

## CHECK THE DATA FROM YOUR CENTRE

To ensure high data quality, it is important to have consistent data and the lowest rate of missing data possible. This is a summary of what we are checking and what you can check too please:

- **Missing data:** ensure that you have filled everything in the forms
- **Follow-up data:** ensure this is only entered after the completion of 30 days after surgery
- **Data consistency:**
  - Date of surgery needs to be in the range of data collection (30<sup>th</sup> January – 21<sup>st</sup> May 2023).
  - Date of diagnosis, date of decision to surgery and date of surgery need to be in order or in the same day.
  - Patients with symptoms CANNOT have asymptomatic as an indication for surgery .
  - Patients without symptoms CANNOT have symptomatic an indication for surgery.
  - Patients where the indication for surgery is obstruction, incarceration or strangulation of the hernia, are expected to be operated as EMERGENCY cases.
  - Patients where the indication for surgery is Asymptomatic are expected to be operated as ELECTIVE.

The following images explains each one of the above and we are sending emails to each centre where typos might have occurred.

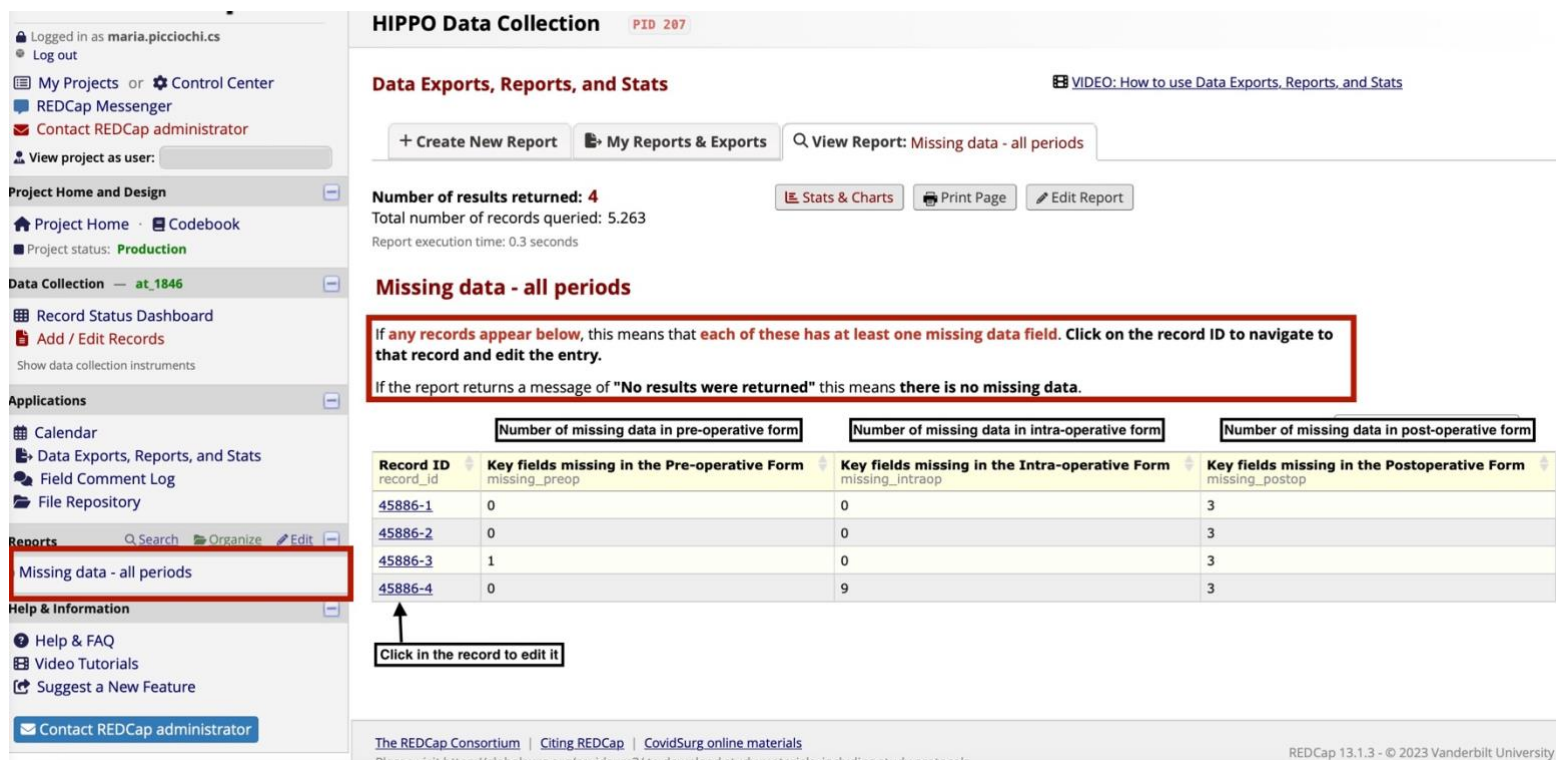
## MISSING DATA

Please **login in your account** and go to the **HIPPO Data collection project**:

HIPPO Data Collection

Access the **report 'Missing data – all periods'** to check if you have any **missing data** and you should see something similar to the picture below:

[https://globalsurgery.redcap.bham.ac.uk/redcap\\_v13.4.9/DataExport/index.php?pid=207&report\\_id=1032](https://globalsurgery.redcap.bham.ac.uk/redcap_v13.4.9/DataExport/index.php?pid=207&report_id=1032)



The screenshot shows the 'HIPPO Data Collection' interface. The left sidebar contains navigation options like 'My Projects', 'REDCap Messenger', and 'Data Collection'. The main content area is titled 'Data Exports, Reports, and Stats' and shows a report for 'Missing data - all periods'. A red box highlights a message: 'If any records appear below, this