A Biological Threat Reduction Program (BTRP)

Ukraine

EHS-EIDSS Data Import Specification

Revision 1.2

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History of Changes

Revision	Date	Section	Changes description	Author
1.0	*Jan 2021*		*Initial draft*	*Uliana Shilovskaya*
1.1	*Feb 2021*	*1.3.4*	*For a new Human Case in field "Additional Information/Comments Including Movement of Patient During Period of Maximum Incubation" [doctor phone] shall be added, taken from "Performer_id" concordance table, "phone number" column, for the doctor found by "doctor.performer_id" from Import File*	*Uliana Shilovskaya*
1.2	*Mar 2021*	*1.3.4*	*In Laboratory/Clinical JSON files there might be blank and non-blank values of division.region for the same Settlement (or in some cases several ehs.region are matching to one eidss.rayon). Search for eidss.setllement in EIDSS shall be performed by combination of division.area, division.region (even if blank) and division.settlement.* *• if such eidss.settlement is found, then take Organization from Rayon to Sites concordance table matching rayon of eidss.settlement* *• if such eidss.settlement is not found, search for eidss.rayon in EIDSS by combination of division.area, division.region (even if blank)* *• if such eidss.rayon is found then take Organization from Rayon to Sites concordance table matching rayon of eidss.rayon* *• if such eidss.settlement AND eidss.rayon are NOT found then take Organization from Region to Sites concordance table matching division.area*	*Uliana Shilovskaya*
1.2	*Mar 2021*		*Patient_id from Import File shall be saved in EIDSS in hidden attribute strEhsPatientId in uaehs.cc_ehs_PatientId table*	*Uliana Shilovskaya*

Contents

1   Data Import Solution Specification

1.1   Import Approach

Data Import of positive COVID-19 cases to EIDSS should be done through the additional screen form EN: **eHealth Import**, UA: **eHealth Імпорт** in EIDSS Web (available from menu item EN "**eHealth Import**", UA "**eHealth Імпорт**"), which shall be available for users or user groups with "Allow" in "Execute" operation for "Can Import/Export data" system function.

Data Import to EIDSS will take place in manual mode on the regular basis. During data import session, two *.json files shall be selected and validated (ImportFiles_Format and Fields mapping.xls):

- Import File 1, containing patients' data AND

- Import File 2, containing episodes: clinical and laboratory data, referenced to the patients in Import File 1

During data import session, patient records and Human Cases shall be created and/or updated (if they are already present in the system) in EIDSS. If any of the Import Files 1&2 contains at least one discrepancy with the provided criteria detected by validation process (refer to validation rules in Data import process section), data import shall not be processed. In case of failed data validation, a user shall receive a file with highlighted errors, and operation of importing data shall be cancelled by the system.

If during patient identification process system finds in EIDSS an existing patient, a user shall be able to provide resolution in EIDSS interface if this patient needs to be updated.

Changes in the *EIDSS Web* shall be implemented for Ukraine only. They should not affect the system used by other countries.

1.2   Criteria for data import to EIDSS

1.2.1   Import File acceptable extensions
Files that can be used for File Import shall have *.json extension. **Open** dialog for selecting Import Files shall apply the filter of files' extensions listed above.

1.2.2   Import File Patient identification rule
In Import File a Patient is uniquely identified in Import File 1 by "patient_id".

1.2.3   Import File Human Case identification rule
In Import File a Human Case is identified in Import File 2, if for "patient_id" either Clinical OR Laboratory subset exists, i.e. either Clinical "code", "clinical", "onset_date" attributes OR Laboratory "code", "value", "issued" attributes are not blank.

1.2.4   Import File Human Case Test identification rule
In Import File a Human Case Test is identified in Import File 2, if for "patient_id" Laboratory subset exists, i.e. Laboratory "code", "value", "issued" attributes are not blank.

1.2.5   EIDSS Patient duplicate identification rule
EIDSS Patient duplicate identification shall be done in 3 steps.

Step 1.

Search is performed by "patient_id" value from Import File 1:

Import File Field Name	EIDSS Field Name
patient_id	Hidden attribute strEhsPatientId in uaehs.cc_ehs_PatientId table

IF patient with such "*patient_id*" is not found in EIDSS, then

Step 2.

The following fields shall be considered as key fields to uniquely identify a Patient, among those records which strEhsPatientId is blank:

Import File Field Name	EIDSS Field Name
first_name	Name: First
last_name	Name: Last
second_name	Name: Middle
person_birth_date	Date of Birth
address.area	Current Residence: Region
address.region	Current Residence: Rayon
settlement	Current Residence: Settlement

If more than one patient is found with the same values of the listed attributes, then

Step 3.

The following fields shall be considered as key fields to uniquely identify a Patient:

Import File Field Name	EIDSS Field Name
first_name	Name: First
last_name	Name: Last
second_name	Name: Middle
person_birth_date	Date of Birth
address.area	Current Residence: Region
address.region	Current Residence: Rayon
settlement	Current Residence: Settlement
phones	Current Residence: Phone Number

Search for a Patient in EIDSS shall be performed in Persons List. If there are more than one patient found, then the first found shall be taken.

