

# **A Project Report on Cost Reduction through Quality Approach in Pharma with reference to Dr Reddy's Laboratories Ltd**

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**BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE PILANI**

**(RAJASTHAN)**

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## **CERTIFICATE I**

This is to certify that the project work entitled **“A Project Report on Cost Reduction through Quality Approach in Pharma with reference to Dr Reddy's Laboratories Ltd”** Delhi is a record of bonafide work carried out by **Mr \_\_\_\_\_** under my supervision towards partial fulfillment of the management programme course (MBA) of the **BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI**

**Mr. \_\_\_\_\_**

(Project Guide)

## **CERTIFICATE II**

I, \_\_\_\_\_ certify that the project report entitled **“A Project Report on Cost Reduction through Quality Approach in Pharma with reference to Dr Reddy's Laboratories Ltd”** “is an original one and has not been submitted earlier to BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI, Noida or to any other institution for fulfillment of the requirement of a course of management programme (MBA)

**Name:** \_\_\_\_\_

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**MBA 2 Years**

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## **ABSTRACT / EXECUTIVE SUMMARY**

This project aimed to apply a quality-assisted technique to lower pharmaceutical costs for Dr. Reddy's Laboratories Ltd. The pharmaceutical industry is shifting its attention from more developed nations where people can buy more costly drugs to developing nations where they can discover new consumers. In an attempt to reduce healthcare expenses, the pharmaceutical industry is actively promoting generic versions of drugs. Experts say that the pharmaceutical business is under pressure to cut costs, especially in production, due to factors including the global economic downturn's knock-on effects, the "genericization" of pharmaceutical goods, and a focus on developing markets. Companies are increasingly relying on outsourcing for production and using "green" technology and practices in an attempt to minimize costs. Pharmaceutical firms throughout the world are preparing for price cuts because to persistent pricing pressure, a pro-generic agenda, and dwindling R&D investment. The current global economic slump is on top of this. Manufacturing costs, which include quality expenditures, have a significant and constant impact on the bottom lines of pharmaceutical firms. On top of that, rather than creating value, many pharmaceutical production processes are resource-intensive, time-consuming, and driven by regulatory mandates to guarantee pharmaceutical quality. One of them is running a reliable quality management system in accordance with Good Manufacturing Practice as it pertains to medicines. Meeting all regulatory standards associated to pharmaceutical production may be rather costly, and a significant amount of pharmaceutical firms' expenditures go toward this. Still, there are ways to cut costs that might increase profitability without adding to the expenditure required to fulfill complicated regulations. Patent expiration, new restrictions, and intensifying rivalry are all contributing to shrinking profit margins in the pharmaceutical industry. To make matters worse, the pharmaceutical business is taking a further beating as governments in emerging nations hurry to control healthcare costs. Pharmaceutical companies are examining their expenditures throughout the value chain, which is not unexpected. In the pharmaceutical sector, the major sources of production expenses that impact quality costs are identified as materials, equipment, manufacturing process, personnel, control, and facilities.

## **CHAPTER 1: INTRODUCTION**

### **1.1 Research Background**

According to experts in the field, the pharmaceutical industry, which includes both drug companies and contract manufacturers, is currently facing pressure to reduce costs, especially in manufacturing. This is because there is a greater emphasis on emerging markets, the "genericization" of pharmaceutical products, and indirect effects of the global economic downturn. As part of their efforts to save costs, companies are using "green" technologies and procedures and increasing their use of outsourcing for manufacturing. A substantial portion of pharmaceutical companies' budgets goes toward meeting all regulatory requirements related to pharmaceutical manufacture, which may be rather expensive. Nonetheless, opportunities for cost reduction do exist, and they may boost profits without further investments while still meeting regulatory complexity. This manual measurement technique poses several difficulties, yet quality control is the most important aspect of manufacturing. For the manual measurements, each item has to be calibrated, and there are requirements for receptors and sample pre-treatment. Plus, it's hard to keep their analysis accurate and it takes a long time. Pharmaceutical companies strive for maximum efficiency in the production of their goods. A medicine's revenue-generating potential is directly proportional to how quickly and cheaply it can be manufactured, packaged, and delivered to market. Almost every manufacturing and service company that wants to obtain enough orders now considers quality a core factor.

