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Introduction

Due to the rampant changes in the customer's demand and technology even in the medical field, there is a need for medical facilities to change their processes and way of doing things to improve their effectiveness and efficiency. However, to make these changes, the administrators have to implement in phases, and it is usually referred to as a project, and it needs proper manager to ensure all its objectives and goals are achieved at the end. A project is a formal approved document used to guide both project execution and the project control. Since the project execution requires more than one person's input, proper condition and control are paramount in ensuring that all the policies and guidelines depicted in the project plan are followed to the letter. On the other hand, project planning involves the use of schedules such as Gantt charts to plan and subsequently report the progress within the project environment. This essay will attempt to create a project plan to introduce new equipment in the hospital to aid in increasing the efficiency and effectiveness as well as the quality of the services offered by the facility.

Part 1: Project Description

St. Johns Hospital being one of the best healthcare facilities in the region runs on an outdated dialysis machine which takes the time to serve a single customer. In the worst cases, the machine misbehaves in front of the patients forcing them to be sent to other facilities to get the same service. As a result, the management of the hospital has proposed to buy a new dialysis machine and completely replace the older one. According to the management, replacing the machine is cost effective compared to the regular repairs the machine undergoes and still breaks down after some time. As a result, the proposed project will compose of components such as selection and acquisition, evaluation of equipment for inclusion into the Equipment Management Program, Preventive Maintenance inspection, review of hazards alerts and product recall, incident investigation and orientation and continuing education on how to use and maintain the machine (Kerzner, 2013).

Purpose

The primary purpose of the project is to replace the old dialysis machine by purchasing the current model in the market. Moreover, the project will ensure there is a smooth transition from the era of the old machine to a new era with the new machines through training of all workers who will be using the machine in their daily operations on how to operate and maintain to minimize the chances of occurrence of work-related accidents. However, before the implementation of the machine, the management has to conduct a feasibility test to determine the practicality of the new equipment in the hospital before the acquisition.

Project justification

In the recent years, there has been an increase in the number of patients coming to the hospital with kidney failures problems. Considering that to change a kidney is far much expensive, and an individual will need to have a possible donor, most of the patients opt to take dialysis treatment. Due to the constant failure of our dialysis machine, the hospital is forced to send these patients to other hospitals and the facility fails to maximize the opportunity to attract more customers. As a result, the management of the hospital is certain that a new machine will have positive impacts on the services that are offered in the hospital.

Objectives and goals of the project

1. After the completion of the project the manager aims to:
2. Increase the number of customers it serves in a day
3. Increase the quality of healthcare they offer to their esteemed and target customers.
4. Increase the efficiency and effectiveness of the workers working in this department.
5. Cut the maintenance cost that was used to maintain the old machine.
6. Save on time that is used to serve a single customer as well as increasing the market share by attracting more patients.

Requirements for the project

1. For the management to successfully complete project it needs:
2. Enough funds to purchase the new machine
3. Choose the best alternatives among the available machines.
4. Train the hospital workers on how to operate and maintain the machine.
5. The actual purchase and acquisition of the equipment

Tangible measures criteria

1. To measure the success of the project, the management will need to:
2. Keep a record of the number of patients treated each and every single day to project the trend and examine if there is an improvement from the old machine (Burke, 2013).
3. Keep a record of the time that is spent on a single patient to determine if an improvement is noted.
4. Calculate the cost of maintaining the new machine and compare with the cost incurred to repair and maintain the old machine and examine any notable changes.

Project scope: expected deliverables

After the full implementation of the project the management expects:

1. To increase the quality of the services offered to kidney failure patients – the hospital is expected to increase its ability to achieve the maximum expectation of their customers by giving them the best care possible in the best comfortable way
2. To reduce the cost of repair and maintenance of the machine – the hospital was spending large chunk fund to keep the previous machine running, and it is hoping that with the new purchase the funds that were spent in maintenance can be put into other useful projects.
3. Increase the effectiveness and efficiency of the hospital services – the hospital expects to offer and complete all kidney failure services with a minimum expenditure in terms of effort, money and time while maintaining high-quality service. Moreover, the hospital expected to move closer to perfection by improving the extent to which the target problem is solved.

Acceptance criteria

For the machine to qualify for purchase, it has to meet or surpass acceptance criteria such as:

1. It has to be assembled in front of the members of the management to test its compatibility with the needs and desires of the hospital.
2. The spare parts of the machines must be available locally to cut the cost of importing them for repair purposes (Meredith, 2011).
3. The machine also needs to work on at least ten individuals a single day to meet the demand of clients and decongest the appointment diary.

Project assumptions, risks, and constraints

1. There is an assumption that the machine will go for not less than three months without breakdown while working on daily basis.
2. There is an assumption that the machine will serve at least ten patients each day.
3. The major and primary risk associated with the machine is the machine break down that will halt the operations of the hospital.
4. The major constraint associated with the new machine is the lack of knowledge among the hospital workers on how to operate it.

Project roles and responsibilities

Project roles and responsibilities

Project name new machine implementation

Project manager Allan G. Smith

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| TASK | JOHN (I) | FRANK  (E) | JOYCE (E) | JANE  (I) | LEAH  (E) |
| selection and acquisition | P | P |  |  |  |
| evaluation of equipment |  |  | S | P |  |
| preventive maintenance inspection | S |  |  |  | P |
| review of hazards alerts and product recall |  | S |  |  |  |
| orientation and continuing education | P |  | P |  | S |

P= PRIMARY S = SECONDARY I = INTERNAL E = EXTERNAL

Considering the hospital has many departments and stakeholders, each category of the stakeholder has a representative in the senior management that is planning to implement the project. John represents all surgeons, Frank representing all doctors, Leah representing all nurses, Jayne represents the board of governors of the hospital, and Leah represents all medical practitioners dealing with kidney patients. These members of the stakeholders will be the first lot to undergo training in order to train other members of their teams (Pollack, 2007). Moreover, to get the full support of the stakeholders, the management will call a meeting with all head of departments to inform them of the impending project who will, in turn, spread the word to all other concerned parties.

Part 2: Grants chart

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Start Date** | **Duration** | **End Date** |
| selection and acquisition | 15/9/2016 | 2 months | 15/11/2016 |
| evaluation of equipment | 16/11/2016 | 1 month | 13/12/2016 |
| preventive maintenance inspection | 15/12/2016 | 1 month | 13/1/2017 |
| review of hazards alerts and product recall | 14/1/2017 | 1 month | 14/2/2017 |
| orientation and continuing education | 15/2/2016 | 3 moths | 10/6/2017 |

For proper and effective implementation of the project the management distributed the intended project time among the tasks in the priority of their significance. The more significant stages were given more time compared to less significant stages.

Selection and acquisition being the first stage were given a period of 2 months which is an ample time to give the team enough time to research on the available and new models of the machine in the market, evaluate all options to make a well-informed decision. Selecting the best alternatives is a complex process that may require the team members to conduct a benchmark or seek an opinion from an expert.

The second, third and fourth stages were given one-month duration each considering that they will be conducted by experts and the suppliers of the machines since they are well conversant with all advantages and disadvantages of the machine as well as all the hazards relating to it (Aloini, 2007). However, these experts must clearly explain to the team each stage to the team so that the team can be aware of what and how to deal with the machine in case of breakdown.

The final stage carries more weight than any other stage and involves training of hospital workers on how to operate the machine. Considering that this is a new model to us, it may take the time to learn, and all the hospital operatives are required give the necessary assistance to see out this exercise because without the knowledge and necessary skills on how to operate the machine it will be useless to the hospital.

The team decided to settle on the top-down and bottom-up estimation method obtaining data from previous projects that have been carried by the hospital as well as getting data from other hospitals which have undertaken a similar project in recent months. Top-down design helps in breaking down structures and data to add estimates for each stage of the project to determine the overall cost in time of efforts and money. Moreover, bottom- up will help in estimating as well as analyzing each stage independently before rolling up estimates from all stages to give a higher value. The selected techniques will succeed because they have succeeded in previous occasions and thus there are minimal chances of failure.

Part 3 strategies to maintain the project budget

A budget consists of an estimate of income and expenditure for a set period of time and thus, the project team has to ensure the expenditure does not exceed the available funds for the project. The team leader has the obligations to ensure that the team does not extravagantly spend to see the project through. Some of the strategies to maintain a sensible budget include:

1. Continually forecasting the budget - after the completion of each stage, the project team should review the budget as well as making any necessary changes because the budget needs to be reviewed now and then to prevent failure if a project (Aloini, 2007). Some of the risks associated with this method include lack of enough stress tests and carrying forward of past errors.
2. Keeping the team informed – since this is not a one man job, all the team members should be well informed of the proceedings and the amount of money at their hands to make the necessary adjustments. By constantly informing his team members of the proceedings, the team leaders is likely to face resistance from some members as well as the spread of biased information.
3. Regularly forecasting resource usage - just like the budget, the team has to keep close tabs on how they use the resources at their exposure or they find themselves short of resources. This strategy is likely to face risks and challenges such as corruption among members where some feels they should have more that they possess, and spendthrift spending as the resources will be reviewed in the near future.

Part 4: risk management, quality management, and sustainability

To effectively and the best way to deal with the risks of this project is to avoid and accept the avoidable risks. Risk avoidance in this project would include avoidance of any action and activity that is likely to result in any kind or loss or misbehave (Meredith, 2011). Moreover avoiding including individuals that are likely to jeopardize the project can help a lot in mitigating the likeliness of failure of the project. However, those risks that cannot be avoided have to be accepted and weathering the impacts and setbacks that they may bring into the project process. However, despite the fact that this strategy is dangerous, the project will deal with the risk in case of occurrence.

To maintain the quality of the project and the machine that is intended to be implemented, the team will have no other option but to constantly fulfill the requirements for quality such as quality inspection and testing. The primary aim of the project is to improve the quality of service it offers to its customers, and thus, it has to regularly test the quality by determining and eliminating causes of unsatisfactory performance and service.

The project needs to make clear choices and effectively and efficiently allocate its resources through a steady accumulation of frameworks promising to unlock the advantages and secrets of competitive advantage and successful completion of the project (Aloini, 2007). To ensure sustainability, there is the need to communicate and create awareness to the team members and all stakeholders of the importance of the project at hand to the hospital and all their customers in general.

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