

## **9. Comorbidities and Past Medical History - Requirements Specification**

### **Introduction**

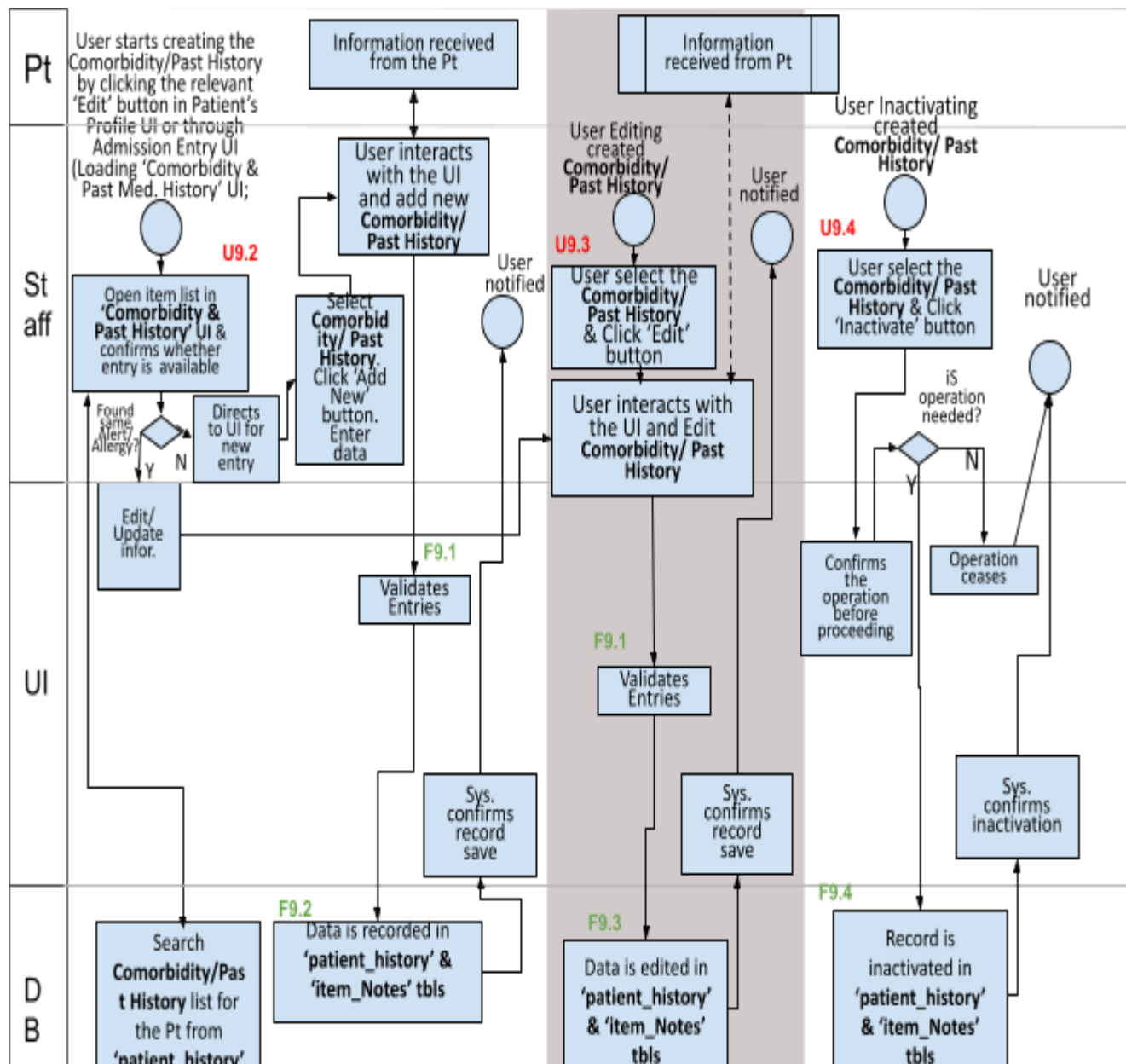
These are captured during the admission process, inward care, ED, or outpatient department. Sometimes these are flagged by the community and GPs. This information is important in the decision-making process in care and to include in the discharge communication to the community/GPs. These are entered at the admission, inward stay, outpatient direct patient communication, or as per GPs/community inputs by the clinical or ward-based clerical staff.

- There is a dedicated interface for this; **'Comorbidities & Past History'** UI (**Comorbidities\_PastHistory**) which has the **'patient\_history'** as the main backend table. **'Item\_notes'** tbl is used to save notes related to an item (comorbidity/Past History). To list comorbidities and past conditions in relevant combos Snowmed data should be used.
- Need to upgrade old **'Add / Edit Past History'** UI in Dompe
- This should be used by all clinical and ward clerks/admin staff (Accessibility is available in the 'Group\_Permission' tbl [link to DB Schema](#) ; goto 'Group\_Permission' sheet)

### **Needed additional functions**

- This should be captured into the patient profile with the date (not into the episode) as special information related to the patient.
- These entries should be auto-populated from past records.
- Should be validated during entries (drop-down lists).
- Should be used in decision-making in other modules (Special care for stroke patients with hypercholesterolemia).
- May need communication/integration with already available clinical systems and MHR
- The interface should facilitate entry of new comorbidity/past history for the Pt, if there is already an entered same comorbidity/past history for the same Pt that should be flagged to the user.
- Auto-filling, dropdown menus should be provided to validate entries and improve user-friendliness.
- This data might receive from other care providers or MHR electronically. In that case, that data should be obtained from different sources through an API/direct entry.
- Once executing user actions (**U9.1 - U9.4**) always should check for the accessibility and privileges of the user (User Access Level) (Accessibility is available in the 'Group\_Permission' tbl [link to DB Schema](#) ; goto 'Group\_Permission' sheet)
- Any change in the data (through **F9.2- F9.4**) of the main table should be recorded in the system log with Date, Time, User Name, Table, Field & Change
- Consumer entered Patient Comorbidities & Past Medical History data should be shown in this UI. Consumer data recorded in **'patient\_history\_CI'** tbl (which has more or less the same fields as per 'Patient\_history' tbl).
- Further consumer should be able to validate provider entered Comorbidities & Past Medical History data and flagged into this UI (as 'Confirmed' or marked as 'Wrong')
- Further, correction of these entries as per consumer validation should be enabled. Consumer App gets provider data from the **'patient\_history'** tbl to be checked by the consumer.
- In this comparison another field in the **'patient\_history'** ('Consumer\_Checked' field) captures whether the consumer marks the record as 'Wrong' or 'Confirmed' as correct. Last Update date of the both consumer and provider entries should be taken into account in flagging mismatch.

## Application Process - Create/Edit/Inactivate Comorbidities & Past Medical Issues of a patient



## User Functions

- U9.1 - Loading - Comorbidity\_PastHistory
- U9.2 - Create the new Comorbidity\_PastHistory
- U9.3 - Edit Comorbidity\_PastHistory
- U9.4 - Inactivate Comorbidity\_PastHistory

## System/DB Functions

- F9.1 - Validating entries in creating a Comorbidity\_PastHistory
- F9.2 - Creating a Comorbidity\_PastHistory
- F9.3 - Edit Comorbidity\_PastHistory
- F9.4 - Inactivate Comorbidity\_PastHistory

Current UI

'Add / Edit Past History'

Add / Edit Past history

Mr. KS KAVEE RODRI / Male / ~73yrs 26dys / Single

PID: 157

DOB: ~1948-03-01

Village: Alliyawatta

Date/Age/Year

60

\*SNOMED

Disorder

Event

Finding

Procedure

Hypertension:follow-up default

Remarks

Active

Yes

Date created :

2021-03-21 17:46:25

Data accessed on :

0000-00-00 00:00:00

Save

Cancel

## Suggested UI Improvements (Name: 'Comorbidities & Past History' → Comorbidities\_PastHistory)

### Comorbidities & Past History

PID: 1221335622 Name: John Doel DOB: 23-05-1967 Address: 67, Main St, Rosetta, TAS 7028

[Patient Profile](#) [Patient Search](#)

#### Comorbidities/Past Medical Issues

Condition	Reported Date	Category
TIA	12/01/2000	
Herniotomy	05/10/1999	Surgical
Diabetes	04/02/1995	
Depression	10/10/1999	Psychiatry