### **1.2 Scope of the Study**

The goal of this study is to catalog the various pharmaceutical companies' cost-cutting quality strategies. Nowadays, patient demand and perception are the only factors that matter when it comes to pharmaceutical product quality. For pharmaceutical companies, the high cost is a result of these innovations and how intricate they are. The key to success is using production strategies like TQM and outsourcing. While the topics of cost and quality management have received much attention in the literature, pharmaceutical companies often use TQM and outsourcing as part of their strategies to enhance quality while decreasing costs.

## **CHAPTER 2: INDUSTRY PROFILE**

## **Indian Pharmaceutical Sector**

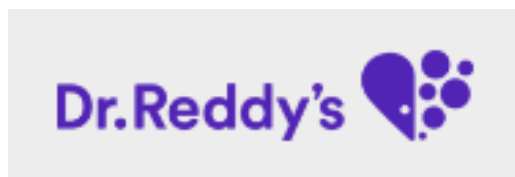
According to experts in the field, the pharmaceutical industry, which includes both drug companies and contract manufacturers, is currently facing pressure to reduce costs, especially in manufacturing. This is because there is a greater emphasis on emerging markets, the "genericization" of pharmaceutical products, and indirect effects of the global economic downturn. As part of their efforts to save costs, companies are using "green" technologies and procedures and increasing their use of outsourcing for manufacturing. A substantial portion of pharmaceutical companies' budgets goes toward meeting all regulatory requirements related to pharmaceutical manufacture, which may be rather expensive. Nonetheless, opportunities for cost reduction do exist, and they may boost profits without further investments while still meeting regulatory complexity. This manual measurement technique poses several difficulties, yet quality control is the most important aspect of manufacturing. For the manual measurements, each item has to be calibrated, and there are requirements for receptors and sample pre-treatment. Plus, it's hard to keep their analysis accurate and it takes a long time. Pharmaceutical companies strive for maximum efficiency in the production of their goods. A medicine's revenue-generating potential is directly proportional to how quickly and cheaply it can be manufactured, packaged, and delivered to market. Almost every manufacturing and service company that wants to obtain enough orders now considers quality a core factor.

### **1.2 The Research's Purview**

Our primary objective is to compare and contrast the ways in which different pharmaceutical businesses reduce expenses without compromising on quality. These days, the quality of pharmaceutical products is determined solely by patient demand and perception. Because these advances are so complex, they come at a significant price for pharmaceutical corporations. Using production tactics such as TQM and outsourcing is crucial to achieving success. Although there has been a lot of written about cost and quality management, pharmaceutical firms often use TQM and outsourcing to improve quality while reducing costs.



## **CHAPTER 3: COMPANY PROFILE**



**Dr. Reddy's Laboratories** is an international pharmaceutical firm having its origins in India. Its headquarters are in Hyderabad, Telangana. A former employee of the mentor institution, Indian Drugs and Pharmaceuticals Limited, Kallam Inji Reddy, founded the firm. Many different kinds of medications are made and sold by Dr. Reddy's in India and abroad. More than 190 different drugs and 60 different APIs are in the inventory of this pharmaceutical manufacturing firm. They cater to diagnostic kits, critical care, biotechnology, and drug manufacture.

Dr. Reddy's began as a supplier to Indian drug manufacturers, but it soon started exporting to other less-regulated markets that had the advantage of not having to spend time and money on a manufacturing plant that would gain approval from a drug licensing body such as the U.S. Food and Drug Administration (FDA). In the early 1990s, the company's focus turned to gaining permission from drug authorities in developed countries for its formulations and bulk drug production factories. This was due to the increased size and profitability in these uncontrolled markets. This allowed them to join regulated markets such as the US and EU. Trust Research Advisory, a brand analytics consultancy, ranked Dr. Reddy Laboratories among 1200 of the most trusted brands in India in their 2014 Brand Trust Report.

### **History**

#### **1984**

##### **The birth of a dream**

With the goal of making medicines accessible to everyone, Dr. K. Vinod Reddy, a scientist and entrepreneur, founded Dr. Reddy's Laboratories. They started by making ibuprofen active ingredients and then moved on to methyldopa, an anti-hypertensive medicine that was previously unavailable in India, and finally they branched out into formulations. The company became India's largest exporter of Ibuprofen PI in 1988, sending shipments to the US, Spain, Italy, and Japan. In 1990, they also started sending active ingredients for

Norfloxacin and Ciprofloxacin to Europe and the Far East. For an Indian pharmaceutical company, this was a first.

## **1991**

### **Moving up the value chain**

One of the most popular omeprazole brands in the world, Omez, was introduced in 1991. Not long after that, they introduced Ditropromethorphan, an antitussive, and Domperidone, an antiemetic, to the Indian market for the first time. Drug discovery programs were initiated by them in 1993, making them the country's first such company. Their main areas of interest were metabolic disorders, diabetes, cancer, inflammation, and bacterial infections.

## **1995**

### **Charting new territories**

Our company set out on its globalization journey by creating an international presence with the aim of making inexpensive medications available globally, not only in India. After touching 2 billion Indian rupees in completed dosage sales, they decided to go into the US generics industry and established a presence in New Jersey. Novo Nordisk leased the anti-diabetic compound DRF 2593 (Balaglitazone) to him, making him the first Indian pharmaceutical business to out-license an original molecule. Starting in 1998, their Biologics company sought to provide more economical alternatives to costly drugs to patients in India. The year 2000 saw their growth as India's third-largest pharmaceutical corporation.

They also established the Dr. Reddy's Foundation to help the less fortunate and make money. The foundation continues to provide in many areas, including education, skill development, and improving livelihoods.

## **2001**

### **Spreading their wings**

They were the first pharmaceutical company from Asia outside of Japan to list their shares on the New York Stock Exchange once all of our group companies merged. Along with that, they made its first international acquisition in the UK with BMS Laboratories Limited and Meridian Healthcare. Their efforts to make medications affordable for everyone resulted in

the conduct of phase I clinical trials for DRF 1042, an anti-cancer medicine, locally. They introduced Bicalutamide, a prostate medication, in 2002.

## **CHAPTER 4: LITERATURE REVIEW**

### **Cost reduction through quality approach: Why would an pharma organization apply this approach?**

The term "cost of quality" refers to the monetary outlay that is necessary to achieve or fall short of an intended standard of quality in a given service or product. These are the expenses associated with avoiding, enhancing, managing, or not achieving the desired level of quality. Included are product quality, service quality, and process quality. Many advantages, which are not possible with other methods, may be achieved by establishing a formal measure of these costs.

1. A crucial aspect of management is minimizing the cost of quality in order to integrate improvement approaches into functional areas without using trial and error methods or quality safety networks. Reducing inspection while maintaining control of hazards is only possible with cost of quality.

2. Other types of improvement will cause a rebalancing of expenses. These cost reductions are added to earnings without trade-offs when quality expenses are applied correctly.

3. When we look at the various business metrics used by different levels of an organization, we can see that upper-level managers use monetary metrics and lower-level areas use pieces or transactions to measure effort. An improvement measure that comes from the perspective of senior management is cost of quality.

### **Correlations between quality and cost**

#### **The ability to adapt**

Any organization may implement cost-of-quality. The term "cost of quality" may refer to a variety of things for service organizations, including the expenses associated with bad processes, the costs of measuring quality levels (both actual and potential), and the investments made to avoid such outcomes. Crucially, every organization is meant to apply the components of cost of quality. The versatility of these techniques makes them suitable for use in a wide range of organizations and improvement strategies.

#### **Saving money via avoidance**

The company may effectively manage its improvement programs by striking a balance between prevention activity cost, measurement activity cost, and connected expenses. First,

we attack failure costs with increased and refocused prevention activities. Then, we reduce appraisal costs.

**The objective is to lower the total expenses.**

While avoiding the pitfalls that come with simple cost reducing, improvement programs will demonstrate bottom-line savings. Decreases in product or service quality, increases in customer dissatisfaction, additional expenses for rework, or simple cost transfers from one area to another are all examples of potential problems that could arise.

**The standard Philosophy of Management**

The procedures of any organization usually have the most problems. The fundamental principle upon which our whole operation is based is that all of our dealings are interactions between external and internal suppliers and customers. In order to grasp the ins and outs of process management, we need to study up on the principles of quality management. Philip Crosby, a renowned quality expert, first developed these principles and wrote extensively about them in his seminal work, Quality is Free.

**Characterizing the Quality Profitability Emphases**

**CHAPTER 5: OBJECTIVES OF THE STUDY**

- A. To identify the cost reduction through quality approach in pharmaceutical industry with special reference to Dr Reddy's Laboratories
- B. To analyse the effectiveness of these cost reduction strategies at Dr Reddy's Laboratories
- C. To offer the suggestions to improve the quality in pharma manufacturing and reduction of cost

## **CHAPTER 6: RESEARCH METHODOLOGY**

### **Sample Design**

**Target Respondents:** Operational Department Employees

**Sample Size:** 50

**Sampling Method:** Convenient Sampling

### **Source of Information:**

**Primary Data:** It was collected through questionnaire survey

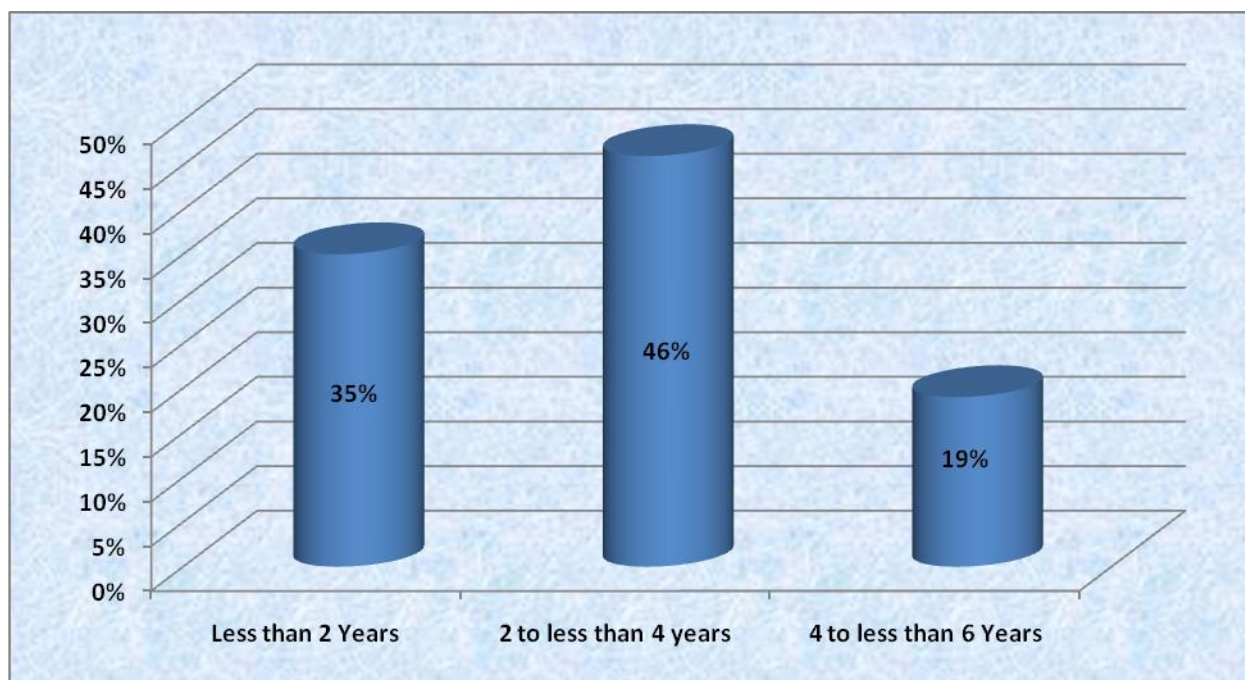
**Secondary Data:** It was collected through hospital website, magazine, online journals, books and magazines

### **Tools and Techniques of Analysis**

The primary data is analyzed through Pie Charts and Bar Graphs. The researcher has used simple percentile method and interpretation is also done for each graph.

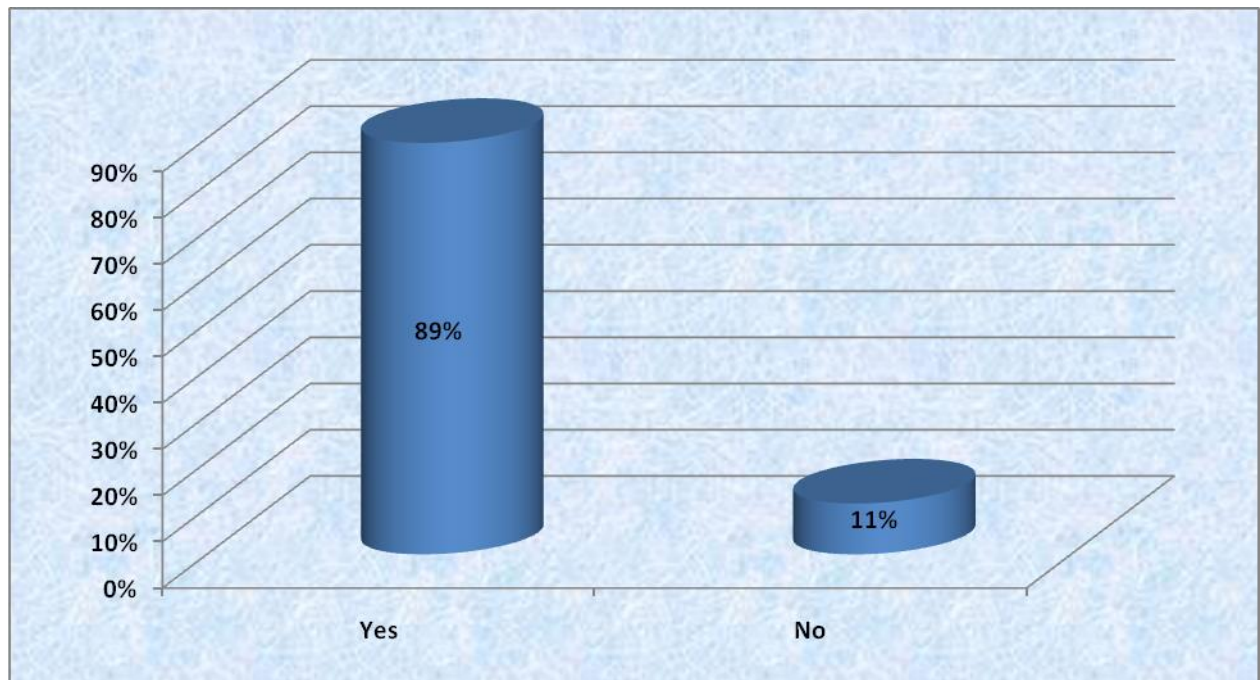
## **CHAPTER 7: DATA ANALYSIS & FINDINGS**

**Q1. From how many years you have been working in Dr Reddy Laboratories?**



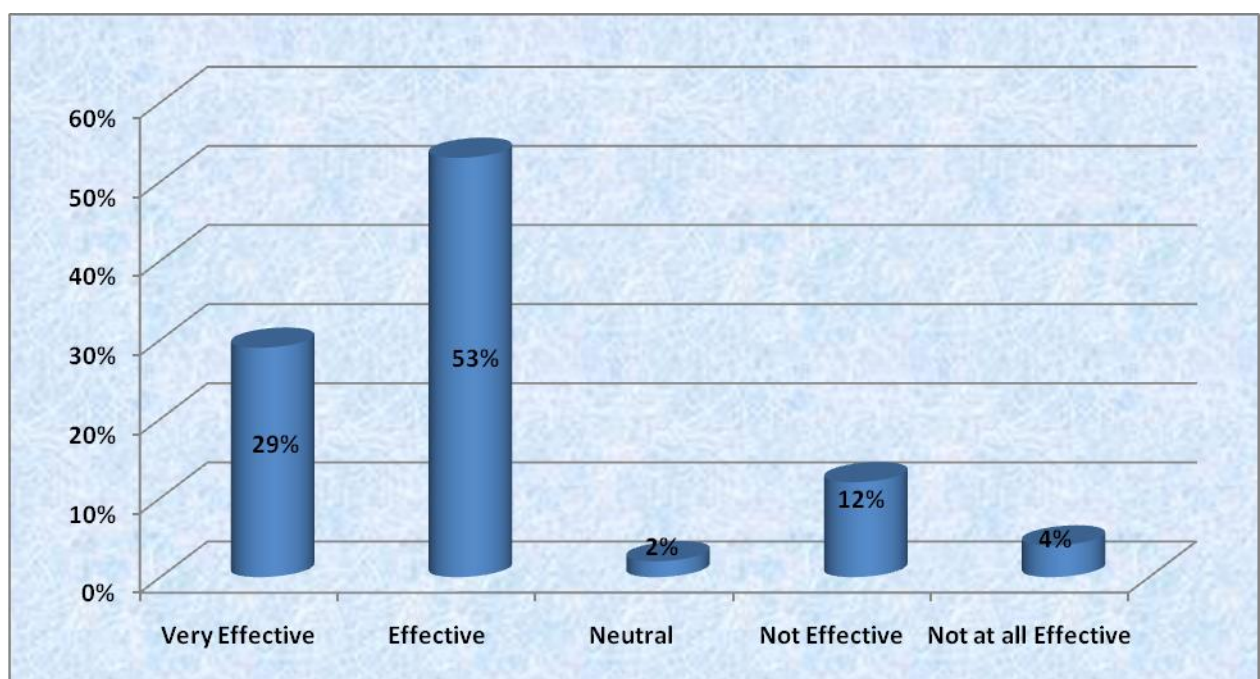
About one-third of the people who took the survey had been with Dr. Reddy Laboratories for less than two years, while nearly half (46%) have been there for two to four years or longer.

**Q2. Are you aware of the cost reduction strategies through quality improvement in Dr Reddy Laboratories?**



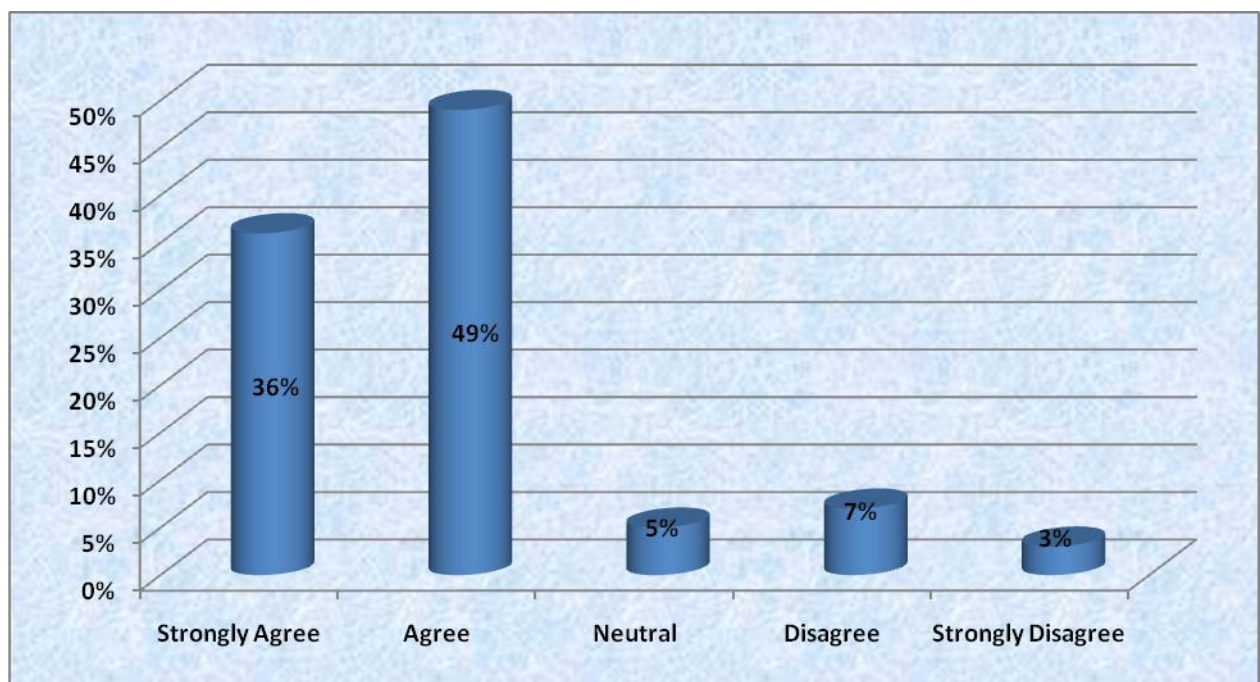
A whopping 89% of those who took the survey are aware of Dr. Reddy Laboratories' strategies for cutting costs without sacrificing quality.

**Q3. How will you rate the effectiveness of quality improvement approaches applied by the Dr Reddy Laboratories?**



29% respondents replied that quality improvement approaches applied by the Dr Reddy Laboratories are very effective for reducing the cost however 53% respondents replied that quality improvement approaches applied by the Dr Reddy Laboratories are effective for reducing the cost

**Q4. Quality approach is also useful for reducing the gap between the growing demand for pharma and the rising cost**





36% respondents were strongly agreed with the fact that quality approach is also useful for reducing the gap between the growing demand for pharma and the rising cost however 7% respondents were disagreed with the fact that quality approach is also useful for reducing the gap between the growing demand for pharma and the rising cost

## **CHAPTER 8: CONCLUSION & SUGGESTIONS**

### **8.1 Conclusion**

- 35% respondents replied that they have been working in Dr Reddy Laboratories from less than 2 years however 46% respondents replied that they have been working in Dr Reddy Laboratories from 2 to less than 4 years
- 89% respondents replied yes that they are aware of the cost reduction strategies through quality improvement in Dr Reddy Laboratories  
29% respondents replied that quality improvement approaches applied by the Dr Reddy Laboratories are very effective for reducing the cost On the other hand, 53 percent of those who took the survey agreed that Dr. Reddy Labo's quality improvement strategies work to lower costs.

- The fact that quality approach is also useful for reducing the gap between the rising demand for health was highly agreed with by 36% of respondents. products and the increasing expense however 7% respondents were disagreed with the fact that quality approach is also useful for reducing the gap between the growing demand for health services and the rising cost
- 32% respondents were strongly agreed with the fact that quality approach is also effective for meeting the customers' expectation On the other hand, 8% of those who took the survey disagreed with the statement that a quality approach is effective in meeting customers' expectations, while 37% strongly agreed that it is effective in meeting competition.
- Thirty percent of respondents were in full agreement that Dr. Reddy Laborateries is still struggling to provide healthcare services that can compete with the best in the world.
- Four percent of respondents disagreed that quality approach is also effective for meeting competition. 6% of those who took the survey disagreed with the statement that Dr. Reddy Laboouries is having a hard time providing healthcare on par with the best in the world.

## 8.2 Suggestions

- **Set short-term attainable goals and celebrate successfully achieving them.** Make it simple for medical professionals to see the immediate results of their work with new procedures, and provide public props to those who are making strides forward. To demonstrate and track progress on quality improvement efforts, use posters, newsletters, prizes, parts, or similar tactics. Comparisons with others are especially motivating for physicians, who are often characterized as competitive. This can only take place with precise and continuous measurement.
- Involve the staff in identifying and fixing problems. Make sure employees believe their voices are being heard in order to foster a "safe" environment where they may report issues and concerns. Get staff on board by having them help research, test, and

implement solutions. All the way from support staff to nurses, doctors, and administrators, everyone's expertise has to be considered.

- Cultivate leaders and champions who are committed. "Not just managers who will do the minimum that the job requires," as one interviewee put it, are necessary for change; leaders committed to quality improvement are also necessary. Aside from hiring senior executives (such as chief medical officers, nurse directors, or chief quality officers), establish a culture that encourages and supports anybody to become a quality improvement leader.
- Maintain unwavering patience. Even after committing to quality improvement, restructuring systems, and investing resources, results may take some time to materialize. It takes time to form a quality improvement team, get line staff on board and motivated, investigate weaknesses, develop action plans, and incorporate new procedures on a systemic basis before you see changes in practices or health status. Being patient yet persistent and monitoring progress using process indicators and outcomes is crucial.
- Seek a middle ground between quality and financial objectives. Improving quality sometimes necessitates spending more money, which could or might not lead to lower expenses in the near term. In order to drive improvements in all of these areas, hospital leaders should balance quality improvement, cost reduction, and service goals, rather than depending on a business case. Over the long term, improved quality and services should enhance market share and result in growth and improved financial performance.

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## **ANNEXURE-QUESTIONNAIRE**

Q1. From how many years you have been working in Dr Reddy Laboratories?

- Less than 2 Years

- to less than 4 years
- to less than 6 Years

Q2. Are you aware of the cost reduction strategies through quality improvement in Dr Reddy Laboratories?

- Yes
- No

Q3. How will you rate the effectiveness of quality improvement approaches applied by the Dr Reddy Laboratories?

- Very Effective
- Effective
- Neutral
- Not Effective
- Not at all Effective

Q4. Quality approach is also useful for reducing the gap between the growing demand for health services and the rising cost

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Q5. Quality approach is also effective for meeting the customers' expectation

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree



