teams



RF EEZEE APPLICATION

Users are logging in to the application using a unique username, so every action can be logged and identified.

A screenshot of the RF Eezee application's login screen. The background is a dark blue image of stacked metal coils. A white login form is centered on the screen. The form has a header "Please login" with a horizontal line below it. It contains two input fields: "EMAIL" with a user icon and the text "mister@bobdoba1ina.com", and "PASSWORD" with a lock icon and masked characters "*****". A blue "LOGIN" button is at the bottom of the form. The RF Eezee logo is in the top right of the form area. At the bottom right of the page, there is a small copyright notice: "© 2017 LOREM IPSUM DOLOR SIT AMET." data-bbox="318 480 703 1000"/>

RF Eezee

Please login

EMAIL

mister@bobdoba1ina.com

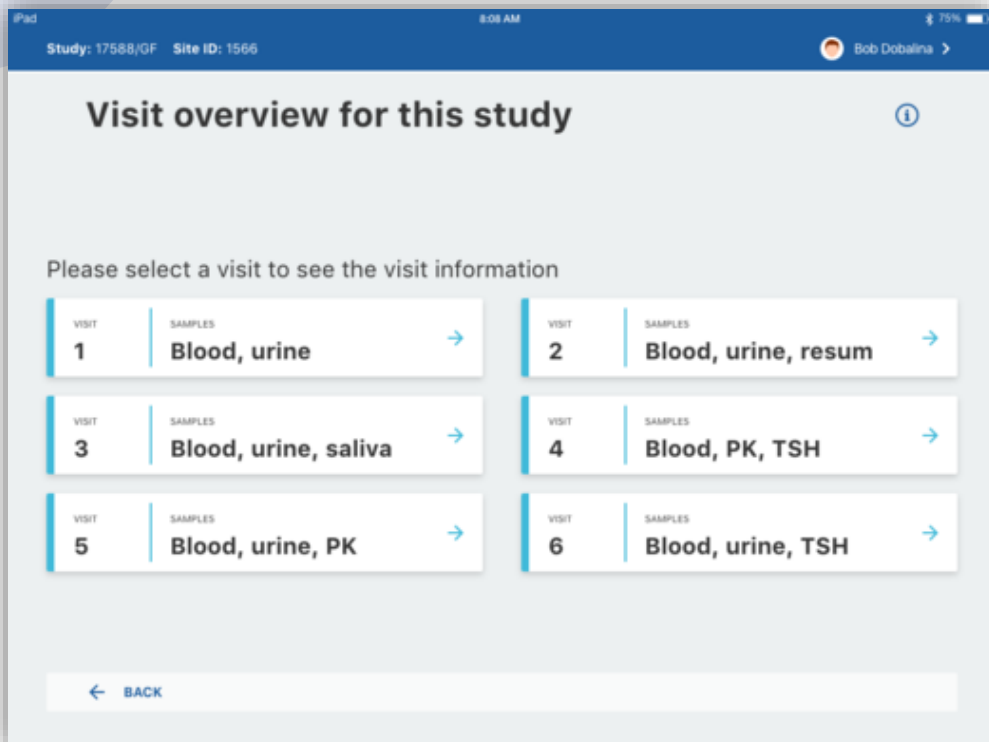
PASSWORD

LOGIN

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RF EEZEE APPLICATION

For every individual study a protocol is set up, outlining all required visits, together with the expected samples per visit including processing instructions



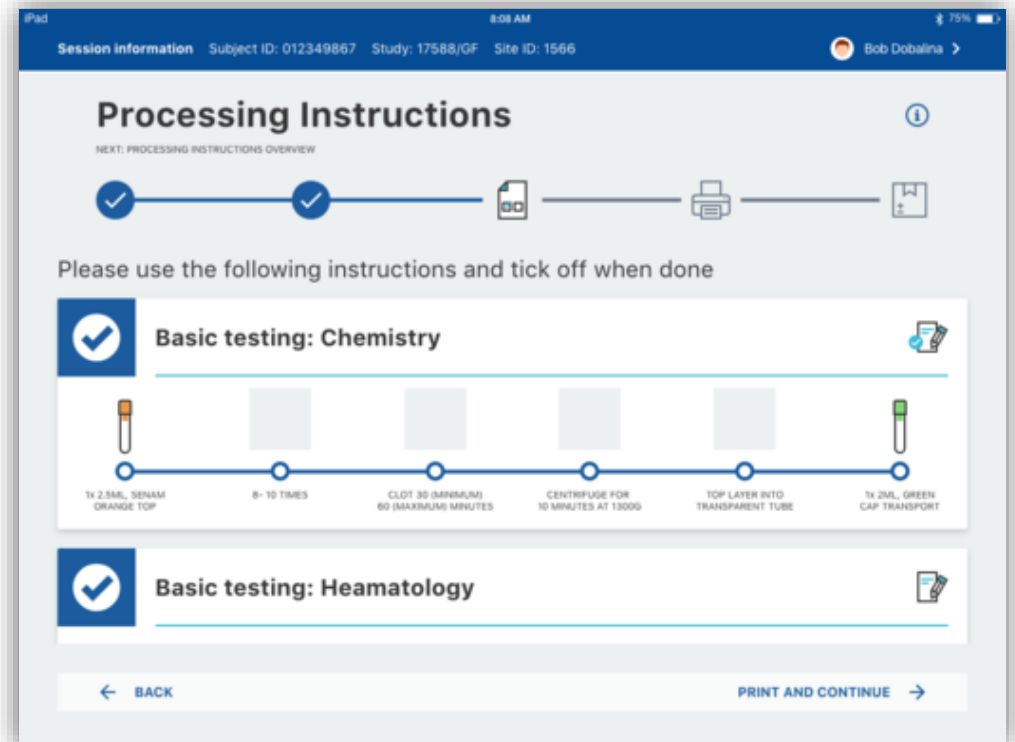
Study: 17588/GF Site ID: 1566 Bob Dobalina