[Toggle Button](#) [Show Inactives](#)

Consumer has flagged issues with this entry

#### Diagnosis of Past Hospital Episodes

Pneumonia- (12/01/2000; Inpatient)  
Unwitnessed Fall - (05/10/1999; Inpatient)  
Neuralgia- (04/02/1995; Outpatient)  
Ankle sprain (02/12/1994; ED)

☒ Inpatient ☐ Outpatient ☐ Emergency

#### Entries from Consumer

Hernia operation - (12/01/2000)  
Gastritis - (05/10/1999)

☒ Comorbidity ☐ Past Medical Issue: Category- [Medical/Surgical/Obstetrics/Psychiatry/Paeds.](#)

Date/Time Diagnosed/ Detected: 21/02/2021 or [Days/Months/Years](#) back [Consumer Seen](#)

Free text combo, list is provided from Snowmed filtered as per entry.

Comorbidity/Past Medical Issue: Asthma

Status: Past/Present

Description: Moderate asthma, on a seretide inhaler

Do not view in the Consumer side: ☐

Include in Discharge Summary: ☐

Notes:

Note	Author	Date
Poorly controlled, not on regular preventer Managed by GP	Joe Noel (Doctor) Mary Price (Nurse)	12/01/21 04/08/19

[Add Note](#)

Active: Yes/No

Date Entered: 21/01/2021 Created by: Shan Rodrigo Last Edited by: Emma Johnson

[Add](#) [Edit](#) [Save](#) [Cancel](#) [Inactivate/Activate](#)

*One of these should be entered*

*If only these entered date should be calculated and entered into the table*

*Once consumer seen the record from app - 'Consumer seen' or once marked as wrong 'Consumer marked incorrect'.*

*Activated only after new entry is saved*

*This is changed from 'Inactivate/Activate' button*

*Auto-assigned*

*List of entered notes. Saved in 'Item Notes' tbl. Once clicked on the item popup subform should show the values.*

*In form load 'Save' & 'Cancel' should be disabled. Once 'Add'/'Edit' is clicked 'Add'/'Edit' should be disabled while 'Save'/'Cancel' enabled. After 'Save'/'Cancel' clicked 'Add'/'Edit' enabled while 'Save'/'Cancel' disabled.*

### Diagnosis of Past Medical Episode

- Popup menu (once the cursor moves over the item) should show the details of the episode; Date start/End, Primary Dx, Secondary Dx, Admitted consulted/DR seen, Outcome. Once clicked → direct to relevant episodes.
- This is just a viewer, data is obtained from past episodes.

### Highlighting with Pink in the Comorbidities/Past Medical Issues list

- Comorbidities/Past Medical Issues marked as 'Wrong' by the consumer (as per text 'Wrong' in the 'Consumer\_Checked' field for the record in 'patient\_history' tbl) should be highlighted in 'pink' in this list.
- Moving the cursor over them should show the comment from the consumer ('Consumer\_Comment' field for the past medical issue (record) in 'patient\_history' tbl).

### Entries from Consumer

- Data from 'patient\_history\_CI' tbl.
- Once clicked on an item should show a pop-up menu with the details of the entry and button to copy consumer entry into this provider end.

## Adding/Viewing Notes

- When the 'Add Note' button is clicked this should appear with blank input for add new.
- When a Note from the note list is clicked it should view the whole note as below and the provision for the user who entered the note should be able to edit/inactivate (Thus user name should be checked when trying to edit/update; except for Sys. Admin.).
- Once saved the Note should be recorded in 'Item\_Notes' table filling fields as follows; **Note\_ID** (auto increment), **NPID** (Pt ID), **Item\_ID** (ALLERGYID, PATHISTORYID, etc.), **Table\_ID** (tbl of the items), **UI\_ID**, **Note\_Body**, **CreateDate**, **CreateUser**, **CreateTime**, **LastUpDate**, **Active**

**Create Inpatient Episodes**

PID: 1221335622 Name: John Doel DOB: 23-05-1967 Address: 67, Main St, Rosetta, TAS 7028 Patient Profile Patient Search

