

Quality Assurance Practice and Performance of Private Medical Diagnostic Practice in South East Nigeria



Ihionu, M. C., lyke-ofedu, M. & Okechukwu, E. U.

Abstract

The study evaluated quality assurance practice and performance of private medical diagnostic practice in South East Nigeria. The specific objectives are: examine the relationship between quality planning and the number of samples processed and examine the relationship between quality control and error rate of private medical diagnostic practice in South East Nigeria. The study used the descriptive survey design approach. The primary source of data was the administration of questionnaire. A total population of 197 entrepreneurs was used. One hundred and eighty-eight (188) returned the questionnaire and accurately filled. Data was presented and analyzed using Likert Scale and the hypotheses using Z - test. The findings indicated that Quality planning had significant positive relationship with the number of samples processed $Z(95, n = 188), 5.105 < 7.585, P < .05$ and Quality control had significant positive relationship with error rate of private medical diagnostic practice in South East Nigeria, $Z(95, n = 188), 5.762 < 7.731, P < .05$. The study concluded that Quality planning and Quality control had significant positive relationship with the number of samples processed and error rate of private medical diagnostic practice in South East Nigeria. The study recommended among others that the management of the medical diagnostic firms should promote and establish confidence in the results of clinical research, as quality planning will help and design a process that will be able to meet established goals under operating conditions.

Keywords: Quality Assurance Practice; Private Medical Diagnostic Practice; South East Nigeria

* Correspondence: ihionu***@esut.edu.ng (available on request)

Department of Business Administration, Enugu State University of Science and Technology, Nigeria



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Background of the Study

In most developing countries Nigeria inclusive the concept of quality assurance has not found its rightful place in health laboratories. It is mandatory to put in position an effective system of quality assurance in laboratory services. This would operationally ensure a systematic and continuous process of measuring the level of services, compare it with the desired standard, and make corrections to reach an optimal health services delivery process with available resources (WHO,1996). The increase in lack of customer's confidence and organisation's credibility of Quality in Laboratories, while also improving work processes and efficiency has attracted attention to masses in our nation and globally and which has reduced organisation's to better compete with others. Quality in Laboratories is as important as in any other organization and even more. It can be defined as the accuracy, reliability, and timeliness of reported test results. Quality management systems in laboratories assure the reliability of all aspects of the operations. **Quality** means "Performance upon expectations" and "fit for functions." A product is said to be of good quality if it satisfies the customer requirements in terms of performance, grade, durability, appearance and intended use/purpose, etc. (Techqualitypedia, 2023).

Quality Assurance - QA is the overall program that ensures that the final results reported by the laboratory are correct. "The aim of quality control is simply to ensure that the results. The aim of quality control is simply to ensure that the results generated by the test are correct. However, quality assurance is concerned with much more: that the right test is carried out on the right

specimen, and that the right result and right interpretation is delivered to the right person at the right time" (Salehi, 2024). Quality improvement in clinical laboratories is crucial to ensure accurate and reliable test results. With increasing awareness of the potential adverse effects of errors in laboratory practice on patient outcomes, the need for continual improvement of laboratory services cannot be overemphasized. Quality assurance (QA) is crucial in healthcare as it helps to ensure that patients receive safe, effective, and patient-centered care. It minimizes errors and adverse events, promotes evidence-based practices, and improves healthcare outcomes (MedicSkills Sdn Bhd, 2024).

Medical labs play a crucial role in healthcare, providing vital information for diagnosing and treating patients. In the intricate realm of medical laboratory operations, Quality Assurance (QA) and Quality Control (QC) stand as more than standard procedures; they are the pillars ensuring precision and safety. Recognised by global health authorities like the World Health Organization, QA and QC are crucial for reducing errors in lab tests and building trust with doctors, patients, and health regulators (MedicSkills Sdn Bhd, 2024). Clinical laboratories are an important component of health care system. Apart from supporting the diagnosis and treatment of individual patients, they also provide health authorities with the statistical data needed to develop, implement and evaluate national health policies. Moreover, they are responsible for national and international surveillance of communicable Diseases (WHO, 1996).

The quality of any product or service comes from hard work, thorough research, and intelligent efforts. In today's highly competitive business environment, quality is what distinguishes one business from another. If you want to stand out from the crowd, quality assurance is essential, especially in software development. Quality assurance is a long-term investment. It is easy to lose patience during the process (Pham, 2023). Assurance specializes in assessing and improving the quality of the information in organisation. It helps in decision making in an organization as it works on customer feedback, financial information, employee feedback, or areas where information is required in decision making in the organization (Wallstreetmojo, 2024). Based on this, the study aimed at evaluating quality assurance practice and performance of private medical diagnostic practice in South East Nigeria.

Statement of Problem

Quality assurance is making sure that products or services consistently meet the highest standards, ensuring customer satisfaction every step of the way. It is not just about fixing problems after they happen; it is about preventing them from occurring in the first place. Think of it as a proactive approach to excellence, where every detail is carefully examined and perfected to ensure a flawless experience for your customers. It's a strategic and systematic approach to maintaining exceptional quality standards within an organization especially in producing goods or providing services. It ensures that every aspect of the operation is fine-tuned to deliver excellence, time and time again.

Implementing quality assurance practice in laboratories also comes with challenges which include poor strategic planning, poor control, poor human resource management, poor resources provision, poor management commitment, ineffective communication system, lack of well-established quality management system and resources. Resource Constraints: The need for significant investment in equipment and training is a major hurdle.

Ignoring the importance of quality assurance testing will lead to tremendous damages in the aspects of financial loss, reputational damage and even loss of life. Many real-world examples show that the lack of quality assurance practice testing is a severe problem for companies around the globe. The most common are lost customers, lower productivity, and increased costs. In some cases, Poor quality can also lead to product liability claims. Hence, the need to study quality assurance practice and performance of private medical diagnostic practice in South East Nigeria.

Objective of the Problem

The main objective of the study was to evaluate quality assurance practice and performance of private medical diagnostic practice in South East Nigeria. The specific objectives are:

- i. Examine the relationship between quality planning and the number of samples processed in South East Nigeria
- ii. Examine the relationship between quality control and error rate of private medical diagnostic practice in South East Nigeria

Research Questions

The following research questions guided the study

- i. What is the relationship between quality planning and the number of samples processed in South East Nigeria?
- ii. What is the relationship between quality control and error rate of private medical diagnostic practice in South East Nigeria?

Statement of Hypotheses

The following research hypotheses guided the study

- i. Quality planning has relationship with the number of samples processed in South East Nigeria
- ii. Quality control has relationship with error rate of private medical diagnostic practice in South East Nigeria.

Review of the Related Literature

Conceptual Review

Quality

Quality is the extent to which products, services, processes, and relationships are free from defects, constraints, and items which do not add value for customers. Although the term quality is quite widely used by practitioners and academics, there is no generally agreed definition of it, since different definitions of quality are appropriate under different circumstances (Garvin, 1984; Reeves and Bednar, 1994; Seawright and Young, 1996; Russell and Miles, 1998; Beaumont and Sohal, 1999; Sebastianelli and Tamimi, 2002; Ojasalo, 2006). Indeed, quality has been defined as excellence (Tuchman, 1980).

Quality planning

“Failure to plan is planning to fail” and “Planning without action is futile as well as action without planning is fatal.” Performance in the organization is a ideology used in many organization as organizations are highly faced with performance challenges in general. The success & failure of any organization is exceedingly depending up on various resources, among which quality planning is the most vital one (Nigatu, Feleke & Alemtshay (2017). Plan helps organization to establish a framework of policies, practices and actions that guide employee’s efforts in meeting the workforce needs (Trinet,2019). Quality planning is to design a process that will be able to meet established goals under operating conditions. Quality planning is a methodology which can be used when a situation exhibits one or more of the following characteristics: A service has never existed before, Customer requirements are not known, The existing service/process performance is not capable of meeting customer requirements. (Health.state, 2022).

Performance

Health systems primarily concentrate performance improvement initiatives around critical areas, including clinical outcomes, patient experiences, and organizational costs. While this high-value improvement approach has the potential for significant impact, its long-term success relies on strategic execution. Performance improvement efforts fall short of their desired results when organizations approach improvement as a series of one-off projects. To achieve an effective and sustainable performance improvement, organizations must develop and perform their initiatives within an ongoing performance infrastructure and program (Bobbi, 2021). Performance is defined as the accomplishment of a given task measured against preset known standards of accuracy, completeness, cost, and speed. In a contract, performance is deemed to be the fulfillment of an obligation, in a manner that releases the performer from all liabilities under the contract (McNamara, 2018).

Components of quality control used in the system

Quality Control

Quality control is concerned with the control of quality of the product during the process of production. It aims at achieving the predetermined level of quality in a product. In other words quality control is concerned with controlling those negative variances which ultimately affect the excellence of a manufacturer in producing the products (Chand, 2023). Quality control (QC) is a process through which a business seeks to ensure that product quality is maintained or improved. Quality control means how a company measures product quality and improves it if need be. Quality control can be done in many ways, from testing products, reviewing manufacturing processes, and creating benchmarks. This is all done to monitor significant variations in a product. Quality control requires the company to create an environment where management and employees strive for perfection. This is done by training personnel, creating benchmarks for product quality, and testing products to check for statistically significant variations (Hayes, 2023).

Error Rate

The validity of any biomedical study is potentially affected by measurement error or misclassification. It can affect different variables included in a statistical analysis, such as the exposure, the outcome, and confounders, and can result in an overestimation as well as in an underestimation of the relation under investigation. Measurement error in clinical research, yes it matters (Groenwold, & Dekkers, 2020). In most organisations, the error rate ranges between 10 and 30 errors per hundred opportunities. Failure rates of five to 10 out of every hundred opportunities are possible in well-managed organizations utilizing standard quality management practices.

