

Time to be Healthcareful[®]

Salutare Clearinghouse Overview

May 2023

Chris Dial
Co-founder and CEO

Professor Kevin Moore
Co-founder and Chief Medical Officer

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Research and Clinical Safety Officer

Salutare:

Clearinghouse

Digital Phlebotomy and Digital Blood Forms

Brings together test requests from GPs and hospitals into one platform. Access anywhere at anytime. More patient choice

One digital label.
One tube.
Once.

Salutare:

Clearinghouse

Digital Phlebotomy benefits

Works across hospitals and regions.
Perfect for Community locations.

Easily manage all blood and non-blood tests from multiple EPR and GP systems without paper forms and handwritten labels

Simplify self-booking of appointments and check-in by sending patients Digital Blood Forms with links and barcodes

End relabelling by printing analyser-compliant barcodes

Capture accurate sample collection times by scanning tubes and automatic, real-time status updates to LIMS and EPR

Reduce staff time and effort with a simple, clear UI for less confusion and short training times

Salutare:

Clearinghouse

Digital Phlebotomy and Digital Blood Forms

Works across hospitals and regions.
Perfect for Community locations.

Raise the efficiency of Community collection

Cloud-based service means analyzer-compliant barcode labels can be printed any place at any time from multiple hospitals, EPRs, and LIMS

Improve mobile phlebotomy in the community

Community nurses can print on-the-go and at the patient's bedside using mobile devices in the home

Reduce duplication of orders across hospitals and primary care

We estimate at least 5% of orders are duplicated at the time of order or at the time of phlebotomy.

Salutare:

Clearinghouse

Sets the scene for pharmacies to pick up demand

Opens the door for pharmacy phlebotomy.

Connects pharmacies into patient care without broad EPR deployment.

Pharmacists can service outpatient and GP test orders

In some regions, patients can attend their local pharmacy for blood tests using handwritten forms. Soon they will have barcoded labels and sample tracking. Patients prefer their pharmacy to hospitals for tests.

Reduce overall environmental impact

Paperless forms, shorter travel distances, reduced testing via de-duplication means less emissions and fewer materials consumed.

Monitor the safety of medicines

Many new drugs require frequent blood tests to check for adverse effects. This is ideally done by the pharmacist at the point of dispensing.

Clearinghouse

Digital Phlebotomy and Digital Blood Forms

Clearinghouse. Print Scan Teams Reports Blood Forms Welcome Mr. Moore

Patient Search

Select the patient

First Name	Last Name	Date of birth	Gender	MRN Number	NHS Number
Benny	Omar	1992-03-04	M	123456	123 456 7890
Ben	Longhurst	1970-04-27	M	147010	244 175 890

Future orders

Date	Order	Accession	Path Lab	Order Origin	Tube Colour	Clinician	Track
14:04 31/01/2022	Fbc, WBC	87654321(UHC008005758)	HAE	Top Practice		DR/TWIRL	>>>
14:04 31/01/2022	IRO1	87654321(UHC008005758)	BIO	Top Practice		DR/TWIRL	>>>
14:04 31/01/2022	IRO1	87654321(UHC008005758)	BIO	Top Practice		DR/TWIRL	>>>
14:04 31/01/2022	IRO1	87654321(UHC008005758)	BIO	Top Practice		DR/TWIRL	>>>
14:04 31/01/2022	IRD1	87654321(UHC008005758)	BIO	Top Practice		DR/TWIRL	>>>

PRINTER: \RFL-ZBR-11-A PRINT SEND

7011112 NHS: 431 667 4367 RT
06/03/1993 F RF - Clinic 2
TEST, PATIENT



37223611776 FBC Printed: 01/01/23 16:45

7011112 NHS: 431 667 4367
06/03/1993 F RF - Clinic 2
TEST, PATIENT




37223615555 AEM Printed: 01/12/22 12:50
M2, M4, GGT, LPA2, TFT, APO1, M3, CK
GOLD CHEMISTRY

GROUP AND SCREEN

Patient identified by name and date of birth
Please handwrite on tube:
name, Surname, DOB, MRN, Date & Time,
and Collected By



27223564026

NHS No:  1442854359 Royal Free London NHS Foundation Trust

MRN: 20149708 Request Date: 23/09/2020

Forename: BEN Clinician Name: DR SHIVANI SHAH


Surname: LONGHURST Clinician Alias: GP000306

DOB: 17/08/1996 Practice Code: E83018

Address: 41 Ackington Drive, London, NW9 5WL Practice Address: Watling Medical Centre

Department: BIO

Clinical Details: N/A

Test: Liver Profile (M3)  60011431300

Specimen Container: Gold

Specimen Collection: DATE: / /
TIME: :
Phlebotomist Signature:

