Public Health England

Protecting and improving the nation's health

HCAI Data Capture System
User Manual

Case Capture: Main Data Collections

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000
www.gov.uk/phe
Twitter: @PHE_uk
Facebook: www.facebook.com/PublicHealthEngland

Document History

Revision date	Author	Version
01/09/2015	Public Health England	1.0
01/10/2015	Public Health England	2.0
22/03/2017	Public Health England	3.0
12/07/2019	Public Health England	4.0
01/06/2020	Public Health England	5.0

Contents

Case Capture

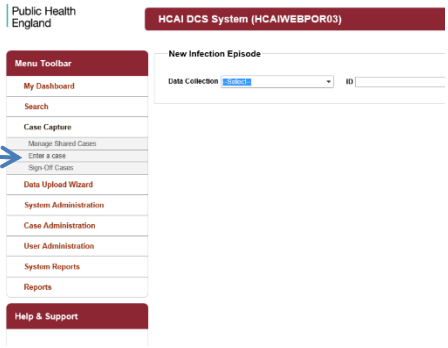
Introduction

This User Manual describes the process of entering a case (infection episode) of MRSA, MSSA and Gram-negative bacteraemia or *Clostridioides difficile* infection. Please refer to the specific Quarterly Mandatory Laboratory Return (QMLR) User Guide for information on how to enter QMLRs.

A case may be entered onto the HCAI data capture system via two routes:

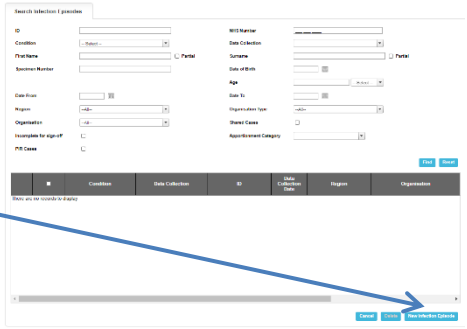
1) **Case Capture**

By selecting “Enter a case” from Case Capture option in the Menu Toolbar on the left hand menu.



2) **Search**

By selecting “Search” from the left hand menu, and “New Infection
Episode” from the
bottom right of the “Search” screen.



Entering a case

The process of entering a new case is the same whether you have navigated to it via the “Case Capture” or “Search” Menu Items. The process is described below in more detail. Click on “Enter a Case” or “New infection episode” to initiate the following screen. The “Data Collection” field needs to be selected before any of the data collection fields are displayed.

Figure 1. The top banner of the Case Capture screen

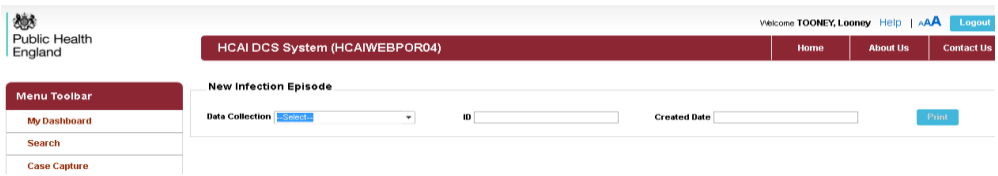


Table 1. Overview of fields in the top banner of the Case Capture screen

Field	Description
Data Collection	Select the appropriate organism from the drop down. This field informs users which organism the case is being entered for, this may be amended during initial data entry up until the case is saved and assigned an ID number, however any entered data will be lost. It is not possible to change the “Data Collection” selection of a case that has already been entered and assigned an ID number. The case would need to be deleted and re-entered selecting the correct data collection
ID	This is a unique 6 digit ID number, which is automatically assigned (by the DCS) to a case, once the case is saved. This ID can be used in communication with PHE about any case entered on the system.
Field	Description
Created Date	Once the case has been entered and saved, this field is auto completed with the date on which the case was saved, showing users the date the case was created.

Data Collections

The six “Data Collections” covered in this guide are:

- *C.difficile*
- *E. coli*
- MRSA
- MSSA
- *P. aeruginosa*
- *Klebsiella* spp.

The main Data Collection Tab is the “Episode Details” page which is the same across all Data Collections; there are also Data Collection specific tabs (Table 2).

Table 2. List of Data Collection Tabs expected for each Data Collection

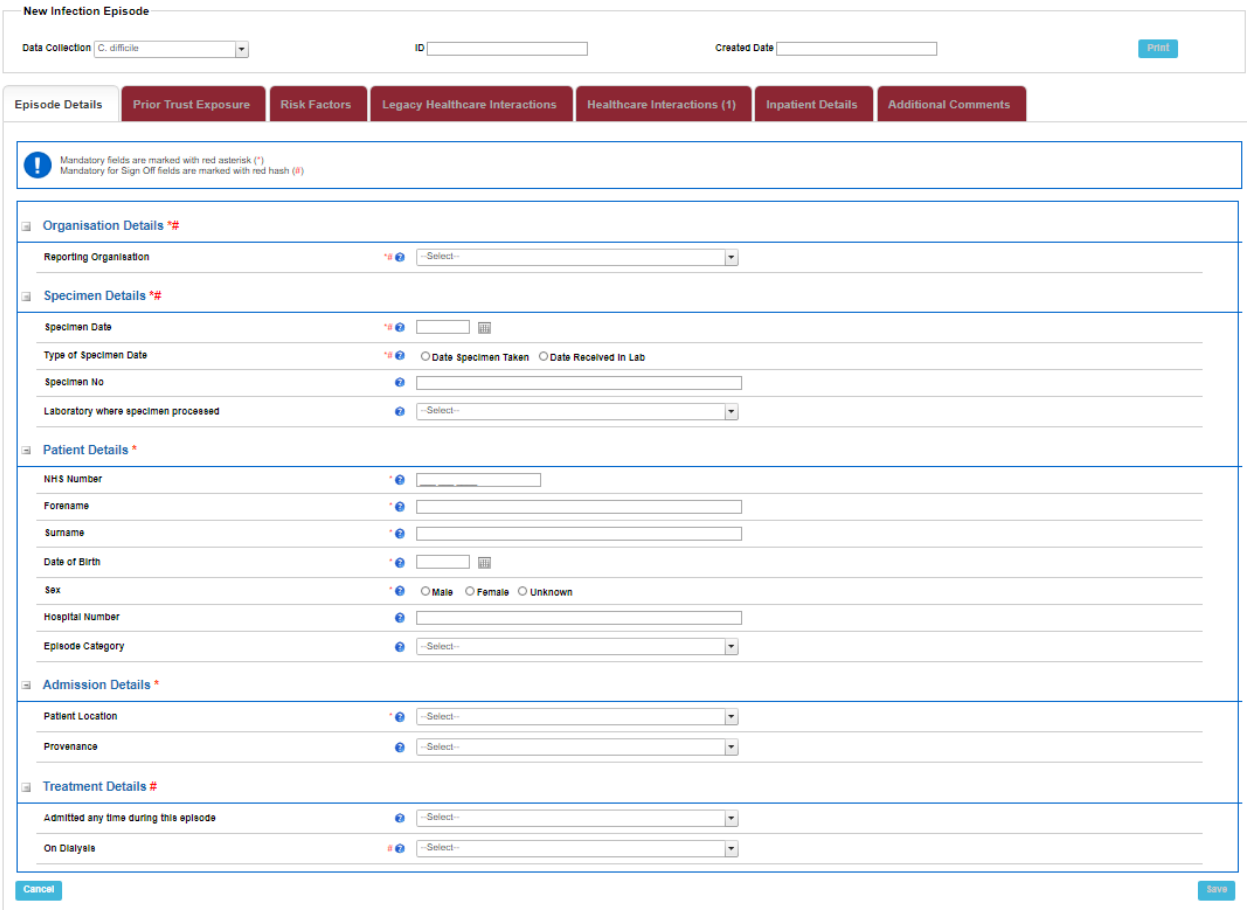
Field	Description
Data Collection	Data Collection Tabs
C.difficile	Episode Details Prior Trust Exposure Risk Factors Healthcare Interactions Inpatient Details Data Enrichment Additional Comments
MRSA	Episode Details Species Prior Trust Exposure Source of Bacteraemia & Associated Infections Risk Factors & Treatment Healthcare Interactions Data Enrichment Additional Comments
MSSA	Episode Details Species Prior Trust Exposure Source of Bacteraemia & Associated Infections

Field	Description
Data Collection	Data Collection Tabs
	Risk Factors & Treatment Healthcare Interactions Data Enrichment Additional Comments
E.coli	Episode Details Risk Factors Prior Trust Exposure Data Enrichment Additional Comments
P. aeruginosa	Episode Details Risk Factors Prior Trust Exposure Data Enrichment Additional Comments
Klebsiella spp.	Episode Details Species Risk Factors Prior Trust ExposureData Enrichment Additional Comments

Episode Details Tab

Once a “Data Collection” has been selected the “Episode Details” screen will be presented (Figure 2).

