Process Design Document / Solution Design Document

Process Name: HIM – Deceased Patient Status Automation

Purpose of Document

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

TABLE OF CONTENTS

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	8/2/21			Initial Draft
1.1	8/3/21			Context changes
1.4	9/27/21			Enhancements
1.5	10/8/21			Addition of QA and DOD date check
1.6	08/17/2022			Epic Upgrade November 2022
1.7	6/17/23			Epic Upgrade August 2023
1.8	9/19/2023			EPIC SU Oct 2023

REVIEW

Role	Name	Date
SME	Sheila Ortman	
Process Owner	Sheila Ortman Janet Anderson	

STAKEHOLDERS

Role	Name	Email
Process Owner		
SME		
Process Architect		
IAH Director		
Developer		

2. Document Details

2.1 PURPOSE OF THIS DOCUMENT

This document intends to provide a detailed process and solution design proposal for robotics automation of the '**HIM – Deceased Patient Status Automation**' process.

3. Current State Process Description

3.1 PROCESS SUMMARY

The **HIM – Deceased Patient Status Automation** process involves staff sending inbasket messages to the designated BOT pool, Bot processing each patient and marking their statuses as deceased, DONE'ing the inbasket message and providing an output file to business daily

3.2 DATA FLOW & APPLICATIONS

3.2.1 INPUT

Input	Format	Location	Is it natively digital?	Is it structured?
Inbasket Message – Patient Calls	Epic Inbasket	Epic	Yes	Yes

3.2.2 OUTPUT

Output	Format	Location	Frequency	Comment
Process Report	Excel	Network Drive	Created daily	Report of processed transactions
Outlook Email	Email	N/A	Sent daily	Email containing process report

3.2.3 APPLICATIONS

Application	Version	Interface	Req Key / Operation / URL	Comment
Outlook	2016	Desktop Application	N/A	
Excel	2016	Desktop Application	N/A	
Epic		Desktop Application	IAHHIM	

3.3 BUSINESS RULES

Rule	Detail
Automation frequency	Daily
Bot start time	9p
Excluding weekends and holidays	No
SLAs	Robot finished run by 210 AM

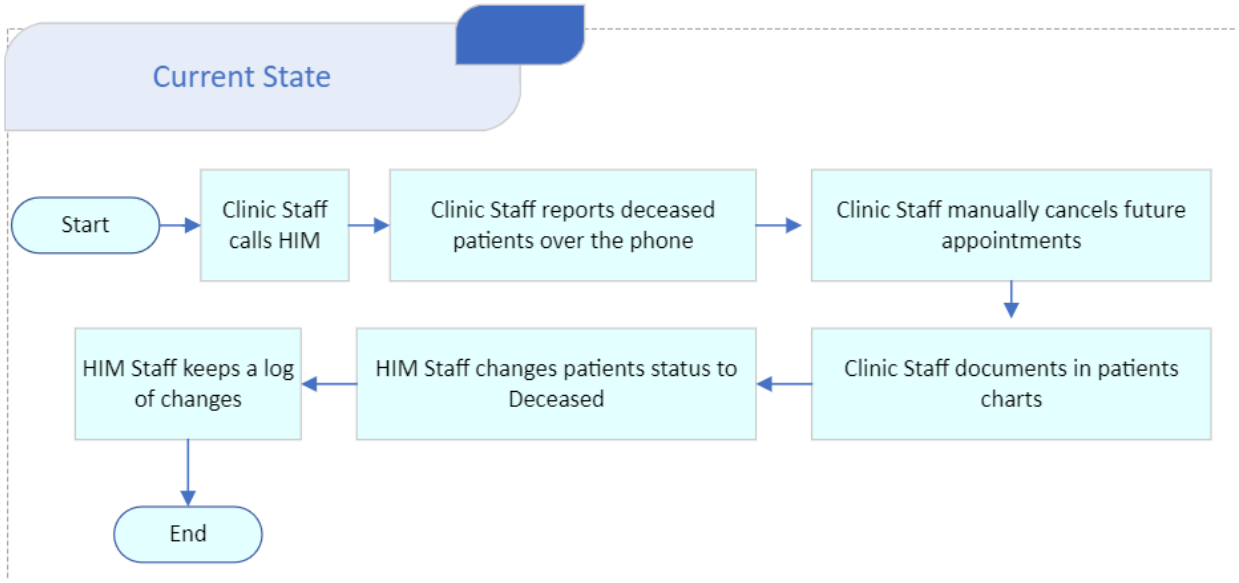
3.4 CURRENT STATE METRICS

Avg. Monthly Transactions	# Batches Monthly	Avg. Volume / Batch	Weekly Avg. Volume	Frequency

400	30	20	140	Daily

3.5 CURRENT STATE PROCESS FLOW

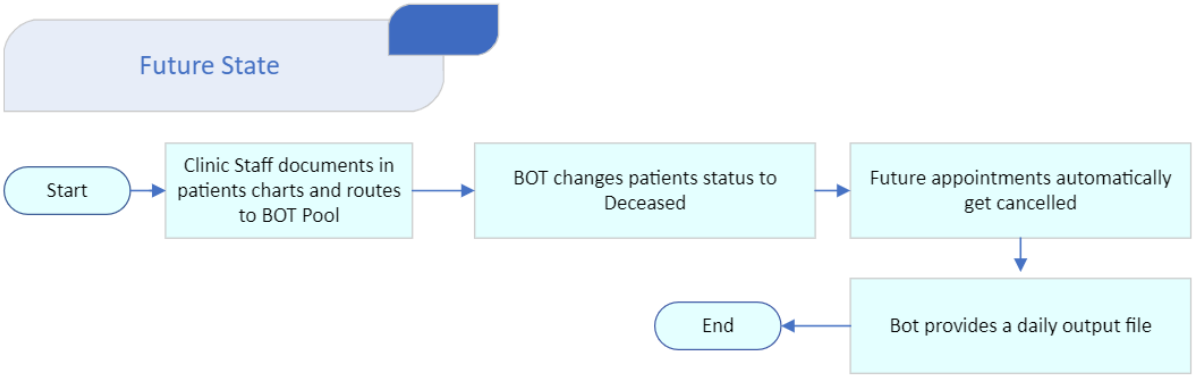
High Level Process Flow Diagram (Current state):



4. Future State Process Description

4.1 FUTURE STATE PROCESS FLOW

Bot Automation Process & Workflow Diagram (Future State):



1. Clinic Staff documents in patients' chart and routes to BOT Pool (EPIC)
2. Bot changes patients' status to DECEASED (EPIC)
3. Future appointments automatically get cancelled (EPIC)
4. Bot provides a daily output file (Outlook/Excel)

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			

4.4 FUTURE STATE DETAILED STEPS

Short description of key process steps	**Screenshot for reference**
Bot will Click on 'User ID'	
Bot will Type username IAHHIM	
Bot will Click on 'Password'	
Bot will Type *password* (get from cyberark)	
Bot will Click on 'Log in'	

Bot will type GMC HIM department and click continue	
Bot will click OK	
INBASKET SET UP STEPS (Only done once to set up)	
Bot will click Epic	
Bot will click Tools	
Bot will Click on Patient Care Tools	
Bot will click Inbasket Class	
Bot will click on empty row under Add Pool:	
Bot will Type 'him'	

Bot will click on magnifying glass	
Bot will click on HIM automated deceased pool	
Bot will click Add	
Bot will click Save	
Bot will Click on 'Accept' Adding the Pool will be completed only Once.	
Daily Workflow	
Bot will click Epic	
Bot will click Options	
Bot will click Inbasket	

If ‘Welcome to the new In Basket pops up, Bot will click ‘Remind Me Later’	
Bot will Click 'Refresh'	
Got this far ** Bot will Click on 'Patient Call'	
Bot will Click on the first message in the patient call folder	
Bot will look inside the documentation field. **Bot will read from the storyboard:** Patient Name Date of Birth Medical Record Number **Bot will read from the documentation:** Date of Death:	
If the date of death is not on or after the date of birth, Bot will mark this as business exception under Date of Death tab	

If the patient's DOB is missing, the patient will be reported as business exception	
	1 – Bot will read the patient Name, DOB, and MRN from the side bar in each message to confirm: 2 – if and when the side bar is missing, BOT will fully depend on the documentation 3 – Bot will read the date of death: information even if the patient deceased documentation format was not followed properly. Bot will find the wording **Date of death** and use the date after. 4 – Bot will look at couple of documentations since there may be different conversations going on in that encounter, Bot will look at each documentation to find the date of death 5- Bot will ignore if there is any other verbiage next to DOD and only read the DOD. Example: 3/3/2020 5pm, 3/5/2021 patient died etc. 6- I would like to be flexible with date of death format • M/d/yy --- 10/8/21 • M/d/yyyy --- 10/8/2021 • Mon d(st,nd,rd,th), yy --- Oct 8th, 21 • Mon d(st,nd,rd,th), yyyy --- Oct 8th, 2021 • Month d(st,nd,rd,th), yy --- October 8th, 21 • Month d(st,nd,rd,th), yyyy --- October 8th, 2021 • MMddyy --- 100821 (2 digits of month and date) • MMddyyyy --- 10082021 (2 digits of month and date) • MM/dd/yy --- 01/08/21 • MM/dd/yyyy --- 01/08/2021
Bot will Click on Epic	
Bot will Click on Scheduling	

Bot will click Appts	
Bot will pick the patient showing up in 'Currently Open' (Bot will confirm the name, MRN, DOB matches)	
If the patient already has been marked as deceased, the BOT will see this alert. These patients do not need to be processed again. Bot will move on to the next patient. Bot will click OK and exit the patient's appointment desk (This patient will be on the output file as already deceased)	
If Bot lands on any other tab, Bot will click back to the Appt Desk tab	
If bot lands on Break-the-Glass Bot will Cancel and move on to the next patient. (This patient will be on the output file as break-the-glass)	

Bot will click on drop down next to Patient Options in appointment desk	
Bot will click on Registration	
If Bot sees this alert, it will put in the patient lock tab and move on to the next record. Will not process this record	
Bot will click on Additional Patient Info	
Bot will click on Magnifying glass next to patient status	
Bot will click on Deceased	
Bot will click on Mark Deceased	
Bot will click on the calendar next to date of death	

Bot will enter the date from the documentation for 'date of death' If date of date was blank – Bot will put in the output file (Blank date of death)	
Bot will click Finish	
If this warning comes up, 'Ignore warnings and continue anyway' Bot will click Continue Anyway	
If this warning pops up, click OK	
If any confirmation messages Pop Up (yellow), Bot will click continue. If any hard stops – output file as failed.	
Bot will exit the chart by clicking X	
Bot will double check the deceased status from the 'I' (information),bring up the information box, and provide	

the outcome in the output file (deceased: Yes/No)	
Bot will go back to the inbasket, while same message is highlighted, it will click DONE. Epic will automatically highlight the next message (auto advance) Bot will process every message in this folder	
Bot will process all the messages (top to bottom)	
All the message statuses will be ‘ DONE”	
Once daily process completed, click refresh to ensure no messages left. BOT will click Log out	
Bot will exit Epic	
Bot will provide daily output files to business	

4.5 EXCEPTIONS IN THE PROCESS FLOW

Exception	Actions	Comment
Break the glass popup	Will provide the list of patients in output file	
Free Text documentation that BOT cant read	Will provide the list of patients in output file	
Already marked as deceased	Will provide the list of patients in output file	
DOB not on file	Will provide the list of patients in output file	
Failed unknown reasons	Will provide the list of patients in output file	
Date of Death blank	(Tab: Break the Glass/Manual Process (MRN, Name, DOB, Date of Death)	
View Only Reg	(Tab MRN, Name, DOB, Date of Death)	

4.6 SYSTEM ERRORS

Error	Action	Comment
Application crash	Recover and retry 3 times	Users will manually process the patients for that day

4.1 PROCESS CONTINUITY

Prevention:

Establishing and defining what redundancies and protocols are in place to prevent failures in the process and maintain business continuity		
Event	**Actions (Who/what/How)**	**Result**
When the system or application is down (i.e. EPIC, Facets, MI)	• Alert set up for IAH team • IAH plan accordingly	
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**		
Event	**Actions (Who/what/How)**	**Result**
Quality Assurance	• Audit/Manual review • Alert system	Established two week daily audit by QA Analyst and reporting results to business on a daily basis.
Hypercare	• Alert system • Logs reviewed by BA, QA, and Developer	Added to hypercare daily reporting starting 9/14/21.
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.		
Event	**Actions (Who/what/How)**	**Result**
If the bot fails, how will it continue and resolve issue?		If bot is unable to complete the automated process, it should email the user to provide an update as well as email alert to the Bot Controller [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/No	On-Premise/Version
UiPath version used	2019.10	

6. Reporting

Report Type	Update Frequency	Details	Distribution List
Process Report	Daily	Report of status of processed transactions Subject: *IAH – HIM – Deceased Patients Daily Patient Reports* Body of email: Please see the attached file. Successful records: ** (confirmed deceased number) Failed records: ** (confirmed deceased number) Break the Glass records: ** (confirmed number) Already Deceased records: ** (confirmed deceased number) No Birth Date records: ** (confirmed deceased number)	

		Date of Death records: ** (confirmed deceased number) Hard Stop records: ** (confirmed deceased number) Locked records: ** (confirmed deceased number) (Tab 1: Successful (MRN, Name, DOB, Date of Death, Deceased:Yes/No))) (Tab 2: Failed/Manual Process (MRN, Name, DOB, Date of Death, Deceased:Yes/No)) (Tab 3: Already Marked as deceased/ (MRN, Name, DOB, Date of Death, Deceased:Yes/No)) (Tab 4: Date of death blank/Free Text Documentation/Manual Process (MRN, Name, DOB, Deceased:Yes/No) (Tab 5: Break the Glass/Manual Process (MRN, Name, DOB, Date of Death, Deceased:Yes/No) (Tab 6: Birth Date Blank/Manual Process (MRN, Name, DOB, Date of Death, Deceased:Yes/No) (Tab : Birth Date Blank/Manual Process (MRN, Name, DOB, Date of Death, Deceased:Yes/No)	

Error Logs	Daily	Report of failed run Subject: *IAH – HIM – Deceased Patients Failed * Body: Please run the HIM automated Deceased Patients Reporting workbench report in Epic to complete the patients manually	

7. Environment Details

Application	Development Stage	Environment	Access Type	Access Key/Credential
Epic	Development	<Epic_Dev>	Username and password	Username: <username> Password: <password>
	Test	<Epic_Test>	Username and password	Do not use test patients in testing or UAT
Outlook	Development /Test/UAT/Prod	<Environment Name>	Email account and password	

8. Assumptions

Assumption	Impact

Mapping table is present in shared drive at start of automation	If file is not present then robot cannot start

9. ADDITIONAL SOURCES OF PROCESS DOCUMENTATION

Type	Name	Link	Comments
Video recording	IAH – Deep Dive 1	TBD	Insert any relevant comments
Work instructions	User process manual	TBD	Insert any relevant comments

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