

Process Design Document / Solution Design Document

Process Name: BH Care Teams Automation

Purpose of Document

This document serves as the technology policies and procedure for Intelligent Automation Hub at Geisinger

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1. Document Control

Applies to:	All IAH RPA Operating Model
Classification:	Highly Confidential
Owner:	Intelligent Automation Hub Team

DOCUMENT HISTORY

Version	Date	Author	Approver	Reasons for Change
1.0	12/5/2022			Initial Draft
1.1	6/20/23			Initial review with business
1.2	7/6/23			Updated with business – steps
1.3	7/20/23			Updated with business – steps
1.4	7/28/23			Updated with business – steps
1.5	8/7/23			Updated with business – steps
1.6	8/29/23			Updated with business – steps/crosswalk/receptionist report/dept list
1.7	9/7/23			Updated with business – bot crosswalk/scenarios: added ‘discharge’ trumps all logic. Updated crosswalk added to PDD.
1.8	9/23/2023			Update due to EPIC October SU upgrade.
1.9	10/25/23			Added RWB Mock-Up: Mtg with business and reviewed.

REVIEW/APPROVAL

Role	Name	Date
SME		
SME		
Process Owner		
Business Architect		
Developer		
IAH Director		

STAKEHOLDERS

Role	Name	Email
Process Owner		
SME		
SME		
Business Architect		
IAH Director		
Developer		

2. Document Details

2.1 PURPOSE OF THIS DOCUMENT

The Process Design Document outlines the business process chosen for automation and the technology being utilized.

The document describes the sequence of actions performed as part of the business process, the conditions and rules of the process prior to automation and how they are envisioned to work after automating it, partly or entirely. This specifications document serves as a base for developers, providing them with the details required for applying automation to the selected business process.

3. Current State Process Description

3.1 PROCESS SUMMARY

Behavioral Health providers are not directly linked to Care Teams in Epic.

This causes challenges identifying who is actively involved in Behavioral Healthcare impacting scheduling and medication workflows. The build of automatic empanelment would be based on appointment follow up/ disposition and discharge status. The empanelment automation build would use follow up/disposition and Care Teams in Epic.

The triggers to **add** a BH provider to the patient's Care Team for outpatient would be if the disposition/follow up section was completed with appt needed OR if the PRN option was used.

The triggers to **remove** a BH provider from the patient's Care Team for outpatient would be if a BH provider enters d/c summary note (with SDE) OR BH provider used the new Discharge button in disposition / follow up section within the epic encounter.

3.2 DATA FLOW & APPLICATIONS

3.2.1 INPUT

Input	Format	Location	Is it natively digital?	Is it structured?
Custom Receptionist report including: f/up disposition information ('return', prn, blank, new discharge 'checkbox') for all completed visits for BH OP	Receptionist Report	Epic	Yes	Yes

RWB showing all BH OP completed visits where provider used discharge summary note with SDE	Reporting Workbench		Yes	Yes
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3.2.2 OUTPUT

Output	Format	Location	Frequency	Comment
Daily Summary	XLS	Outlook email		

3.2.3 APPLICATIONS

Application	Version	Interface	Req Key / Operation / URL	Comment
Epic	May 2022	Citrix	Test and Prod Bot Username and Passwords ADD prod URL here	Access Request needs to be submitted by IAH 1. RWB for Discharge SDE 2. Receptionist Report
Outlook		Desktop Application		
Excel		Desktop Application		

3.3 BUSINESS RULES

Rule	Detail
Automation frequency	Daily, M-F

Bot start time	8pm
Patient unique field	MRN
Excluding weekends and holidays	No
SLAs	By 2:00 AM daily (M-F) If bot does not finish by 2:00 AM, it is okay to complete the transactions later in the AM

3.4 CURRENT STATE METRICS

Avg. Daily Transactions	# Batches Daily	Avg. Volume / Batch	Weekly Avg. Volume	Frequency
93 total daily Total of Add and Remove daily: 62+31 = 93 62 per day Add to Care Team 31 per day Remove from Care Team	1	93 62+31 = 93	465 93 X 5 days = 465	EOD daily M-F

3.5 CURRENT STATE PROCESS FLOW

CURRENT STATE:

Step 1: Providers to complete **disposition and follow up** section in Epic Outpatient for ALL visits in the BH department

Step 2: If no appointment needed for patient but staying established with BH, check off 'prn'

Step 3: If no appointment needed for patient and **not** continuing care with BH, use '**no follow up needed**'.

Step 4: If appointment is needed for patient, provider to enter in **disposition and follow up** section at end of visit

4. Future State Process Description

4.1 FUTURE STATE PROCESS FLOW

FUTURE STATE:

Step 1: Bot will log in to epic

Step 2: Bot will run Receptionist Report to identify patients

Step 3: From the receptionist report, bot will identify provider to be added/or removed to Care Teams

Step 4: Bot will open Appointment Desk and update Care Teams.

Step 4a: Bot **add** the BH encounter provider from the disposition date column on receptionist report to *Care Teams*

Step 4b: Bot will **remove** the encounter provider from Care Teams if disposition / follow up is section has 'Discharge check box' checked or d/c summary note with SDE was used in BH OP encounter (list provided using Reporting Workbench for SDE's used for bot).

Step 5: Bot will send business output file daily.

*Report can be run at end of day (marc to explore to see if that will make the report more performant)

4.2 IN SCOPE FOR RPA

100% of current state process is in scope for RPA.

4.3 OUT OF SCOPE FOR RPA

The actions out of scope for RPA should be listed in the table below together with the reasoning.

Activity/Action	Reason for out of scope	Future State solution	Measures to be taken for future automation
N/A	N/A	N/A	N/A

4.4 FUTURE STATE DETAILED STEPS

Step	Short description of key process steps	Screenshot for reference
1.	Bot will launch EPIC production	
2.	Bot will enter user id and press tab button to move to password field.	
3.	Bot will enter password and use tab button to move to Log In button.	
4.	Bot will click on the Log In button.	
5.	Bot will enter 100168 for GMC Psychiatry in the Department field and click on Continue button.	
6.	Bot will click on continue button.	
7.	Bot will open Receptionist Report by	

	clicking on 'Recept Rpt' from top tool bar	
8.	ONE TIME ONLY – Steps 8-10 Bot will click on the Criteria Tab Bot will click on the <i>Appointment</i> <i>Locations</i> section and on the 'LIST' Button. Bot will enter all departments using dept ids from excel document provided by business: Psych Departments Master List 4.29.24 (For pilot, bot will filter by department ID and only run departments listed for Pilot) Provider/Resource: bot to choose Provider Date/Time Range: From Date: T	

	To Date: T From Time: Bot to enter 8:00pm Appointment Status: Bot to choose Completed Visit type: Keep as All <i>This is done only once to setup the Receptionist report</i>	
9.	Bot will click on Display tab Bot will choose the following in the Available Columns section (in order) and use right arrow to add to Selected Columns section: Appt date [1020] Appointment time [1001] Patient Name [1004] Patient MRN [1003] Appointment Provider / Resource Name [1006] Appt Department Abbreviation and ID [1007]	

	Appointment Status [1008] Appt Visit Type Abbreviation and ID [1009] Encounter Type [103153] Disposition Date [104301] <i>This is done only once to setup the Receptionist report</i>	
10.	Bot to click on SAVE button. Bot will add name of Receptionist Report on General Tab in the Name field as: IAH BH Care Teams Automation Receptionist Report Bot will click on SAVE	
11.	Bot will locate report: IAH BH Care Teams Automation Receptionist Report	

	And will click on RUN	
12.	Bot will sort Type column and search for two Visit Types: Iris Telephonic Intake [349186] Iris [34180] Bot will create business exception. Business exception reason will be IRIS Intake Visit Type	
13.	See crosswalk for scenarios and bot actions.	
14.	Bot will start at the top of the Receptionist Report for today and click on the first patient. Bot will review the Disposition Date column information.	
15.	Bot will follow crosswalk/scenario document for actions: BH Care	