Visit overview for this study

Please select a visit to see the visit information

VISIT	SAMPLES
1	Blood, urine
2	Blood, urine, resum
3	Blood, urine, saliva
4	Blood, PK, TSH
5	Blood, urine, PK
6	Blood, urine, TSH

← BACK



Session Information Subject ID: 012349867 Study: 17588/GF Site ID: 1566 Bob Dobalina

Processing Instructions

NEXT: PROCESSING INSTRUCTIONS OVERVIEW

Please use the following instructions and tick off when done

Basic testing: Chemistry

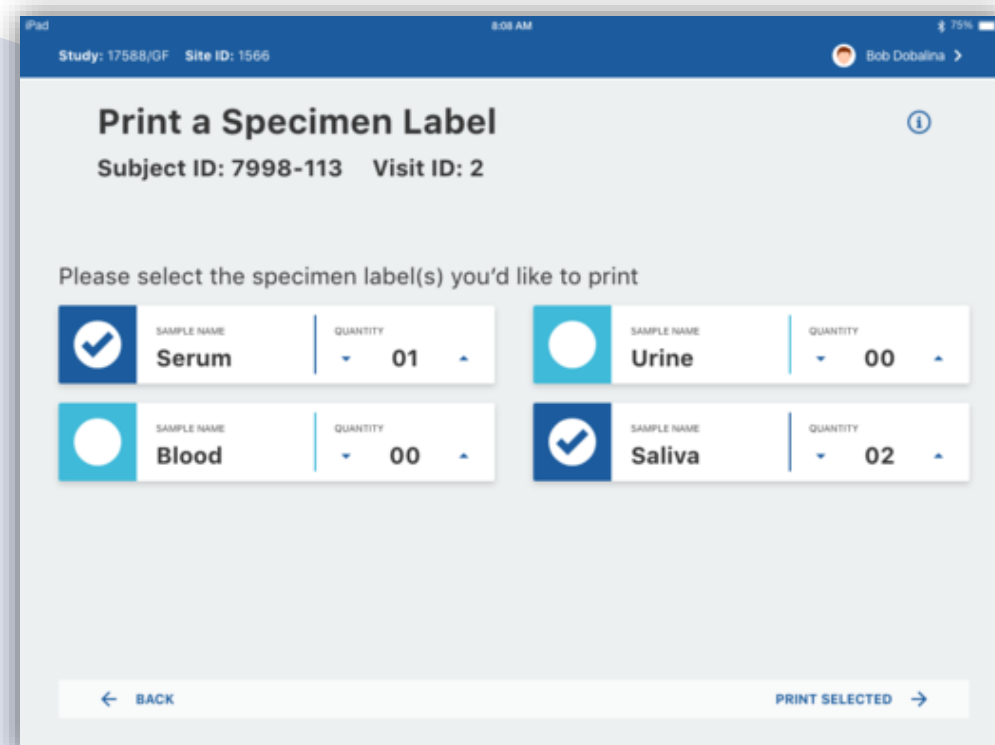
1x 2.5mL, SERUM ORANGE TOP 8-10 TIMES CLOT 30 (MINIMUM) 60 (MAXIMUM) MINUTES CENTRIFUGE FOR 10 MINUTES AT 1300G TOP LAYER INTO TRANSPARENT TUBE 1x 2mL, GREEN CAP TRANSPORT

Basic testing: Heamatology

← BACK PRINT AND CONTINUE →

RF EEZEE APPLICATION

Labels and forms can be printed wirelessly from the application to the provided label or letter printer.

A screenshot of the RF Eezee application running on an iPad. The interface is titled "Print a Specimen Label" and shows "Subject ID: 7998-113" and "Visit ID: 2". It prompts the user to "Please select the specimen label(s) you'd like to print". There are four selection cards: "Serum" (checked), "Urine" (unchecked), "Blood" (unchecked), and "Saliva" (checked). Each card has a "QUANTITY" dropdown menu. At the bottom, there are "BACK" and "PRINT SELECTED" buttons.

SAMPLE NAME	QUANTITY
<input checked="" type="checkbox"/> Serum	01
<input type="checkbox"/> Urine	00
<input type="checkbox"/> Blood	00
<input checked="" type="checkbox"/> Saliva	02

RF EEZEE APPLICATION

Shipping information is captured for simple track & trace of every sample.

iPad

8:08 AM 75%

Session information Subject ID: 012340867 Study: 17588/GF Site ID: 1566 Bob Dobalina >

Ship

✓ — ✓ — ✓ — ✓ —

Please indicate AWB and carrier for this shipment

SAMPLE	COUNT	AWB	CARRIER
Urine	1	1Z2A42781343790396	DHL

← BACK MARK AS SHIPPED →



RF EEZEE FUTURE DEVELOPEMT

Courier

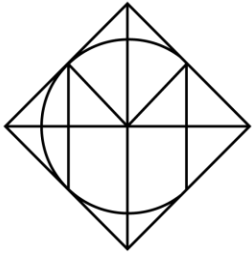
- **Direct integration with courier systems**
 - AWB printing
 - Automatic AWB track & trace
 - Automated courier pick-up request

API

- **API for custom integrations**
 - Allow laboratories to integrate with LIMS for automated sample booking
 - Allow CRO's to integrate with CTMS for automated progress reporting

PM

- **Online PM portal**
 - Create portal for simple drag & drop protocol creation
 - Utilizing Google Maps to allow visual progress reporting



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QUESTIONS?