1.2.6   EIDSS Human Case duplicate identification rule

Import File case (identified based on Import File Human Case identification rule) is assumed to be a duplicate of EIDSS human case if there is a case in EIDSS, which satisfies all the following conditions together:

(1) It has a link to the same patient (based on EIDSS Patient duplicate identification rule);
AND
(2) Human case Diagnosis equals to COVID-19;
AND

(3) The time difference between the EIDSS Human Case "Date of completion of paper form" and "onset_date" OR "issued" date in Import File 2, referencing the same patient, is less than 45 days.

1.2.7 EIDSS Human Case Test duplicate identification rule
Import File test record is assumed to be a duplicate of EIDSS human case test record if there is a test in EIDSS, which satisfies all the following conditions together:

(1) It has a link to EIDSS Human Case, linked to the same patient (based on EIDSS Patient duplicate identification rule);
AND
(2) Human case Diagnosis equals to COVID-19;
AND
(3) Laboratory subset "code", "value" and "issued" attributes in Import File 2 are equal to EIDSS human case test attributes.

Import File Field Name	EIDSS Field Name
code	Test Name
value	Result/Observation
issued	Result Date

1.2.8 Import File and EIDSS attributes mapping
The mapping of Import File attributes and EIDSS case attributes is defined in the ImportFiles_Format and Fields mapping.xls file. If some attributes in Import File are missing but record still can be imported to EIDSS such attributes shall be left blank in EIDSS. If Import File contains some attributes, not listed in ImportFiles_Format and Fields mapping.xls file, such attributes shall be ignored.

Reference concordance matrixes are located in the corresponding tabs in the Reference_Concordance_Tables file.

1.3 Data import process
Data Import shall follow the following scenario:

1. On the **EHS Import** form a user selects two *.json files in fields
   - EN "Patient Data File" UA "Файл, що містить дані Пацієнтів" (Import File 1)
   - EN "Laboratory/Clinical Data File" UA "Файл, що містить Клінічні/Лабораторні дані" (Import File 2)
   1.1. If a user selected only one *.json file [Import] button shall be disabled.
   1.2. If a user selected files with another extension than *.json, a warning message shall be displayed: EN "Wrong file extension. Please select JSON file and try again." UA "Неправильне розширення файлу. Виберіть файл JSON і повторіть спробу", import shall not be started. [Import] button shall be disabled.
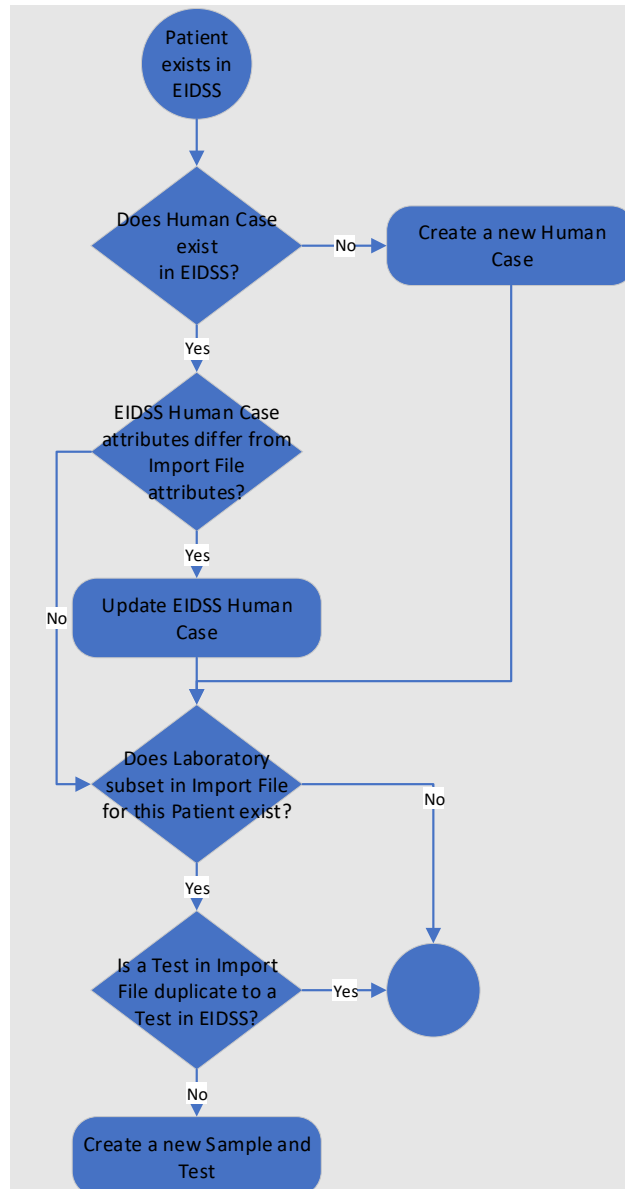
2. For each file System checks the size of *json files. Maximum allowed size shall be 100Mb ("UploadEhsMaxMBSize" in the eidss_general.config file, by default "UploadEhsMaxMBSize"=100Mb).