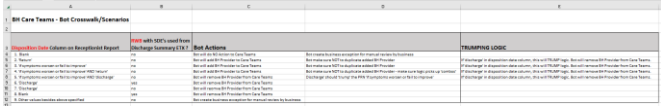
	Teams Crosswalk Scenarios	
	Business Exception, no BH provider added to Care Teams	Receptionists Report: Disposition Date Column = Blank
	If the Disposition Date Column is BLANK, bot takes no action to BH Care Team. Bot will create business exception. Business exception reason = No Disposition/Follow Up	
	Add to Care Teams	Receptionist Report: Disposition Date Column = 'Return'
16.	If the Disposition Date Column shows the word ' return ', Bot will click on patient to highlight.	
17.	Bot will record the following	

	from the Receptionist Report: Patient Name Patient MRN Provider Name Provider ID Department name Department ID	
18.	Bot will click on Appointment Desk	
19.	Bot will open Care Team by clicking on provider from Story Board	
20.	Care Teams form will open	
21.	Bot to review Patient Care Team prior to adding provider. If BH provider already exists as Care Team member Bot will NOT add same BH Care Team member (no repeating). This will be considered a	If BH provider is already listed in Care Teams, bot will NOT do additional action(s). Keep same BH Provider as is.

	successful transaction	
22.	Bot will click on 'Add Team Member' field in the Patient Care Team section.	
23.	Bot will type in the BH provider last name or provider ID copied from step 2 into the 'Add Team Member' field and click enter	
24.	Bot will click 1 st location shown for that provider. NOTE: 1 st choice is shown pulling from provider SER (Masterfile) address section per Epic IT.	
25.	BH Provider will be listed as 'Team Member' in the 'Add New Assignment' box in the Care Teams section.	

26.	Bot will click on the Accept button to complete.	
27.	Bot will continue to next patient on the receptionist list until finished.	
	Add to Care Teams	Receptionist Report: Disposition Date Column = 'if symptoms worsen or fail to improve'
28.	If the Disposition Date Column shows the words <i>'if symptoms worsen or fail to improve'</i> or <i>'if symptoms worsen or fail to improve AND return'</i> bot will follow steps 2-12 above for Adding BH Provider to Care Team	
29.	Bot will continue to next patient on receptionist list until finished.	
	Remove from Care Teams	Receptionist Report: Disposition Date Column = 'Discharge' and RWB using SDE's for Discharge

30.	If the Disposition Date Column shows the word 'discharge' , Bot will click on that patient to highlight.																																																																																																				
31.	Bot will record the following from the Receptionist Report on that patient: Patient Name Patient MRN Provider Name Provider ID Department name Department ID																																																																																																				
32.	In addition to the Receptionist Report, Bot will run the RWB (reporting workbench), called BH Care Team BOT that shows all pt's discharged today that a BH provider used the discharge summary note with an SDE.	The RWB will have the SDE's used which will be built by Epic IT: 1. Therapy/Psychology Discharge Summary (ETX ID 36337) – GHS#856 2. Psychiatry OP Discharge Summary (ETX ID 32541) – GHS#10001132 It will also have the Psych Departments which were provided by business. : Psych Departments Master List 4.29.24 Reporting Workbench Mock- Up for Bot: <table><tr><th></th><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th><th>H</th></tr><tr><td>1</td><td colspan="8">BH Care Teams RWB (discharge SDE's used in discharge summary note) for Bot</td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td>MRN</td><td>Patient Name</td><td>SDE Used</td><td>Date of Service</td><td>Encounter Type</td><td>Provider Location</td><td>BH Provider Name</td><td>BH Provider ID</td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td colspan="8">SDE's</td></tr><tr><td>9</td><td colspan="8">Therapy/Psychology Discharge Summary (ETX ID 36337) – GHS#856</td></tr><tr><td>10</td><td colspan="8">Psychiatry OP Discharge Summary (ETX ID 32541) – GHS#10001132</td></tr></table>		A	B	C	D	E	F	G	H	1	BH Care Teams RWB (discharge SDE's used in discharge summary note) for Bot								2									3									4	MRN	Patient Name	SDE Used	Date of Service	Encounter Type	Provider Location	BH Provider Name	BH Provider ID	5									6									7									8	SDE's								9	Therapy/Psychology Discharge Summary (ETX ID 36337) – GHS#856								10	Psychiatry OP Discharge Summary (ETX ID 32541) – GHS#10001132							
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	Encounter provider department to be added to RWB report	
33.	Bot to refer to the Crosswalk/Scenario document for 'Discharge' logic	 Bot will remove BH provider from Care Teams: 1. 'discharge' in disposition date column and NO on RWB for SDE use 2. 'discharge' in disposition date column and YES on RWB for SDE use 3. 'blank' in disposition date column and YES on RWB for SDE use 4. Trumping logic = anytime 'discharge' is found in disposition date column on receptionist report, bot to Remove pt from BH Care Teams
34.	Bot will click on Chart Review and enter patient MRN for 1 st patient to highlight. Bot will click on Epic button and type in 'Care Team' to search for Care Teams as option.	
35.	Bot will click on Care Teams	
36.	Bot will check the Active Team Member section in Care Teams for the recorded BH	

