

## Service Definition Document – PatientSource Electronic Patient Record Solution:

Document formatting taken from: [Applying to the G-Cloud framework - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/applying-to-the-g-cloud-framework)

### • what the service is

PatientSource's electronic healthcare platform is built around the modern healthcare professional. Clinicians lead our design team, ensuring that the workflows of your routine are supported. Our systems work where you work, by the bedside, or in the community. We enable secure communication; with colleagues, IT systems, external organisations and patients.

### Service Categories -

- Electronic medical records
- Medical billing
- Medical scheduling and booking
- Mental health
- Patient case management, care pathway management
- Pharmacy
- Pharmacy management

### Service features -

- Clinician designed user interface empowering minimal click access to information
- Modular solution – incrementally and safely build your platform
- Elastic-data-structure allows customers to apply solution to unique usecases easily

### Service benefits -

- Intuitive UI reduces clinician fatigue and reduces clinical risk

- **the levels of data backup and restore, and disaster recovery you'll provide, such as business continuity and disaster recovery plans**

We take a containerised high availability approach to our deployments with full fail over and fail back across availability zones. There is also an option for on-site fail over for business continuity/disaster recover scenarios. Full information available on request.

- **any onboarding and offboarding support you provide**

An initial meeting will be held with the client to gather the requirements so we ensure we agree scope of the project.

This meeting will involve a Technical Configuration Analyst, and a Project Manager.

This meeting will include the gathering of information to produce a Statement of Work, the SoW will provide a breakdown of tasks involved for the project, roles & responsibilities, timelines, costs, training requirements, quality assurance and testing procedures.

- **service constraints like maintenance windows or the level of customisation allowed**

## Maintenance

All changes to our product, architecture and environment are authorised, reviewed and fully audited. We use JIRA and JIRA Service Management to document and track bug fixes, releases, upgrades, maintenance and other elements that might impact our production environment. All changes are tested in house by our UAT team before being applied to customer test instances and tested by the customer. After passing they are applied to live customer instances in collaboration with the customer. New releases are accompanied by release notes.

## Customisation

Almost all areas of the product can be extensively customised. There is an admin panel that allows users to self-customise, and we have configuration specialists who can help you get even more out of our offerings.



Patient care safely in one place

In particular the ability to create casenotes and documents to exactly fit customer needs is very popular, as is our tracker capability that allows customers to set up complex patient workflows fully supported in the system.

- **service levels like performance, availability and support hours**

Email or online ticketing support

Yes

Support response times

Urgent - 10mins High - 30mins Medium - 4 Hours Low - 24 Hours

User can manage status and priority of support tickets

Yes

Online ticketing support accessibility

WCAG 2.1 AA or EN 301 549

PatientSource operates 1 level of support included in the customers annual license fee. PatientSource agrees to provide First line support to the Customer in the form of a 24/7/365 support line.

This support line will provide “Level 1” support for most issues likely to be encountered by the Customer and a telephone number and/or online means of reaching the support service will be provided by PatientSource.

The Customer’s employees should initially contact the Customer’s internal IT support team who, if unable to resolve the issue should escalate the issue to PatientSource’s first line support service.

First line support initial response will be less than ten minutes but ordinarily much less than that. First line support may be provided by PatientSource through a third-party contractor Should Level 1 support staff be unable to resolve the Customer’s issue then they will escalate the issue to the Customer’s “Level 2a” support where further investigation may be required.

- **after sales support**

PatientSource prides itself on its capabilities and alignment as a strategic supplier to our clients. We review and consider the entirety of challenges and opportunities within the clients digital health eco system, providing guidance, consultancy and implementation support outside of the core EPR provision.

- **any technical requirements**

System requirements

- Modern internet browsers.

- A reliable internet connection.

## Differences between the mobile and desktop service

The service layout dynamically scales and adjusts for different device screen sizes. Note - not all views are optimised for smaller mobile phone screens, phablet/tablet devices are recommended for use in care settings.

### • outage and maintenance management

We facilitate the use of multiple monitoring tools including cloud platform monitoring tools and third-party availability monitoring tools. Alerts and dashboards can be set up on customer request. Most typically these are SMS/email alerts.

### • hosting options and locations

- Public cloud
- Private cloud
- On-premise

### • access to data (upon exit)

This is provided in a mutually agreed format at the end of the contract usually provided in excel format (CSV) as standard although other formats may be available upon request, such as a database view/extracts or PDF.

### • security

## Data protection between buyer and supplier networks

- Private network or public sector network
- TLS (Version 1.2 or above)
- IPsec or TLS VPN gateway

## Data protection within supplier network

- TLS (Version 1.2 or above)

- IPsec or TLS VPN gateway

We perform annual penetration testing to find high level threats. We work with specialist security partners to further identify and assess any threats. When vulnerabilities are spotted we deploy patches as quickly as possible. For highest priority issues we have deployed patches within minutes, for lower priority issues they will be patched in line with standard release cycles.

Our systems are continuously monitored and alerts are configured to detect unusual activity. There is a full audit capability within the system to allow us to trace all user activity as well as backend logging. When potential compromises are found an incident is logged in our service desk and all on-call employees are notified and immediately will login, assess and secure the situation. For critical compromises we respond within minutes.

PatientSource Ltd operate a Information Security Management System which contains Information Security and Governance, Acceptable Use and Breach Policies. The policies are implemented through the processes that PatientSource Ltd has adopted. Particular to the ISMS there are the following processes; ISMS Disciplinary Process, ISMS Management Review Process and Information Security Management System Process. Staff are asked to confirm they have read and understood these documents as part of the onboarding as well as when they are reviewed.

Staff screening performed with conforms to BS7858:2019

## User authentication

- 2-factor authentication
- Identity federation with existing provider (for example Google apps)
- Username or password
- Other

## Other user authentication

User access can optionally be limited by IP address or IP address range as an addition to other authentication methods.

## Statement of current PatientSource software capabilities

### Engines

#### **DynDocs**

User-built forms with medically advanced fields

- Totally customisable forms
  - Complex layouts possible via templating
  - Auto-populate from other sources (e.g. patient's allergies / test results / vitals/co-morbidities/medication history)
  - Medically advanced widgets (investigation importing, diagnosis coding, procedure coding, medication records, medical photography, calculations, medical sketch functionality)
  - File upload functionality (audio/video)
  - Print formatting (patient transfer/DNA appointment letters)
  - Contemporaneous clinical noting
  - Rich text with formatting options
  - Sketch medical diagrams
  - Take and annotate medical photos
  - Custom proformas with advanced medical fields (via DynDocs engine)
  - Filterable by note type
  - Searchable
  - Coded entries (ICD10, SNOMED CT, legacy ReadCode2)
  - Draft saving
  - Dictation capability (Scribetech)
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## Admin

Configure and control every aspect of PatientSource

- Configuration of PatientSource Modules (e.g Dyndocs/Drugschart/Trackers/Menus/Billing/Graphical Charts)
  - User profile creation and management of staff accounts
  - Security permission groups
  - Superuser access for permitted staff
  - Management of patient episodes/admissions (superusers only)
  - Import/Export of casenote templates
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## Coding

Attach semantic tags to contents

- ICD10
  - OPCS4
  - SNOMED CT (diagnoses)
  - SNOMED CT (medication)
  - Any other coding set that is required can be also be uploaded
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## Authentication

Authenticates users, links to other systems

- Standalone / LDAP / Active Directory / oAuth2 modes of operation
- Customisable password strength rules (default = "sufficient entropy")
- Roles with start and end dates
- Multiple roles per user
- Customisable permissions
- Customisable groups

- Customisable permissions exceptions per user
- Two-factor authentication

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## Audit Trail

Record user activity across whole platform

- Searchable by user, patient, date
- Patient sensitive information screened from non-clinical users
- Tracks alert messages displayed and actions taken

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## Open API

Extract and query PatientSource data in realtime

- RESTful JSON APIv1:
  - Patients + Episodes (PAS) endpoint
  - Case notes endpoint
  - Observations endpoint
  - Staff endpoint
  - Dynamically generated documentation based upon your configuration
- RESTful JSON APIv2:
  - Drugschart endpoint
  - Pharmacy endpoint
  - (easy to develop additional endpoints)

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## HL7 Translator

Synchronise data with legacy lab systems, radiology systems and PAS systems in HL7v2

- HL7v2:
  - ADT^A01 ADT^A02 ADT^A03 ADT^A04 ADT^A05 ADT^A08 ADT^A11  
ADT^A13 ADT^A21 ADT^A22 ADT^A31 ADT^A34 ADT^A38 ADT^A52  
ADT^A53 ORU^R01 (lab investigations) ORU^R01 (bedside  
observations) ORM^O01 (therapies) ORM^O01 (lab investigations)  
REF^I12 REF^I13 SIU^S12 SIU^S13 SIU^S14 SIU^S15



## Exporting

Package clinical documentation in PDF and transmit automatically to document archives

- Optional XML encapsulation
  - Transcoding for safe interoperability with legacy GP systems
  - Transmit discharge letters to GP systems
  - PDF generation
  - Automated scheduling
  - On-site backup
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## Patient Portal

