

Right Place. Right Time. Right Care.



Mike Sanders CEO

Our mission is to empower healthcare organisations to transform the way they capture and analyse data, ultimately making better decisions for patients.

We believe in the power of implementing digital change and we pride ourselves on our ability to pioneer new and innovative technologies to solve the challenges faced by healthcare providers.

We strive to build useful, proficient solutions that meet our clients' needs, are easy to use, and fundamentally improve patient flow and clinical outcomes.



VitalHub UK

GROUP PORTFOLIO

VitalHub UK is a leading health-tech company, combining 9 of the UK's leading digital health brands, with a collective of over 160 years of experience in collaborating with the NHS, to co-design, develop and deploy expert patient flow solutions.

We work with the NHS to improve care services, achieve higher levels of operational efficiency, and enable more coordinated, continuous, and ultimately safer care for patients.



OUR AREAS OF EXPERTISE



System Control Centres

Our real-time data sharing solutions take complex digitised data from all system providers and create a critical strategic overview of operational flow, growing pressure, and end-to-end pathway management.

This single version of the truth, in both planned and unplanned care, enables an integrated, tactical response to manage patient flow and improve operational efficiency.



Perioperative Care

Manage the perioperative process from waitlist management and digital pre-operative assessment, through to bed utilisation and post-operative review.

Our solutions help to reduce waitlist backlogs by increasing patient throughput to theatre and optimising all available capacity, whilst reducing cancellation rates, and delivering improved patient and economic outcomes.



Patient Flow

Manage the movement of patients through the whole health system with our collective portfolio of digital solutions.

Utilising real-time data, our products enable improved, more effective care from point of admission to point of discharge, delivering the prescriptive intelligence required to better coordinate and streamline patient flow.



Operational Management

Optimise operational excellence and staff workstreams, from departmental to regional level, to streamline patient flow and facilitate the provision of safer, more effective care for patients.

Our suite of real-time digital solutions offers the strategic perspective required to effectively manage operational performance and clinical delivery, ensuring coordinated, consistent, and integrated care.



Healthcare Optimisation

From clinical utilisation review to patient tracking lists, our solutions ensure care delivery is optimised to offer the most appropriate levels of care for patients.

By determining, at an organisational scale, if resources and services are being utilised efficiently, our solutions will monitor patient journeys from attendance to through to discharge.



Mental Health

Support the mental health crisis care pathway from point of referral, for Mental Health Act assessment to admission to hospital.

Our wider toolkit enables data sharing and review for Mental Health care providers, helping to monitor demand and capacity and improve crisis care for patients.



Demand & Capacity

Manage demand and utilise all available capacity across any geographical area, whilst also supporting social distancing and infection prevention measures.

From resource planning and whole-system visibility, to clinical utilisation reviews and mutual aid transfers, our solutions can support surge and escalation planning from departmental to regional levels.



Patient Engagement

Empower patients to become more activated and engaged in their personal care journey, through the use of apps, portals and clinic management tools.

Support patients remotely through a range of digital tools that allow them to send and receive bespoke and automated communications, complete online questionnaires and access live urgent care wait-time information.



Whole-System Visibility

A live operational management platform that provides instant visibility of whole-system data, supporting command centre utilisation, improved patient flow, and enhanced system performance.

Pages **08-14**

intouch with health

Outpatient Flow

A holistic platform for elective services, supporting hospitals to manage entire patient workflows and optimise flow in outpatient care in an efficient manner.

Pages **18-27**

OUR PORTFOLIO OF SOLUTIONS



Patient Tracking Lists

A real-time solution to plan and resource clinical services to match fluctuations in patient flow, with patient tracking lists to monitor patient journeys from any point of entry through to dishcarge.

Pages **15-17**



Pre-operative Assessments

A digital pre-operative assessment platform for elective surgery, reducing risk and optimising patient throughput to theatre.

Pages **28-31**



Clinical Management Platform

A patient engagement portal that provides a digital communication channel to connect patients, carers and healthcare providers.

Pages **35-37**



Mental Health

A cloud-based platform that supports the mental health crisis pathway, from point of referral for Mental Health Act assessment, to admission to hospital.

Pages **42-43**



Clinical Decision Support

A clinical decision support solution that medically optimises the delivery of patient centred medical, surgical and mental health care.

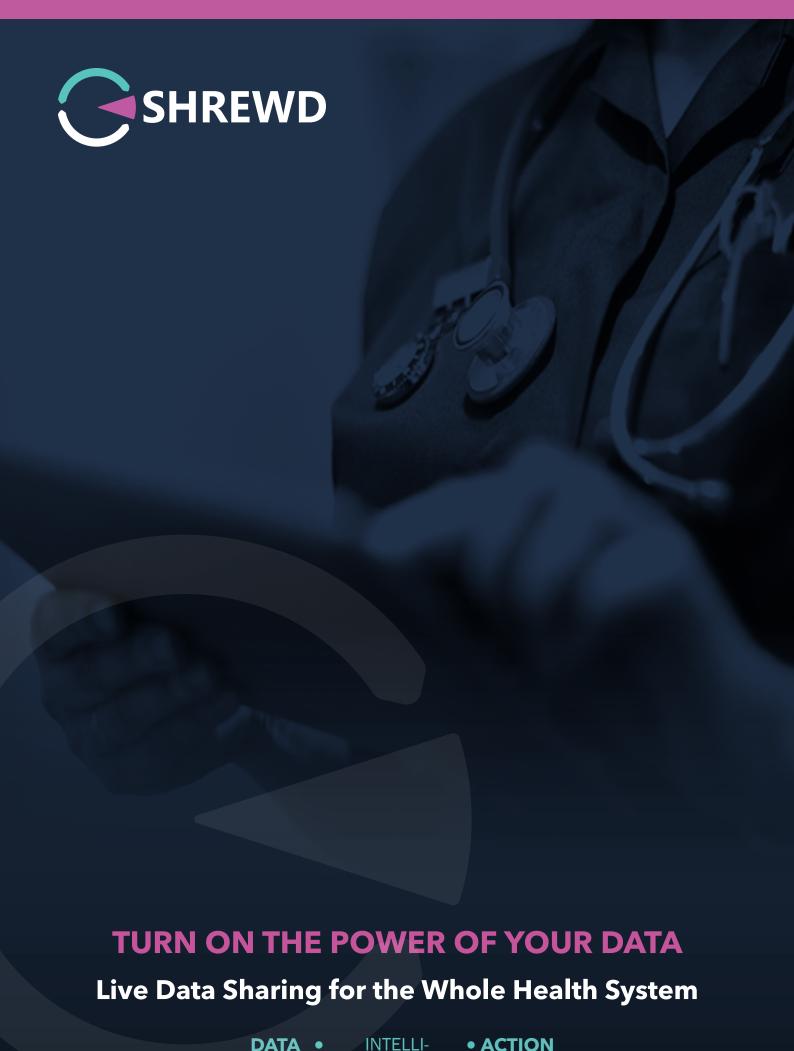
Pages **32-34**



Diabetes Care Management

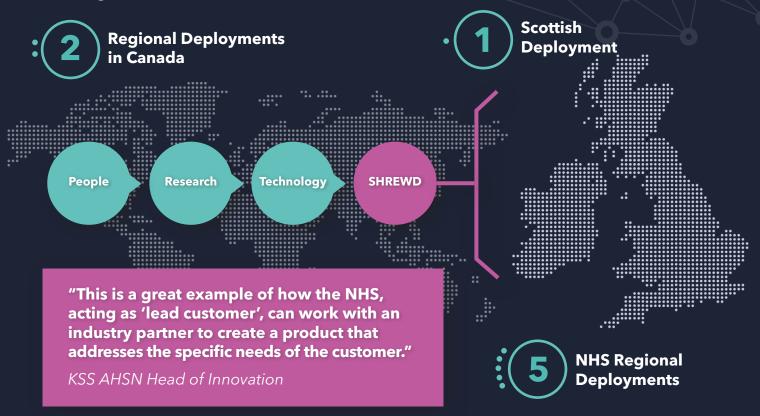
A diabetes patient care system supporting the multidisciplinary care team to treat and educate patients; enabling conditionspecific data to be captured and made available at the point of care.

Pages **38-41**



WHO WE ARE

SHREWD was founded in 2009, to provide improved visibility of real-time data across multiple NHS providers, 'to buy time' during the H1N1 Influenza Pandemic.





EXPERTS

We grew from a team of technology scientists and senior NHS managers, motivated by using

real-time data to generate insight driven



PIONEERS

We provide new and relevant ways of generating insights by being creative, innovative and helping to set new standards.



COLLABORATORS

We unite people by linking real-time data insights and turning these into action. We bring IT, systems and people together.

Our Goal was to solve the challenges associated with how you can capture, transform and easily display a wide range of healthcare data, from multiple providers in real time, to create a single version of the truth. We spent 6 years in R&D and have since been working with the NHS to deliver award-winning

solutions that support patient flow and improve operational resilience.

The core to our success has been the in-depth understanding that we have of data flows, data management, data translation, visual display and

WHAT WE DO

The output from our research is our award-winning SHREWD portfolio, a cloud-based platform of data visualisation tools that takes complex digitised data from all providers within the wider health economy, from acute and community to ambulance and primary care, and creates instant, whole-system visibility of escalating pressure and potential impact on services.

Using live BRAG rated dials, dashboards and heatmaps, SHREWD enables users to recognise early warnings in and around the wider infrastructure and

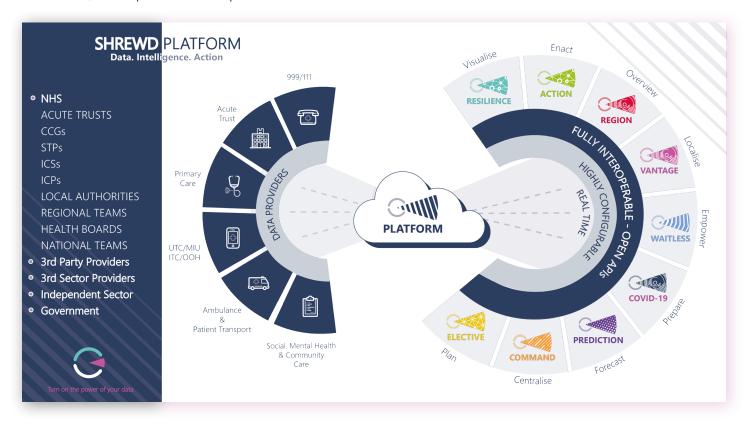
take action quickly, helping to avoid breaches of targets for performance measures, saving valuable time, and maintaining patient safety.

The SHREWD Portfolio

Our award-winning SHREWD solution, a portfolio of real-time operational management tools, is playing a pivotal role in supporting the NHS to implement digital transformation at scale.

The SHREWD platform offers a range of innovative tools to effectively manage patient flow, demand and capacity, whole-system data sharing, and operational control centres.

SHREWD supports healthcare organisations to address fragmentation in services and enable more coordinated, continuous, and improved care for patients.



SHREWD takes complex digitised data from multiple providers across healthcare systems, from Acute and Community trusts to Ambulance and Primary Care, including Independent Sector providers, and creates instant, automated, whole-system visibility of pressure, creating one single version of the truth.

This utilisation of live data sharing helps to deliver the prescriptive intelligence required to empower decision makers with key information to better co-ordinate and streamline patient care across any geographical footprint.

By providing a critical strategic overview of growing pressure, in both Urgent and Emergency and Elective Care pathways, it helps to load balance and support mutual aid transfers between providers, enabling an integrated, tactical response to reduce pressure, resolve delays and improve care delivery services.







Reduce Pressure & Improve Flow



Enhance Operational
Performance



Whole System Visibilty





RESILIENCE

Real-time visibility of whole-system, BRAG-rated data, indicating demand and capacity pressure for all urgent care providers.



ACTION

Digitised action plans to tackle any surge or escalation within the system, sending real-time alerts to staff on the ground.



REGION

A strategic territorial overview of real-time urgent and emergency care pressure, indicating OPEL statuses per system.



ELECTIVE

A system-wide view of demand, capacity and waits across all planned care providers, including private sector, enabling resource utilisation.



COVID-19

Live at-a-glance visibility of key COVID-19 data across multple areas, enabling mutual aid transfers and a tactical crisis management response.



VANTAGE

Regional visibility of category specific data, enabling pressure analysis and intelligience to enact immediate response actions.



PREDICTION

A unique tool to acurately predict flow into an acute setting hour by hour, up to 7 days in advance, forecastsing activity peaks & troughs.



COMMAND

Centralised visibility of all operational data, at patient and pathway level, creating a system control centre to improve flow and care delivery.



A patient empowerment app that displays live queue numbers, wait times, and travel time for all local urgent treatment facilities.



PLATFORM

The operative base for all SHREWD modules, where data is ingested, quality assured, stored and made available through our open API.



Whole System Visibility in Real Time

SHREWD Resilience, currently deployed across over 67% of the NHS in England, is a cloud-based, data visualisation tool that takes complex digitised data from all providers within the wider health economy, and creates instant, whole-system visibility of escalating pressure and potential impact on services. It enables all users, whether strategic execs or front-line teams, to recognise early warnings in and around the wider infrastructure, to better inform them of what is going on, as it happens.

Data is automated and captured in real time, with an inbuilt notification system to proactively alert users to situational changes, enabling fast action to avoid breaches of targets, saving valuable time, and maintaining patient safety, allowing for better co-ordination and streamlining of patient care services.





Provide Mutual AidShare resources between all system providers



Prevent BottlenecksIdentify areas with growing pressure



Load Balance
Utilise all available
capacity in the system



Improve Patient Flow Streamline processes and improve consistency



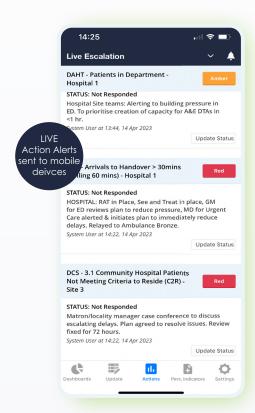
Reduce Pressure Implement effective operational processes



Predict DemandUtilise data to plan and prepare for future

Predetermined Response Actions in Real Time





SHREWD Action, an intuitive solution that compliments SHREWD Resilience, was designed to further enhance whole-system integration by generating automated alerts linked to surge and escalation plans.

As pressure starts to escalate, push notifications are sent to designated teams in real time, notifying them of pre-agreed actions that should be implemented at specific points in time. Actions are managed on web or smartphone interfaces and users can update the status of their actions as it happens, from any location, removing duplicated effort and enabling the whole system to view the effectiveness of system plans.

This digital approach to system-wide actions is helping to reduce variation and maintain best practice, improving operational performance.





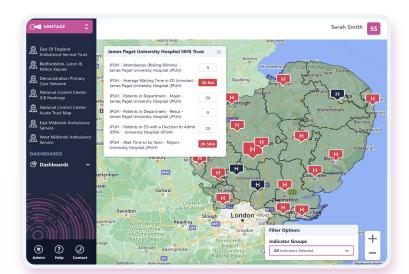
Simple Map View of Real-time Regional Pressure

SHREWD Region was designed for, and built in collaboration with, national teams to support winter reporting and service improvement across multiple territories. It provides a simple, high-level regional view of pressure in real-time via a heat map and reporting function.

The heatmap reflects real-time acute and system OPEL statuses, showing emerging pressure at a glance. The reporting function facilitates automation of the daily winter returns and in-year escalation reporting, and records the trusts proposed actions for review.

SHREWD Vantage has been developed as a data-filter version of our SHREWD Region module and can be applied to any specific data sets, to support intelligent ambulance conveyancing, system wide bed management, carehome capacity, and networks such as maternity, cancer and paediatrics.

It provides a centralised map-view of pressure across a large geographical area, creating a single version of truth and showing site status changes instantly.





Increase Operational Flow



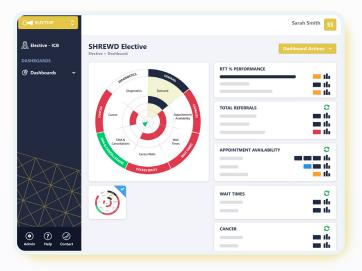






A Real-time Planned Care Solution





SHREWD Elective takes complex digitised data from all NHS Elective Care providers across a geographical footprint, including independent sector partners, and creates instant, whole-system visibility of demand and capacity in planned care.

This single version of the truth identifies growing pressure in planned care by speciality and sub speciality level, supporting system wide response efforts, in line with the vision of centralised Elective Care Hubs, that enable integrated, tactical response efforts to resolve excess waits and delays; improving flow and offering safer, more effective care for patients.



Provide Mutual AidShare resources between all system providers



Prevent Bottlenecks
Identify areas with
growing pressure



Load Balance Utilise all available capacity in the system



Improve Patient Flow Streamline processes and improve consistency



Reduce Pressure Implement effective operational processes



Predict DemandUtilise data to plan and prepare for future



Real-Time System Control Centres

SHREWD Command takes complex data from multiple providers across the wider healthcare system, tracking patients through all stages of varying pathways, and creates whole-sytem visibility through a centralised multi-screen display.

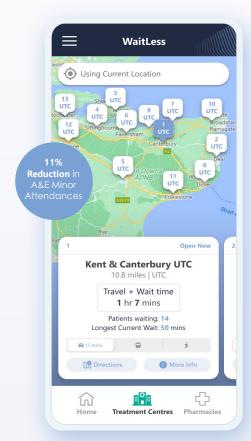
Utilising real-time, automated data, this System Control Centre combines a strategic overview of pressure via regional heatmaps with a simplified display of detail via data dashboards, along with an alert functionality to notify teams of growing pressure. It also utilises Patient Tracking Lists (PTLs) to drill down into specific detail, at individual patient level.

Providing a critical strategic overview of growing pressure, in both urgent and emergency and elective care pathways, it helps to load balance and support mutual aid transfers between providers, enabling an integrated, tactical response to reduce pressure, resolve delays and improve care delivery, and enables health networks to effectively manage patient flow, balance demand and capacity, and improve operational efficiency across an entire region.





A Live Patient Empowerment App



SHREWD WAITLESS is a patient facing app that helps to redirect patients to the most appropriate, and fastest care facility, resulting in reduced pressure on busy A&E departments and system-wide load-balancing.

The app presents real-time queue numbers, wait times and indicative travel time information for MIUs, UTCs, WICs and EDs across a locality, to empower patients to make informed decisions about where to seek the fastest treatment for minor illness and injuries.

The times shown on the app are combined to give patients the most accurate picture of how long they may spend at each location, allowing them to decide on the most appropriate setting to attend. The app also displays a full list of services available at each site, parking and opening time information and other non-emergency treatment options.





Turning Data into Action

Patient Tracking Lists to monitor patient pathways



OUR MISSION



To connect patients, clinicians and managers through beautiful information to make healthcare simple and transparent.



To develop the best possible framework of information management applications for each of our clients' needs.



To present essential information in a way that is intuitive, engaging, and actionable.



To support the NHS with information-led operational change.

WHO WE ARE

BEAUTIFUL INFORMATION (BI) offers real-time operational data to NHS trusts to help them plan and resource clinical services to meet fluctuations in patient flow, including Patient Tracking List data, to help monitor patient journeys from admission through to discharge.

Our solutions significantly improve the ability of NHS organisations to understand and manage performance, through our performance dashboards, giving healthcare managers and clinicians a real-time view of activity.

Our strategy is to elevate information management above information technology. This means the choice of products from the market does not determine how or what information is collected, analysed and used to make decisions.

WHAT WE DO



Provide the means to deliver high quality, cost-effective care by transforming data into action.



Web-based solutions across areas such as emergency care, bed management, theatre activity and RTT.



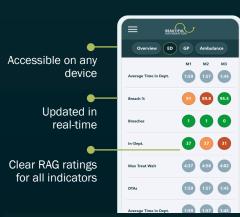
Monitor individual patient pathways and summarise whole-site performance.



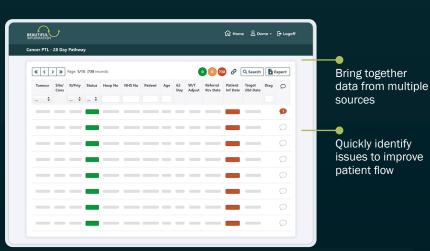
Available on mobile platforms and whiteboards, offering a clear view of data in real time.



Provide a clear understanding of patient-flow from admission to discharge.



Mobile Apps



Whiteboard Patient Trackers

Everyone has an up-to-date view anytime, anywhere, and on any device

PATIENT TRACKING

Real-time, web-based Patient Tracking Lists that can be customised with the relevant tracking steps and business rules for your organisation. It can manage a wide variety of operational areas, such as Emergency, Inpatients, Maternity or RTT 18 Weeks.

Monitor patient journeys from attendance through to discharge.

- Bring together patient-level data from multiple systems in one real-time view.
- Hosted locally, accessible via the web from anywhere in the organisation.
- Designed to be used on whiteboards in operational locations.
- Integrated with our Performance Dashboard solutions.



After six months

66

the Patient Tracking List is now a way of life on the wards and we couldn't live without it. 99

DAPHNE LEISTER. HEAD OF IT PROJECTS EPSOM AND ST HELIER, UNIVERSITY HOSPITALS

02

REGIONAL OVERVIEW

Using our Performance Dashboards framework, the Regional Overview brings together information from various healthcare providers across the regional health economy:

- Acute providers
- > Primary care
- > Community
- > Ambulance
- **ED** performance and Bed availability
- **GP** demand and appointment availability
- bed availability and MIU performance
- handovers and incidents

With unlimited users across the full-range of providers, the dashboard provides an easily accessible shared view of emergency care for the whole region

PERFORMANCE DASHBOARDS

We have developed a wide range of real-time dashboards for tracking performance in different areas. These applications are available on any device, anytime, anywhere, giving everyone a simple, up-to-date view of the situation to ensure that action can be taken as soon as possible.

- > Web-based applications, available on any smartphone, tablet or desktop platform.
- Provides aggregated and real-time data of the current state of play.
- A proactive management tool that highlights issues like bed capacity and delays
- Available anytime and anywhere, whether you are in the hospital or off-site.
- Control over access to unlimited users, wherever they may be.
- Quick to implement, easy to update

90% of Acute & **Ambulance Trusts** use our Scheduler to submit data



THE COMPLETE PATIENT JOURNEY PLATFORM

Manage entire patient workflows and optimise flow in outpatient care

An Introduction

The award-winning Intouch Platform integrates with hospital systems to support coordinated and efficient patient flow.



The Intouch Platform is deployed in 52% of NHS Acute Trusts



The Intouch Platform processes over **55 million** outpatient appointments annually



Flow Manager processes approximately 56% of all NHS outpatient attendances

Optimise Outpatient Flow

The award-winning Intouch Platform supports NHS Acute Trusts to manage entire patient journeys and optimise patient flow across Outpatient Services, Elective Care and Day Cases and unplanned 'Walk-in' Services.

The platform integrates with the hospital's PAS / EPR, supporting a joined-up approach to patient-centred care and optimised workstreams, as previously isolated systems and processes become connected in a seamless manner. As a result of this integration, the entire patient journey can be mapped and recorded digitally from arrival to discharge, with all information visible and accessible across the hospital to relevant staff.

Improve Operational Efficiency

From one centralised dashboard, staff can manage all appointment types:

- face-to-face hospital appointments
- virtual appointments (video or telephone)
- remote appointments in the community

PAS / EPR integration enables the patient's identity to be checked and authenticated, helping to verify the patient and automatically direct them to their appointment.

Reduce the time patients spend at hospital

Patients can also be flagged ahead of time to alert staff if they require additional support, such as chaperoning or translation services. Intouch's check-in kiosks have an average patient self-check-in rate of 80%, which reduce queues at reception, releasing staff time and saving patients an average 4.5 minutes during check-in. This process receives an average 85% positive feedback from patients. Patient activities and tests can be scheduled in advance of their appointment, helping to reduce any 'down time' in the hospital, supporting a reduction in the average appointment time by 35 minutes.



The Intouch Platform

Patient Hub

A collection of six intuitive solutions, simplifying the patient journey and elevating the patient experience by increasing patient choice and convenience, improving communication and improving information management.

Clinical Hub

A collection of five operational and analysis solutions designed specifically with clinicians and managers in mind, allowing clinicians to efficiently manage multiple care channels and maximise the utilisation of available resources.

Patient Hub Modules



Flow Manager

The patient flow dashboard at the heart of the Intouch Platform. Enable hospital staff to efficiently manage each stage of the patient journey



Check-in

Enable patients to self-check-in for their pre-booked outpatient appointment using interactive kiosks, improving the patient experience with an efficient



Mobile Appointment Manager

Enable patients to self-check-in and be called for their appointment without entering the hospital, improving social distancing measures and providing patients



Walk-in

Arrive non-appointed patient attendances with interactive kiosks, improving the patient experience with an efficient and coordinat-



Wayfinding

A digital hospital map that improves the patient experience and delivers quality improvement by helping patients navigate their way eas-



iReceptionist

Connect patients and hospital visitors to your centrally organised reception team, extending your reception service reach to everywhere at anytime and

Clinical Hub Modules



eOutcomes

Replace paper forms by digitally recording patient appointment outcomes, improving data capture and audit trails, supporting an



Virtual Clinics

The fully integrated virtual and video consultations solution designed for hospital settings, consolidate the management of virtual patients



Room & Resource Manager

Intelligently book and manage office or clinic rooms and room resources with real-time visibility of availbility,



Activity Manager

Plan, monitor and manage patient activities and tests with a digital dashboard, supporting informed decision making around the next

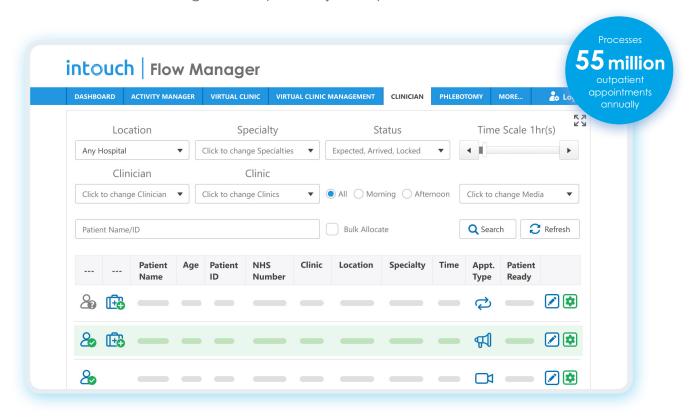


Performance Manager

Create and save digital data queries, supporting the monitoring and pro-active management of services

Flow Manager

A centralised patient flow dashboard, enabling staff to efficiently manage each stage of the patient journey, from one location.



Real-time visibility of the patient journey

Flow Manager processes over 55 million outpatient

appointments annually, including 56% of all NHS outpatient attendances, and provides staff with oversight of each patient journey in real-time, from the patient arriving for their appointment through to discharge, a follow-up appointment or onward care.

Staff can manage each stage of an outpatient journey, regardless appointment type, including:

- face-to-face hospital appointments
- virtual (video or phone) appointments
- remote appointments in the community

When a patient checks in using a kiosk, the mobile app, or with support from a member of staff, their status is automatically updated on the dashboard. Icons including 'visually impaired patient' or 'interpreter required' alert staff and help deliver a better patient experience.

Clinicians can call patients to the clinic room via wall-mounted screens. Any patients flagged as visually impaired will be called with a high-contrast display, and the patient's identity can be anonymised if required. By capturing key data during each patient journey, Flow Manager can also communicate potential clinic delays to patients via wall-mounted screens.

Integration with hospital systems

Integration with multiple hospital systems including Electronic Patient Records (EPR) and Patient Administration Systems (PAS), enhances care coordination by supporting a joined-up approach to patient-centred care and optimised workstreams, as previously isolated systems and processes become connected in a seamless manner.

Why choose Flow Manager?



Real-time data provides visibility of the patient's status



PAS / EPR integration enhances coordination of care and streamlines processes



Improve communication channels between staff and patients



Support staff to identify potential bottlenecks and problem areas

Check-in

Check-in uses interactive kiosks to enable patients to self-check-in for their pre-booked appointment, supporting an efficient and coordinated arrival at hospital for patients.



Self-check-in with multi-language support

Utilising self-service kiosks, patients can check-in at the hospital using an intuitive, interactive, and multi-language kiosk that reduces the need for reception staff to manually check patients in for their appointment.

Increasing patient satisfaction and delivering quality improvements in the healthcare environment, Check-in reduces long queues for patients at reception and releases staff time.

Once the self-check-in process is completed, the patient's status is automatically updated as 'arrived' on Intouch with Health's Flow Manager dashboard, alerting staff to the

patient's arrival. Patients can also be presented with a

variety of information on the kiosks, including di-

Mobile Appointment Manager

Enable patients to self-check-in for their appointment on their phone, releasing staff time and elevating the patient experience.

Streamline the check-in process

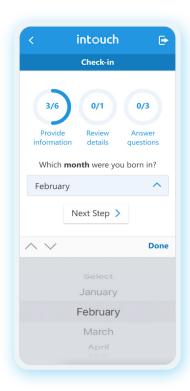
The Mobile Appointment Manager app enables patients to self-check-in for their appointment without visiting a reception area or using a kiosk.

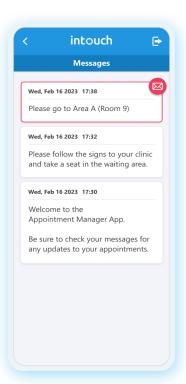
Patients are able to check-in when they are in close

proximity to the hospital (including the car park), and avoid congested waiting areas. Once the patient

completes the check-in process, staff are notified immediately on the Flow Manager dashboard.

When staff are ready, patients are called forward for their appointment, either by the app or by members of staff. As a result, patients spend less time waiting inside the hospital, and staff time is released, which can be used to support patients arriving at the hospital requiring one-to-one support.





iReceptionist

Connect patients and hospital visitors to your centrally organised reception team, extending your reception service reach to anywhere, at anytime.



Extend your reception service

iReceptionist enables patients and hospital visitors to

contact a centrally organised / remote reception team using a free-standing kiosk.

As a result, patients and visitors are able to contact the Trust's core reception team from any location at any site, at anytime, extending the reach of the Trust's reception service.

The iReceptionist live dashboard informs the remote

reception team when a new query arrives, how long the call has been waiting to be answered, and the caller's location.

With just one click, operators are connected via a video call, ready to answer any query, including: locating a clinic or hospital area; locating a relative or patient; completing

Walk-in

Arrive non-appointed patient attendances with interactive kiosks, supporting an efficient, stress-free and coordinated arrival at hospital for patients.

Non-appointed attendance self check-

Utilising multi-language self-service kiosks, patients

can register themselves for non-appointed attendances,

including bloods, x-ray, and walk-in clinics. The free

standing, interactive kiosks can be positioned around the hospital as required, delivering a digital self-check-in service at multiple entry points / reception areas around the hospital.

Increasing patient satisfaction and delivering quality

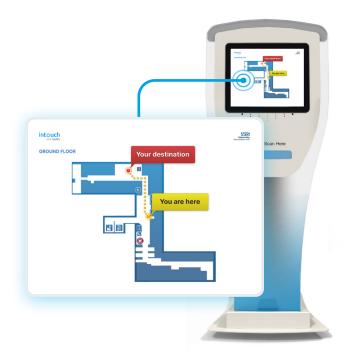
improvements in the healthcare environment, Walk-in reduces long check-in queues for patients, releasing staff time for other value-added tasks, and contributes to

significant process and operational improve-



Wayfinding

Wayfinding is a digital hospital map that improves the patient experience by helping patients navigate their way easily and efficiently around hospital settings.



Digital directional information and maps

Putting the patient first, Wayfinding provides clear, easy-to-follow maps and directions via self-checkin kiosks, guiding patients to their clinic / destination on time and via the most direct route.

Hospitals can choose to have maps and directions

integrated into the check-in kiosks, presenting directional information after patients have completed their self

check-in, or use standalone Wayfinding kiosks at key

locations.

Support clinics to begin and continue to run on time by helping all patients and visitors to locate clinics easily,

from multiple entry points around the hospital.

eOutcomes |

Replace paper forms by digitally recording patient appointment outcomes, improving data capture and audit trails, and supporting an increase in clinic efficiency.

Improving data capture and audit trails

Designed to deliver quality improvement by accurately capturing appointment outcomes and procedure codes, eOutcomes replaces paper outcome forms with a

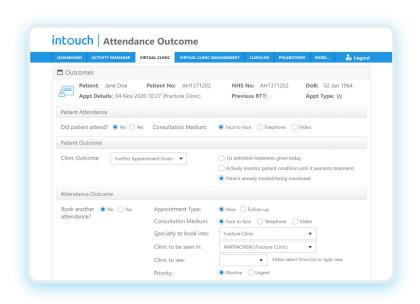
digital appointment outcome form that instant-

updates the hospital's PAS / EPR.

In addition to delivering quality assurance in hospital settings by ensuring accurate data capture, digitally recording appointment outcomes can recover

previously lost hospital income by reducing the inaccuracies associated with paper trail audits.

Implementing a process improvement project that removes the paper trail, and deploys a process to digitally record RTT and procedure codes, can help recover lost income and deliver



Room & Resource Manager

Intelligently book and manage office / clinic rooms and room resources with real-time visibility and dedicated communication channels.



Maximise clinic room utilisation

Provide hospital staff with instant access to real-time data including room availability, the status of a

meeting room and the resource needs, enabling resources to be allocated and booked efficiently.

More than a digital calendar, Room & Resource

Manager supports hospital staff to manage

aspects of a booking that are necessary for a particular activity or clinic.

The calendar view highlights available slots automatically, with a dialogue box for staff to instantly add meeting details. An email can also be sent within the system to notify the organiser of any amendments, and colour cod-

Virtual Clinics

The fully PAS / EPR integrated video and phone consultation solution, consolidating the management of virtual patients alongside physical patients.

Integrated virtual consultations

Virtual Clinics integrates with many leading video

solutions already deployed across the NHS and international healthcare systems, realising significant operational and clinical benefits by consolidating

and automating processes, including patient authentication during the check-in process, due to PAS / EPR integration.

From one dashboard, clinicians can manage all virtual consultations (video and phone appointments) as

efficiently as face-to-face appointments can be managed, including real-time visibility of which patients have checked-in, which are late, and which appointments have been completed.

When Virtual Clinics is deployed alongside Intouch with Health's Flow Manager solution, clinicians can manage all clinic types (face-to-



Performance Manager

Create and save data queries to support the monitoring and pro-active management of services, in line with key drivers, displayed within a graphical dashboard.



Monitor service performance in real-time

Performance Manager is a business intelligence tool designed for Outpatient Managers and other senior staff, which supports the monitoring and pro-active management of the service, in line with key performance indicators (KPIs).

Users can create and save customisable data queries, ensuring the reports are specific and appropriate to supporting improvements.

Focused widgets display the real-time status of each specific area, highlighting potential bottlenecks and supporting staff to adjust.

Enable senior staff to create detailed reports quickly and efficiently, reducing administrative

Activity Manager

Plan, monitor and manage patient activities and tests, supporting informed decision making around the next stages in a patient's journey.

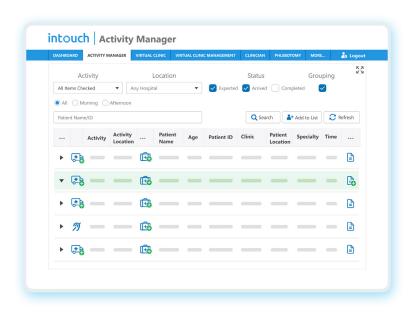
Plan, monitor and manage activities

Activity Manager supports the efficient management of hospital patients that require tests and activities during their Outpatient journey, by enabling staff to plan activities in advance and link those activities to specific clinic codes, areas and rooms, creating a pre-planned workstream.

The dashboard utilises commonly recognisable icons to clearly display the patient's status in real time, including: where the patient is; what test they are having; and which patient is due to have what test, supporting informed decision making around the next steps in the patient's journey.

Advanced capability helps to ensure that no blind spots occur at any stage during the patient's

Outpatient journey, supporting smooth patient flow and the efficient running of clinics, in addition to the realisation of significant operational efficiencies.



Outcomes

A selection of some of the results achieved by NHS Trusts who have deployed solutions within the Intouch Platform.



Average patient self check-in rate using the digital kiosks

A medium-sized hospital



87% positive patient feedback following using the self check-in kiosks

A large hospital



Increase in income since launching eOutcomes across the Trust

A medium-sized hospital



All patient-outcome digital forms logged as complete during the first 3 months after launching eOutcomes

A large hospital



An increase from 55% room utilisation to 92% room utilisation since launching Room & Resource Manager

A medium-sized hospital



Average saving per patient appointment since launching Flow Manager and Activity Manager

A medium-sized hospital



No / reduced queues at reception saved patients, on average, 4.5 minutes during check-in since Check-in kiosks were launched

A large hospital



Turnaround for setting-up ad hoc clinics reduced from over a week to just minutes since launching Room & Resource Manager

A medium-sized hospital



TRANSFORMING PERIOPERATIVE CARE

IN HOSPITAL | AT HOME

The complete digital pre-operative assessment platform, supporting hospitals to reduce surgery cancellation rates and increase theatre utilisation.

An Introduction to Synopsis

The award-winning digital pre-operative assessment platform. Reducing surgery cancellation rates and risk. Increasing patient throughput and theatre utilisation.



SAVE TIME

Streamline the pathway to theatre, improve operational efficiency and reduce administrative burden with PAS / EPR integration



SAVE MONEY

Identify fit-for-surgery patients and intervene with high-risk patients earlier to maximise theatre utilisation



SAVE LIVES

Flag issues immediately with published clinical risk scores including ASA, p-POSSUM and STOP-BANG among others

Maximise Theatre Utalisation

Surgery and anaesthesia are the hospital's engine room, where many costs are focused and where most revenue is generated; typically 70%.

The pre-operative process is the fuel for that engine. Synopsis ensures this process is efficient, supporting hospitals to increase patient throughput and theatre utilisation, whilst reducing cancellation rates and risk.

Fast-track Low-risk Patients

Synopsis has replaced the time-intensive, paper-based pre-operative assessment process with a digital solution that is easy and convenient for patients to use, whilst saving time for hospital staff and reducing operation cancellation rates. Synopsis streamlines processes and supports hospitals to reduce risk, with over 250 clinically validated algorithms within the Synopsis Engine.

This engine processes vast amounts of data instantly to produce published risk levels, including: ASA; Aspiration Risk; POSPOM and P-POSSUM, with calculated cardiac and lung risk levels; and a mortality score. These risk scores provide a summarised view of the data, helping to identify low-risk patients who can be fast-tracked into light-touch care pathways, and higher-risk patients requiring intervention.

Reduce Cancellation Rates

The Synopsis Platform enables hospitals to manage the entire pre-operative assessment digitally, delivering significant operational efficiencies to increase patient throughput to surgery.

Synopsis is used within the NHS to complete over 110,000 assessments annually, contributing to an average saving of £1.4m per Trust, per annum. Savings are generated from the reduction of last-minute cancellations of surgery by an average of 20%.

Increase Pre-operative Capacity

When patients complete their pre-operative assessment questionnaire at home, staff can swim-lane them, before they attend hospital, using the ASA risk score. ASA details the comorbidities and general health of the patient.

On average, we find approximately 45% of patients are ASA I, therefore, the follow-up appointment can be a I5-minute telephone consultation with a Health Care Assistant, rather than a I-hour face-to-face appointment with a Nurse or Anaesthetist. Using this model, one NHS Trust has reported productivity savings of 47%; doubling available pre-operative capacity, whilst at another NHS Trust, the pre-operative capacity has increased by 7,000 patients (41%) annually.

Outcomes

A selection of some of the results achieved by hospitals using Synopsis.



Zero cancellations of on-the-day surgery (due to pre-assessment in the initial 4 months)



Increase in pre-op capacity (7000 additional pre-op assessments each year)



Total in-year saving of £2.7m (anticipated £4m saving when Synopsis Home deployed)

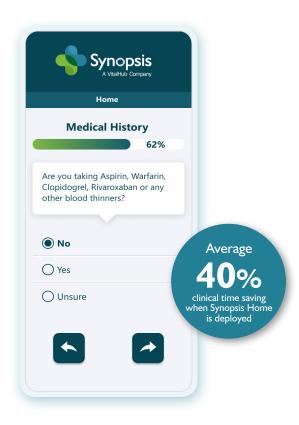


Reduction in paper and printing (reducing carbon footprint by 17.4 tonnes)



Reduction in hospital appointments (when patients use Synopsis Home)

The Solutions



Synopsis Home

Enable patients to complete their pre-op health questionnaire at home

Synopsis Home enables hospital patients to complete their pre-operative health questionnaire on their phone, a tablet or a computer, from the comfort of their home.

Once the questionnaire is completed, it is then shared directly to the hospital's system, allowing the care team to triage their patients more efficiently than ever before.

Synopsis Home is cloud based and all data is owned by the patient. Patient information can only be viewed by the hospital's triage team in Synopsis iQ, once permission is granted by the patient. The patient will also be notified when their data has been accessed.

Synopsis Home supports a reduction in face-to-face hospital appointments, reduces the paper trail within the pre-operative assessment pathway, and provides patients with greater convenience and choice over their care pathway.

Synopsis iQ

The complete digital pre-operative assessment solution

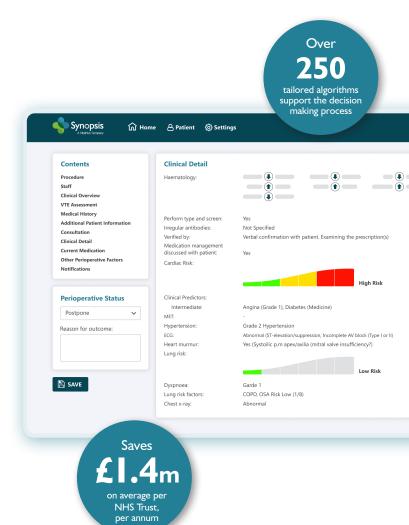
Synopsis iQ is the complete digital pre-operative assessment solution, including clinical decision support, helping to increase the throughput of fit-for-surgery patients to theatre and maximise theatre utilisation.

Synopsis iQ receives data inputs from patients completing their pre-operative assessment questionnaire at the hospital, or from home via Synopsis Home, clinicians, and even lab data from other systems.

Synopsis harnesses the power of data using over 250 tailored algorithms to generate clear outcomes during a full risk assessment to produce a collection of published clinical scores, including ASA, STOP-BANG and P-POSSUM among others. Synopsis iQ also generates a calculated cardiac risk and lung risk levels, and a mortality score as part of the assessment process.

These risk scores provide a standardised, summarised view of the data, helping to identify low-risk patients who-can be fast-tracked into light-touch care pathways.

Released clinical time can be channelled to higher-risk patients requiring in-person consultations and care intervention. A searchable database of fit-for-surgery patients also supports hospitals fill any last-minute available theatre slots.



Case Study

Implementing an integrated digital pre-operative pathway for patients and staff at Worcestershire Acute Hospitals NHS Trust - including clinical decision support.

The Challenge

A cross-specialty staff workshop concluded that Worcestershire's existing pre-operative assessment (POA) process was inefficient and had become a barrier to improving the surgical pathway and maximising operating theatre utilisation.

The Vision

Worcestershire, which assesses II,000 patients each year for surgery, wished to start a patient's POA pathway at home, where appropriate, using a digital POA questionnaire for patients to submit pre-operative health data remotely, while enabling staff to conduct face-to-face pre-operative questionnaires in hospital using the same digital form.

This would help identify fit-for-surgery patients earlier in the pre-operative pathway and release more time for staff to identify patients at high-risk of being unfit for their operations, thus facilitating earlier medical interventions with 'at risk' patients, to help reduce cancelled operations and maximise operating theatre utilisation.

The Objectives

- Identify fit-for-surgery patients as early as possible in the pre-operative pathway
- Release more time for staff to identify patients at high-risk of being unfit for their operations
- Facilitate earlier staff interventions with high-risk patients to ensure each operation stood the best chance of proceeding
- Reduce the number of cancelled operations and increase overall theatre utilisation
- Facilitate a hybrid approach to POA data capture with a fully PAS integrated solution

The Solution

Synopsis Home and Synopsis iQ were launched in February 2020. This hybrid approach to POA data capture is fully integrated with the hospital's Patient Administration System, supporting collaborative, multidisciplinary working.

The Quantitative Benefits



Activity time for a POA reduced by 51% when a patient uses Synopsis Home



52% of patients are choosing to use Synopsis Home to avoid unnecessary hospital attendances



Reduction in lag time between patients referred for POA and completing their triage questionnaire



Patients using Synopsis Home saved 722 hrs inside the Trust between May - July 2020



Patients using Synopsis Home saved 1,025 Kg CO2 between May - July 2020



Synopsis Home saved 5,271 miles between May - July 2020

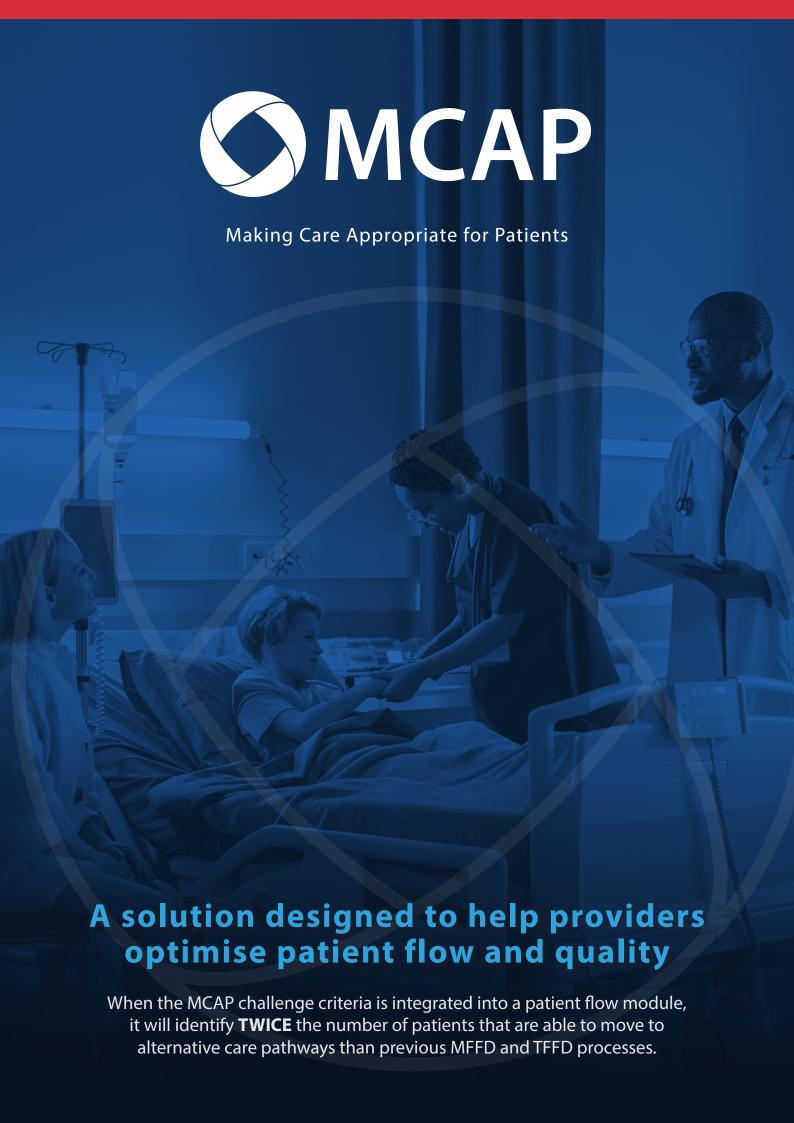
The Qualitative Benefits

- 250+ tailored algorithms to generate clear outcomes and provide clinical decision-making support
- Provides collection of published clinical scores, including ASA, STOP-BANG and P-POSSUM, with cardiac and lung risk levels, and a mortality score
- Provides searchable digital database of fit-for-surgery patients to fill last-minute available theatre slots

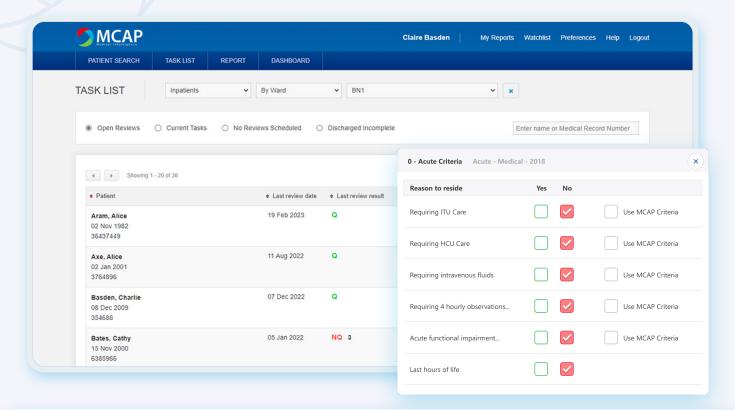
Our elective surgery patients can now complete their health history questionnaire from the comfort of their own home, in their own time, then submit the answers in real-time to our clinical teams.

After assessing the answers, our clinical staff can then quickly triage and separate the patients that are fit and ready for their operation and don't require a full assessment in hospital from those that do.

Staff also benefit from referrals and replies being contained within one system, alongside completed risk assessments.



A clinical utilisation review system that supports healthcare organisations to tackle patient flow



Identify MFFD Patients

It is well documented that longer stays in hospital can lead to worse health outcomes for patients. Ensuring patients are in the right place, at the right time, based on their clinical need, is critical to avoid overcrowding and to reserve hospital beds for those who need them most.

The MCAP clinical utilisation review software supports frontline teams to identify the right level of care for their patients, and identify patients fit for discharge to alternative pathways more appropriate for their individual care needs.

Unique Review Criteria Sets

MCAP utilises internationally recognised clinical criteria that is applicable to a range of specialities, including medical, surgical and mental health. The data is collected at patient level and aggregated to give a strategic view across trusts, providing an objective and standardised methodology to measure reasons to reside. Only one criterion needs to be met for an admission or continued stay to be considered medically necessary.

Data collected within MCAP enables users to:

- Quantify the medically optimised opportunity to discharge patients to alternative levels of care which is typically twice the number of patients identified under current 'Medically Fit For Discharge' processes.
- Establish a detailed understanding, in real time, of the blockages that prevent effective patient flow, which facilitates continuous quality improvement initiatives, and provides evidence-based data for strategic planning.

Appropriate Care

The criteria within MCAP are considered best practice, evidence-based and have been adapted to embed local clinical guidelines; such as the Discharge Guidance endorsed in the UK by the Royal Colleges of Medicine.

The MCAP Criteria are comprehensive but easily understood by frontline staff. Data collected on MCAP is able to be utilised to automatically generate the national mandated discharge SITREPS introduced in England in 2020, saving time for front line staff and ensuring data is consistent and accurate.

Solution Benefits

- Enables clinicians to establish if the patient is receiving care at the most appropriate level
- Assists clinicians to explore what level of care is appropriate to meet their patients' clinical needs
- Provides insight into the principal reasons for continued stays and subsequent delays
- Supports healthcare organisations to effectively manage the movement of patients and reduce delayed transfers of care, by identifying opportunities to limit unnecessary episodes of extended Length of Stay
- Integrates into existing systems, avoiding double entry of data and creating a 'Single Version of the Truth' for the wider Integrated Care System

Snapshot Discharge Audit

MCAP can also be used to conduct Snapshot Discharge Audits, to identify patients who are non-qualified to reside in a hospital bed. The audit also helps to define the most appropriate level of care for the patient outside of hospital, given their clinical need.

The outcomes from the audit enables operational teams to make informed decisions about how best to focus limited resources to generate the greatest impact on safely flowing patients and freeing beds.

Crucially, the audit can also be used to approximate the number of beds or types of services needed at any level of care, including acute and community-based care. The audits can be offered as a one-off snapshot review, or alternatively as an ongoing managed service, delivering regular, updated data.

Our team of trained nurses will conduct an analysis of 100 acute beds (requiring minimal trust resources), utilising the physician plan of care, nursing and progress notes to answer:

- Is the patient at the appropriate service intensity level of care? (are they Qualified or Non-Qualified)
- And if not, what is the most appropriate service intensity level of care?
- And if not, what is the principal reason for the continued stay?



Evidence-Based Outcomes



Reduced Length of Stay

Reduction in average length of stay in target wards of **2.35 days**



Reduced Pre-surgical Delays

A **50%** reduction in patients delayed due to pre-surgical admission



Reduced Departmental Delays

Radiology process redesign resulting in reduced delays & a saving of £324,000 p.a



Reduced Rehabilitation Delays

37% reduction of patients delayed due to awaiting rehabilitation



Increased Day Case Patients

30% - 80% increase in Cardiac Pacing patients treated as a day cases



Improved COVID-19 Response

900 bed ICS discharged 30% of their acute bed base and a 50 bed ICU created

MCAP has proved invaluable in identifying admissions that could be avoided by streaming the patient to an alternative level of care appropriate to their care needs, this delivered significant savings to the health economy as part of our reconfiguration program.

Senior CCG Director



Supporting patients to be activated and more engaged in their care.



An introduction to MyPathway

MyPathway is a patient engagement portal that delivers a digital communication channel to connect patients, carers and healthcare providers via two solutions – the Patient App and Clinical Portal.

The award-winning platform supports a personalised interaction between the patient and clinician, increasing access to care services and providing greater data insight at individual and population levels. MyPathway provides enriched patient data to support enhanced decision-making and improved clinical outcomes, whilst reducing clinical and operational administration. By improving remote care pathways, MyPathway releases clinical time, enabling clinicians to focus on patients requiring immediate care.

MyPathway is often used to improve patient interactions during treatment for long-term conditions, in areas including chronic pain, musculoskeletal, motor neurone disease and rheumatological conditions, and to support effective communications in shorter pathways (shorter-term conditions), such as physiotherapy or orthopaedic surgery.

Data is provided at patient, pathway, service, and population levels to support strategic decision-making and service improvements to be based on data which has been gathered directly from patients.

Recorded outcomes



73%
of patients triaged to video package went on to self-manage their care

37%
of MSK surgical patients identified as their condition deteriorated

88%
attendance rate for patients triaged to a telephone appointment

1.7%

DNA (Did Not Attend) rate for a virtual pathway appointment

What can MyPathway offer?



Remote Monitoring



Elective Care Recovery



Virtual Clinics



Supported Self-Management



Digital Triage



Appointment Management



Patient Cohort Management

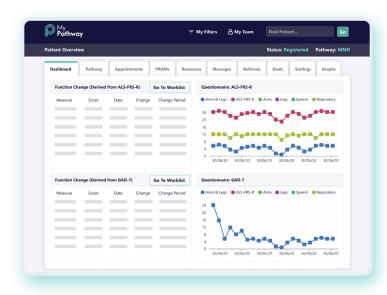


Digital Letters



Self-Referral

A personalised, digital interaction between patients and clinicians.



The Patient App

A secure patient engagement portal that provides a digital communication channel to connect patients to their care team. The app delivers a range of personalised digital interactions, including:

- automated and bespoke messaging
- digital guestionnaires and digital letters
- pre-populated and bespoke educational materials
- appointment booking (PIFU) and reminders

Patients can also submit readings (e.g. oxygen levels, blood pressure or blood sugar levels), providing the care team with far more data to track their condition than a physical appointment schedule allows.

With access to a greater volume of data, the care team can make adjustments to the patient's care package far quicker and easier than previously possible.

The Clinical Portal

A service and system agnostic portal enabling clinicians to track and support remote patient pathways in real-time. Graph views of key markers enables the care team to identify trends over time and intervene if required.

MyPathway's operational automation provides patient data without an administrative need to request and process it manually. Clinicians can share resources to minimise unnecessary hospital attendances for patients, releasing clinical time for vital face-to-face appointments. Staff can also create a library of predefined messages or questionnaires, to send alongside bespoke communications.

Automated pathways release clinical time. By integrating with PAS for events in the patient's journey, messages, questionnaires, and resources are sent automatically at the right moment. Advanced search, filter, and bulk operations simplify the management of large cohorts of patients.



What makes MyPathway different?

Working in collaboration with our customers, we utilise technology to deliver better health, better care and better outcomes.

Fully Customisable

MyPathway can be modified to suit your services' particular need. We work with our customers to ensure this process is straightforward and simple.

Single Digital Solution

MyPathway combines operational breadth and clinical depth, to offer Trusts a single digital solution for all patient engagement, communication and analytics.

Clinically Specific

MyPathway can be tailored to any clinical service. We work with clinicians to ensure all content, questionnaires, resources etc. are specific to your clinical requirements.

Trusted Partners

We work with strategic partners to expand our offering. We work with our trusted partners to achieve the desired results for your service.

Self-edit Configuration

MyPathway allows you to personally modify your own pathways. This removes the need to rely on our development team for all changes.

Light Touch Approach

MyPathway can offer your service proven automated templates that can work off the shelf. We can support your service to create low complexity, high volume pathways.



Supporting digital transformation journeys with intuitive solu-

The Hicom Portfolio

A collection of data-driven and secure solutions designed to support business automation, with expertise across healthcare, government, retail, hospitality, law enforcement, manufacturing and commerce.

Hicom is committed to delivering integrated solutions and professional advisory services to enable digital transformation, process alignment, business analysis, software design, solutions architecture, integration, training, hosting and support.





Established in 1986 and part of the VitalHub group of specialists healthcare companies



Over 35 years experience in the provision of healthcare solutions



Over 200 customers in the UK, Ireland, United Arab Emirates and New Zealand



Prestigious customer base including 100+ NHS trusts, international private & public healthcare providers and local government



Specialist solutions for clinical care, hospital management, compliance and healthcare human capital management

Our Software Solutions



Adult & paediatric diabetes patient management



Paediatric diabetes patient management



Recruitment, selection and accreditation of the healthcare workforce



Medical workforce education and training management



Business processes and compliance and risk management



The market-leading diabetes care management solution.

Designed to support multi-disciplinary teams, **Diamond** provides access to real-time patient information, enhancing and improving patient interaction and ensuring optimal care is achieved.





Utilised as an Electronic Medical Record (EMR) system, Diamond consolidates data from multiple sources into one single view that allows all departments to access information on diabetic patients.

Diamond supports medical professionals to accurately capture, record and report on a wide range of patient data, improving patient care and the ability to satisfy a number of Information Governance requirements and regulations.

Features

- Enhanced access to patient records and clinical data
- Episodic diabetes care management
- Clinic and appointment scheduling and patient attendance management
- ✓ Support for the multi-professional care team
- Insulin regimen and pump administration
- ✓ NDA, NPDA and BPT extract functionality
- ✓ Global coding standards compliant

Benefits

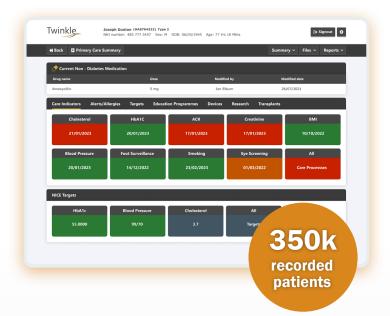
- Enhanced care delivery through real-time access to patient and clinical data
- Improved outcomes from data access at point of patient care
- Support for interoperability standards including patient demographic (PAS) and laboratory results (LIS) interface capabilities
- ✓ Improved efficiency through process automation
- Enhanced patient risk management assessments

66

Care continuity is something that we've seen hugely improve since using Diamond in the community setting. Addressing the hospital/community divide through achieving one system, one shared record across both settings means that care can be commenced in the hospital and followed up in the community as the patient record is accessible to all professionals working with that patient.

Paediatric Diabetes Patient Management





Twinkle is an essential multi-disciplinary tool for the management of data required for the Best Practice Tariff, and the collection of data for the National Paediatric Diabetes Audit.

Twinkle enables diabetes teams to improve the delivery of care for patients by aligning responsibilities and co-ordination of services to the patient. Twinkle can link with a hospital's PAS and pathology system to enable nurses, clinicians and dieticians to quickly access up-to-date patient data, appointments, medical notes and test results.



The process of planning each day of appointments has not only become less time intensive with using Twinkle but we've also been able to better manage resources. Being able to access individual patient data, whether recent or historic, and at any time, is proving to be extremely useful for when we review patient care and for the NPDA.

Dr Parakkal Raffeeq, Consultant Paediatrician

Features

- ✓ Comprehensive clinical datasets for paediatric diabetes
- Episodic care management
- ✓ Appointment scheduling and attendance management
- ✓ National Paediatric Diabetes Audit extract tool
- ✓ Best Practice Tariff reporting tool
- ✓ Insulin regime and insulin pump administration
- ✓ Letter writing tool incorporating letter templates

Benefits



Improved patient outcomes through real-time data access



Enhanced patient risk management assessments



Reduction in administrative workload and the elimination of transcription



Supports diabetes care interoperability standards



Improved efficiency through process automation



Operational and clinical reporting to support workflows





Supporting the Crisis Care Pathway through Digital Innovation



Supporting the Mental Health Crisis Care Pathway through Digital Innovation

The only platform to support the mental health crisis care pathway from point of referral for Mental Health Act 1983 (MHA) assessment to admission to hospital.

What we do

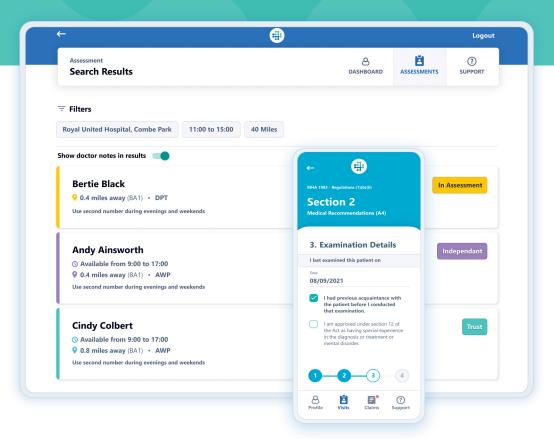
Founded in 2017 by an approved mental health professional (AMHP), S12 Solutions is an app and website, which helps mental health professionals efficiently complete MHA processes.

How we do it

We connect AMHPs, section 12 (s.12) doctors, claims processors and MHA administrators. We support nearly 7,000 users and work with approximately 75-80% of mental health trusts.

Who we do it for

Our purpose is to help ensure timely access to MHA assessment with the team best-suited to the person, while allowing mental health professionals more time to do what they do best: supporting the person.





This is a great example of how uniform and joined-up working practice, across regions, can really help patients and professionals.



Right Place. Right Time. Right Care.





