	Provider. The End date would NOT be filled in.	
37.	Bot will click on the EDIT (pencil) button for the BH provider that needs to be removed from Care Teams in Team Member section	
38.	Bot to enter 'T' for Today's date in the 'End' field. Bot will add Comments, ' IAH removed provider as Care Team Member per Behavioral Health Discharge Protocol. '	
	NOTE: For history of Care Teams changes, user can click on the 'recycle' button	
	Bot will continue to next patient on list until finished.	

Exception	Actions	Comment
Patient Not Found	Flag in output file and continue to next Masterfile entry to process	
Break-the-Glass	Flag in output file and continue to next Masterfile entry to process	
Deceased	Flag in output file and continue to next Masterfile entry to process	
Provider Not Found in Care Teams	Flag in output file and continue to next Masterfile entry to process	
Discharge/Follow Up Discrepancy	Flag in output file and continue to next Masterfile entry to process	Discharge summary signed (SDE) but follow up requested in follow up disposition using the Discharge Box. (anything but 'discharge', this will be a conflict).
IRIS Intake Visit Type	Flag in output file and continue to next Masterfile entry to process	Visit types: IRIS Telephonic Intake [34186] or IRIS Video Intake Home [34180] Bot to NOT modify care teams BH Provider for above visit types. If these show up on report, place as business exception.
No Disposition/Follow Up	Flag in output file and continue to next Masterfile entry to process	Blank Disposition / Follow Up in BH Encounter

4.6 SYSTEM ERRORS

Error	Action	Comment
Application crash	Recover and retry 3 times	
Epic Downtime	Pause bot if during run time	
Epic Upgrade	Review with business and determine what/if any action is necessary	

4.7 PROCESS CONTINUITY

Prevention: Establishing and defining what redundancies and protocols are in place to prevent failures in the process and maintain business continuity Detection: Defining what protocols are in place for monitoring the process to detect bugs and stop incorrect actions at all points post go-live and escalated monitoring during massive systems changes Recovery Assessing the level of risk, define strategic stakeholders to be alerted in need of a recovery and outlining the recovery plan to get back to operational state.			
Scenario	Prevention	Detection	Recovery
Expected number of input files not provided or missing.	Business reviews and confirms number of anticipated files are loaded/prepared by agreed upon date.	Bot scans/inspects for anticipated files/number of files.	• Bot sends notification email to those who are on the distribution list and IAH Prod support team. • Business to resolve the issue and notify IAH regarding next steps. • IAH team to reschedule bot run based on bot's availability.
Input file format change or input file is blank (no data).	Business to notify IAH regarding upcoming changes. IAH and Business work together to prepare and follow change management process.	Bot finds out the unexpected file format and fails to complete the process.	• Bot sends notification email to those who are on the distribution list and IAH Prod support team. • Business and IAH work together prepare and follows change management process.
Bot not completing as outlined in PDD.	N/A: What was not known was not preventable.	Hypercare Phase: Daily auditing is performed and process logs are monitored.	• IAH team adjusts bot design to improve business exceptions.

Higher than expected system exceptions.	N/A: What was not known was not preventable.	Insight Dashboards created during UAT for long term monitoring of volume and exception changes (increases or decreases).	- Alert/pulses identified and notifications sent to IAH Comm Support. - Business and IAH work together if additional phase is needed. - ServiceNOW incident reported and escalated as needed.
Output file errors (timing, format, info, reporting).	N/A: What was not known was not preventable.	Hypercare Phase: Daily auditing is performed and process logs are monitored. Insight Dashboards created during UAT for long term monitoring of volume and exception changes (increases or decreases).	- Business and IAH team adjusts bot design to identify output file errors. - Business and IAH work together if additional phase is needed.
Automated QA Bot.	Bot produces email/confirmation/notification of summary indicating input matches output file/data/action results.	Bot indicates in email either success or failure of input=output comparison.	IAH Support and/or business reviews and determines next steps.
Unknown reasons If the bot fails, how will it continue and resolve issue?	N/A: What was not known was not preventable.	Bot is unable to complete the automated process.	- Bot sends notification email to those who are on the distribution list and IAH Prod support team [iah_rpa_prod_support@geisinger.edu]. - The Bot Controller will then be responsible to triage the bot disruption, fix the issue(s), and either schedule ad hoc processing or resume the bot processing.

5. Technical Details

Item	Description	Comment
Robot Type	Unattended	
Orchestrator used?	Yes	On-Premise Version
UiPath version used	2020.10.4	

6. Reporting

Report Type	Update Frequency	Details	Distribution List
Process Report	Daily	Report status of processed transactions via email: Attach Output File Subject: IAH BH Care Teams Daily Summary mm/dd/yy Body: Please see attached daily report. Successful = how many Business Exceptions = how many System Exceptions = how many	
Error Logs	At Time of Error	Report of process errors Bot will email the business to inform of the failure.	

		Subject: IAH BH Care Teams Failed mm/dd/yy Body: Bot failed due to system error. Please manually process today.	
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7. Environment Details

Application	Development Stage	Environment	Access Type	Access Key/Credential
Epic	Development	<Epic_Dev>	Username And Log in dept	Username: Login Department:
	Test	<Epic_Test>	Username And Log in dept	Username: Login Department:
	Prod	<Epic_Prod>	Username And Log in dept	Username: Login Department:
Outlook	Prod	Prod	Email account	Bot to send output summary to business using outlook
RWB (EPIC)	Prod	Prod		Bot to run RWB for SDE's used in BH Encounters in Discharge Summary ETX's (smarttext)
Excel				Bot to produce output summary in excel for business

8. Assumptions

Assumption	Impact
The entire process is automated end to end with no manual intervention.	
The distribution list, email addresses, and/or shared mailbox listed in the PDD for the purpose of process notification through email are to be maintained solely by the line of business.	

9. ADDITIONAL SOURCES OF PROCESS DOCUMENTATION

Type	Name	Link	Comments
Assessment		Discovery Assessment Outcome - Behavioral Health Care Teams.docx	IAH Teams Folder
Step Recording (video)		Recordings	IAH Teams Folder
Task Capture		n/a	IAH Teams Folder
UAT Recording (video)			IAH Teams Folder
Executive Summary		n/a	IAH Teams Folder

10. Appendix

10.1 GLOSSARY

Acronym/Term	Meaning
PDD	Process Design Document – document that contains information about the process in scope for automation and about the agreed technical solution
RPA	Robotic Process Automation
MRN	Medical Record Number
IAH	Intelligent Automation Hub
SLA	Service Level Agreement
BH	Behavioral Health
SDE	Smart Data Element (in discharge summary smarttext notes within epic)
ETX	Smarttext (discharge summary notes in epic)
RWB	Reporting Workbench