Read-only view of patient-specific modules locked to one patient

- Patients can be given read only views of their record
- Notes can be screened out
- Interface with other solutions for a wider patient experience
- Further expansion of solution on Roadmap

## Notifications

Create automation rules based on information within the record (IFTTT)

- Customisable rules based on information in the patient record (observations, information added in template, test results and more)
  - Customisable alerts that can redirect the clinician to the pertinent information
  - Can alert specified users via on screen display, email, text or inbuilt chat
  - Add patients to new pathways based on the information in record
  - Customisable escalations so that patients get the care needed in a timely manner
  - Alerts and Notifications can be reported on
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## Modules

## Procedures

Run theatre lists and investigation lists

- Team staff resource allocation
  - Customisable pre-list documentation (e.g. WHO checklist)
  - Customisable per-case documentation (e.g. procedure-specific operation note)
  - Surgical instrument and pack counting out and counting in
  - Customisable post-list documentation (e.g. team debrief)
  - OPCS4 and Bupa procedure coding
  - Record converted procedures (e.g. laparoscopic to open cholecystectomy)
  - Sending of patient information leaflets relevant to the patient procedure (EIDO)
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## Referrals

Refer patients to different specialties with relevant information, catch incoming referrals

- Unlimited customisable clinical services
  - Customisable electronic referral forms (e.g. digital photo field for Dermatology referrals)
  - Attach documents with referrals
  - Referral decision deadlines and reminders
  - "Advice-only" referrals
  - Book clinic / test / theatre slot from referral
  - Referral to Treatment Time, Two Week Wait, 31d cancer targets
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## Billing

Itemised billing and invoice tracking

- Itemised billing for appointments, overnight stays, tests conducted, medication received, procedures performed
- Billing by overall diagnosis and procedure
- Customisable pricingRaise invoices

- Tax / VAT supported
  - Vouchers & care allowances
  - Membership plans & subscriptions
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## Incidents

Report & manage near-miss and adverse incidents

- Captures near-miss and adverse incidents
  - Distributes issues to relevant managers
  - Record action taken and further investigation
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## Recalls

Schedule future required care for patients

- Link with diagnoses
  - Track required tests
  - Track required appointments
  - Track required prescriptions
  - Bulk-create based upon a reports output
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## Reporting

Aggregate, digest and display real-time data for tracking KPIs

- Frontend basic report builder (patients by age / sex / diagnosis / positive test result)
- Real-time (up to the second status)
- Period reports (analyses data between two dates)
- One-click generating data for reporting to regulators (e.g. 18 week RTTs, cancer RTTs, 4 hour A&E limit, hospital mortality)
- Tabular and chart rendering formats

- CSV / JSON / XML output formats
  - Custom MySQL script execution
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## Patients

Track your patients, demographics and background history

- Demographics
  - Multiple identifiers (local, NHS, legacy PAS)
  - Next of Kin / Family contacts
  - Past Medical History / Problem list
  - Allergies & Alerts
  - Social History
  - Immunisation History
  - ICD10 and/or SNOMEDCT based diagnostic codes
  - Merge and unmerge patients
  - HL7 integration with legacy PAS systems
  - Episodes/Appointments/Admissions
  - Active Pathways
  - Recalls
  - Status checks (covid/pregnancy)
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## Episodes (with resource scheduling)

Schedule patient appointments, admissions and organise beds and clinics

- Schedule patient appointments / admissions / ward attendances
  - Schedule clinics / theatre lists / investigation lists
  - Manage room resources
  - Manage ward beds
  - By-patient timeline views
  - By-clinic calendar views
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## Graphical Charting

Overview of patient results data from numerical casenote entries

- Highly customisable charts
  - User preference saving
  - Dynamic results view
  - Filterable by date/episode/laterality/measurement/result type
  - Zoom in/out functionality
  - Medical history / past procedures indicated on graphs
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## Patient Pathways

- Create specific care plans for patients
  - Monitoring of items of care plan that are due or overdue
  - Provides a ward overview of what is upcoming today, this week and next week
  - Highly Customisable
  - Easily printable for if care changes provider
  - Different care plans for episodes of care, can have a cardiology specific care plan and diabetic care plan at the same time
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## Clinical Risk Assessment

Risk assess for clinical harm like VTE and pressure ulcers

- Venous Thrombo-embolism (DVT) risk assessment with clinical decision support
  - Customisable clinical risk sets
  - Pressure ulcer risks (e.g. Waterlow score)
  - Cannula associated thrombophlebitis risk assessments
  - Falls & bed rails risk assessments
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## Dental

Record dental visits and treatments given

- Interactive dental charting
  - Periodontal disease charting
  - Routine and emergency visits supported
  - TTO medication supported
  - Searchable dental visits
  - Integrates with Investigations to show dental xrays
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## Observations

Chart and track patient vital signs

- Instant graphical rendering of vitals
  - Automatic calculation of Early Warning Scores (e.g. National Early Warning Score 1/2)
  - Alerts for deteriorating patients
  - Customisable sections and parameters
  - Paediatric parameters (e.g. head circumference, weight)
  - Specialist parameters (e.g. ICU cardiac output, neurology obs)
  - Re-triggering overrides (e.g. a neurosurgery patient can have a different normal range GCS)
  - Works at the bedside on tablets
  - Can interface to HL7 network capable bedside monitors
  - Fluid balance
  - Sepsis flags
  - Escalations to other staff members if actions are not completed in a timely manner for deteriorating patients
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## Drugschart / ePrescribing

Prescribe and administer medication

- Drugs-chart style grid rendering



Patient care safely in one place

- Powered with drugs databases (MHRA in-house derivative or First Databank)
  - Supports once-only, regular, PRN as required, fluid infusions, variable dose medications
  - Dosing by quantity, mass, volume, per unit time
  - Drug dose / route / frequency checking with alerts
  - Dose checking with awareness of age / weight / body surface area / 24hr max / max rate
  - Drug-drug interaction checking with alerts
  - Drug-allergy interaction checking with alerts
  - Drug-washout interaction checking for recently stopped drugs (e.g. prescribing SSRI after recent MAOi)
  - Dual-signing for controlled drugs / infusions
  - Outpatient prescribing
  - Pharmacist review (sign off, stoppage, substitution, supplementary information)
  - Local formulary
  - Medicines reconciliation (with discrepancy alerts and resolution)
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## Pharmacy

Dispense prescriptions and manage stock

- dm+d compatible
  - Dispensing working lists
  - Digital checking
  - Batch and expiry dates
  - Pharmacy stock control
  - Ward stock control
  - Manufacturer orders
  - Pharmacy orders
  - Storage types (cold / CDs)
  - Audit by medication / schedule / prescriber
  - Set medication reviews on repeat medication
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## Recalls

Set custom reviews

- Add reviews to the patient record for when a review is need
  - View all patient recalls in one page
  - View all recalls for all patients in one page with filtering options for due and over due reviews
  - Send letters in bulk for those due a recall
  - Search for those who have not responded to a recall to remove from list/send a further letter
  - System can automatically set recall to complete when appropriate action has taken place (appointment has been made, test has been ordered etc)
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## Therapies

Request therapy services & manage therapy worklists

- Custom therapy categories
  - Custom therapy types
  - Request therapies
  - View and manage therapy worklists
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## Investigations

Book tests and view results

- Electronic requesting of radiology, pathology, cardiology and endoscopy tests
- Comes "out of the box" with national pathology lab and radiology tests configured
- Customisable panels / profiles / order sets
- Customisable list of available tests
- Test-specific questions (e.g. MRI safety questions) at time of requesting, deduplicated
- Automatic importing of data for test-specific questions (e.g. recent creatinine result for contrast radiology tests)



- Render blood results on a graph over time
  - View blood results in a condensed grid over time
  - Integration via HL7 with bloods analysers and Radiology RIS systems
  - Launch correct PACS image by clicking on thumbnail
  - In-built lightbox for quick review of Xrays
  - Textual & numeric reporting
  - Abnormals highlighted (manual and automatic supported)
  - 1D + GS1 2D barcode support
  - AKI detectionLabel generation
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## Tracking

Manage patient integrated care pathways and co-ordinate team care

- Customisable patient pathways
  - Whiteboard views with customisable information shown on boards
  - Most recent observations / NEWS scores
  - Collaborative task lists
  - Smart columns which link into case notes proformas
  - "Time in department" and "time since milestone" columns (good for Emergency Departments)
  - Interval timers with overdue reminders (e.g. frequency of observations)
  - Live updating
  - 4 hour target for A&E
  - Location filtering
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## Partners and Integrations

### Zoom (video conferencing)

Users can schedule virtual appointments in PatientSource using Zoom.

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## Scribotech / Augnito (voice Control)

Capability to use Scribotech to power dictation and voice command features in PatientSource.

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## EIDO (documents and consent)

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## Compliance

PatientSource is compliant with the following:

- ISO 9001, 14001, 27001 ([www.isocis.com](http://www.isocis.com))
- Data Security and Protection Toolkit Assessment ( [Data Security and Protection Toolkit](#))
- Cyber Essentials ( [About Cyber Essentials](#) )