

The Effectiveness of Early Interventions in Altering Medication Error Trends

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Abstract

When there is the occurrence of medication errors, the resultant costs pose a negative effect on the retail pharmacy business sector's profitability. Since 2010, the error rates in developed zones such as the U.S have been documented to be about 0.1%. Despite this trend, with billions of prescriptions filled every year, millions of errors related to prescription dispensing continue to be reported. The annual costs associated with these errors are over 16 billion. Therefore, this multiple study employed a performance prism theory to explore some of the strategies through which pharmacy managers in the retail sector could reduce prescription errors and, in turn, reap from the perceived benefit of increased profitability. Company records that were used to collect data included balance sheets, income statements, and quality improvement incident reports. In relation to data analysis, methodological triangulation was employed, as well as Yin's 5-step process of data compilation, disassembly, reassembly, interpretation, and conclusion. From the findings, it is evident that profit increase results from the strategy of error reduction, with several parameters playing a moderating role.

1 Introduction

In the retail pharmaceutical sector, business leaders are expected to device strategies and models through which their business firms could be positioned effectively relative to competitive advantage [1]. The quest to meet and even exceed the expectations of product and service users forms one of the focal areas; especially regarding the importance of quality service delivery [2]. As customers visit retail pharmacies, their expectation is that the correct medication would be offered [3]. This demand accounts for the growing demand to reduce prescription errors, especially by giving the right medication to customers [4]. On the one hand, many leaders have strived to prevent prescription errors. On the other hand, most of these prescription errors are avoidable, yet the rate or incidence and prevalence are still high. Thus, this study sought to sensitize the retail pharmacy managers regarding some of the strategies that are worth embracing to curb prescription errors. Therefore, this qualitative multiple case study strived to explore some of the techniques that pharmaceutical managers doubling up as owners in the retail sector employed to increase profitability; with [articular focus on prescription error reduction among employees.

2 Methodology

The target sample involved retail pharmacy managers doubling as pharmacy owners. The inclusion criterion was that the participants were expected to have implemented prescription error reduction strategies successfully. To identify the managers, an incident reporting system was used. The data collection and analysis processes were governed by the performance prism theory. Indeed, this theory has several tenets. They include stakeholder contributions, capabilities, processes,

satisfaction strategies, and stakeholder satisfaction [5, 6]. Indeed, the theory focuses in the wants and needs of an organization's stakeholders, rather than emphasize those of the shareholders alone [7, 8]. Hence, the theory aided in exploring the techniques used by retail pharmacy managers to increase profitability via prescription error reduction; especially by giving insight into how they might have considered and synchronized factors such as organizational capabilities, embedded processes, satisfaction levels, and an understanding of the stakeholders. From the sampling perspective, the study employed a purposive sampling technique. Also, relevant documents such as company records and journal notes were imported into NVivo, upon which themes and concepts were identified in relation to the central subject under investigation.

3 Results and Discussion

Three major themes arose. The first theme involved the strategies for reducing prescription errors, which aided in discerning the criticality of employing relevant strategies or approaches in the pharmacy sector. The second theme entailed profitability improvement in relation to prescription error reduction, which aided in analyzing some of the negative effects that could accrue if the incidence of prescription errors in the pharmacy sector increases; with organizational profitability being the determinant or parameter of the prediction. The third theme involved some of the technological strategies that the managers might have utilized to reduce prescription errors. The main aim of this theme was to predict some of the beneficial effects that accrue from technological advancement in relation to prescription error reduction, hence a potential increase in profitability – due to the perceived product and service user satisfaction.

With five managers on focus, it was evident that various tactics had been embraced to reduce prescription errors. Particularly, ten strategies were identified. Although mixed outcomes were received relative to each category of the prescription error reduction strategies, there was a significant degree of consistency. The table below summarizes the findings.

Type of Strategy	Percentage No. of Participants
Continuous training of employees	100.00
Proper identification of product and service users	100.00
Embracing technological advancements	100.00
Discussing and documenting each incident	100.00
Counseling patients	100.00
Being accountable	40.00
Balancing the workload of employees	100.00
Voiding prescription guesswork	100.00
Avoiding distractions such as cell phone conversations	40.00
Workplace automation	100.00

The next stage involved an analysis of the correlation between prescription error reduction and firm profitability. Indeed, all the managers highlighted that they discerned the correlation between prescription error reduction and company profitability based on the feedback gained from employees and customers. The managers highlighted further that they determined trends in the incidence and prevalence of prescription errors based in the data gained from annual continuous quality improvement incident reports, as well as trends in profitability – relative to the perceived change in the rates of prescription errors. Specific results demonstrated that with a reduction in the pharmaceutical companies' annual number of prescription errors, there was an annual increase in profitability. The table below summarizes these results.

	C1	C2	C3	C4	C5
Prescription errors in 2012	300.00	200.00	250.00	350.00	300.00
Annual profit in 2012 (in \$)	100,000.00	200,000.00	250,000.00	100,000.00	150,000.00
Prescription errors in 2013	70.00	40.00	50.00	80.00	80.00
Annual profit in 2016	400,000.00	500,000.00	600,000.00	500,000.00	700,000.00

As mentioned earlier, the third theme entailed some of the tactics that the participants had used to reduce prescription errors and perceivably increase profitability; with technology on focus. Findings suggested that the most impactful methods were those that involved upgrading processes, systems, and settings in the companies; translating in advanced technology maximization. The table below summarizes the specific strategies that the managers were found to have utilized to reduce prescription errors in their companies; hence, perceived increase in annual profitability (as depicted in Table 2, which points to an inference that in the pharmaceutical sector, a decrease in the rate of prescription errors leads to an increase in annual profitability; hence an inverse correlation).

Type of Technology	Percentage No. of Participants
Smart point-of-sale	100.00
The use of verification trays	40.00
The use of prescription pick-up Apps	60.00
The use of ScriptPro and prescription robots	60.00
The use of automated pill counters	80.00
The use of barcode scanners	60.00
The use of alerts for drug-utilization reviews	100.00
The use of alerts for patient counseling	100.00
The use of alerts for look-alike, sound-alike drugs	100.00
The use of portable prescription image scanners	100.00

The use of automated workflows	100.00
The use of electronically transcribed prescriptions	100.00

4 Conclusion

In summary, this study demonstrates that when retail pharmacy managers train their employees regarding some of the techniques that could be implemented to reduce prescription errors, there is likely to be an increase in the organizations' annual profitability. Two major factors were found to yield this outcome. One of the factors involved an increase in the customers' brand loyalty to the given business. Another factor entailed a reduction in the cost of running the pharmaceutical firms. As such, it could be inferred that when prescription errors reduction strategies are implemented, they not only increase the retail pharmacy companies' profitability but also pose a positive impact on social change complications; including reduced mortality rates, fewer hospitalizations, and faster recovery times for community members or patients.

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