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# Review on RPA in Healthcare Industry during Covid-19 Pandemic

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**ABSTRACT:** Before the pandemic, people looked for a human element in all the interaction. In healthcare industry there are lots of work are increase day by day in covid pandemic due to increasing covid cases. healthcare organizations are subjected to maximum pressure due to the shortage of healthcare workers, enormous number of patients, general risks, and public expectations. Such unprecedented conditions translate into several problems in both back- and front-office operations, including employee burnout, long response time, supply chain disruptions, documentation backlog, and others. This paper contains the how RPA resolve this problem occurred in a healthcare industry with the help of RPA bots.

**KEYWORDS:** Use cases, robotic process automation, healthcare provider, benefits.

## I. INTRODUCTION

In this covid-19 Pandemic there are lots of works are increasing in the healthcare center to do the the same task daily and this is very time consuming like fill the patient details, checking the report, copy the data and paste and this task are hospital clerk do in everyday. The main reason for this problem is due to less amount of manual employee in this covid pandemic. When it comes to do manual paper work in healthcare and transferring that records in digital format and that takes lots of time to complete the tasks and Keeping that records up-to-date manually required more time to handle this task. And this is where RPA comes in a picture it takes care of all over tasks that it will do it as you describe as it and it removes all human error like handling data simultaneously, storing the large amount files, keeping a check on the functioning of a healthcare unit's back-office and front-office support, and other similar tasks that seem tedious for ordinary human beings.

## II. USE CASES IN HEALTHCARE INDUSTRY

In the healthcare sector, employee have many task at hand because of the increasing covid cases in today 's and most of the task are dealing with the covid patient because of that their safety is at stake and main challenge comes to employee is to up to date with patient data.This required data entering, checking for previous medical history, registering the patient, symptoms observed, lab results, appointment scheduling, billing, physician credentialing, etc. and All these can take at least 20-30 minutes for a human assistant, while bots can take the few seconds to do.

**Use cases in healthcare industry are following:**

- **Accelerate COVID19 testing**

with the help of RPA, attended bot takes the patient data and matches it to hospital EMR records, records the C-19 test results, and sends them to Health Departments (such as the CDC). This will help the to accelerate the covid testing more than 90%. And this helps to reduce the wait time of hospital clerk.



- **Track COVID-19 Updates**

Bot Scan multiple data sources online, compile localized data into a daily report, and email the latest count of COVID-19 cases in the vicinity, provide guidance on getting tested, and other fact-based helpful resources.

- **Automate EMR transactions**

RPA bots takes the patients information from particular medical institution that data includes the visit of the patients, history, diagnosis and all the information of the patient.

- **Patient Registration**

RPA bots can check the registration status of covid patients in their database and register the new patients comes in the hospital and they can also extract the patient's history and information of already registered patients.

- **Schedule Remote Patient Consultations 24/7**

RPA bots are helps to automatically schedule the patients request for appointments via video consultations thereby ensuring 24/7 availability of booking service for the patients.

- **Streamlining Healthcare Claim**

RPA bot automating the increased volume of call in the hospital and constant change in policy of health and science organization to make the processing faster and easier to tracing and auditing payment accurately in the hospital.

- **Accelerate Radiology Results for COVID-19 Detection**

RPA bot automating the CT scans for faster testing of covid-19 patients for detection. And that will help to reducing wait time of patients by more than 70%.

- **Managing Testing Requests**

RPA bot automating the check in administrative tasks related to managing testing requests eliminating the human error that are comes when we do manually but with the help of RPA bot allow digital paperwork to be processed quickly.

### III. ROBOTIC PROCESS AUTOMATION

RPA will help healthcare providers to reduce the cost and provide streamline activities. RPA also increase the quality of patient care in healthcare sector. That will help the Doctors to spend more time to focusing on their patients. Patients will be happier with the care and they are receiving and will able to receive their diagnoses and treatment on time. Healthcare systems globally are limited, and the unmatched severities associated with the public-health crisis have again confirmed that. Today only 5% of institutions in the healthcare sector use the RPA technology. By McKinsey, the healthcare sector had a 36% technical potential for automation. It also stated robotic process automation as one of the emerging technologies that will reshape healthcare and create between \$350 billion and \$410 billion in annual value by 2025. 50 percent of US healthcare providers plan to invest the automated in the healthcare solutions in next coming three years. In this covid-19 outbreak demonstrate that how we quickly we

word and live can change. Currently, we are recovering from the crisis may be we seen as both the challenge and an opportunity to speed up the automation in the healthcare sector that is critical to global economic growth. Those healthcare leaders who will able to elaborate a comprehensive tech strategy and implement it, and they will not only recover faster but also come out stronger and more strong to potential disruptions in the future.

#### IV. HEALTHCARE PROVIDER

- **Max Healthcare Institute** is one of the largest healthcare chains based in New Delhi, India. they are facing the challenge with the process of patient transaction data that needs to be processed on a daily basis from recording customer details to claims processing and reconciliation data for government health scheme, everything needs a high level of accuracy and efficiency for handling that data so they decide to use uipath enterprise RPA platform that able to handle this data more efficiently.

The following processes are handle by the RPA platform in their institute:

1. Claims Processing
2. Data Reconciliation for Central Government Health Scheme (CGHS)
3. Data Reconciliation for Ex-servicemen Contributory Health Scheme (ECHS)

With this the help of RPA, they reduced the turnaround time (TAT) For claims processing, the TAT was reduced by at least 50% while CGHS & ECHS have achieved time savings in the range of 65% -75%. they are successfully rescue from that problem.

- **Big Step Technologies** are partners for the UiPath Robotic Process Automation (RPA) solution with a strong team of in-house developers having expertise in test automation, chatbot, mobile testing backed by RPA. Uipath is a leading solution in the space of Robotic Process Automation. Big Step Technologies has successfully provided the pilot phase of the solution for one of the leading labs in India. The RPA solution provided by Big Step technology has reduced the manual effort of the worker and less time required to share the test report for COVID 19 by the lab on ICMR website by automating the patient information for collecting the data and sharing process.

#### V. BENEFITS

- **Eliminating the of human error:** In rules based processes, bots apply rules that are programmed. If programmer does not make any error while writing code for task, then your rules based process will be error-free.
- **Reduce cost:** RPA reduce the manual workforce of the clinical staff and hence reduce the cost used to perform any task.
- **Improves overall experience:** The RPA bots simplifies the work for front office and make it easy for patient support team to manage the patient queries. RPA offers the higher quality of customer service to the healthcare provider to finding the solution for front and back office.
- **Productivity Rate:** The execution time to perform any task is much faster when compared to the manual approach and it will increase the productivity rate.
- **Human labor cost reductions:** RPA botsolve all the intensive task that are manually going on the hospital and that will save the time and reduce the work of clinical task and they can use these additional time resources focus on higher value work.
- **Appointment turnout optimization:** The RPA bot sent remainder to the patients about their appointment that patients are likely to be forget about their appointment so doctors provide care to more patients care to more patients that will increase the productivity and efficiency.



## VI. CONCLUSION

Thus robotic process automation is a future of healthcare industry. Where our country is dealing with a lack of healthcare workers already in this pandemic situation, RPA will help healthcare providers not only reduce costs and streamline activities, but also increase the quality of patient care. Doctors to spend more time to focusing on their patients. Patients will be happier when they get proper care and will be able to receive the proper diagnoses and treatment on time. It implemented every other country to help to reduce the work in the healthcare industry.

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