

## Core Engine and The Clinical Portal

At the heart of the WebV System is its Core Engine. It includes various patient search lists and views as well as the WebV Clinical Portal. The portal, forms the hub of the WebV system, as well as the ability to interface with customer's other clinical systems. This allows for seamless integration of WebV into the customer's existing suite of systems via a cohesive patient-focussed view.



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### Module Origin

The WebV Core Engine, together with the Clinical Portal, forms the heart of the WebV System.

Following the implementation of a new pathology system at the Northern Lincolnshire & Goole NHS Foundation Trust it was established that though the new solution worked well for the pathology team, it was inaccessible to our acute medical colleagues. It became evident rapidly that this was a problem as more often than not, colleagues needed their patients' results quickly. It was frustrating for our colleagues not to have immediate access to important information, while adding extra pressure to our already busy workloads.

Using the excellent IT skills we had in-house, we designed and built our own solution which gave access to pathology results in real time, day or night. It saved staff time and resources and helped to ensure patients got the right care as soon as possible – the basis of the WebV System was born.

The system's success meant access was soon widened to all hospitals, out-patient departments and secondary care in the Northern Lincolnshire and Goole NHS Foundation Trust. Other departments then began to see the benefits.

The WebV Clinical Portal was created in 2009 when the system became web-based, meaning it could be accessed from anywhere rather than having to be installed on a PC. The Portal pulls extensive information through to a patient's timeline, giving clinician's easy access to everything they need to build a full clinical picture. This includes patient history, observations, test results, x-rays, graphs and images. The Portal also provides an interface that enables seamless integration with each customer's other clinical systems.