means that each of these has at least one missing data field. Click on the record ID to navigate to that record and edit the entry.' Below this is a table with columns for 'Number of missing data in pre-operative form', 'Number of missing data in intra-operative form', and 'Number of missing data in post-operative form'. The table lists four records with their respective missing field counts. A red box highlights the 'Missing data - all periods' report in the sidebar, and an arrow points to the 'Click in the record to edit it' instruction.

Record ID	Number of missing data in pre-operative form	Number of missing data in intra-operative form	Number of missing data in post-operative form
45886-1	0	0	3
45886-2	0	0	3
45886-3	1	0	3
45886-4	0	9	3

If you **HAVE records here**, it means that you have missing data. Each column shows how many variables are missing in each form (pre-op, intra-op and post-op).

Please **click on each record ID and fill the variables** that are missing.

Eg: the record 45886-1 has missing data in the postoperative form only, so this is what needs to be corrected.

**Only fields where is impossible to have data to fill them should be left unfilled.** Patients with **key missing data will be excluded** from the analysis planned, which might imply exclusion of centres if the above is true for >95% of the included patients.

If you do **NOT HAVE records here**, no action is needed.

## DATES AND TIMES

REPORT:

[https://globalsurgery.redcap.bham.ac.uk/redcap\\_v13.4.9/DataExport/index.php?pid=207&report\\_id=1034](https://globalsurgery.redcap.bham.ac.uk/redcap_v13.4.9/DataExport/index.php?pid=207&report_id=1034)

There are **three** key dates within the HIPPO study dataset, that can be found within the **Pre-Operative Data Fields** section:

<b>Date of diagnosis</b>	01-03-2023	Today	D-M-Y
* must provide value			
<b>Date of decision for surgery</b>	02-04-2023	Today	D-M-Y
* must provide value			
<b>Date of surgery</b>	03-04-2023	Today	D-M-Y
* must provide value			

### Ordering of Dates

It was intended that for these three variables:

- 1) **Date of diagnosis** is the first time that a **suspected or confirmed diagnosis of inguinal hernia was made**
- 2) A suspected or confirmed diagnosis of inguinal hernia was required **before making a decision regarding surgery**
- 3) A **decision to operate was taken before surgery**

Therefore:

- 1) **Date of diagnosis** should **NOT** occur **AFTER** **Date of Surgery**
- 2) **Date of diagnosis** should **NOT** occur **AFTER** **Date of decision for surgery**
- 3) **Date of decision for surgery** should **NOT** occur **AFTER** **Date of surgery**

This therefore gives an ideal timeline of:

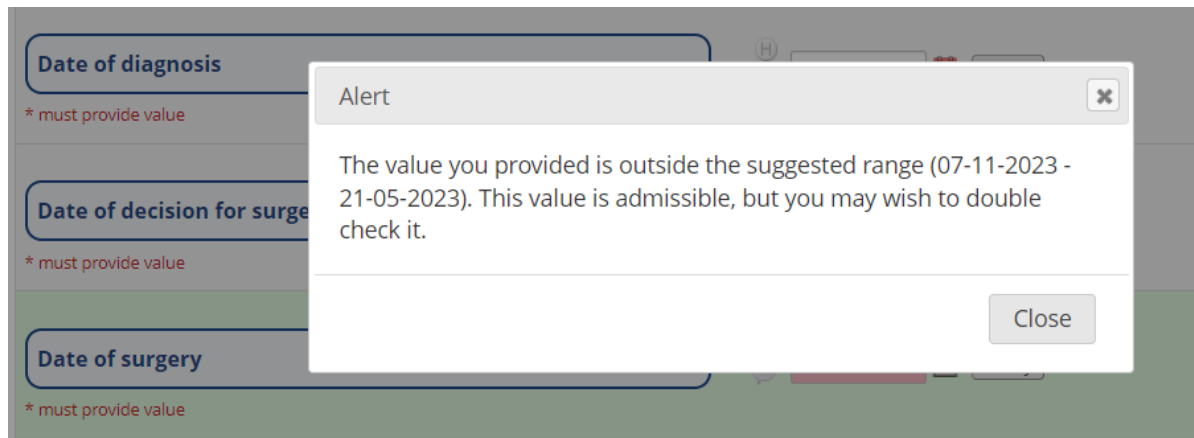
- 1) **Date of diagnosis -> Date of decision for surgery -> Date of surgery**

With alternative acceptable timelines:

- 2) **Date of diagnosis = Date of decision for surgery -> Date of surgery**
- 3) **Date of diagnosis = Date of decision for surgery = Date of surgery**

We will therefore be checking that all dates within the HIPPO dataset conform to one of these three timelines and identifying where this is not the case.

If the dates were initially entered in a format outside of this timeline, the below warning was shown.



*N.B. Initial review of dates entered suggests that most flagged dates entered are due to error in year input (2023 used in place of 2022, vice versa, etc.), which may be easily corrected by updating the record to reflect the correct year.*

### Other Date related errors that will be flagged up for review

Dates will additionally be flagged for correction if **Date of surgery** entered is outside of the study period dates of the study. Please therefore check that **Date of surgery** is between:

**Period 1** – January 30<sup>th</sup> 2023 to February 26<sup>th</sup> 2023

**Period 2** – February 27<sup>th</sup> 2023 to March 26<sup>th</sup> 2023

**Period 3** – March 27<sup>th</sup> 2023 to April 23<sup>rd</sup> 2023

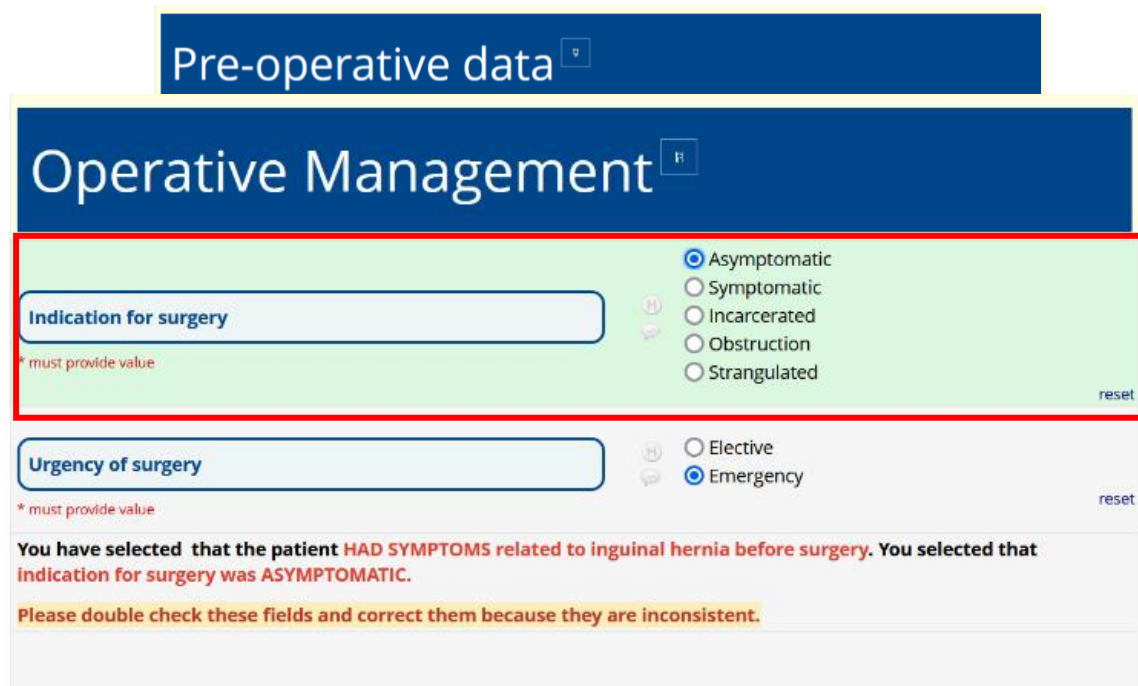
**Period 4** – April 24<sup>th</sup> 2023 to May 21<sup>st</sup> 2023

## SYMPTOMS AND INDICATION

REPORT:

[https://globalsurgery.redcap.bham.ac.uk/redcap\\_v13.4.9/DataExport/index.php?pid=207&report\\_id=1038](https://globalsurgery.redcap.bham.ac.uk/redcap_v13.4.9/DataExport/index.php?pid=207&report_id=1038)

In the **pre-operative data** form, we asked whether **patient had experienced symptoms related to their inguinal hernia before surgery and your answer was YES**, which means that the patient had symptoms.



The screenshot shows a form titled "Operative Management" with two sections:

- Indication for surgery:** A text input field is empty. To its right are radio button options:  Asymptomatic,  Symptomatic,  Incarcerated,  Obstruction, and  Strangulated. A "reset" button is at the bottom right.
- Urgency of surgery:** A text input field is empty. To its right are radio button options:  Elective and  Emergency. A "reset" button is at the bottom right.

Below the input fields, a message states: "You have selected that the patient HAD SYMPTOMS related to inguinal hernia before surgery. You selected that indication for surgery was ASYMPTOMATIC. Please double check these fields and correct them because they are inconsistent."

In the **Operative Management** section, we asked about the **Indication for Surgery and your answer was ASYMPTOMATIC (see below)**.

**These do not match with each other, because if the patient had symptoms before surgery, the indication for surgery should indicate that.**

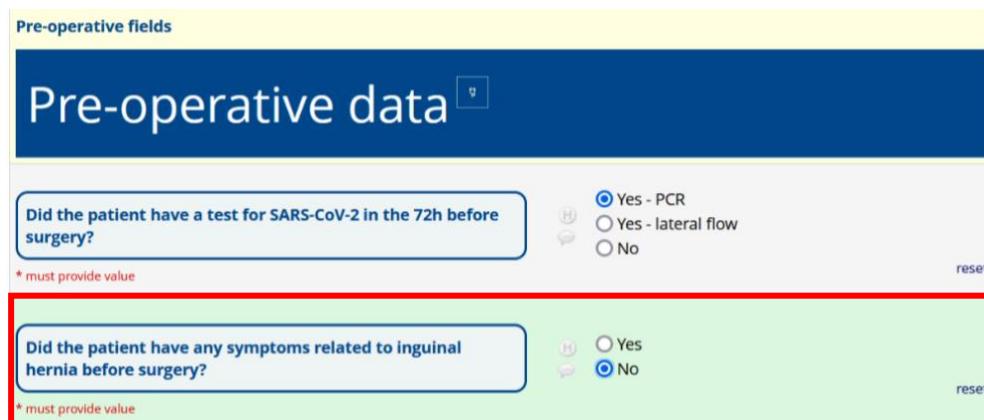
Please **review the data** provided at this stage, in order to make our analysis and the overall results more accurate. Patients with **inconsistent data will be excluded** from the analysis planned, which might imply exclusion of centres if the above is true for for >95% of the included patients.

## NO SYMPTOMS AND INDICATION

REPORT:

[https://globalsurgery.redcap.bham.ac.uk/redcap\\_v13.4.9/DataExport/index.php?pid=207&report\\_id=1038](https://globalsurgery.redcap.bham.ac.uk/redcap_v13.4.9/DataExport/index.php?pid=207&report_id=1038)

In the **pre-operative data** form, we asked whether **patient had experienced symptoms related to their inguinal hernia before surgery** and **your answer was NO**, which means that the patient **DID NOT** have symptoms.



Pre-operative fields

### Pre-operative data

Did the patient have a test for SARS-CoV-2 in the 72h before surgery?

Yes - PCR  
 Yes - lateral flow  
 No

\* must provide value reset

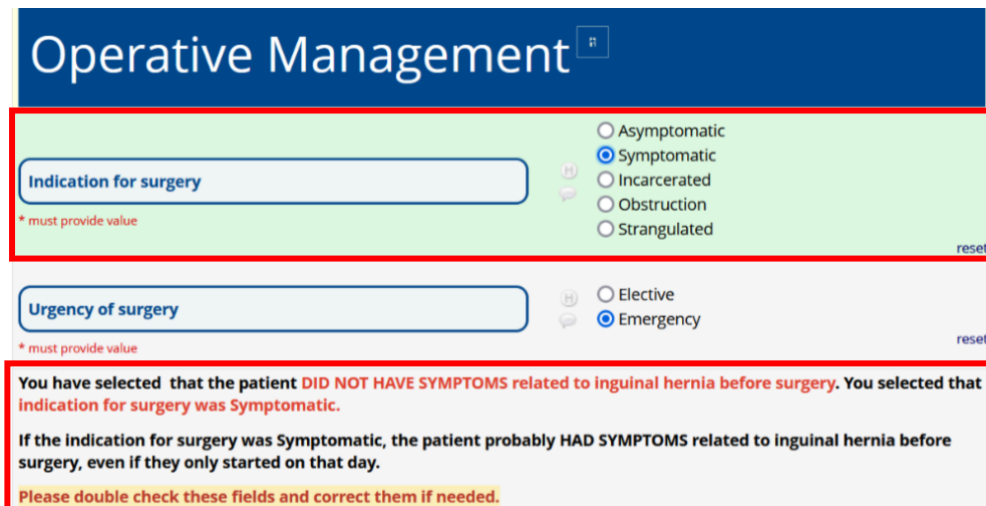
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Did the patient have any symptoms related to inguinal hernia before surgery?

Yes  
 No

\* must provide value reset

In the **Operative Management** section, we asked about the **Indication for Surgery** and **your answer was either SYMPTOMATIC/ INCARCERATED/ OBSTRUCTIVE/ STRANGULATED** (see below).



### Operative Management

Indication for surgery

Asymptomatic  
 Symptomatic  
 Incarcerated  
 Obstruction  
 Strangulated

\* must provide value reset

Urgency of surgery

Elective  
 Emergency

\* must provide value reset

**You have selected that the patient DID NOT HAVE SYMPTOMS related to inguinal hernia before surgery. You selected that indication for surgery was Symptomatic.**

**If the indication for surgery was Symptomatic, the patient probably HAD SYMPTOMS related to inguinal hernia before surgery, even if they only started on that day.**

**Please double check these fields and correct them if needed.**

For any of these indications, it is likely that the patient **HAS EXPERIENCED SYMPTOMS pre-operatively**, even if for **only a few hours before the operation**. Please **review the data** provided at this stage, in order to make our analysis and the overall results more accurate. Patients with **inconsistent data will be excluded** from the analysis planned, which might imply exclusion of centres if the above is true for >95% of the included patients.

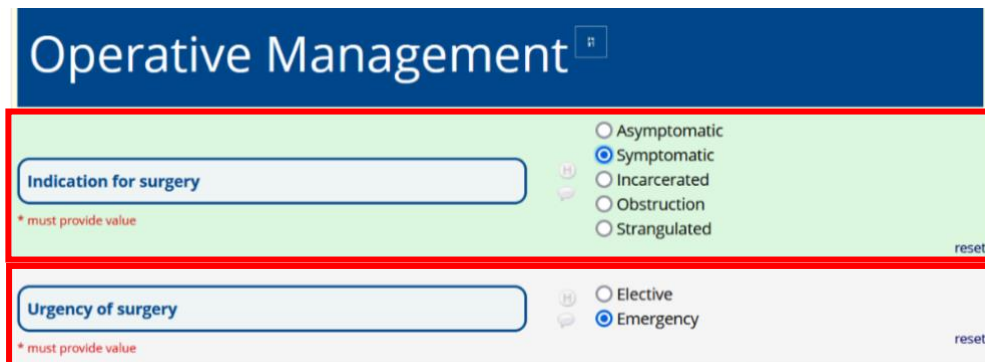
## INDICATION AND URGENCY

REPORT:

[https://globalsurgery.redcap.bham.ac.uk/redcap\\_v13.4.9/DataExport/index.php?pid=207&report\\_id=1039](https://globalsurgery.redcap.bham.ac.uk/redcap_v13.4.9/DataExport/index.php?pid=207&report_id=1039)

In the **Operative Management** section, we asked about the **Indication for Surgery** and **your answer was either INCARCERATED/ OBSTRUCTIVE/ STRANGULATED** (see below). Then, we asked about the **Urgency of surgery** and **your answer was either ELECTIVE** (see below).

For the indications **INCARCERATED/OBSTRUCTION/STRANGULATED**, it is likely that the



The screenshot shows a form titled "Operative Management" with two sections. The first section, "Indication for surgery", has a text input field and a radio button group with options: Asymptomatic, Symptomatic (selected), Incarcerated, Obstruction, and Strangulated. The second section, "Urgency of surgery", has a text input field and a radio button group with options: Elective and Emergency (selected). Both sections include a "reset" button and a red asterisk indicating a required field.

urgency of surgery should **HAVE BEEN EMERGENCY**, due to the life-threatening risk associated with such conditions.

Please **review the data** provided at this stage, in order to make our analysis and the overall results more accurate. Patients with **inconsistent data will be excluded** from the analysis planned, which might imply exclusion of centres if the above is true for more than 95% patients.