   2.1. If the size of the file exceeds 100Mb, a warning message shall appear: EN *"The file size exceeds the limit allowed and cannot be imported. Please reduce the file size or select another file."*, UA "Розмір файлу перевищує дозволений ліміт та не може бути імпортований. Зменште розмір файлу або оберіть інший". [Import] button shall be disabled.

   2.2. If the size of the file is less or equal to 100Mb, go to step 3.

3. System checks if *.json files can be parsed (potentially wrong with brackets or quotes)

   3.1. If *.json files can NOT be parsed, a warning message shall be displayed: EN "Wrong file(s) format. Please select other files." UA "Невірний формат файл(у/ів). Будь ласка оберіть інші файли.", import shall not be started. [Import] button shall be disabled.

   3.2. if *.json files can be parsed, go to step 4.

4. When *.json files have been parsed, system checks structure of Import Files. Selected Import Files shall be two files with different structures (refer to ImportFiles_Format_and_Fields_mapping.xls): Import File 1, containing patients' data AND Import File 2, containing clinical and laboratory data for the patients in File 1

   4.1. If in Import Files an expected attribute is missing, a warning message shall be displayed: EN "Expected <attribute name> attribute(s) is missing. Please specify all expected attributes or select other files." (UA "Очікувані атрибути <attribute name> відсутні. Вкажіть усі очікувані атрибути або оберіть інший файл."), where in <attribute name> all missing expected attributes names are listed comma and space delimited. If a number of symbols in a message with missing attributes is more than 483 symbols (3 rows with message's text) show message "Expected attributes are missing. Please specify all expected attributes or select other files." UA: "Очікувані атрибути відсутні. Вкажіть усі очікувані атрибути або оберіть інший файл.". Import shall not be started. [Import] button shall be disabled.

   4.2. If Import Files structure is as expected, go to step 5

5. If all validations in steps 1-4 were successful, then after a user clicks [Import] button on EHS Import form the system shall check the number of the ongoing uploads:

   5.1. If the number of the ongoing uploads is more than or equal to the Maximum Allowed Number of Concurrent Uploading Sessions ("UploadingEhsSessionsCount" in the eidss_general.config file, by default "UploadingEhsSessionsCount"=5), the system shall display the message with a busy indicator EN: "The system is busy now importing other files. Please try again a few minutes later." UA: "Наразі система зайнята імпортом інших файлів. Будь ласка, повторіть спробу через декілька хвилин.". "Patient Data File" and "Laboratory/Clinical Data File" fields shall NOT be cleared. Import shall not be started.

   5.2. If the number of the ongoing uploads is less than the Maximum Allowed Number of Concurrent Uploading Sessions, then go to step 6.

6. System performs Import Files validation. The following checks shall be performed:

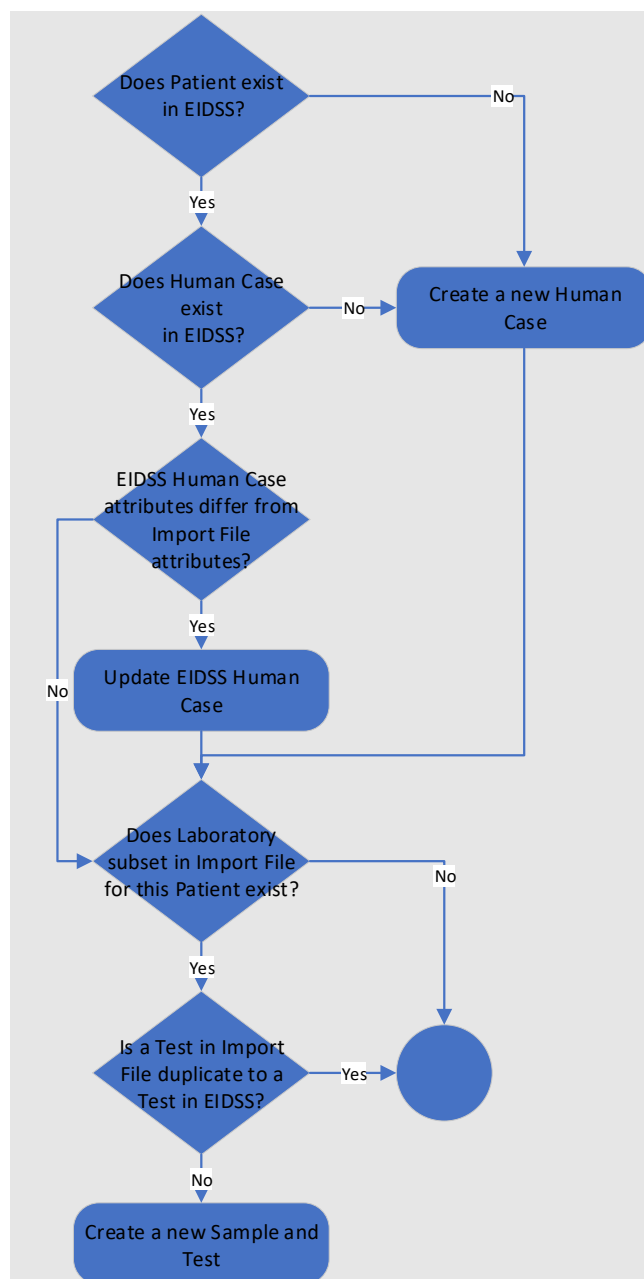| #	Validation step	Resolution for the File with Errors
1	The system shall check data types, date formats, max string lengths of each Import File attributes (ImportFiles_Format and Fields mapping.xls file).	- EN: Wrong data type, UA: Невірний тип даних - EN: Wrong date format, UA: Невірний формат дати - EN: Max string length is exceeded, UA: Перевищена максимальна довжина строки
2	The system shall check mandatory fields if they are not empty (ImportFiles_Format and Fields mapping.xls file).	EN: Mandatory field cannot be empty UA: Обов'язкове поле не може бути порожнім
3	The system shall check unknown reference values not present in the concordance tables (reference concordance matrixes are located in the corresponding tabs in the Reference_Concordance_Tables file).	EN: Unknown reference value UA: Невідоме значення довідника
4	The system shall check business rules for date fields: - "person_birth_date" ≤ "onset_date" - "person_birth_date" ≤ "issued"	EN: Date of birth is later than date of event UA: Дата народження пізніша за дату події
5	The system shall check for duplicate patient records in Import File 1. Two records shall be considered duplicates if they have equal "patient_id" values. If duplicate patient records are found, the first found record shall be used, all other records shall be ignored.	N/A
6	The system shall check for duplicate test records in Import File 2. Two records shall be considered duplicates if: • "patient_id" are equal AND • Test attributes "code", "value" and "issued" are equal If duplicate test records are found, the first found record shall be used, all other records shall be ignored.	N/A
7	The system shall check if all events in Import File 2 have referenced patients in Import File 1.	EN: Unknown patient (does not exist in the file with patients) UA: Невідомий пацієнт (не існує у файлі з пацієнтами)

6.1. In case of failed data validation, system shall create a *.json Error File with extra attributes with errors, based on Import File with highlighted errors, and a warning message shall appear: EN

"During file validation some errors were found. Please see errors in the 'ImportFileName_Errors_YYYYMMDDHHMMSS.json' file. Fix the errors and try again." UA: "Під час перевірки файлу було виявлено помилки. Будь ласка, перегляньте помилки у файлі "ImportFileName_Errors_YYYYMMDDHHMMSS.json". Виправте помилки та повторіть спробу». Import shall not be started.

    6.2. If Files validation succeeded, a confirmation message shall appear: EN "Files have been validated successfully. Do you want to import them?" UA "Файли успішно перевірені. Бажаєте їх імпортувати?", go to step 7

7. System checks cross references between Import File 1 and Import File 2, go to step 8

    If a patient in Import File 1 does not have referenced event in Import File 2, such a patient shall be ignored and not imported

8. System checks for each patient in Import File 1 if there is an existing EIDSS patient. EIDSS patient shall be considered as existing based on [EIDSS Patient duplicate identification rule](#)

8.1. If EIDSS patient already exists. If in EIDSS more than one patient found based on EIDSS Patient duplicate identification rule, first of them shall be updated.

    8.1.1. System checks if "strEhsPatientId" attribute is blank

        8.1.1.1.   If "strEhsPatientId" is blank, then it shall be updated with "patient_id" value from Import File

        8.1.1.2.   If "strEhsPatientId" is NOT blank, go to step 8.1.2

    8.1.2. For patient(s) candidate(s) for update system shall show such patients with highlighted attributes, which differ in EIDSS and Import File 1. User provides resolution for such patient(s) if they need to be updated or dismissed. Refer to Resolution to update Patient(s). If user marked a patient to be updated, then such a patient needs to be updated based on attributes received in Import File 1, go to Update existing EIDSS Patient.

8.2. If no EIDSS patients are found based on EIDSS Patient duplicate identification rule, such a patient needs to be created in EIDSS, go to Create new EIDSS Patient.

9. For an existing EIDSS patient, system checks if there is an existing EIDSS human case. EIDSS human case shall be considered as existing based on EIDSS Human Case duplicate identification rule.

9.1. If EIDSS Human Case already exists, system checks if Human Case needs to be updated (Human Case attributes in EIDSS differ from human case in Import File).

    9.1.1. If EIDSS Human needs to be updated, it is updated based on rules, described in Update existing EIDSS Human Case, then go to step 11.

    9.1.2. If EIDSS Human does NOT need to be updated, go to step 11.

9.2. If EIDSS Human Case does NOT exists, this Human Case needs to be created, refer to Create new EIDSS Human Case, then go to step 11.

10. For a new Patient system creates a new Human Case, refer to Create new EIDSS Human Case, then go to step 11.

11. If in Import File a Test record is identified based on <u>Import File Human Case Test identification rule</u>, then system checks if there is an existing EIDSS Human Case Test. EIDSS human case Test shall be considered as existing based on <u>EIDSS Human Case Test duplicate identification rule</u>.

    11.1.   If EIDSS Human Case Test already exists, this Test record shall be skipped.

    11.2.   If EIDSS Human Case Test does NOT exist, a new Sample and new Test, linked to it, shall be created, refer to <u>Create new EIDSS Test record in Human Case</u>.

12. After successful data import system creates File with Results of import. File with Results of data import shall have the same extension (*.json), format and key attributes as the uploaded Import File 2, and for each event shall contain:

- Additional attribute "eidss_human_case" with corresponding EIDSS Human case ID of the created/updated Human Case AND
- Additional attribute "eidss_result" with the following possible values:
  - "Event ignored" (UA "Епізод ігноровано"), in case if duplicated event in Import file has been ignored
  - "New case created" (UA "Створено новий випадок"), in case if a new EIDSS Human Case has been created based on the event
  - "Existing case updated" (UA "Оновлено існуючий випадок"), in case if an existing EIDSS Human Case has been updated based on the event
  - "Existing case with no updates" (UA "Існуючий випадок без оновлень"), in case if the event has a duplicate in EIDSS and Human Case/Test did not require update based on the event.

    The predefined name of the output file shall be "ImportFileName_Results_YYYYMMDDHHMMSS.json". A message shall be displayed: EN "Please see the results of data import in the 'ImportFileName_Results_YYYYMMDDHHMMSS.json' file", UA "Будь ласка, перегляньте результати імпорту даних у файлі 'ImportFileName_ Results_YYYYMMDDHHMMSS.json'".

1.3.1 Create new EIDSS Patient

If system identified that a new Patient needs to be created (refer to <u>EIDSS Patient duplicate identification rule</u>), then a new record shall be added to Persons list with the following data received from Import File 1 (refer to <u>ImportFiles_Format and Fields mapping.xls</u>)

Import File Field Name	EIDSS Field Name	
patient_id	Hidden attribute of patient strEhsPatientId	
first_name	Name: First	
last_name	Name: Last	
second_name	Name: Middle	
person_birth_date	Date of Birth	

Import File Field Name	EIDSS Field Name	
person_birth_date	Age	Age shall be calculated based on basic EIDSS rules and Date of Birth
person_birth_date	Age Type	Age shall be calculated based on basic EIDSS rules and Date of Birth
gender	Sex	
address.area	Current Residence: Region	
address.region	Current Residence: Rayon	
address.settlement	Current Residence: Town or Village	
address.street	Current Residence: Street	
address.building	Current Residence: House	
address.apartment	Current Residence: Apt.	
address.zip	Current Residence: Postal Code	
phones.number	Current Residence: Phone Number	

1.3.2   Resolution to update Patient(s)

If system identified that a Patient needs to be updated (refer to EIDSS Patient duplicate identification rule), then EN: **Patients Candidates for Update U02**, UA: **Пацієнти-Кандидати на оновлення U02** modal form shall be developed in EIDSS Web. Patients Candidates for Update U02 form shall be opened automatically after Import Files verification, if during Import Files uploading process at least one EIDSS patient candidate for update based on Import Files was found.

Refer to 506 files upload solution for EIDSS Thailand for the example of Candidates for Update form implementation.

The Patients Candidates for Update U02 form shall display Patient by Patient the found EIDSS Patients, which are considered to be candidates for update. On the form a user gives a resolution to each of the Patient, candidate for update, if it shall be updated, dismissed or a new Patient shall be created (in case when the two found Patients are not duplicates).

The Patients Candidates for Update U02 form shall display by default the first found EIDSS Patient, considered to be a candidate for update, with a counter showing the total number of found Patients and buttons to navigate back and forward between the found Patients. The form shall contain the following components:

- Navigator with a counter with the total number of found Patients and buttons to navigate back and forward between the found Patients;
- On the left pane the list of the current EIDSS Patient attributes' values;
- On the right pane the list of attributes values of the Import File Patient;
- Functional buttons.

Navigator

The Navigator shall have the following format: [< button] [Serial number of the Patient displayed]/[Total number of Patients for update] [> button].

The sorting of the EIDSS Patients in the grid shall correspond to the sorting of the Patients in the uploaded Import File.

By clicking on [< button]/[> button] the system shall navigate a user between Patients back and forward. By default, the first found Patient, candidate for update, shall be displayed.

Attributes of the Patient

On the left pane the list of the current EIDSS Patient attributes' values shall be displayed. On the right pane the list of attributes values of the Import File Patient shall be displayed. All the attributes shall be non-editable text fields. If there is a difference between a value of the EIDSS Patient attribute and Import File Patient attribute, then the font color of values of these attributes shall be red. Only fields on the left pane shall have labels.