Lab Only Use:
Sample Receiver Initial:
Sample Type Received:
SST EDTA Grey Red Light Blue

Salutare:

Patient choice and service simplicity Democratise phlebotomy

Any blood tests can be taken at any location
[hospital, GP office, community center, pharmacy]

PATIENTS can go where it's most convenient for them

Clinicians order using the
EPRs they have today



GP

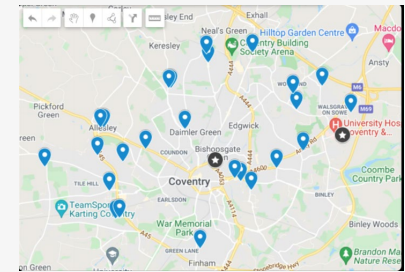


Hospital Clinician

Patients receive digital blood
forms to book when and
where they want



Patients go where they want
to take their tests



Clearinghouse.

Salutare:

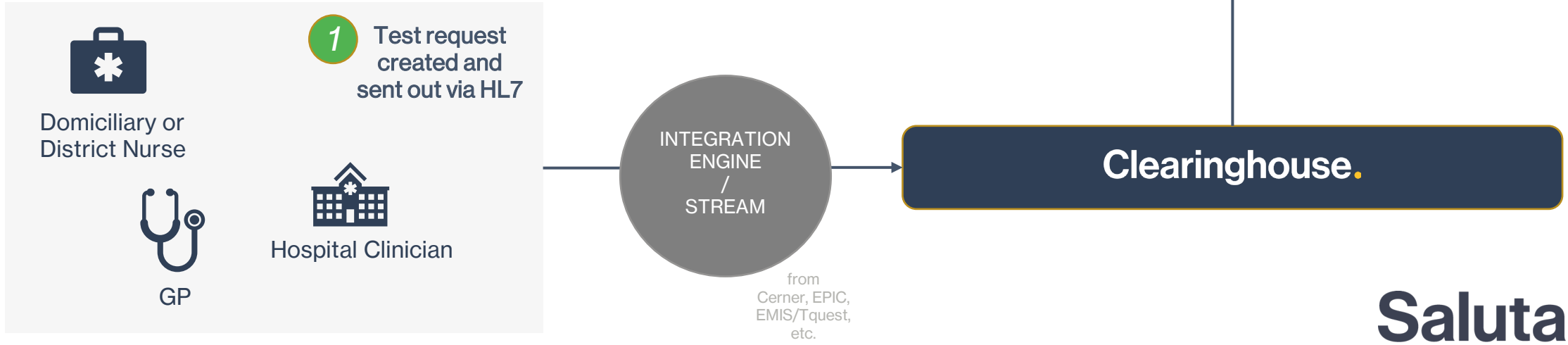
Workflow and data flow

Digital Blood Forms go to patients Salutare® Clearinghouse

Test requests are created the normal way in an EPR [EPIC, Cerner, EMIS, System3, Vision, etc]

Salutare takes the order from a direct stream, Integration Engine, or LIMS. It sends a Digital Blood Form [PDF + QR code] along with a link to the Patient to book an appointment directly in your appointment booking system.

Patients go wherever they want for blood taking



Patient presents at ANY phlebotomy location Salutare® Clearinghouse

The Patient presents at phlebotomy, with or without the QR code and Form. Reception finds the Patient and Orders in Salutare.

Proper analyser-ready labels are printed for the tubes.

Blood is collected, tubes are labeled, tubes are scanned for departure to lab.

Single labels work all the way through the analysers with no relabelling



4



Patient arrives at ANY phlebotomy centre
Check in with appointment booking system

shows QR confirmation
-OR-

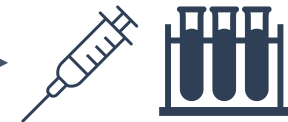
Phlebotomy can look up with Name/DOB/MRN

5



Print lab-ready tube labels and A4 form [if desired]

6



Tubes collected, scanned along pathway, and sent to lab, confirmed in pre-analyser

Clearinghouse.