Comorbidities/Past Medical Issues Comorbidity Past Medical Issue *One of the options should be selected*

TIA- (12/01/2000)  
Hypercholesterolaemia  
Diabetes- (04/02/1995)

**Notes on Comorbidity/Past Medical History**

Note : *Max 500 characters, should indicate as a tool tip text*

Created by: Author *Auto-assigned* Date & Time : Date Time

Add Edit Save Inactivate Back *These should be enabled for the same user only.*

*Toggle Button; inactive items clicked.* Show Inactive

Diagnosis of Past History

Pneumonia- (12/01/2000; Inpatient)  
Unwitnessed Fall - (05/10/1999; Inpatient)  
Neuralgia- (04/02/1995; Outpatient)  
Ankle sprain (02/12/1994; ED)

*Popup menu (once the cursor moves over the item) should show the details of the episode; Date start/End, Primary Dx, Secondary Dx, Admitted consulted/DR seen, Outcome.*

*This is just a viewer, data is obtained from past episodes.*

Inpatient Outpatient Emergency

*In form load 'Save' & 'Cancel' should be disabled. Once 'Add' / 'Edit' is clicked 'Add' / 'Edit' should be disabled while 'Save' / 'Cancel' enabled. After 'Save' / 'Cancel' clicked 'Add' / 'Edit' enabled while 'Save' / 'Cancel' disabled.*

Add Edit Save Cancel Inactivate/Activate

Notes :

Note	Author	Date
Poorly controlled, not on regular preventer Managed by GP	Joe Noel (Doctor) Mary Price (Nurse)	12/01/21 04/08/19

Active : Yes/No *This is changed from 'Inactivate/Activate' button* *Auto-assigned*

Date Entered : 21/01/2021 Created by : Shan Rodrigo Last Edited by : Emma Johnson

Consumer side entry

Comorbidities & Past History

PID: 1221335622   Name: John Doel   DOB: 23-05-1967   Address: 67, Main St, Rosetta, TAS 7028

Patient Profile

Patient Search

Comorbidities/Past Medical Issues

TIA- (12/01/2000)  
Hypercholesterolaemia - (05/10/1999)  
Diabetes- (04/02/1995)

Show Inactives

Diagnosis of Past Hospital Episodes

Pneumonia- (12/01/2000; Inpatient)  
Unwitnessed Fall - (05/10/1999; Inpatient)  
Neuralgia- (04/02/1995; Outpatient)  
Ankle sprain (02/12/1994; ED)

☒ Inpatient   ☒ Outpatient   ☒ Emergency

Entries from Consumer

Hernia Operation- (12/01/2000)  
Gastritis - (05/10/1999)

☒ Comorbidity   ☐ Past Medical Issue

Date/Time Diagnosed/ Detected: 21/02/2021 or Days/Months/Years back Consumer Confirmed

Comorbidity/ Past Medical Issue: Consumer Confirmed

Status : Past/Present Consumer Confirmed

☐ Include in Discharge Summary

Comorbidities / Past History: Entries from Consumer side

Reported Date: Date

Comorbidity/ Past Medical Issue: List to consumer provided from Snowmed + free text. This is open for editing by the provider.

Status : Past / Present

Description :

Created Date: Date

Add to Provider side

Back

Add

Edit

Save

Cancel

Inactivate/ Activate

Table: patient\_history, table ID: 35 (modify table)

Blue - Using old fields | Red - New field | Black- Not using fields

Table_ID	Table_Name	Field_Name	Field_ID	Type	Type_Txt	Size	Null	Key	Default	Extra	Comment	Add_Entry	Auto_Fill	Default_val	Add_Entry_Order	Add_Entry_Section	Missing_Item	
35	patient_history	PATHISTORYID	35_1	int(11)	int	11	NO	PRI	NULL	auto_increment								
35	patient_history	PID	35_2	int(11)	int	11	YES		NULL									
35	patient_history	NPID	35_3	varchar(20)	varchar	20	YES		NULL		Patient Hospital ID							
35	patient_history	History_Type	35_4	varchar(50)	varchar	50	YES		NULL		Comorbidity/Past History							
35	patient_history	SNOMED_Code	35_5	varchar(20)	varchar	20	YES		NULL									
35	patient_history	SNOMED_Text	35_6	varchar(200)	varchar	200	YES		NULL									
35	patient_history	History_Name	35_7	varchar(200)	varchar	200	No		NULL		Comorbidity/Past History Name							
35	patient_history	History_Category	35_18	varchar(20)	varchar	20	No		NULL		Medical/Surgical/Obstetrics/Psychiatry/Paeds.							
35	patient_history	Detected_Date	35_8	Date			YES		NULL		Diagnosed/Detected date							
35	patient_history	Description	35_9	varchar(500)	varchar	500	YES		NULL		Description							
35	patient_history	Remarks	35_10	varchar(200)	varchar	200	NO		NULL									
35	patient_history	Status	35_18	varchar(10)	varchar	10	NO		'Present'		'Past/Present'							

35	patient_history	CreateDate	35_11	datetime	datetime		YES	NULL										
35	patient_history	CreateUser	35_12	varchar(200)	varchar(200)		YES	NULL										
35	patient_history	LastUpDate	35_13	datetime	datetime		YES	NULL										
35	patient_history	LastUpDateUser	35_14	varchar(200)	varchar(200)		YES	NULL										
35	patient_history	Active	35_15	tinyint(1)	tinyint(1)	1	YES	1										
35	patient_history	HistoryDate	35_16	varchar(50)	varchar(50)	50	YES	NULL										
35	patient_history	O_PID	35_17	varchar(100)	varchar(100)	100	YES	NULL										
35	patient_history	Not_view_consumer	35_18	tinyint(1)	tinyint(1)	1	YES	NULL		Whether enable view by the consumer								
35	patient_history	Consumer_Checked	35_19	varchar(10)	varchar(10)	10	YES	NULL										
35	patient_history	Consumer_Check_Date	35_20	datetime	datetime		YES	NULL										
35	patient_history	Consumer_comment	35_21	varchar(250)	varchar(250)	250	YES	NULL										
35	patient_history	Include_Discharge_Summary	35_22	tinyint(1)	tinyint(1)	1	YES	NULL		Include in discharge summary								



Examples  
HCS

Adams, Sally Anne

THCI 107324278 53 year old FEMALE HT 175cm WT 85kg

ADMITTED • 21 mth RHHW7AMEDI

GENMED DIAGNOSIS Acute exacerbation of chronic bronchitis

Problems / Diagnoses

+ Choose

≡ View List

Start Date	Type	Problem / Diagnosis	Note	On Summary?
7/06/2019	Principal	Community acquired pneumonia	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7/06/2019	Principal	Acute exacerbation of chronic bronchitis	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Secondary	None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Summary** **Settings** **Notes**

THCI 107324278 **53 year old FEMALE** HT 175cm WT 85kg



## Edit Problem / Diagnosis

Start Date:

7/06/2019



Type: \*

Associated Problems/Comorbidities ▼

On Summary:



Include on Summary

Details: \*

Chronic obstructive pulmonary disease

Note:

[View Record and History →](#)

Save

Cancel

Created by Jess Kingston on 15-Mar-2021 13:24

Original

## Edit Problem / Diagnosis

Start Date:

7/06/2019



Type: \*

Associated Problems/Comorbidities ▼

On Summary:



Include on Summary

Details: \*

Cop

Note:

80 result(s) found.

Chronic obstructive pulmonary disease

Coprolalia

Coprophilia

Coproporphyruria

Eating faeces

Sexual intercourse - finding

Coproporphyrinuria

Copra itch

Difficulty coping

Avoidance coping

Copper poisoning

Copper fever

Inability to cope

Copious sputum

Able to cope

Hypocupraemia

Dysfunctional coping using self defence mechanisms

Created by Jess Kir

Save

Cancel

Original

SYSAD • 25-Jul-2019








## Problem / Diagnosis

Start Date	7/06/2019
Type	Principal
Include on Discharge Summary	✓ Include on Discharge Summary
Problem / Diagnosis	Community acquired pneumonia
Note	

Created by Jess Kingston on 15-Mar-2021 13:24

Original

### Actions

-  Modify
-  View History
-  Add Problem/Diagnosis
-  View List
-  Add Task...
-  0 Tasks
-  Delete