<b>Clinical Portal</b>	<b>Event List</b> <ul style="list-style-type: none"> <li>• Ability to view interfaced systems as chronological event reports (see interfaces for your organisation)</li> </ul>
<b>WebV Core</b>	<b>General System</b> <ul style="list-style-type: none"> <li>• Ability to login to system and recover account/change password</li> <li>• Ability for users to change site</li> <li>• Ability for user to send feedback</li> <li>• Ability to log out of users session</li> </ul> <b>Patient Search</b> <ul style="list-style-type: none"> <li>• Ability to search patient by Identifier (NHS number or Hospital Number)</li> <li>• Ability to search for patient by DOB and surname</li> <li>• Ability to search by pre-defined lists <ul style="list-style-type: none"> <li>○ Clinician</li> <li>○ Location</li> <li>○ Clinic</li> </ul> </li> <li>• Ability to perform advanced search by: <ul style="list-style-type: none"> <li>○ Site</li> <li>○ Date</li> <li>○ Clinician</li> <li>○ Location</li> <li>○ Clinic</li> </ul> </li> </ul> <b>Patient Summary</b> <ul style="list-style-type: none"> <li>• Display of demographic information</li> <li>• Display of clinician information</li> <li>• Display of admission information</li> <li>• Ability to navigate to Patient systems</li> </ul>
<b>Trust Administration</b>	<b>Accounts</b> <ul style="list-style-type: none"> <li>• Ability to search the user database by Display Name or Username</li> <li>• Users can view a table of results according to their search criteria for selection of the relevant staff member.</li> <li>• High level user details display in a table format including status, Date Created, Date last accessed and account expiry date.</li> <li>• Administrative staff can create user accounts by recording mandatory and additional details for each staff member <ul style="list-style-type: none"> <li>○ Mandatory: <ul style="list-style-type: none"> <li>▪ Username</li> <li>▪ Title</li> <li>▪ Surname Forename</li> <li>▪ Type</li> </ul> </li> <li>○ Additional <ul style="list-style-type: none"> <li>▪ Expiration Date</li> <li>▪ Single sign on status</li> <li>▪ ID Badge number</li> <li>▪ Professional registration number</li> <li>▪ Prescriber Code</li> </ul> </li> </ul> </li> <li>• User profiles can be configured by recording mandatory and additional details <ul style="list-style-type: none"> <li>○ Mandatory</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>▪ Role (Populated from the Trust administration roles configurator)</li> <li>▪ Email</li> <li>▪ Site</li> <li>○ Additional <ul style="list-style-type: none"> <li>▪ Job Title</li> <li>▪ Department</li> </ul> </li> </ul> <ul style="list-style-type: none"> <li>• Accounts can be selected from the search criteria results and full account details will be displayed.</li> <li>• Accounts can be configured with multiple profiles</li> <li>• Accounts can be manually deactivated</li> <li>• Account details can be edited (e.g. name, sign on status, ID Badge number)</li> <li>• Administrative Staff can reset passwords by recovering the user's accounts on which the reset password functionality will be sent to the recovered users email address.</li> </ul> <p><b>Organisation Administration</b></p> <p><u>Trusts</u></p> <ul style="list-style-type: none"> <li>• Administrative staff can select to view a list of all Trusts, a list of your current Trusts Sites or a list of your current Trusts locations.</li> <li>• Administrative staff can filter a table display of configured Trusts</li> <li>• Trust Display table can be sorted by the columns: <ul style="list-style-type: none"> <li>○ Name</li> <li>○ Status</li> <li>○ Type</li> <li>○ Telephone</li> <li>○ Postcode</li> <li>○ Region</li> </ul> </li> <li>• The Trust Display Table can be filtered by Status and Postcode.</li> <li>• Administrative staff can create new Trusts by recording: <ul style="list-style-type: none"> <li>○ Trust Details <ul style="list-style-type: none"> <li>▪ Name</li> <li>▪ National Code</li> <li>▪ Region</li> </ul> </li> <li>○ Address Details</li> <li>○ Multiple Contact numbers.</li> <li>○ Email Address</li> </ul> </li> <li>• Administrative staff can select and view/edit full Trust details from the display table.</li> <li>• Administrative staff can Link Sites to the selected Trust.</li> </ul> <p><u>Sites</u></p> <ul style="list-style-type: none"> <li>• Administrative staff can filter a table display of configured Sites for your current select Trust profile</li> <li>• The Site display table can be sorted by the columns: <ul style="list-style-type: none"> <li>○ Name</li> <li>○ Status</li> <li>○ Type</li> <li>○ Telephone</li> <li>○ Postcode</li> <li>○ Region</li> </ul> </li> <li>• The Trust Display Table can be filtered by Status, Site, Type and Postcode.</li> <li>• Administrative staff can create new Sites by recording: <ul style="list-style-type: none"> <li>○ Site Details <ul style="list-style-type: none"> <li>▪ Name</li> <li>▪ National Code</li> <li>▪ Region</li> </ul> </li> </ul> </li> </ul>
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	<ul style="list-style-type: none"> <li>○ Address Details</li> <li>○ Multiple Contact numbers.</li> <li>○ Email Address</li> <li>● Administrative staff can select and view/edit full Site details from the display table.</li> <li>● Administrative staff can Link Locations to the selected site.</li> <li>● Administrative staff can Link Specialties to the selected site.</li> <li>● Administrative staff can Link Personnel (clinicians) to the selected site through navigating the Trust and searching the clinician list that has been configured under personnel.</li> </ul> <p><u>Locations</u></p> <ul style="list-style-type: none"> <li>● Administrative staff can filter a table display of configured Locations for your current select Trust profile</li> <li>● The Location display table can be sorted by the columns: <ul style="list-style-type: none"> <li>○ Name</li> <li>○ Status</li> <li>○ Manager</li> <li>○ Telephone</li> <li>○ Postcode</li> <li>○ Region</li> </ul> </li> <li>● The Location display table can be filtered by Status and Postcode.</li> <li>● Administrative staff can create new Locations by recording: <ul style="list-style-type: none"> <li>○ Location Details <ul style="list-style-type: none"> <li>▪ Name</li> <li>▪ National Code</li> <li>▪ Region</li> </ul> </li> <li>○ Address Details</li> <li>○ Multiple Contact numbers.</li> <li>○ Email Address</li> </ul> </li> <li>● Administrative staff can select and view/edit full Location details from the display table.</li> <li>● Administrative staff can Link Sites to the selected Location by editing and navigating though Trust to the desired Site.</li> </ul>
<p><b>User Administration</b></p>	<p><b>Personnel</b></p> <ul style="list-style-type: none"> <li>● Administrative staff can filter a table display of configured personnel for their Trust</li> <li>● Display table can be sorted by the columns: <ul style="list-style-type: none"> <li>○ Type</li> <li>○ Display Name</li> <li>○ Activation Status</li> <li>○ National Code</li> <li>○ Prescriber Code</li> </ul> </li> <li>● Administrative staff can create new personnel by recording: <ul style="list-style-type: none"> <li>○ Personal Details <ul style="list-style-type: none"> <li>▪ Active Status</li> <li>▪ Title</li> <li>▪ Name</li> <li>▪ Display Name</li> <li>▪ Employment status – Locum, Substantive or Not Employed</li> <li>▪ National Code</li> <li>▪ Prescriber Code</li> </ul> </li> <li>○ Address Details</li> <li>○ Multiple Contact numbers.</li> <li>○ Email Address</li> </ul> </li> <li>● Administrative staff can select and view/edit full personnel details from the display table.</li> </ul>

	<ul style="list-style-type: none"> <li>Administrative staff can Link personnel to organisations by navigating through Trust and selecting the relevant site (organisation).</li> </ul> <p><b>Roles</b></p> <ul style="list-style-type: none"> <li>Administrative staff can filter a table display of configured roles for their Trust</li> <li>Administrative staff have the ability to create new roles recording Name, Display Name and activation status.</li> <li>Administrative staff can select and edit role details</li> <li>Administrative staff can deactivate and activate configured roles</li> </ul>
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**Release v3.01**

<b>V3 Clinical Portal</b>	<ul style="list-style-type: none"> <li>Ability to now view PDFs in event list.</li> </ul>
<b>V3 WebV Core</b>	<p><b>Patient Summary</b></p> <ul style="list-style-type: none"> <li>Added risk information display.</li> </ul> <p><b>Patient Search</b></p> <ul style="list-style-type: none"> <li>Ability to perform a patient identifier quick search</li> </ul>
<b>V3 Improvements</b>	<ul style="list-style-type: none"> <li>Updated style for date picker</li> </ul>

**Release v3.1**

<b>V3 WebV Core</b>	<p><b>Patient Search</b></p> <ul style="list-style-type: none"> <li>Emergency Department list added to pre-defined search criteria</li> <li>Quick search feature added to patient search modal</li> <li>Introduction of Specialties within search lists.</li> </ul> <p><b>Patient Summary</b></p> <ul style="list-style-type: none"> <li>Ability to view admission information, clinical information and risk flag boxes using tablet devices.</li> </ul>
<b>Clinical Portal</b>	<ul style="list-style-type: none"> <li>Search criteria displays on all current and advanced search lists.</li> <li>Ability to view all a list of patients within the Emergency department</li> <li>Auto refreshing inpatient ward, clinician and clinic lists.</li> </ul> <p><b>Event List</b></p> <ul style="list-style-type: none"> <li>Ability to return to parent report from embedded child reports</li> <li>Disclaimers added to diagnostic reports</li> </ul>

**Release v3.2**

<b>Clinical Portal</b>	<ul style="list-style-type: none"> <li>• Permission created that has the ability to hide events by type from the front end of the Timeline.</li> <li>• Ability to filter events in the patient timeline.</li> <li>• Duplicate click removed when exiting the timeline and returning to the overview.</li> <li>• Audit entries created for certain user transactions.</li> <li>• Current day's activity is highlighted on the timeline.</li> <li>• Mobile view of Clinical Portal improved.</li> </ul> <p><b>Scanned Documents</b></p> <ul style="list-style-type: none"> <li>• New feature to allow fully automated upload of scanned documents into a patient's Event list from a specified network folder</li> </ul>
<b>WebV Core</b>	<ul style="list-style-type: none"> <li>• Emergency department pre-defined criteria search.</li> <li>• Ability to search for patients by indicator values.</li> <li>• Password expiry extended to 90 days if set by user or 30 days if set by system administrator.</li> <li>• Auto-refresh of the pre-defined lists changed from 30 seconds to 60 seconds.</li> <li>• Orange vertical line added to identify activity for the current day.</li> </ul>

<b>Trust Administration</b>	<ul style="list-style-type: none"> <li>• Ability to configure role based permissions</li> </ul>
<b>Patient Summary Screen and Timeline</b>	<ul style="list-style-type: none"> <li>• Patient's latest documents displayed with status in Patient Overview.</li> <li>• Displays patient's current location and time added.</li> <li>• Current responsible personnel displayed within the admission information.</li> </ul>
<b>Patient Search/Patient List</b>	<ul style="list-style-type: none"> <li>• Able to identify WAT (Ward attenders) and TCI (To Come In) in patient lists</li> <li>• Specialty displayed is current, not as on admission</li> </ul>

**Release v3.3**

**Clinical Portal**Login

- Performance and security updates to login
- Correct message displays when a user tries logging in to a disabled account
- Stopped separate tab launching when pressing enter on the account recovery function of the log In page
- Login page is prevented from remembering usernames

System

- Added additional HTTP security headers
- Removed some standard HTTP headers that are not required
- Developed audit functionality for events within the patient record
- Clear values option removed when changing site within user profile
- Patient menu now displays within patient record to make navigation more efficient

Settings

- Ability to update user's roles in isolation so that other fields do not need to be amended when changing a profile
- Added colours to the statuses within the Organisation table
- Permission renamed from Diagnostic Reports module to Reports module
- Organisations – Ability to add Clinicians to a site
- Created permission for access results from within the patient menu
- Generating personnel list is driven by user search
- Ability to view/create/amend/deactivate Location Codes

	<p><u>System Announcements</u></p> <ul style="list-style-type: none"> <li>• Created a permission to access the announcements feature</li> <li>• Ability to create and configure system announcements</li> <li>• Activated system announcements will appear after logging in to the system</li> <li>• Enabled announcements to be confirmed on devices with varying screen sizes</li> <li>• Configuration - Ability to filter announcements by category, severity and status</li> <li>• Configuration - Ability to access and view historic announcements that are no longer active</li> <li>• Configuration - When creating a new announcements, ability to preview before submitting</li> <li>• Configuration - Ability to add hyperlinks to announcements when users log in</li> <li>• Configuration – Ability to set message to display on each successful log in to the system</li> <li>• Configuration – Added ability to format text size within an announcement</li> </ul>
<b>Clinical Record</b>	<ul style="list-style-type: none"> <li>• Patient merging functionality to enable unconfirmed (minor) patient records to be merged in to the confirmed (master) patient record. Audit information is captured.</li> <li>• Created an Acknowledgement Card within patient summary to show the most recent reports for that patient that requires acknowledging, with the oldest results displayed at the top. The test information displays for each entry to enable easy identification of each report type. This card is hidden when users do not have permission to the results acknowledgement module.</li> <li>• Ability to perform additional actions including making additional requests, view blood science table and linking to patient timeline whilst viewing a report (involves linking between version 2 and version 3 of the system)</li> <li>• Ability to strike through an event note created in error</li> <li>• Added contextual link to access Sunquest ICE from within patient summary</li> <li>• Added contextual link to access WebV legacy systems from within patient summary</li> </ul>
<b>Cumulative Table and Charting</b>	<ul style="list-style-type: none"> <li>• Ability to view multiple blood science results in a cumulative table</li> <li>• Ability to view blood science results in a graph format</li> <li>• Ability to select graph type from either bar, line or scatter</li> <li>• Graphs updated to show reference guides for the most recent reference ranges</li> <li>• Results are sorted in reverse chronological order, showing newest results first</li> <li>• Ability to access report from entries on the blood science table</li> </ul>



<b>Patient Search Screen</b>	<ul style="list-style-type: none"> <li>• Enabled filtering on search results table when performing a pre-defined inpatients by clinical indicator search</li> <li>• Updated styling of the patient search panel and patient demographics bar</li> <li>• Removed link to blank page</li> </ul>
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#### **Release v3.4**

<b>Clinical Portal</b>	<ul style="list-style-type: none"> <li>• More flexibility when searching for clinicians within personnel settings</li> <li>• Corrected formatting for the unconfirmed patient list in the patient merge function</li> <li>• Ability to perform a search to find a list of patients that the user has recently searched for. Search results include the last 20 patients viewed.</li> <li>• Improved date picker UI so that it no longer sets the month to January when changing the year,</li> <li>• Automatically updates the user's version 3 profile when changes are made within version 2</li> <li>• User accounts will be locked following five consecutive failed password attempts</li> </ul>
<b>Clinical Record</b>	<ul style="list-style-type: none"> <li>• Ability to add event notes to Patient Administration System (PAS) events</li> <li>• Improved the content of the Admission Information card on the Clinical Record to distinguish between admitting information and current information.</li> <li>• Ability to update patient jobs from the patient's summary card</li> <li>• Corrected time discrepancy between reports in the patient's timeline and the reports to acknowledge list</li> </ul>
<b>Job Management</b>	<ul style="list-style-type: none"> <li>• Ability to create outstanding jobs that are stored against the patient</li> <li>• Jobs created in other modules are added to the master jobs list</li> <li>• When creating a new job, requirement to record the details and priority for the job</li> <li>• Ability to mark outstanding jobs as complete</li> <li>• Job details and priority can be edited for outstanding jobs</li> <li>• Ability to remove outstanding jobs from a patient. Removing a job means that the job is only visible on that instance of the clinical handover and is hidden from the future events of the handover</li> <li>• Functionality to re-open a completed job</li> <li>• Patient Summary card created to show outstanding jobs for that patient</li> <li>• Ability to view the patient's job list on a mobile device</li> <li>• Required date added as an optional field when creating a job</li> </ul>

#### **Release v3.5**

<b><u>None</u></b>
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