Salutare:

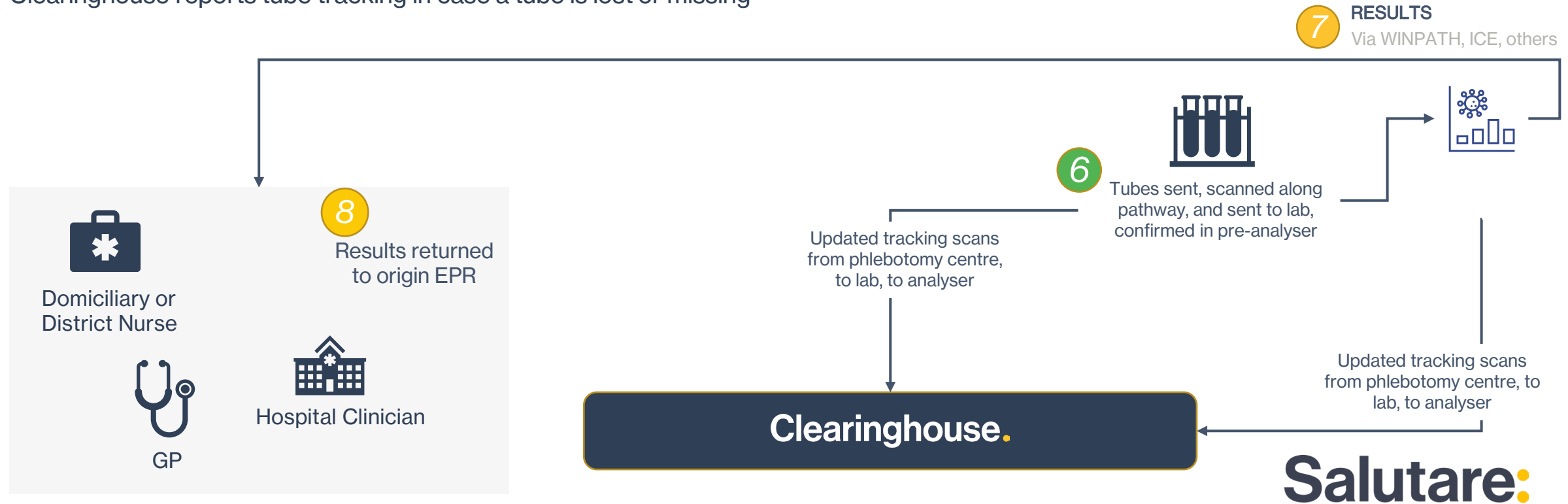
Tubes sent to lab, tracked, results returned Salutare® Clearinghouse

Blood tubes are scanned, Salutare stores scanned locations for tracking and sends a COLLECTED notification automatically.

Tubes sent to lab and analysed, analyser updates on reception

LIMS sends results back to origin EPR for reporting

Clearinghouse reports tube tracking in case a tube is lost or missing



Find then print labels and required forms Paperless booking and check in

Patients arrive without forms or bring a Digital Blood Form

CLEARINGHOUSE

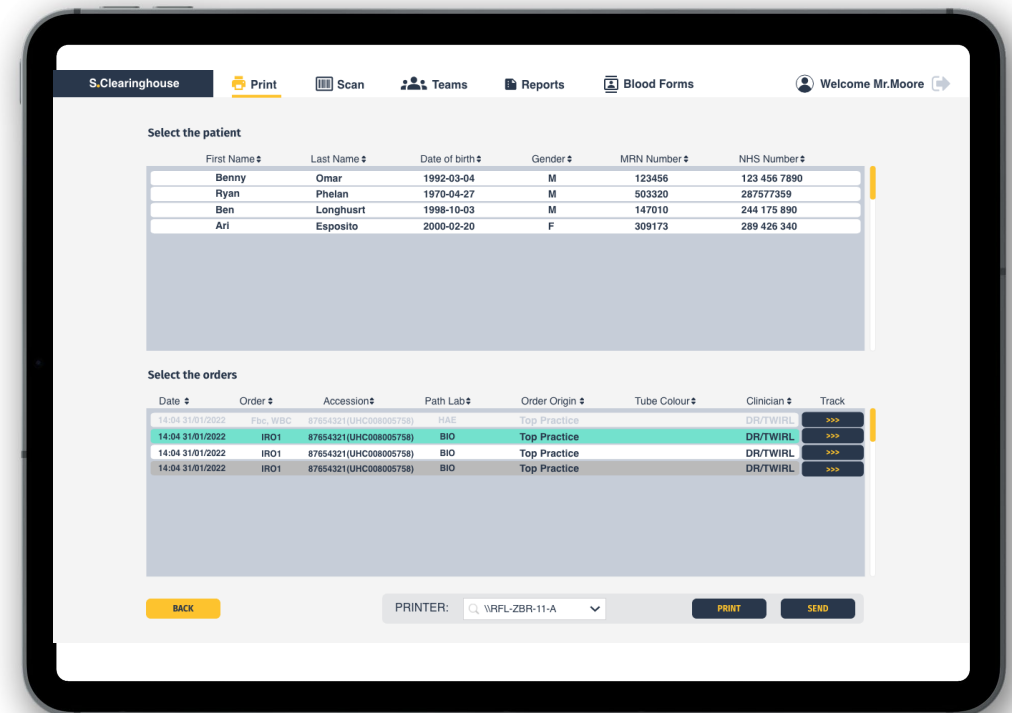
Find orders with QR code, bar code, or patient info
[name, NHS number, DOB]

Print high-quality labels that are analyser-compliant to
avoid relabelling samples in the lab

Print required forms with clinical info if required

Track samples from ordering to lab and see history
and details. Find missing samples more easily.

*No EPR login required



Salutare:

Scan and track labelled tubes

Automate to spend less time and take less risk

Scan tubes like a supermarket scanner and track progress and performance

CLEARINGHOUSE

Obtain accurate collection times for samples and automatically update LIMS and EPR

Follow progress during the day and see quickly samples not scanned

Better manage your phlebotomy service and performance on scanning

The screenshot displays the S.Clearinghouse mobile application interface. At the top, there is a navigation bar with the title 'S.Clearinghouse' and icons for 'Print', 'Scan', 'Teams', and 'Reports'. A user greeting 'Welcome Mr. Moore' is visible in the top right corner. Below the navigation bar, a message reads 'Begin to scanning barcodes to record received sample'. The main content area is divided into two sections: 'Printed (3)' and 'Scans (11)'. Each section contains a table with columns for 'Printed on', 'Order', 'First Name', 'Last Name', 'NHS No.', 'MRN No.', 'Accession', and 'GP Practice'. The 'Printed (3)' table has three rows, with the first row highlighted in orange. The 'Scans (11)' table has eleven rows, with the first row highlighted in orange. A '(Mouse Over)' tooltip is visible on the right side of the 'Printed (3)' table.

Printed on	Order	First Name	Last Name	NHS No.	MRN No.	Accession	GP Practice
22:40 24/07/2022	FBC, Im1, Im1	Art	Esposito	58942634	309173	35441409	Iusto
22:48 31/07/2028	WBC, T3, HCYS	Ryan	Phelan	287577359	503320	71942648	optio
12:40 22/03/1984	IROT, CEA, CEA	Ben	Longhurst	841787326	215145	65105218	perspicatis

Last Scanned	Order	First Name	Last Name	NHS No.	MRN No.	Accession	GP Practice
14:04 31/01/2022	Full Blood Count	Art	Esposito	58942634	309173	35441409	Iusto
14:04 31/01/2022	Ferritin	Art	Esposito	58942634	309173	35441409	Iusto
14:04 31/01/2022	Ferritin	Art	Esposito	58942634	309173	35441409	Iusto
14:04 31/01/2022	White Blood Count	Ryan	Phelan	287577359	503320	71942648	optio
14:04 31/01/2022	Thy-Iodothyronine	Ryan	Phelan	287577359	503320	71942648	optio
14:04 31/01/2022	Homocysteine	Ryan	Phelan	287577359	503320	71942648	optio
14:04 31/01/2022	Ferritin	Ben	Longhurst	841787326	215145	65105218	perspicatis

Salutare:

Manage teams and locations

A simple interface for your organisation

Create teams and locations to organise staff and resources

CLEARINGHOUSE

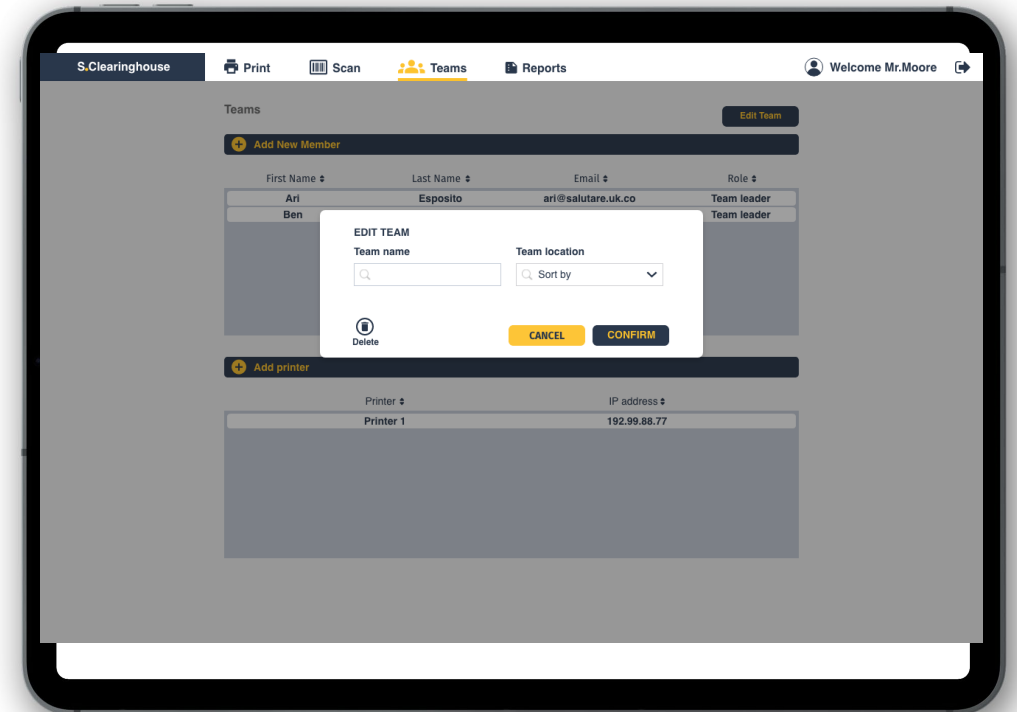
Create multiple teams to manage your locations

Assign staff to one or more locations

Organise printing resources by location

Discover printers that produce poor labels and generate errors

View location-based throughput and performance



Salutare:

Report and analyse performance Metrics on phlebotomy and pathology operations

Gain more understanding on performance and track down missing samples

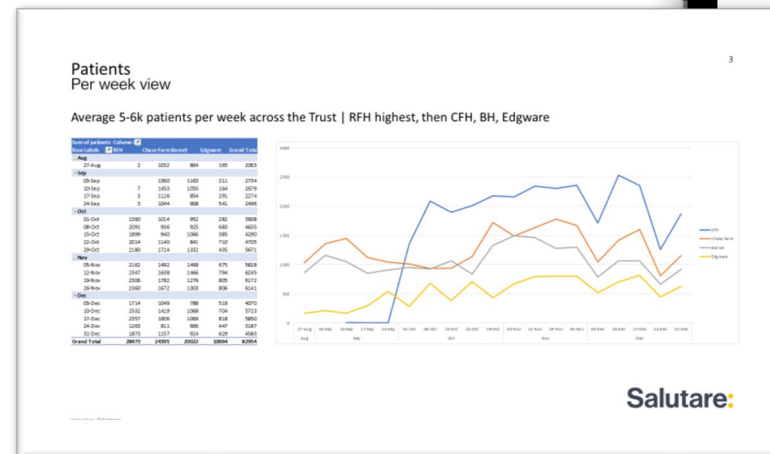
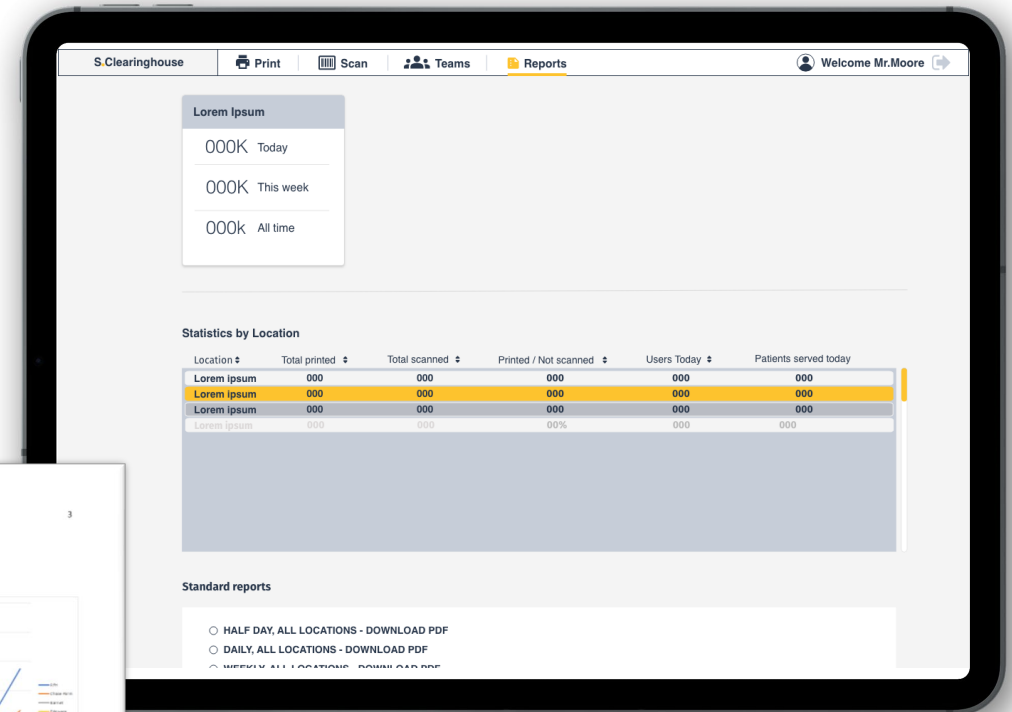
CLEARINGHOUSE

See interval timing from sample collection to lab, to results posting

Find tubes and orders that go missing

Understand your phlebotomy team capacity by location and across the Trust

Manage your staff's performance



Salutare:

Send patients a Digital Blood Form Go paperless and use online booking

Patients receive a digital form and secured QR code with a link to book online – like a boarding pass

Clearinghouse

When orders are created, send patients their test request details and a link to book an appointment online

Paperless from end to end – patients use their QR code, bar code, or demographic information

Patients feel safer with a detailed confirmation

Patients can print if they want

A printable "Pathology Request Form" for Finchley Memorial Hospital. The form includes a QR code in the top left, the NHS logo in the top right, and the hospital's address: Granville Road, London, N12 0JE, with a telephone number of 020 8349 7500. Patient and clinician information is provided: Clinician Requesting Dr Kevin Moore; Medical Record Number: 1112223344; Title: Mr.; Surname: Dial; Forename: Chris; Date of Birth: 24/03/1970; Date: 09/05/2022. The form is titled "Pathology Request Form" and lists "Clinical Details" as N/A and "Test Requests" including Urea and Electrolytes, Liver function tests, Full Blood count, Thyroid Function Tests (T4 & TSH), C Reactive protein, and Lipids. A barcode is located at the bottom left of the form.

Test Clearinghouse

Digital Phlebotomy and Digital Blood Forms

Streamlines the process of getting a blood test. More options for busy hospitals, clinics, and community centres. More choice to patients to have a test easily near them.

Our deployment at Royal Free London, UK

Barnet Hospital and Chase Farm Hospital have been early adopters through design and testing

Now running live at all RFL locations with 1500 patients a day, 600k+ labels printed, tracking more than 75%

Rolling out to dialysis centres and other smaller phlebotomy units

Finds, prints, and scans hospital Cerner EPR orders along with GP orders from tQuest/EMIS/others.

Benefits

One-time label printing

Analysis-ready blood tube labels

Reduce reprinting and rejected samples in the lab

No need for paper blood forms from patients

No blood tube mislabeling

Reduce handwritten forms and labels

Track tubes and find missing samples

Reduce number of systems and log-ins needed – doesn't require EPR, tQuest, or LIMS access

Features

Cloud-based software amalgamates requests into one place – GP and hospital tests

Digital blood forms are sent directly to patients

Samples can be easily tracked

Collected easily done through one-step tube scanning at the phlebotomy station

Daily tracking and reporting by location, practice, bay, and others

Salutare:

Site feedback

Early results from Chase Farm Hospital

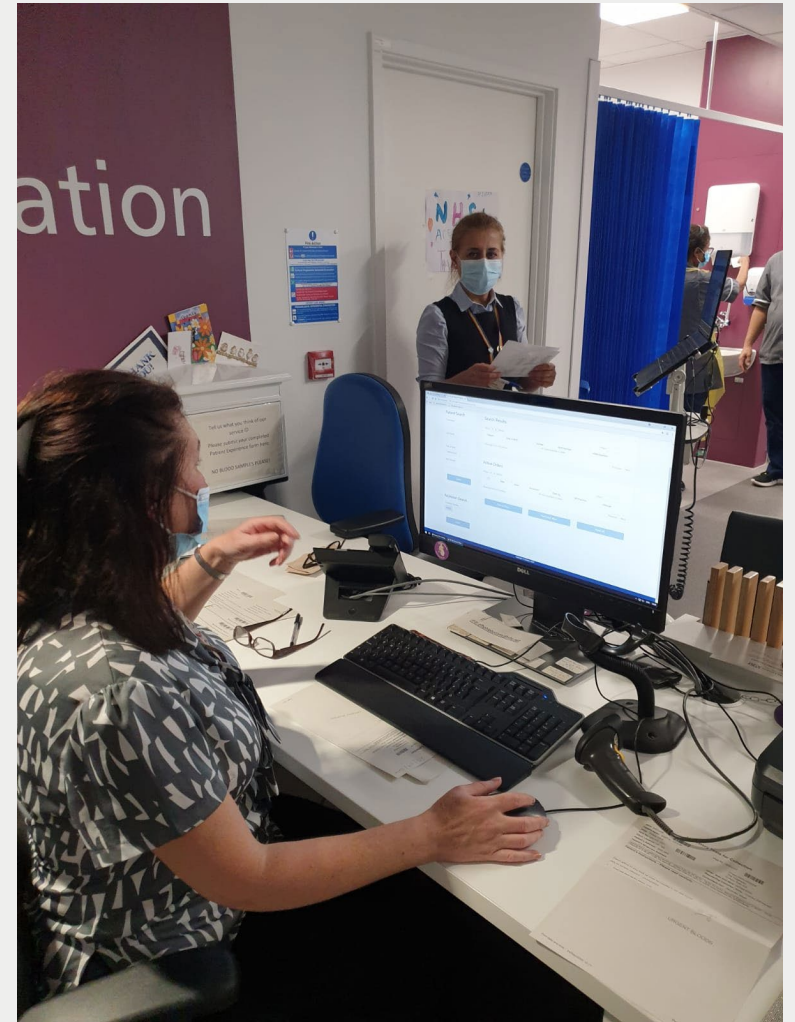
CLEARINGHOUSE

Digital Phlebotomy and Digital Blood Forms

“The pilot has been running in Pathology these last 6-8 weeks successfully, and we have modified the system according to requests and feedback.

“Today went pretty great, wish I could have voice recorded the feedback which was excellent. Had some good examples while there. A tQuest order sheet which a patient had brought in on just normal A4, not a sticker sheet.

Receptionist scanned the accession barcode into the new search window, printed label, couldn't believe how easy it was. Prevents them from hand-writing labels”



Salutare:

Certifications

Our current partners

Investment and work to gain important certifications



NHS

NHS Digital certifications on DSP Toolkit, SPINE access for patient records



Care Quality Commission

Passed certification and approval for private blood testing service with public offers: thePharmacyClinic



Cyber Essentials Certified

Core digital safety and privacy management in place



Crown Commercial Service

Crown Commercial Service

Accepted and approved both major products for purchase by UK public organizations



Healthcareful®
means patients
are not lost

Patients face risks at many points in their care

Half of all outpatient appointments are to monitor patients for development of complications due to chronic disease, medications, or cancer

Patients get lost to follow up

A fundamental problem

Unmonitored patients come to harm when complications occur that are not found early and treated.

A fifth of patients that turn up for blood tests are turned away for lack of a form

Patients get lost in diagnostics

A fundamental problem

Delayed blood tests means delayed diagnosis means delayed treatment. Patients are harmed.

A third of patients who develop complications or disease are not referred in a timely manner

Patients get lost in referral

A fundamental problem

Failed or missing referrals lead to delays in treatment and patient harm.

Current systems let down clinicians, patients, and the health service

Half of all outpatient appointments are to monitor patients for development of complications due to chronic disease, medications, or cancer

Patients get lost to follow up

What goes wrong

Clinics cancelled. Appointments never rescheduled. Single points of failure. Not enough people and hours in the day to follow up everyone by hand. Plus see new patients properly.

A fifth of patients that turn up for blood tests are turned away for lack of a form

Patients get lost in diagnostics

What goes wrong

Patients turned away or cannot attend to a convenient location, rebooking never happens. Manual labeling adds time and delays analysis. Delays to re-test or investigate disease in a timely manner.

A third of patients who develop complications or disease are not referred in a timely manner

Patients get lost in referral

What goes wrong

Forms not complete, information missing, unclear where to refer to. Over-reliance on emails and no internal system to keep track and follow up. EPR systems do not meet the needs of MDT teams.

How we keep patients safe

Healthcareful® means patients are never lost

Half of all outpatient appointments are to monitor patients for development of complications due to chronic disease, medications, or cancer

Patients get lost to follow up

Solving a fundamental problem

Simplified, automated common tasks for outpatient monitoring

Monitor

A fifth of patients that turn up for blood tests are turned away for lack of a form

Patients get lost in diagnostics

Solving a fundamental problem

Scalable online service that simplifies collection and lets patients go where they want, when they want.

Clearinghouse

A third of patients who develop complications or disease are not referred in a timely manner

Patients get lost in referral

Solving a fundamental problem

A single place for 'multi-mind medicine' dialogue and referrals

Referral

Salutare:

“The path to lower cost
is the same as the path
to safer care.”

Gary Kaplan

Team and Strategy

Executive team

Our clinicians and software developers understand technology's transformative power for healthcare.



Chris Dial
Co-Founder, CEO

An ex-senior executive from Microsoft.

Led the development of software companies across Europe and the US.



Prof. Kevin Moore
Co-Founder, CMO

A Professor of Medicine, hepatologist and clinical pharmacologist, and biochemist [B.Sc. and Ph.D]

More than 100 publications with an H-index greater than 65. Led teaching of therapeutics at UCL and course creator and director for Applied Medical Sciences.



Dr Ameet Bakhai
Research, CSO

A nationally leading clinical researcher and cardiology consultant.

Experience in clinical trials and digital innovations in the NHS. A researcher with a history of change and innovation in the hospital and healthcare industry.

Salutare:

Our Solution

Healthcareful® for better outcomes

Salutare software simplifies Referral, Investigations, and Monitoring across healthcare systems.

Salutare flips healthcare's focus to Referral and Monitoring

Effective Monitoring and Referral have the greatest impact for patients

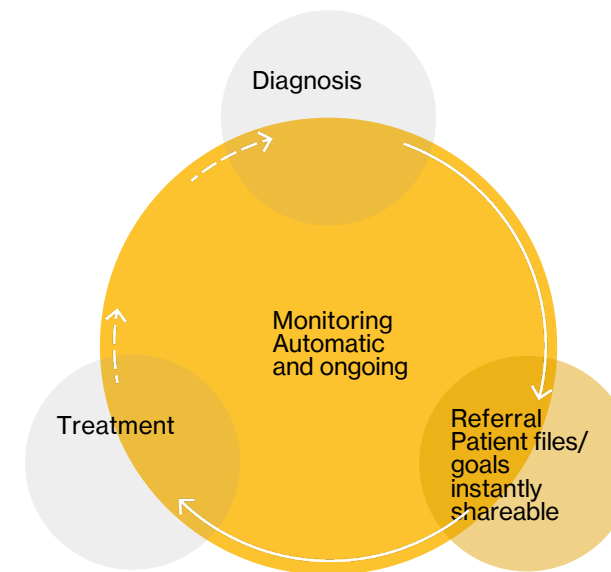
The care pathway transitions from linear and reactive to circular and proactive

Quality patient information is shared in one place

Patients are automatically monitored and continually informed about their care

A simple, effective, and efficient system

Circular healthcare with Salutare software

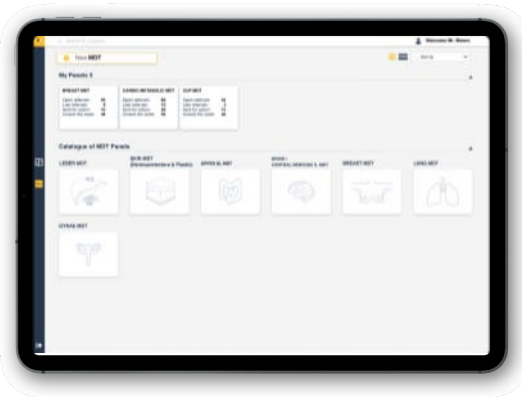


Salutare:

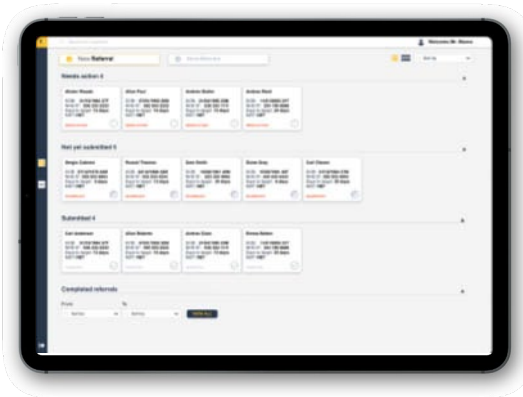
Our solution is Dialogue Joined-up healthcare for better outcomes

Salutare™ software creates Referral, Diagnosis and Monitoring across healthcare systems.

DIALOGUE Dashboard



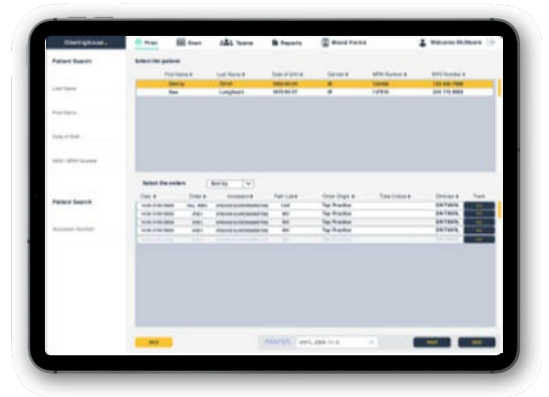
DIALOGUE Monitor



DIALOGUE Referral



DIALOGUE Clearinghouse



Single platform
Cloud-based SaaS
Scalable and reliable

Salutare:

Join us in Healthcareful®

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Salutare: