Streamlining New Intake Admission Processes for the Internal Medicine Residency Programme: A Two-Phase Approach

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A. Introduction & Background

Selecting the right candidates for the Internal Medicine Residency Programme is crucial in shaping the future of healthcare. The rigorous nature of the residency demands individuals who are not only academically excellent but also resilient and adaptable.

Each year, the programme receives 120-130 applications, initiating a meticulous document verification process and close coordination among Programme Director, Core Faculty, Supervisors, Chief Residents and Programme Executives. Streamlining this complex process is essential. Enhancing efficiency ensures that every candidate is thoroughly evaluated, allowing the programme to focus on nurturing the most promising doctors who will excel in demanding residency programme and ultimately contribute significantly to the medical field.

B. Problem Statement & Motivation

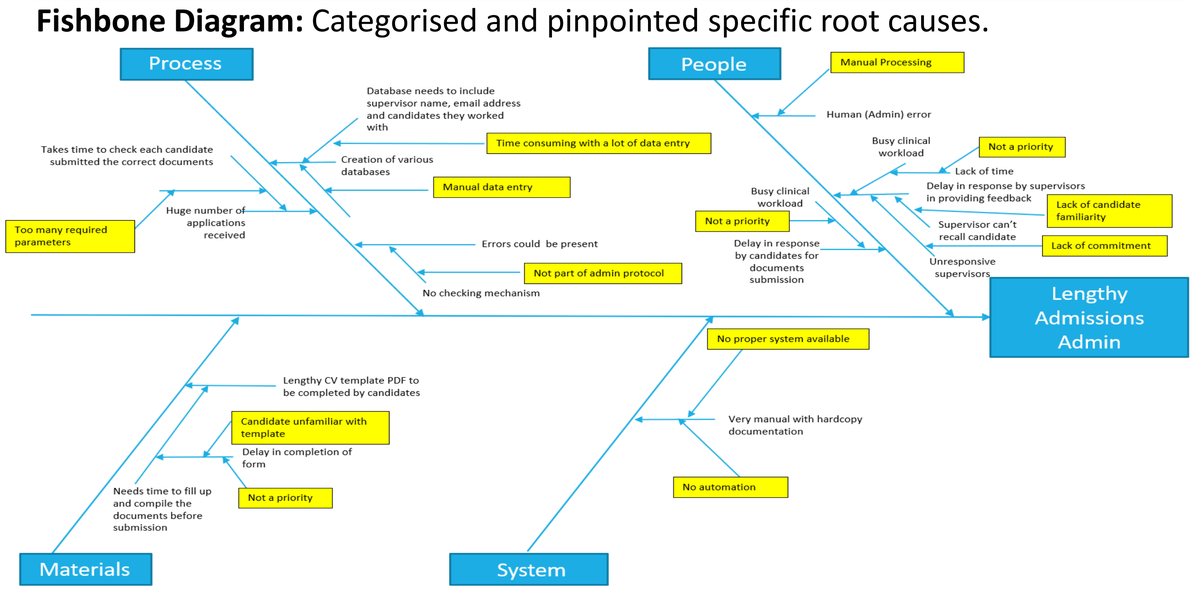
The Internal Medicine Residency Programme faces a significant challenge with the annual influx of 120-130 applications. The current admissions process involves:

- Lengthy document verification
- Manual data entry
- Time-consuming communications with candidates and supervisors

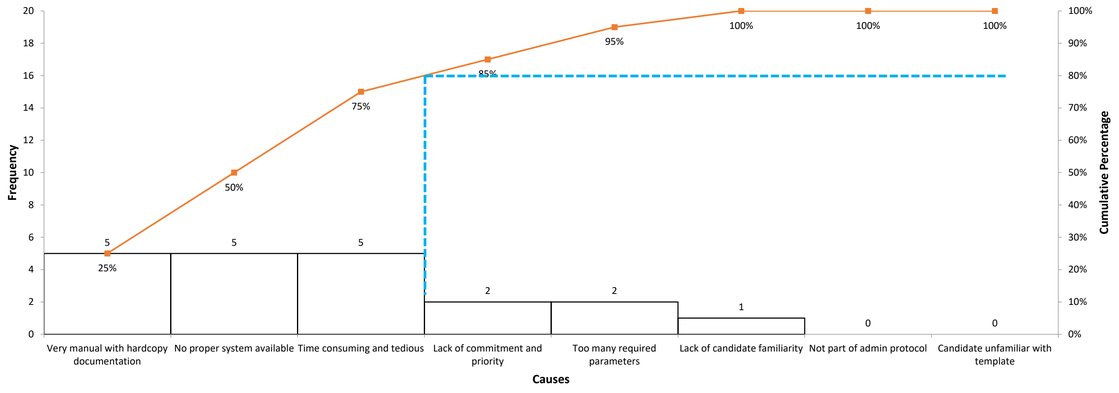
This administrative burden delays the programme's ability to identify the most suitable candidates. Enhancing efficiency and reducing the administrative workload is essential to allow more focus on candidate assessment. By streamlining the admissions process, the aim is to cut down the time spent on these tasks by 30% within three months, ensuring a more efficient and effective selection process.

C. Methodology

Fishbone Diagram: Categorised and pinpointed specific root causes.



Pareto Chart: Identified the most significant factors causing delays.



Prioritization Matrix: Ranked potential solutions based on impact and feasibility.

Scoring
1= meets criteria poorly
5 = meets criteria very well

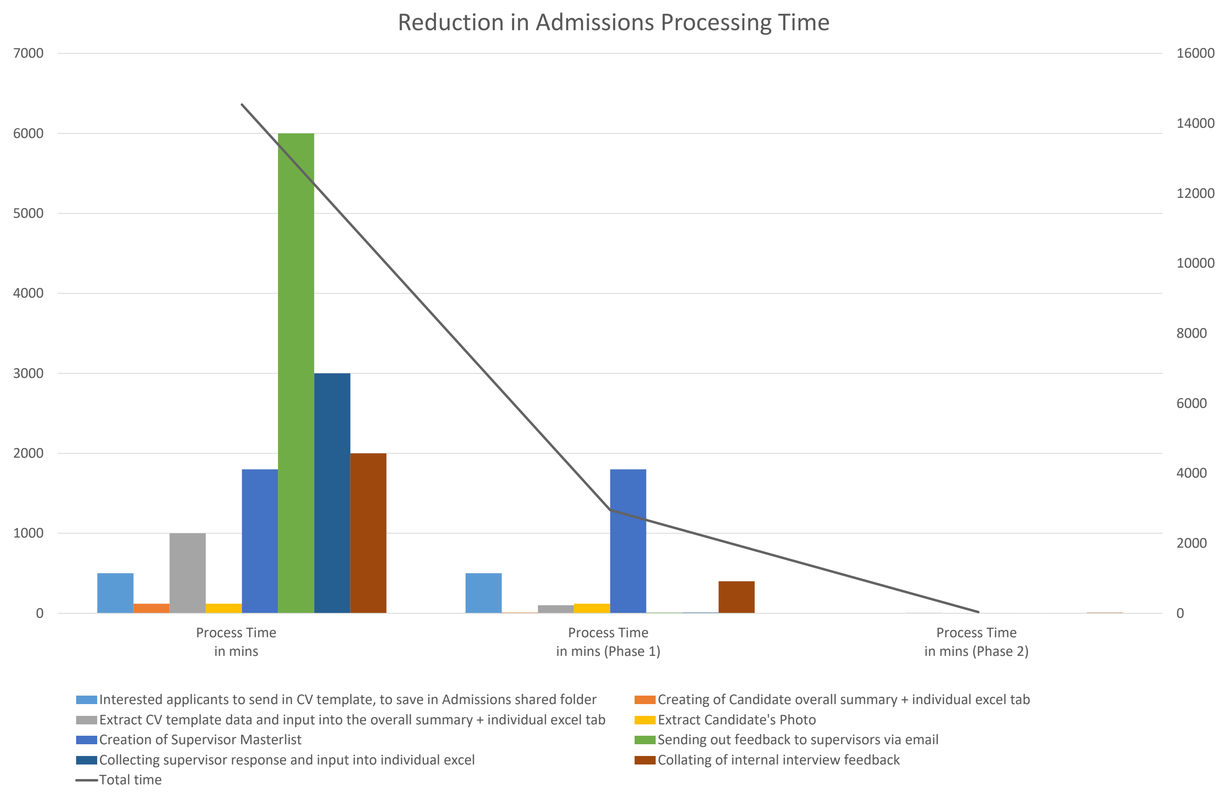
Aim of project	Concepts to address root causes	Specific Solutions	Criteria #1 Time Saving	Criteria #2 Cost Saving	Criteria #3 Feasible	Criteria #4 Sustainability	Total Score
To improve Residency CCC Turnaround Time	Very manual with hardcopy documentation	Usage of Form.sg and incorpoate into the Admissions process	5	5	5	5	20
	No proper system	Usage of RPA to assist in extracting and tabulating of information	5	5	5	5	20
	Time consuming and tedious	Removal of unnecessary components such as Rubric scoring	3	5	5	5	18
		Remove all hardcopy documentation, replace with word document/ excel/ form.sg	4	5	5	5	19
		Usage of auto-replying chatbot for email correspondence/chat	5	5	3	3	16

PDSA Cycle 1: Addressing feedback collection inefficiencies, the programme implemented Form.sg, an online tool for streamlined feedback collection. The implementation of automation in the collection process substantially reduced manual errors and minimised the time required for data entry, thereby ensuring the precise and accurate capture of supervisor responses.

PDSA Cycle 2: To further enhance efficiency, Robotics Process Automation (RPA) was introduced for tasks such as data extraction and document handling. The development and integration of RPA scripts improved accuracy and accelerated data processing, streamlining the admissions workflow.

Reason for Splitting into 2 PDSA cycles: Given staff unfamiliarity with RPA initially, the programme began with Form.sg in Cycle 1, requiring minimal training. This phased approach, amidst ongoing projects, ensured effective integration of each solution, leading to a more efficient admissions process.

D. Results



Baseline Data: Initial Analysis

During the initial analysis, the programme's process time of 15,405 minutes was largely attributed to manual tasks such as data management, correspondence handling and interview coordination. The labor-intensive activities, including CV submissions, summary creation and feedback collation, underscored the necessity for automation.

PDSA 1: Form.sg Implementation

In PDSA 1, the introduction of Form.sg decreased process time to 3,815 minutes. Automating feedback collection minimised errors, streamlined workflow and enabled staff to prioritize essential tasks. Form.sg also enhanced email efficiency and interview feedback collation.

PDSA 2: RPA Integration

PDSA 2 saw the integration of RPA, further reducing process time to 901 minutes. RPA streamlined tasks like data extraction and document handling, optimizing CV management, summary creation, and data extraction processes. This enhancement improved accuracy and liberated staff for more impactful responsibilities.

E. Conclusion & Future Works

In conclusion, the systematic approach to optimising the residency admissions workflow has led to a significant enhancement in efficiency and productivity. This is evidenced by the reduction of process times from 15,405 minutes to 901 minutes through phased implementations of Form.sg and RPA. These implementations involved the streamlining of tasks such as feedback collection, CV handling and data extraction.

Moving forward, there is a commitment to further refine the automated systems, explore the integration of machine learning algorithms for advanced data analysis, and prioritize ongoing staff training in automation technologies. The goal is to continually improve the workflow, creating an admissions process that is not only efficient and effective but also adaptable to future challenges and advancements.