

## Diagnostic Requesting

The WebV Diagnostic Requesting Solution allows clinical staff to request and manage diagnostic tests electronically. This module reduces the time taken per request, as results are logged electronically and can be accessed instantly. It can also reduce the likelihood of results being lost or delayed due to processing issues, as all requests are clearly laid out with all the relevant information. The module also includes an audit log to allow users to track their requests.



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## Module Origin

### The Problem

- Thousands of requests for blood, microbiology and radiology tests daily
- Inefficient paper-based system
- Sharing of results
- Rejection due to illegible handwriting and/or missing information on requests

### The WebV Solution

The in-house WebV team at the Northern Lincolnshire and Goole NHS Foundation Trust were approached to look at delivering an intuitive electronic solution to the organisation.

The solution developed by WebV was designed to include:

- The recording and display of mandatory patient information which helps to identify and manage the care of patients
- Multiple requests for Blood Sciences, Microbiology and Radiology in a standardised way
- Prompts staff to specify exactly when results are needed, either immediately, later that day or by a future date, to help to prioritise the most urgent cases

The module also features drop-down menus to make it easier to find the right test and ensure patients are screened for everything relevant to them. For example, a doctor can select a patient's condition from a menu and it will then list all the recommended blood tests for that condition. It also advises on which of the seven colour-coded bottles to use to collect the test sample; a simple prompt which cuts down on human error and stops patients having to experience the discomfort and inconvenience of having to have more blood taken.

The solution also allows staff to:

- Preview a patient's test history
- Share results with colleagues in other departments or Trust sites also on the system
- Allow identification of whether tests have already been requested, thus avoiding duplication.

### The benefits for patients, staff and the Trust

The list of benefits are many, however the key ones are:

- Improvements in patient safety and care
- Improvements in data quality and efficiency
- Significant cost savings for the Trust, due to the reduction in duplication of tests
- Faster turnaround time for results
- Real-time access to the results staff need to determine the right treatment

- Patient prioritisation for tests based on the on-hand clinical data
- Time saved from a more efficient system allowing staff to deliver greater and better patient care
- Patients receive more accurate and timely treatment as they do not have to wait for a diagnosis because results are mislaid or forms were filled out incorrectly
- The module also shares test results with GPs, hospices and nursing homes, allowing continuity of care once they leave the hospital

### **Where the Module can be used**

The Diagnostic Requesting Module can not only be utilised within Trusts Wards & Departments for the requesting of key diagnostic tests, but it can also be rolled out into community healthcare organisations within both secondary & primary care sectors.

### **Diagnostic Requesting**

The Diagnostic Requesting module enables users to perform electronic requests for diagnostic tests on individual patients as well as review the patient's full list of requests. The system also allows a phlebotomy & reception mode which enables users to filter all recent diagnostic request in order to action them.

### **Blood Sciences Requesting**

- Users are required to select consultant and location of originating requestor.
- Requestors have the ability to select multiple investigations from a set Most Popular list
- Requestors have the ability to select multiple investigations from a the full list of available tests
- Requestors have the ability to select a clinically driven profile of tests if they have been configured to the selected clinicians specialty
- Users will be prompted about any guidance linked to individual test profiles
- Users will be prompted to answer questions linked to individual test profiles
- Requestors are required to enter free text clinical details
- Requestors have the ability to select from a list of optional sample/patient criteria to set against a single request.
- Requestors have the ability to print requests out via Labels, Forms or receipts or store the request in the patient's backlog.
- Table Display of Blood Science profiles sortable by Display name, Lab Code, Active Status and expedite status.
- Ability to create new profile
- Ability to select and edit profiles by:
  - Display Name
  - Set Guidance/Advice per profile
  - Set Question per profile
  - Set specimen type per profile
  - Expedite status – set profile as a priority for the lab.
- Table display of active profile groups sortable by Display Name, Active Status, Number of Profiles in group, Advice Status and Specialty that group is assigned to.
- Ability to filter table by specialty
- Ability to create new group.
- Ability to edit group by:
  - Display Name
  - Specialty
  - Profiles Included in Group
  - Active Status
  - Set Advice & Questions for the profile group
- Blood science requests ordered by most popular

### **Microbiology Requesting**

- Users are required to select consultant and location of originating requestor.
- Requestors have the ability to select appropriate investigation via a structured pathway leading the user to the appropriate investigation they require.
- Users will be prompted about any guidance linked to individual request paths.
- Users will be prompted to answer questions linked to individual request paths.
- Requestors are required to enter free text clinical details
- Requestors have the ability to select from a list of optional sample/patient criteria to set against a single request.
- Requestors have the ability to print requests out via Labels, Forms or receipts or store the request in the patient's backlog.
- Table Display of Microbiology profiles sortable by Display name, Lab Code, Active Status and expedite status.
- Ability to create new profile
- Ability to select and edit profiles by:
  - Display Name
  - Set Guidance/Advice per profile
  - Set Question per profile
  - Set specimen type per profile
  - Expedite status – set profile as a priority for the lab.

### **Requesting**

- Most popular tests list is available to select from when making a request
- Displays look back day warning and the status of the previous request when user tries to request same investigation within the configured look back period
- Enabled pathology requesting for GP Practices
- Print and collect options available as further actions when submitting a request
- Ability to change site when selecting a location for the request
- Shows containers required for the test on request summary and submission
- Improved resolution of barcode printing on forms
- When creating a blood science request, the investigations list can be filtered by specimen type
- Ability to add patient notes against a request which display on the request form
- When a request has been printed, real time update to the status of the request in the patient's request list
- Ability to repeat a request from the Patient Request list
- Updated colours for statuses printed and collected on patient request table
- Ability to find request by NHS number in request list
- Permission restricted ability to edit the details of a request up to the stage where the sample has been booked in and accepted
- Trust and organisation filters
- Sorting functionality to table headers
- Rejection message on details panel
- Clear all option on each filter
- Single date select
- Improved UI to make the colour of statuses appear consistently throughout the Requests module including the status filters
- Ability to sort the patient request table by infection risk status
- Required date and to new blood science and microbiology requests
- Type, Sample and Investigation added to the microbiology details panel within the Request tab
- Keyword search added to the property list for questions and guidance search for blood science configuration
- Added further action to create another Clinically Driven Request (CDR) when creating a new CDR
- Specimen number on the referral worklist
- Added 'G' as a hotkey for printing grey labels from the reception page

### **Patient Request Table**

- Display of the specific patients historical BS/Micro requests.
- Ability to sort by Date, Requestor, Type, Priority and status.
- Ability to filter by type, status and date.
- Ability to select and print out an outstanding request.

### **System Request Table**

- Display of all historical BS/Micro requests.
- Ability to sort by Patient, Requested Date, Requesting location, Risk level, Type, Priority and status.
- Ability to filter by location, type, status, specific patient and date range.
- Ability to select and print out an outstanding request.

### **System Request Table – Phlebotomy Mode**

- Ability to enter and load up request using Request ID.
- Multiple patient check and select on searching via request ID.

### **System Request Table – Reception Mode**

- Ability to enter Unique request ID and load request
- Multiple patient check and select on searching via request ID.
- Ability to accept/reject request (DEPENDANT ON LAB INTERFACE BEING IN PLACE)

### **Reception**

- Displays required receptacles on reception mode confirmation
- Ability to print a request from within reception mode
- Ability to re-print individual labels for samples within reception mode
- Option to clear selection added to appropriate filters
- Functionality to edit a request including adding investigations and modifying the order number

### **Configuration**

- Ability to configure and create clinically driven requests
- Ability to configure either single or multiple questions, guidance against tests and lookback days for tests as simple demand management
- Ability to set bottle quantities, media descriptions and media images for tests
- Ability to set profiles as either active or inactive
- Keyword search added to property list for question and guidance configuration
- Configured for auto linking certain profiles to automatically add all tests when requesting
- Status of profile displayed on the blood science configuration table
- When configuring an investigation, you can add a reference to an external system
- When creating a new profile where the providing trust and code combination is not unique, it will display an appropriate message to the user

### **Radiology Requesting**

- Ability to create a radiology request, including site selection for the investigation depending on availability of equipment and service.
- Improved user interface when adding new investigation and there are no existing investigations on the request.
- When multiple investigations have been requested, the summary details all of the requested investigations
- Users can select multiple investigations per modality when making a radiology request
- Ability to review and vet submitted radiology requests by either accepting or rejecting
- Built configuration for simple demand management and questions/guidance
- Ability to validate radiology requests
- Ability to configure questions per entire modality and against individual examinations with full text input for longer questions
- Clinical details, provisional diagnosis and method of arrival set as a mandatory fields
- Urgency of request is set as non-mandatory with routine as the default answer and emergency has been removed as an option.
- Ability for a requestor to cancel a radiology request up to status printed
- Created a permission to restrict radiology requests per modality
- For examinations requiring last eGFR information, data is automatically populated using data stored in the laboratory system
- Ability to print radiology request
- Ability to cancel a request up to status printed

- Ability to filter by investigation type
- Planned – Follow Up added as a priority option
- Patient weight added to request card
- Ability to access version 3 diagnostic requesting from the patient's version 2 timeline
- Skips provider field when there is only one provider available to select
- Portable added as an option for method of arrival
- Ability to record additional information about the patient (such as, deaf, blind, epileptic, etc.) when making a new radiology request
- When navigating away from the main request panel, the user's position within the panel is remembered on return (to save scrolling to the bottom of the panel each time)
- When the review page is refreshed, the list of requests is updated to include any newly submitted requests
- Ability to filter requests table by multiple requesting organisations