Figure 2. The Episode Details tab



Messages displayed under the Tabs will either be information messages or error messages (Figure 3). The initial message displayed when a “Data Collection” is selected, is an Information message indicating which fields need to be completed to allow a case to be saved and signed off (Table 3). Each of the “Episode Details” Tab contains fields with super scripts, * or/& # beside them.

Figure 3. The information and error messages bar

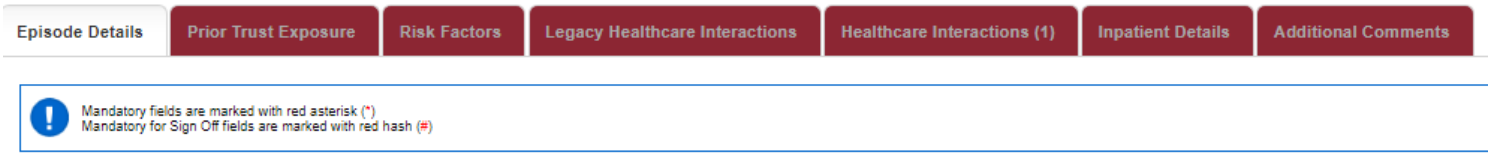


Table 3. Super Scripts for mandatory fields

Superscript	Comment
*	Mandatory fields need to be completed in order for a case to be saved
#	Mandatory fields that need to be completed in order for the case to be signed off. A case may be saved without this information being entered, but it cannot be signed off with this information missing.

Throughout the “Episode Details” tab and the “Data Collection” specific tabs many fields are triggered (become visible on screen) based on responses to previous questions. Thus, depending on the information entered you may see different fields on the “Data Collection” tabs. Where “Other” is selected from a drop down list a free text box allowing the “other” information to be entered will be triggered.

Each field in the “Episode Details” Tab and “Data Collection” specific tabs are detailed below. Triggered questions, except “other” are indicated.

Table 4. Overview of “Episode Detail” Tab Fields

Field Name	Comment
Organisational Details	
Reporting Organisation	The name of the acute Trust or IS Provider entering the case details. This will be autocompleted by the system, unless you have permissions to enter data for more than one site, in which case you will need to select the relevant site from the drop down.
Specimen Details	
Specimen Date	Date when specimen was taken. If this is not known the date the specimen was received in the laboratory should be used instead. (E.g. for a GP sample, the date the specimen was taken may not be available). An error message will occur if this date is earlier than the “Date of Birth” or “Admission Date”. **Please note** that the specimen date may be altered even after the data has been signed off, as long as the date is within the signed off period.
Type of Specimen Date	Depending on where the specimen was obtained, users are able to identify whether the “Specimen Date” is when the specimen was actually taken or when the specimen was received (e.g. GP sample, the date the specimen was taken may not be available).
Specimen No	The specimen number of the sample.
Laboratory where specimen processed	Laboratory where the specimen was processed can be from the options in the drop down list.
Patient Details	
NHS number	A unique number assigned to individuals registered with the NHS. If the NHS number is not known, all 9’s can be entered; however the NHS number should be completed as soon as it is known.

Field Name	Comment
Patient Details	
	where this can be kept as 9's is where the patient is a non-UK national and does not have an NHS number (e.g. a patient from overseas). A correct NHS number is vital for increasing the chances of an accurate attribution to CCG.
Forename	The patient's first name. Only the initial is displayed when a user who is not authorised to view the Patient Identifiable Information (PII) views the case.
Surname	The patient's surname. This is used to create a "Soundex" code which is displayed when a user who is not authorised to view the PII views the case.
Date of Birth	Patient's date of birth (DoB). An error message will occur if the DoB is invalid (e.g. in the future or if it is after the Specimen or Admission Date). An accurate DoB is essential for increasing the chances of an accurate attribution to CCG. Please note: Potential duplicate cases will be identified by the system if certain key fields being entered match an existing record; please refer to the Duplicates on Case Capture section below and Figure 4.
Sex	Patient's gender.
Hospital Number	The patient's local hospital identifier. This may be determined by checking the patient's hospital documentation. Useful for identifying duplicate entries for the same person.
Episode Category	This allows users to indicate whether this record applies to a new infectious episode, a continuing infection or whether the patient has suffered a repeat infection or a relapse.

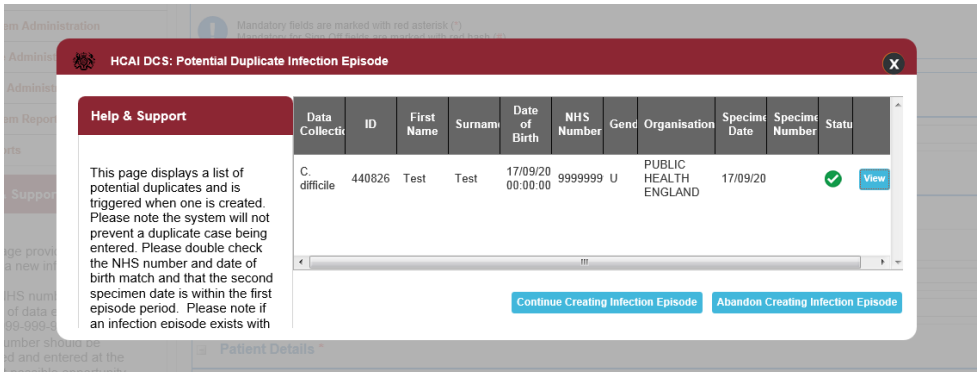
Duplicates on case capture

The definition of a duplicate for MRSA, MSSA, Gram-negative bacteraemia is any specimen collection from the same patient within 14 days. For *C.difficile* infection a duplicate is any specimen collected from the same patient within 28 days. Any positive specimens collected after 14 days (MRSA, MSSA, and Gram-negative bacteraemia) or 28 days (*C. difficile* infection) are considered to be a new episode and must be entered onto the HCAI DCS.

Whilst entering patient details the HCAI DCS will identify whether a patient's details have previously been entered onto the system based on: the Data Collection; patient's surname; date of birth; and specimen date (which includes a window based on the organism-specific episode length). Existing records that fulfil the criteria for being a duplicate will be show in a popup, along with the case currently being entered (Figure 4). You will have the option to either abandon creating the infection episode, or continue entering the infection episode.

Please Note: It is necessary for organisations entering data to ensure that duplicates, as defined above, are not entered or retained on the HCAI DCS.

Figure 4. The Potential Duplicate Infection Episode popup window



"Admission Details" section

This collects information about the patient's admission and location prior to attendance at the healthcare facility. It is important that any data in this section relates to the time at which the specimen was collected. It should not be amended to reflect any subsequent changes.

Table 5. Overview of the "Admissions Details" section

Field Name	Comment
Admission Details	
Patient Location	The **actual location** of the patient when the specimen was taken.
Trust/ Provider (triggered field)	This field is only made available if NHS acute Trust, Non-acute NHS provider, Independent Sector Provider or Mental Health Provider is selected.
Hospital Site (triggered field)	This field is only made available if NHS acute Trust, Non-acute NHS provider, Independent Sector Provider or Mental Health Provider is selected in the Patient Location field. It is the specific hospital/site within which the patient was located.
Patient Category (triggered field)	This field is only made available if a provider organisation is selected i.e. NHS acute Trust, Non-acute NHS provider, Independent Sector Provider or Mental Health Provider. This field categorises the patient at the time the specimen was taken into one of the groups shown in the dropdown menu. Any subsequent location of the patient after the sample was taken is not relevant here (for example, if the patient was admitted after having a sample taken in A&E, the patient category is still “A&E only”).
Do you know the admission date (triggered field)	This field is triggered when “Patient Category” “In-patient”, “Day-patient”, “Emergency Assessment”, “Other”, or “Unknown” is selected.
Date Admitted (triggered field)	Selecting “Yes” for the above field triggers the “Admission Date” field.
Admission Method (triggered field)	This field is triggered when “Patient Category” “In-patient”, “Day-patient”,

	"Emergency Assessment", "Other", or "Unknown" is selected. This field is used to determine the admission method of the patient.
Provenance	The location of the patient prior to arriving at the healthcare facility.
Trust/Provider Admitted From (triggered field)	This field is enabled when "Hospital (UK or abroad)", "Non-acute NHS Provider", "Independent Sector Provider" or "Mental Health Provider" are selected as the Provenance.
Hospital Site Admitted From (triggered field)	This field is enabled when a "Trust / Provider Admitted From" is selected. It is the specific hospital/site within which the patient was located.

Treatment Details section

This section captures further information on the patient's treatment.

Table 6. Overview of the Treatment Details section

Field Name	Comment
Treatment Details	
Admitted any time during this episode	This field captures whether the patient was admitted at any point during the episode. This differs from the "Date Admitted" field in "Admission Details" section which captures admission information about the patient at the time of specimen collection.
On Dialysis	This captures whether the patient is receiving dialysis. If "Yes: Established RF" is selected the record should be shared with the renal unit providing the renal care. Please refer to the Sharing User Manual for more information.

Field Name	Comment
Main Speciality (triggered field)	This field is enabled when “NHS acute Trust”, “Non-acute NHS provider”, “Independent Sector Provider” or “Mental Health Provider” is selected as the “Patient Location”. This refers to the specialty under which the consultant, looking after the patient, was contracted during the period of care when the specimen was collected.
Treatment Speciality (triggered field)	This field is enabled when “NHS acute Trust”, “Non-acute NHS provider”, “Independent Sector Provider” or “Mental Health Provider” is selected as the “Patient Location”. This refers to the specialty in which the consultant, looking after the patient, was working during the period of care when the specimen was collected.
Augmented Care (triggered field)	This field is enabled when “NHS acute Trust”, “Non-acute NHS provider”, “Independent Sector Provider” or “Mental Health Provider” is selected as the “Patient Location”. This refers to the speciality where the sample is collected and the patient has received enhanced care (eg Intensive Care Unit (ICU) or High Dependency Unit (HDU)).

Save and Cancel Options

When a new case has been entered or an existing case altered, the save button at the bottom of the page will be enabled. Once either “Cancel” or “Save” buttons are pressed a dialogue box will pop up. Any missing fields or validation errors will be highlighted upon save in the information and error messages bar (Figure 3).

Clostridioides difficile infection additional tabs

Prior Trust Exposure

The ‘Prior Trust Exposure’ tab is only enabled once the main data entry section has been successfully saved. This section collects information about the patient’s admission to the reporting trust prior to attendance at the healthcare facility.

Figure 5. The Prior Trust Exposure Tab

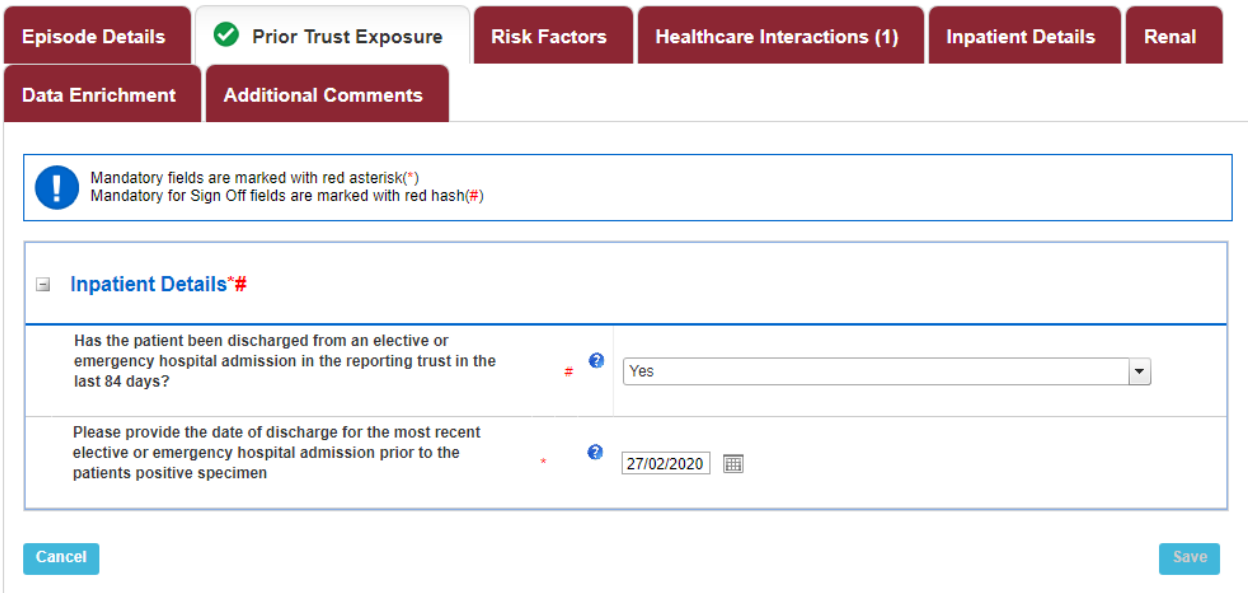


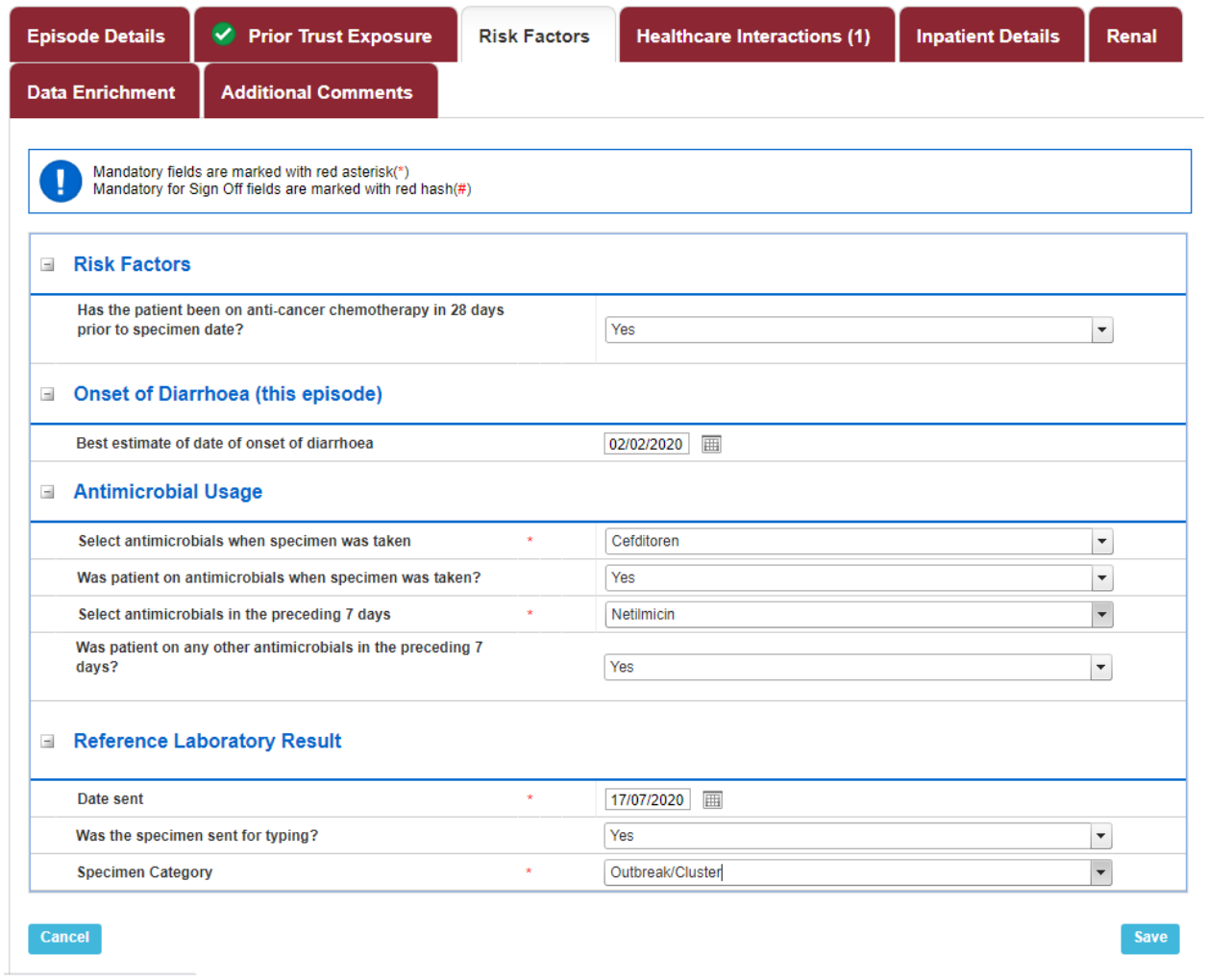
Table 7. Overview of the Healthcare Interactions in the 12 Weeks Prior to Specimen Tab fields

Field Name	Comment
Prior Trust Exposure	
Has the patient been discharged from an elective or emergency hospital admission in the reporting trust in the last 84 days?	Select an option from the drop-down list available
Please provide the date of discharge for the most recent elective or emergency hospital admission prior to the patient’s positive specimen	This field is triggered if “Yes” is selected in response to the previous question. Please provide the data of discharge from the reporting trust.

Risk Factors Tab

The “Risk Factor” tab is only enabled once the main data entry section has been successfully saved. This screen collects important additional information related to how the infection may have been acquired.

Figure 6.The Risk Factors tab



Healthcare Interactions Tab

This section deals with any contact the patient may have had with the present Trust or another Trust in the 12 weeks prior to the specimen date.

Figure 7. The Healthcare Interactions Tab.

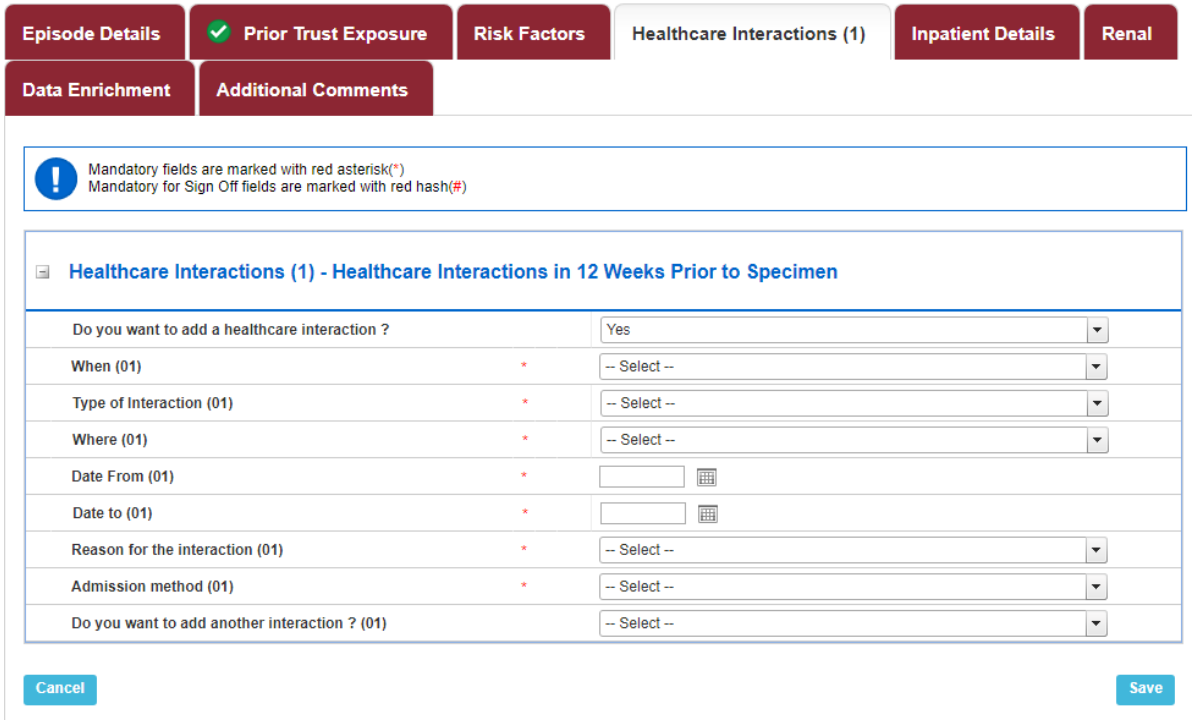


Table 9. Overview of the Healthcare interactions Tab fields.

Field Name	Comment
Healthcare Interactions	
Do you want to add a healthcare interaction ?	Only if “Yes” is answered will further questions be enabled
When (01)	Select the timescale within which the interaction occurred
Type of Interaction (01)	Select the type of interaction
Where (01)	Select where the interaction occurred
Date From (01)	The date the interaction occured
Date to (01)	The date the interaction ceased
Reason for the interaction (01)	Select the reason for interaction
Admission method (01)	Select the admission method
Do you want to add another interaction? (01)	If yes is selected another “Healthcare Interactions” tab is triggered with the same questions asked for the additional healthcare interaction. Up to 45 individual healthcare interactions can be added.

Inpatient Details

This tab should only be completed for Inpatients only

Figure 8. The Inpatient Details tab

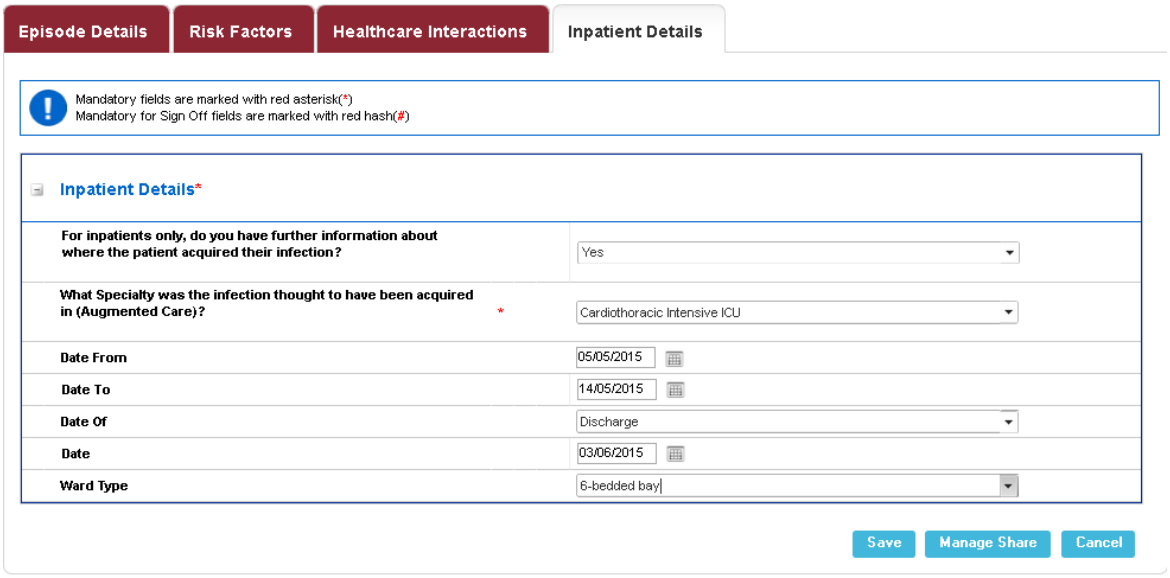


Table 10. Overview of Inpatient Details Tab fields

Field name	Comment
Inpatient details tab	
For inpatients only, do you have further information about where the patient acquired their infection?	Only if “Yes” is selected will further questions be available
What specialty was the infection thought to have been acquired in (Augmented care)	Select from the dropdown list. This is different from the information entered on the “Episode Details” tab as it relates to the specialty where the infection was thought to have been acquired.
What specialty was the infection thought to have been acquired in (Treatment Specialty) (triggered question)	If “Not applicable” is selected for field “Treatment Specialty” becomes available. This is different from the information entered on the “Episode Details” tab as it relates to the specialty where the infection was thought to have been acquired.
Date From/Date To	The dates that the patient was in the specialty for.
If applicable did the care within this particular treatment specialty end in discharge or death	Select either “Discharge” or “Death”
Date of Discharge/Death	Enter the date or use the Data selector
Ward Type	The ward type the patient was in
Total number of beds (triggered field)	This is enabled if “Nightingale” or “Other” is selected as the ward type.

Data Enrichment tab

This section is automatically populated the day following case entry, whereby the case is traced against the SPINE via NHS Digital's, ODS. Please refer to the CCG attribution user guide for further information on the attribution process.

Figure 9. Data Enrichment Tab

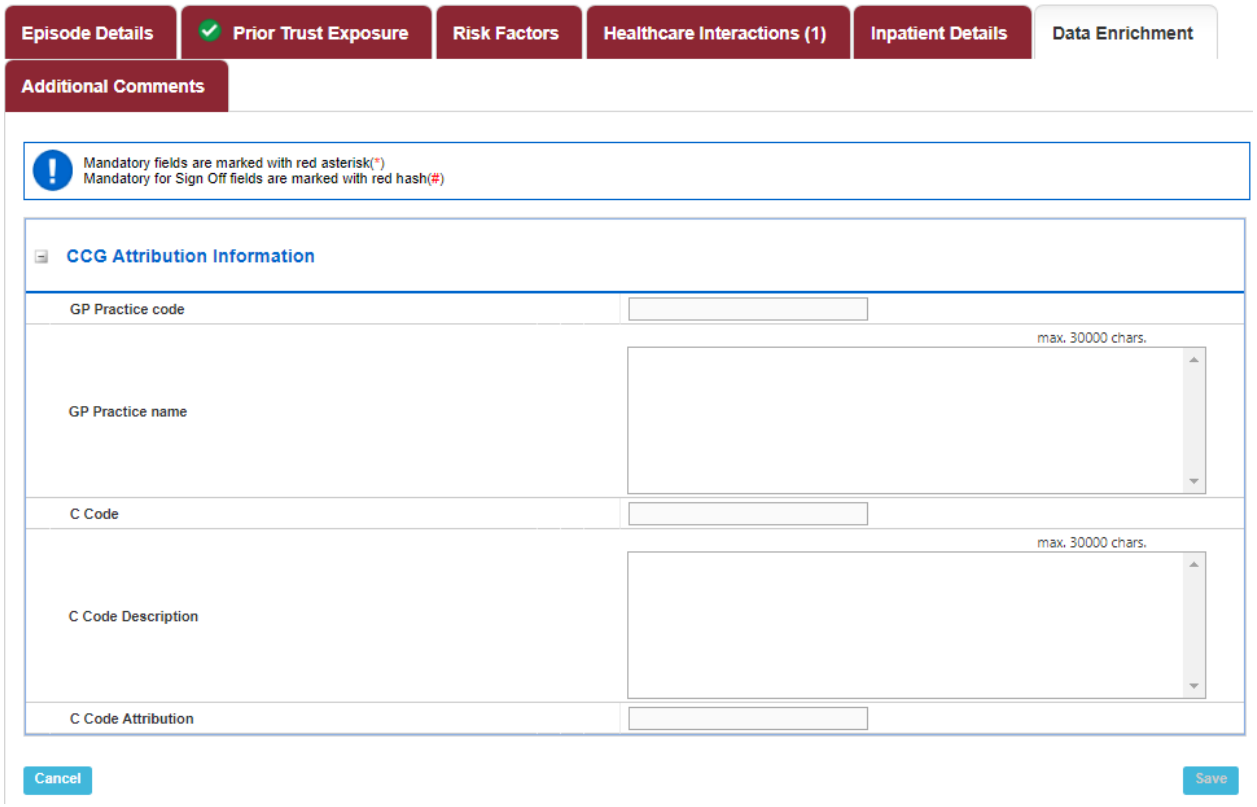


Table 11.Overview of the Data Enrichment Tab fields

Field Name	Comment
Data Enrichment Tab	
GP Practice code	The ODS GP practice code will be displayed here
GP Practice name	The ODS GP practice name will be displayed here
C Code	The C code defines how the case was traced
C Code description	The definition of the C code which describes how the case was attributed to a CCG.
C Code Attribution	The description of how the case was attributed to a CCG.

Additional Comments

This section is to capture any additional information the reporting organisation may want to record.

Figure 10. Additional Comments

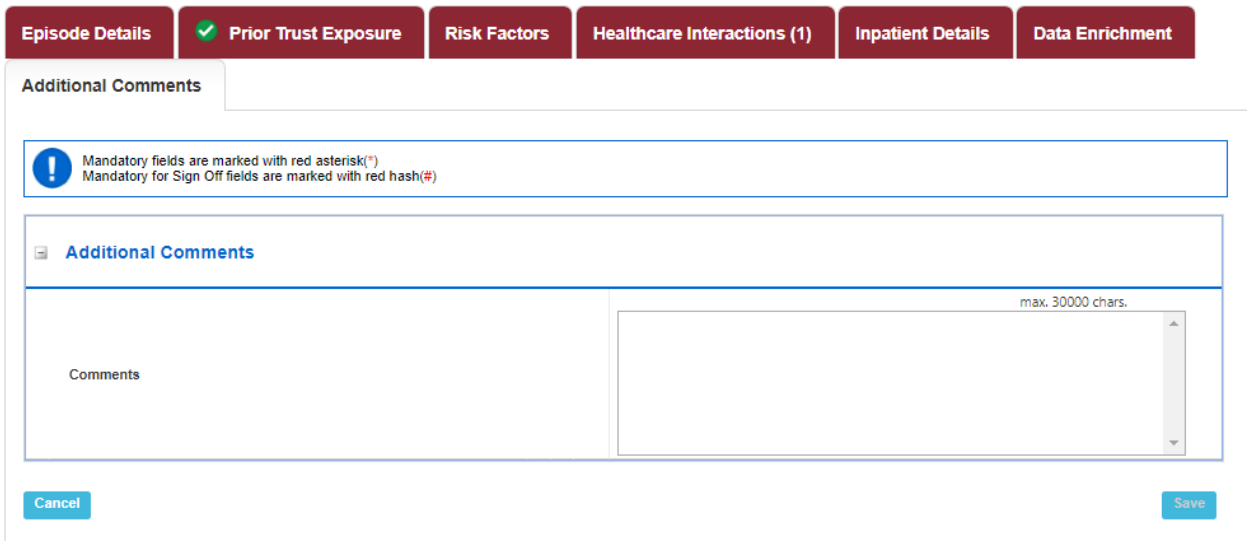


Table 12. Overview of Additional Comments tab

Field Name	Comment
Additional Comments Tab	
Comments	This is a free-text field for any general comments users wish to record. Please ensure any comments are entered using standard characters on the keyboard.

MRSA and MSSA additional tabs

Species

This section collects important additional information related to the *Staphylococcus aureus* identified.

Figure 11. Species Tab

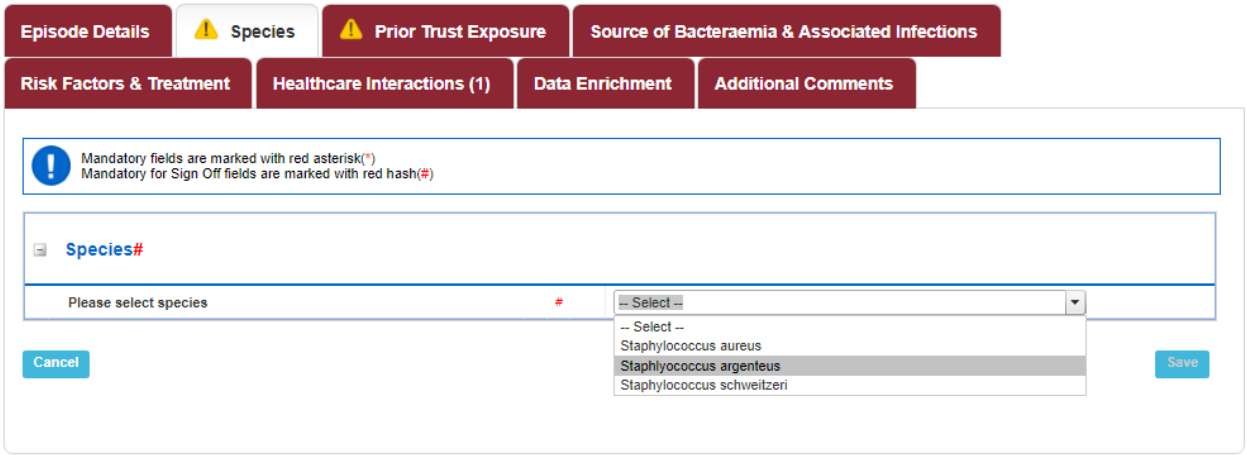


Table 13. Overview of the Species tab

Field Name	Comment
Species	
Please select species	This is a drop down field requesting the species of *Staphylococcus* identified.

Prior Trust Exposure

The 'Prior Trust Exposure' tab is only enabled once the main data entry section has been successfully saved. This section collects information about the patient's admission to the reporting trust prior to attendance at the healthcare facility.

Figure 12. Prior Trust Exposure Tab

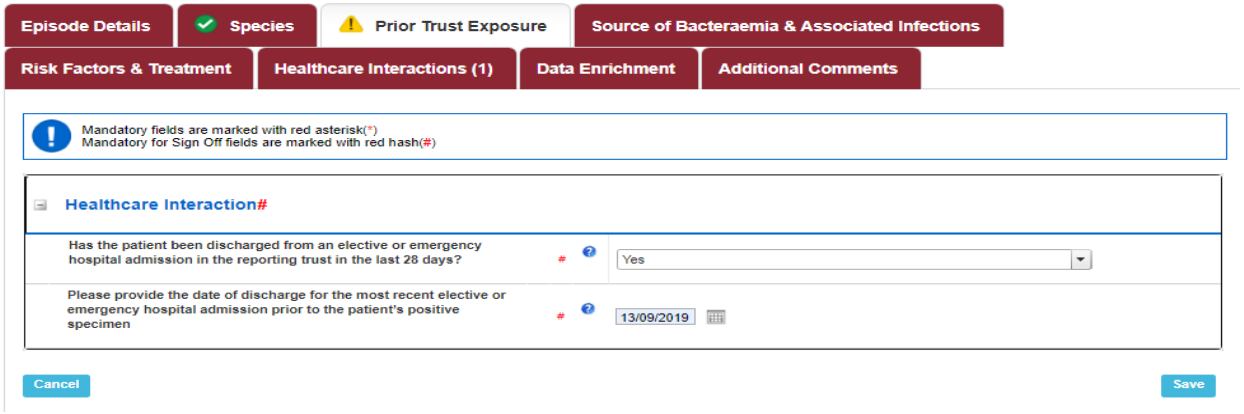


Table 14 Overview of Prior Trust Exposure fields

Field Name	Comment
Prior Trust Exposure	
Has the patient been discharged from an elective or emergency hospital admission in the reporting trust in the last 28 days?	Select an option from the drop down list available
Please provide the date of discharge for the most recent elective or emergency hospital admission prior to the patients positive specimen	This field is triggered if “Yes” is selected in response to the previous question. Please provide the date of discharge from the reporting trust.

Source of Bacteraemia & Associated Infections

This section is used to record what was considered to be the cause of bacteraemia following a root cause analysis (RCA). The information entered here may differ from that on the “Episode Details” tab. For example, the “Treatment Specialty” and “Augmented Care” information entered here should reflect the outcome of the RCA.

Figure 13. The Source of Bacteraemia and Associated Infections tab

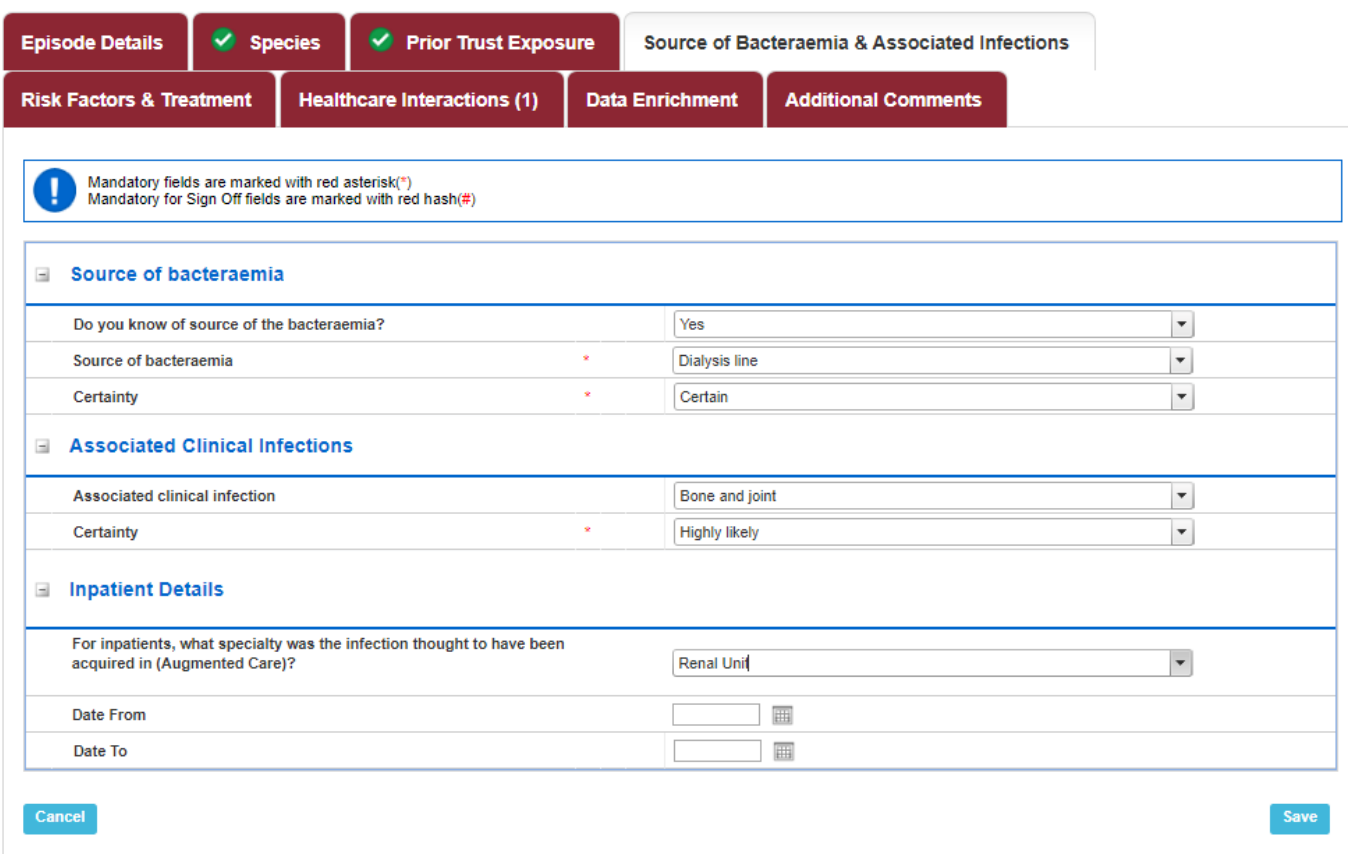


Table 15. Overview of the Source of Bacteraemia and Associated Infections Tab fields

Field name	Comment
Source of bacteraemia	
Do you know the source of bacteraemia?	Only if “Yes” is selected will further questions be available
Source of bacteraemia	Select from the drop-down list. Only one option can be selected.
Certainty	Select the certainty with which the selected source explains the cause of the bacteraemia
Associated clinical infections	
Associated clinical infection	Only if an option is selected will further questions become available. Only one option can be selected.
Certainty	Select the certainty
Inpatient details	
For inpatients, what specialty was the infection thought to have been acquired in (Augmented Care)?	If “Not applicable” is selected the field “Treatment Specialty” becomes available. This is different from the information entered on the “Episode Details” tab as it relates to the specialty where the infection was thought to have been acquired.
Treatment specialty (triggered question)	This is different from the information entered on the “Episode Details” tab as it relates to the specialty where the infection was thought to have been acquired. Not applicable can be selected.
Date From/Date To	The dates from and to that the patient was in the treatment specialty.

Risk Factors & Treatment Tab

Figure 14. The Risk Factors and Treatment Tab

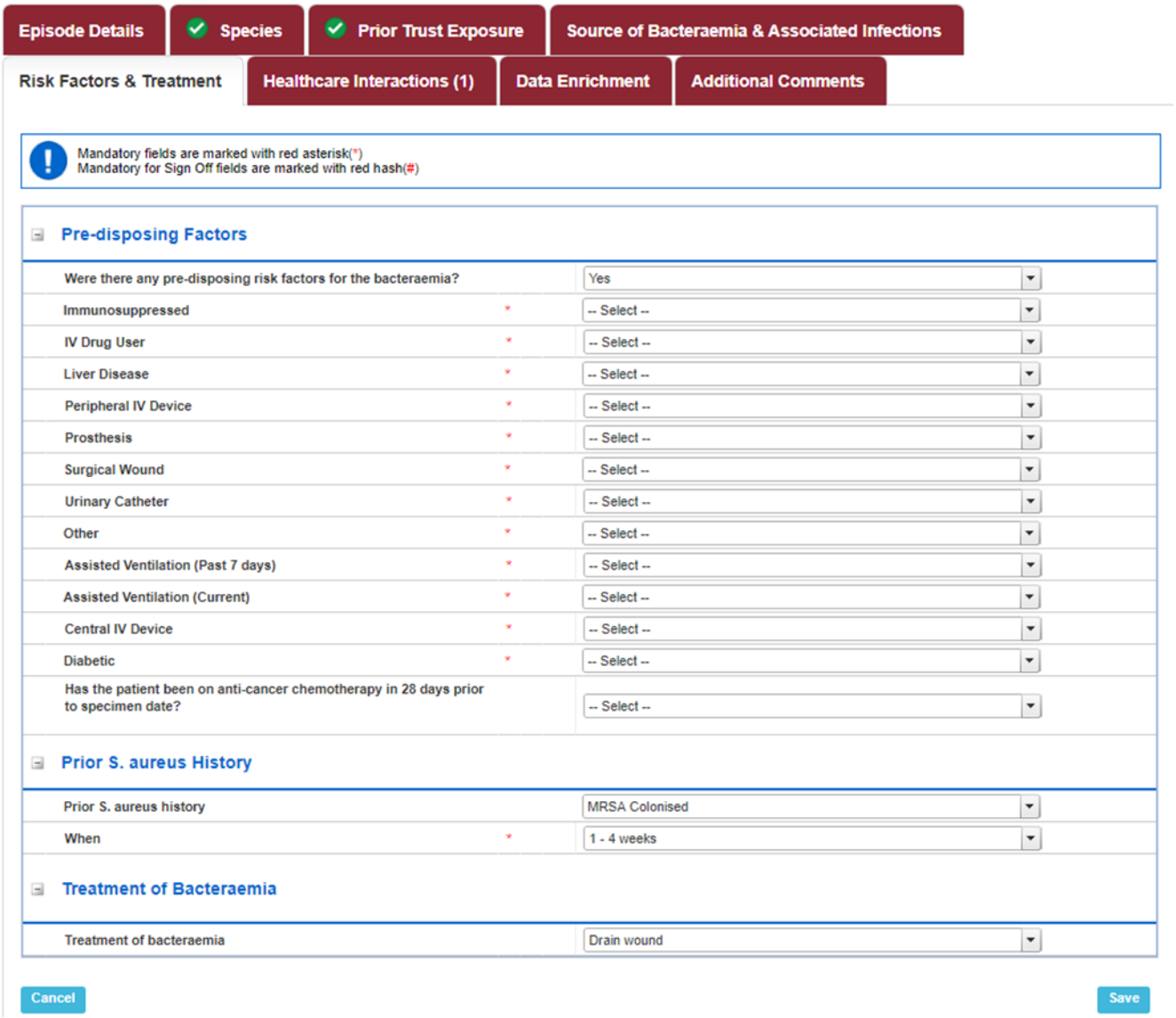


Table 16. Overview of the Risk Factors and Treatment Tab fields

Field name	Comment
Pre-disposing factors	
Were there any pre-disposing risk factors for the bacteraemia?	Only if “Yes” is selected is it possible to select a pre-disposing factor
List of pre-disposing factors	As many pre-disposing factors as applicable can be selected
Prior *S. aureus* History	
Prior S. aureus history	If any option except “None”, “Unknown” and “Other” is selected
When	Select the timescale
Treatment of bacteraemia	
Treatment of bacteraemia	Select as many options as appropriate from the drop down list

Healthcare Interactions Tab

Table 17. Overview of the Healthcare Interactions Tab fields

Field name	Comment
Healthcare interactions tab	
Do you want to add a healthcare interaction	Only if “Yes” is answered will further questions be enabled
When	Select the timescale within which the interaction occurred
Type of interaction	Select the type of interaction
Where	Select where the interaction occurred
NHS acute Trust organisation	If “NHS acute Trust” is selected from “Where” the name of the organisation must be selected from the drop-down list which is enabled
Independent Sector Provider Organisation	If “Independent Sector Provider” is selected from “Where” the name of the organisation must be selected from the drop down list which is enabled
Date from/Date to	The dates from and to that the interaction occurred
Reason for interaction	Select the reason for interaction
Admission method	Select the admission method
Do you want to add another interaction?	If yes is selected another “Healthcare Interactions” tab is triggered with the same questions asked for the

Field name	Comment
Healthcare interactions tab	
	additional healthcare interaction. Up to 45 individual healthcare interactions can be added.

Gram-negative bacteraemia additional tabs

Risk Factors

This section collects important additional information related to how the *E. coli, P. aeruginosa* or *Klebsiella* spp*. bacteraemia* may have been acquired. Please note that pre April 2017 cases will have an “Archived (Risk Factor)” tab.

Figure 15. The Risk Factors Tab

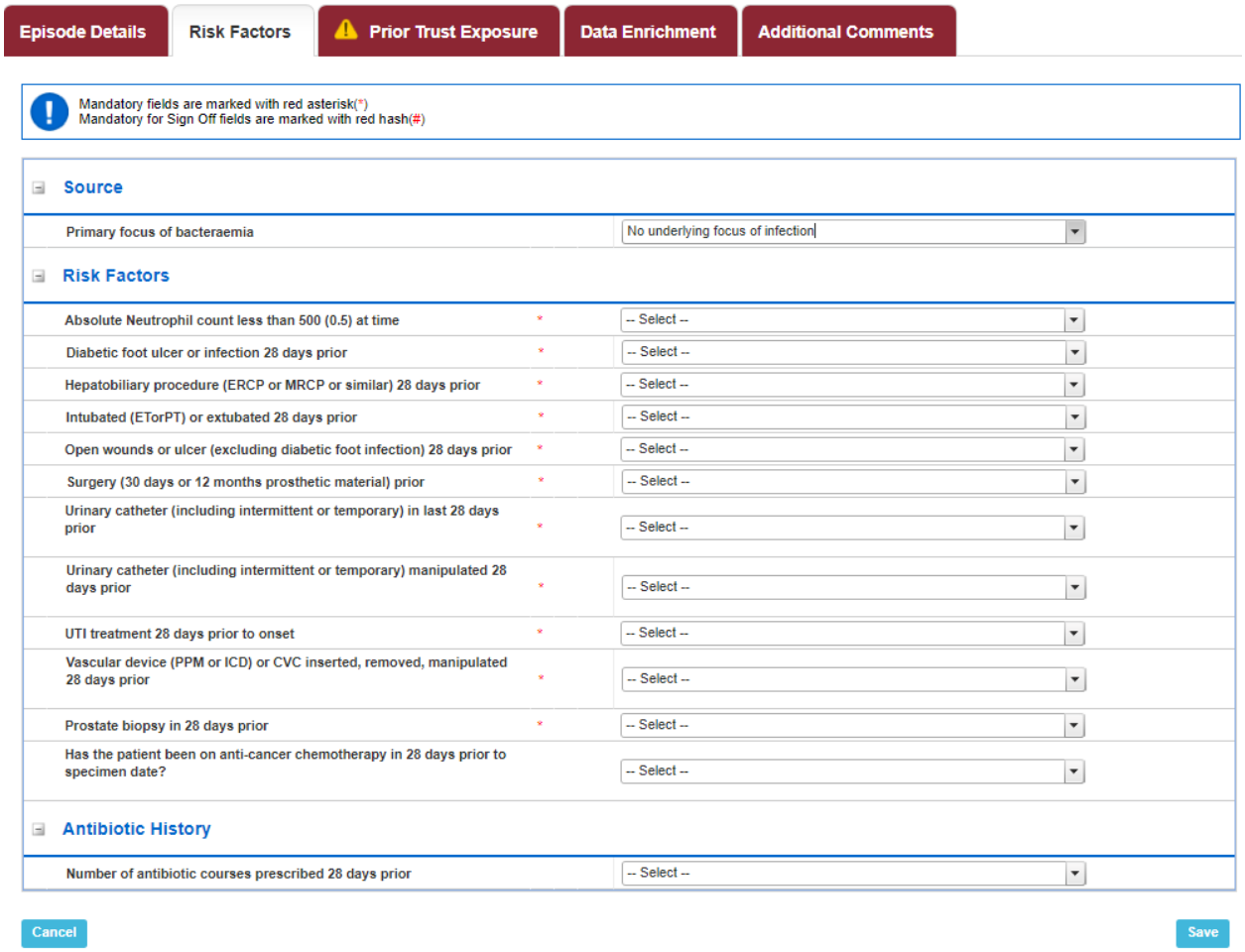


Table 18. Overview of the Risk Factors Tab fields

Field name	Comment
Risk factors tab	
Primary focus of bacteraemia?	The anatomical location/system believed by the microbiologist attending to the patient to be the most likely, on the basis of their clinical judgement, initial primary focus or source of the infection. Secondary sites resulting from a complication are not included. Only one can be selected.
Urinary catheter in last 28 days prior	This list is only enabled if the primary focus is unclear or “Urinary” related.
Urinary catheter inserted, removed or manipulated 28 days prior	Whether urinary catheter had been manipulated for clinical purpose in 28 days prior to the onset of infection. This list is only enabled if the primary focus is unclear or “Urinary” related.
Vascular device inserted, removed or manipulated 28 days prior	This list is only enabled if the primary focus is unclear or “Intravascular device” is selected.
Intubated (ET or PT) or extubated 28 days prior	Whether endotracheal or PT intubation was inserted or removed in last 28 days. This list is only enabled if the primary focus is unclear or “Respiratory” related.
Prostate biopsy in 28 days prior	This list is only enabled if the primary focus is unclear or “Urinary” or Genital related
Surgery (30 days or 12 months’ prosthetic material) prior	The patient has undergone surgery in the past 30 days (if no implant was inserted), or past year if an implant was inserted.
Surgical methods used (tick all that apply)	The list is only enabled if “Yes” is selected to the previous question. Generally one factor should be selected, but it may be applicable to select more than one.
Hepatobiliary procedure (ERCP or MRCP) 28 days prior	Any procedure performed on hepatobiliary organs, such as Magnetic Resonance Cholangiopancreatography (MRCP) or Endoscopic Retrograde Cholangio-Pancreatography (ERCP). This list is only enabled if the primary focus is unclear or “Hepatobiliary” related.

Open wounds or ulcer in prior 28 days	This list is only enabled if the primary focus is unclear or “Bone & Joint” or “Skin or Soft Tissue” are selected. Patient has an unhealed wound or ulcer in 28 days prior to onset of Bacteraemia.
Diabetic foot ulcer or infection 28 days prior	Patient has had an unhealed diabetic ulcer or diabetes - related infection of the foot in the 28 days prior to onset of bacteraemia. This list is only enabled if the primary focus is unclear or “Skin or Soft Tissue” is selected.
Absolute Neutrophil count less than 500 (0.5) at time	Patient has an absolute neutrophil count of less than 500 cells/µl at time of onset of bacteraemia. This is triggered regardless of what is selected as the Primary focus. Select an option from the drop down.
Number of antibiotic courses prescribed 28 days prior	Number of antibiotic courses patient has received in 28 days prior to onset of bacteraemia This field will trigger questions relating to the name and start and stop dates of the antibiotics. Up to 5 sets of antibiotics can be entered against each case.

Completing primary focus of bacteraemia will trigger further risk factor questions. These risk factor questions are all required dropdown boxes when triggered and are defined in the Mandatory Surveillance Protocol in section 13.2.2 Definitions of risk factors for Gram-negative collections (*E. coli, Klebsiella* spp. , *P. aeruginosa*)

Klebsiella spp. Species Tabs

Species Tab

This section collects important additional information related to the *K. pneumoniae*

Figure 16. The Species Tab

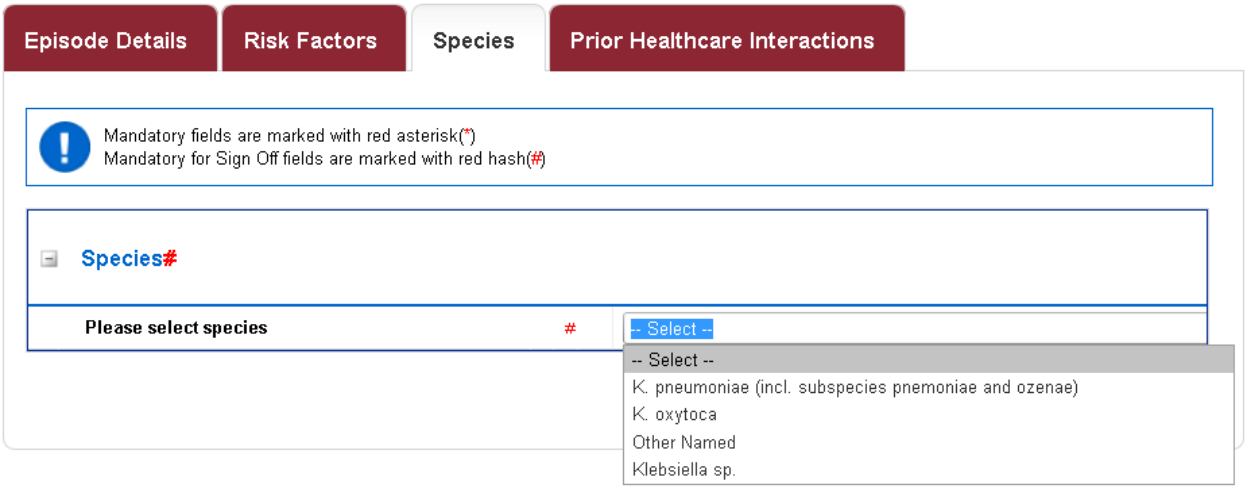


Table 19. Overview of the Species Tab fields

Field name	Comment
Species Tab	
Please select species	Please select appropriately