The panes shall contain the following list of EIDSS human Patient attributes:

Label	EN: EIDSS attributes UA: ЕЛІССЗ атрибути	EN: e-Health Attributes UA: e-Health атрибути
EN: EHS Patient Id UA: EHS Ідентифікатор пацієнта	strEhsPatientId	patient_id
EN: Last Name UA: Прізвище	Name: First	first_name
EN: First Name UA: Ім'я	Name: Last	last_name
EN: Middle Name UA: По-батькові	Name: Middle	second_name
EN: Date of Birth UA: Дата народження	Date of Birth	person_birth_date
EN: Sex UA: Стать	Sex	gender
EN: Region UA: Область	Current Residence: Region	address.area
EN: Rayon UA: Район	Current Residence: Rayon	address.region
EN: Town or Village UA: Населений пункт	Current Residence: Town or Village	address.settlement
EN: Street UA: Вулиця	Current Residence: Street	address.street

Label	EN: EIDSS attributes UA: ЕЛІССЗ атрибути	EN: e-Health Attributes UA: e-Health атрибути
EN: House UA: Буд.	Current Residence: House	address.building
EN: Apt. UA: Кв.	Current Residence: Apt.	address.apartment
EN: Postal code UA: Поштовий індекс	Current Residence: Postal Code	address.zip
EN: Phone Number UA: Доманшій телефон пацієнта	Current Residence: Phone Number	phones.number

Functional Buttons

Button	Description

EN: Finalize
UA: Завершити
	The button shall be used to finalize the work on the Patients Candidates for Update U02 form.
	By clicking [Finalize] button the system shall check <Resolution> (UA "Резолюція") of each Patient on the form.
	
	• If there is at least one Patient with <Resolution>= *Unspecified (UA "Не визначено")*, then a warning message shall appear: EN "*There are Patients without resolution. Do you want to dismiss them?*" UA "Є пацієнти по яким не прийнято рішення. Бажаєте пропустити?..." with [Yes]/[No] buttons.
	   o By clicking [Yes] for all the Patients with <Resolution>= *Unspecified* the value shall be changed to *Dismiss (UA "Пропустити"),* the message shall be closed, the Patients Candidates for Update U02 form shall be closed, a confirmation message shall appear: EN "Files have been validated successfully and all resolutions for updates of existing patients have been made. Do you want to import files?" UA "Файли успішно перевірені та всі резолюції по оновленю пацієнтів були надані. Бажаєте імпортувати файли?" with [Yes]/[No] buttons
	      ▪ By clicking [Yes] upload process shall begin. Only those Patients shall be updated which have <Resolution>= *Update (UA "Оновити").*
	      ▪ By clicking [No] data import shall be terminated.
	   o By clicking [No] the message shall be closed, the Patients Candidates for Update U02 form shall be refreshed: only those Patients shall be left on the form, which have <Resolution>= *Unspecified.* The upload process shall NOT begin.

Button	Description

	• If there are no Patients with \<Resolution>= *Unspecified*, then a confirmation message shall appear: EN "Files have been validated successfully and all resolutions for updates of existing patients have been made. Do you want to import files?" UA "Файли успішно перевірені та всі резолюції по оновленю пацієнтів були надані. Бажаєте імпортувати файли?" with [Yes]/[No] buttons
	   ○ By clicking [Yes] upload process shall begin. Only those Patients shall be updated which have \<Resolution>= *Update (UA "Оновити").*
	   ○ By clicking [No] data import shall be terminated.

EN: Dismiss All UA: Пропустити усі	By clicking [Dismiss All] button a confirmation message shall appear: EN "*All the Patients will not be updated. Are you sure you want to dismiss all the Patients?*" UA "Дані по усім пацієнтам не будуть оновлені. Ви впевнені, що бажаєте пропустити усіх пацієнтів? …" with [Yes]/[No] buttons. By clicking [Yes] for all the Patients \<Resolution> shall be changed to *Dismiss,* the message shall be closed, the Patients Candidates for Update U02 form shall be closed, the upload process shall begin. No Patients shall be updated. By clicking [No] the message shall be closed, no further actions are required.
EN: Dismiss UA: Пропустити	By clicking [Dismiss] button the current Patient's \<Resolution> shall be changed to *Dismiss* AND the next Patient candidate for update shall be shown automatically*.* The button shall affect only the currently displayed Patient.
EN: Update UA: Оновити	By clicking [Update] button the current Patient's \<Resolution> shall be changed to *Update* AND the next Patient candidate for update shall be shown automatically*.* The button shall affect only the currently displayed Patient.

1.3.3   Update existing EIDSS Patient

If user's resolution is to update a Patient (Resolution to update Patient(s)), then the following attributes of a Patient shall be updated, if in EIDSS the values differ from the data received in Import File 1.

Import File Field Name	EIDSS Field Name	Rule
patient_id	Hidden attribute of patient strEhsPatientId	
first_name	Name: First	
last_name	Name: Last	
second_name	Name: Middle	
person_birth_date	Date of Birth	

Import File Field Name	EIDSS Field Name	Rule
person_birth_date	Age	Age shall be calculated based on basic EIDSS rules and Date of Birth
person_birth_date	Age Type	Age shall be calculated based on basic EIDSS rules and Date of Birth
gender	Sex	
address.area	Current Residence: Region	
address.region	Current Residence: Rayon	
address.settlement	Current Residence: Town or Village	
address.street	Current Residence: Street	
address.building	Current Residence: House	
address.apartment	Current Residence: Apt.	
address.zip	Current Residence: Postal Code	
phones.number	Current Residence: Phone Number	

When Patient is updated, then the found Persons List record shall be updated AND Patient's data in all Human Cases, events for which were found in Import File 2, shall be updated.

1.3.4 Create new EIDSS Human Case

If system identified that a new Human Case needs to be created (refer to EIDSS Human Case duplicate identification rule), then a new Human Case record shall be added with the following data received from Import File 1 and 2 (refer to ImportFiles_Format and Fields mapping.xls)

Import File Field Name	EIDSS Field Name	Rule
N/A	Case status	Case status = In Process
division.area division.region	Entered by Organization	The Organization shall be an organization, linked to an EIDSS site, which has Rayon equal to division.region, according to concordance table Rayon Sites to Rayons. If no corresponding rayon site is not found, the Organization shall be an organization, linked to an EIDSS site, which has Region equal to division.area, according to concordance table Region Sites to Regions.
N/A	Entered by Officer	The User shall be a user, linked to an organization, selected for "Entered by Organization", according to concordance table Rayon Sites to Rayons OR Region Sites

Import File Field Name	EIDSS Field Name	Rule
		to Regions, depending on organization selected. In Laboratory/Clinical JSON files there might be blank and non-blank values of division.region for the same Settlement (or in some cases several ehs.region are matching to one eidss.rayon). Search for eidss.setllement in EIDSS shall be performed by combination of division.area, division.region (even if blank) and division.settlement. • if such eidss.settlement is found, then take Organization from Rayon to Sites concordance table matching rayon of eidss.settlement • if such eidss.settlement is not found, search for eidss.rayon in EIDSS by combination of division.area, division.region (even if blank) • if such eidss.rayon is found then take Organization from Rayon to Sites concordance table matching rayon of eidss.rayon • if such eidss.settlement AND eidss.rayon are NOT found then take Organization from Region to Sites concordance table matching division.area
N/A	Local Identifier	Local Identifier= імп.нов
clinical.code	Diagnosis	Value shall be taken from clinical.code field, if it is blank, then Diagnosis=COVID-19
clinical.onset_date OR laboratory.issued	Diagnosis Date	If clinical.onset_date is not empty Diagnosis Date= clinical.onset_date, otherwise Diagnosis Date=laboratory.issued
clinical.onset_date OR laboratory.issued	Date of Completion of Paper Form	If clinical.onset_date is not empty Date of Completion of Paper Form = clinical.onset_date, otherwise Date of

Import File Field Name	EIDSS Field Name	Rule
		Completion of Paper Form =laboratory.issued
N/A	Initial Case Classification	Initial Case Classification = Suspect
N/A	Hospitalization	Hospitalization = Unknown
managing_organization.edrpou	Notification sent by: Facility	If EIDSS organization with Organization ID= managing_organization.edrpou, then Human Case Notification sent by: Facility shall be linked to the found organization. If Organization's attributes values in EIDSS differ from Organization's attributes in Import File, Organization in EIDSS shall NOT be updated. If no EIDSS organization with Organization ID= managing_organization.edrpou is found, then a new organization shall be created (refer to Create new EIDSS Organization) and Human case Notification sent by: Facility shall be linked to the created organization.
division.region division.area	Notification Received By (Facility)	Same as for Entered by Organization. The Organization shall be an organization, linked to an EIDSS site, which has Rayon equal to division.region, according to concordance table Rayon Sites to Rayons. If no corresponding rayon site is not found, the Organization shall be an organization, linked to an EIDSS site, which has Region equal to division.area, according to concordance table Region Sites to Regions. In Laboratory/Clinical JSON files there might be blank and non-blank values of division.region for the same Settlement (or in some cases several ehs.region are matching to one eidss.rayon). Search for eidss.setllement in EIDSS shall be performed by combination of division.area,

Import File Field Name	EIDSS Field Name	Rule
		division.region (even if blank) and division.settlement. • if such eidss.settlement is found, then take Organization from Rayon to Sites concordance table matching rayon of eidss.settlement • if such eidss.settlement is not found, search for eidss.rayon in EIDSS by combination of division.area, division.region (even if blank) • if such eidss.rayon is found then take Organization from Rayon to Sites concordance table matching rayon of eidss.rayon • if such eidss.settlement AND eidss.rayon are NOT found then take Organization from Region to Sites concordance table matching division.area
[doctor.last name] [doctor.first name] [doctor.second name] [division.phones] [division.area] [division.region] [division.settlement] [division.street] [division.building] [division.email]	Additional Information/Comments Including Movement of Patient During Period of Maximum Incubation	"Additional Information/Comments Including Movement of Patient During Period of Maximum Incubation" Human Case attribute shall be updated with text "Контакти: [doctor.last name] [doctor.first name] [doctor.second name], [doctor phone]. Адреса: [division.area], [division.region], [division.settlement], [division.street], [division.building], [division.phones], [division.email]". Where "**doctor phone**" is taken from "Performer_id" concordance table, "phone number" column, for the doctor found by "doctor.performer_id" from Import File.
first_name	Name: First	Attribute of a patient, to which Human Case is linked
last_name	Name: Last	Attribute of a patient, to which Human Case is linked
second_name	Name: Middle	Attribute of a patient, to which Human Case is linked

Import File Field Name	EIDSS Field Name	Rule
person_birth_date	Date of Birth	Attribute of a patient, to which Human Case is linked
person_birth_date	Age	Age shall be calculated based on basic EIDSS rules and Date of Birth
person_birth_date	Age Type	Age shall be calculated based on basic EIDSS rules and Date of Birth
gender	Sex	Attribute of a patient, to which Human Case is linked
address.area	Current Residence: Region	Attribute of a patient, to which Human Case is linked
address.region	Current Residence: Rayon	Attribute of a patient, to which Human Case is linked
address.settlement	Current Residence: Town or Village	Attribute of a patient, to which Human Case is linked
address.street	Current Residence: Street	Attribute of a patient, to which Human Case is linked
address.building	Current Residence: House	Attribute of a patient, to which Human Case is linked
address.zip	Current Residence: Postal Code	Attribute of a patient, to which Human Case is linked
phones.number	Current Residence: Phone Number	Attribute of a patient, to which Human Case is linked

1.3.5   Update existing EIDSS Human Case

If system identified that EIDSS existing Human Case needs to be updated, then the following attributes of a Human Case shall be updated, if in EIDSS the values differ from the data received in Import File 2 (refer to ImportFiles_Format and Fields mapping.xls).

Import File Field Name	EIDSS Field Name	Rule
clinical.onset_date OR laboratory.issued	Diagnosis Date	If clinical.onset_date is not empty Diagnosis Date= clinical.onset_date, otherwise Diagnosis Date=laboratory.issued. **NB!** Diagnosis Date can be changed only to earlier date.
N/A	Local Identifier	• IF in Import File 2 only Clinical subset for this Human Case exists, then Local Identifier= імп.діаг ONLY if Diagnosis Date is updated.

Import File Field Name	EIDSS Field Name	Rule
		• IF in Import File 2 only Laboratory subset for this Human Case exists, then Local Identifier = імп.лаб • IF in Import File 2 both Clinical AND Laboratory subsets for this Human Case exist, then Local Identifier = імп.лаб **NB!** If in Human Case Local Identifier is NOT blank AND does NOT equal "імп.нов" or "імп.діаг" or "імп.лаб", then "імп.діаг/імп.лаб" text shall be added to the field in the following format: <імп.діаг/імп.лаб><,><space><existing text>.

1.3.6 Create new EIDSS Test record in Human Case

If in Import File 2 Laboratory subset exists, then a new Sample shall be created and linked to a Human Case, with the following attributes (refer to ImportFiles_Format and Fields mapping.xls).

Import File Field Name	EIDSS Field Name	Rule
N/A	Samples Collected = Yes	Human Case attribute
N/A	Sample Type	Sample Type= Nasopharyngeal smear
N/A	Local Sample ID	Local Sample ID = New unique ID (autogenerated by the system)
laboratory.issued	Collection date	
N/A	Sent to Organization	The Organization shall be an organization, linked to an EIDSS site, which has Region equal to division.area, according to concordance table Region Sites to Regions.
laboratory.issued	Sent Date	

A new Test shall be created and linked to the created Sample, with the following attributes (refer to ImportFiles_Format and Fields mapping.xls).

Import File Field Name	EIDSS Field Name	Rule
laboratory.code	Test Name	

Import File Field Name	EIDSS Field Name	Rule
N/A	Test Diagnosis	Test Diagnosis= COVID-19
laboratory.issued	Result Date	
N/A	Test Category	Test Category= Confirmatory
N/A	Test Status	Test Status = Final
laboratory.value	Result/Observation	

1.3.7   Create new EIDSS Organization

If system identified that a new Organization needs to be created (when Human Case is created/updated and Organization for Notification Sent by: Facility is not found in EIDSS), then a new Organization record shall be added with the following data received from Import File 2 (refer to ImportFiles_Format and Fields mapping.xls)

Import File Field Name	EIDSS Field Name
managing_organization.edrpou	Unique Organization ID
managing_organization.name	Abbreviation
managing_organization.name	Abbreviation National
managing_organization.name	Organization Name
managing_organization.name	Organization Name National
N/A	Accessory Code = Human, Vector
N/A	Order = 0
N/A	Country = Ukraine
division.phones	Phone
division.zip	Postal code
division.area	Region
division.region	Rayon
division.settlement	Town or Village
division.street	Street
division.building	House