In clinical research, prevention of systematic and random errors of data collected is paramount to ensuring reproducibility of trial results and the safety and efficacy of the resulting interventions. Over the last 40 years, empirical assessments of data accuracy in clinical research have been reported in the literature. Although there have been reports of data error and discrepancy rates in clinical studies, there has been little systematic synthesis of these results. Further, although notable exceptions exist, little evidence exists regarding the relative accuracy of different data processing methods. We aim to address this gap by evaluating error rates for 4 data processing methods (Garza, et al, 2021).

Empirical Review

Relationship between Quality Planning and the Number of Samples Processed

Relationship between Quality Control and Error Rate

Nworah, et al. (2018) conducted a study to assess the compliance of some quality control (QC) parameters of some conventional X-ray equipment to a known standard. Setting was in Nigeria and a cross sectional design was used. Material used was a non-invasive digital multifunctional detector meter (MDM). Three facilities were selected from a university teaching hospital. Measurement of KVp, mAs and the exposure time accuracy was performed using MDM that incorporates computer output. The MDM was positioned at the center of the collimated beam axis with a Source to Image Distance (SID) of one meter. Eight different mAs, exposure times and KVp stations were selected and measured in each teaching hospital. Statistical Analysis: SPSS was used and statistical tools used was one way ANOVA. The result obtained showed that the magnitude of deviation in KVp accuracy ranged from 0.01 to 6.07 % in all the four machines checked while the magnitude of deviation in mAs accuracy ranged from 0.00 to 19.20 %. In a similar way, exposure time accuracy deviated from 0.01 to 12.32 %. The study revealed that only one out of the four X-ray units at the teaching hospital in the Southern-Eastern part of Nigeria failed exposure time, mAs and KVp accuracy compliance test.

Akpan, Abdulrahman & Pepple (2020) conducted a study to compare service quality by assessing the level of adherence to quality system essentials (QSEs) in laboratory services delivered by public and private health institutions in Southern Nigeria. This was an analytical cross-sectional study conducted among 50 health facilities' laboratories in 5 Southern States (Akwa Ibom, Anambra, Cross River, Edo and Rivers) of Nigeria. Randomly selected sample of secondary health facilities' laboratories (ten per state, and a total of 25 public and 25 private health facilities) receiving equal level of support from the same USAID/PEPFAR implementing partner and had been providing ART services to clients for a minimum of one year, were included in the study. Quarterly Internal quality audit was conducted in the ART Laboratory section of the selected health facilities spanning July 2015 to September 2016. 200 audit reports were checked, cleaned, and analyzed using SPSS version 23. We analyzed changes in mean performance scores over time across 6 quality management essentials using Repeated Measures ANOVA. Results were considered significant at $P < 0.05$. The result of the study showed that the private health facilities laboratory achieved a significantly higher improvement in Facility and Safety score over time ($p = 0.019$) compared to public health facilities. Overall, temporal improvements were recorded in all facilities in three out of the six QSEs (document and record, $p = 0.045$; organization and personnel, $p = 0.020$; equipment, $p < 0.001$) and total laboratory quality score ($p = 0.004$). But there was no significant quarterly difference in performances on QSEs between public and private health facilities laboratories.

Akinwale and George (2023) conducted a study on the rationale behind medical workers' brain-drain syndrome and the quality healthcare delivery in the Nigerian public healthcare sector. To stimulate an understanding of the effect of the phenomenon called brain drain, the study adopted a diagnostic research design to survey the public healthcare personnel in government hospitals. The study administered a battery of adapted research scales of different measures to confirm the variables of interest of this study on a probability sampling strategy. The study surveyed 450 public healthcare sector employees from four government hospitals to gather pertinent data. The study used a structural equation model (SEM) and artificial neural networks (ANNs) to analyse the collected data from the medical personnel of government hospitals. The findings of this study are significant as postulated. The study discovered that poor quality work life experienced by Nigerian medical personnel was attributed to the brain-drain effect and poor healthcare delivery. The study further demonstrated that job dissatisfaction suffered among the public healthcare workforce forced the workforce to migrate to the international labour market, and this same factor is a reason for poor healthcare delivery. Lastly, the study discovered that inadequate remuneration and pays discouraged Nigerian professionals and allied healthcare workers from being productive and ultimately pushed them to the global market.

Powell, King, Makungu, Quaife & Goodman (2023) conducted a study on the adoption of management practices in over 220 private for-profit and non-profit health facilities in 64 districts across Tanzania and link these data to process quality-of-care metrics, assessed using undercover standardised patients and clinical observations. We find that better managed health facilities are more likely to provide correct treatment in accordance with national treatment guidelines, adhere to a checklist of essential questions and examinations, and comply with infection prevention and control practices. Moving from the 10th to the 90th percentile in the management practice score is associated with a 48% increase in correct treatment. We then leverage a large-scale field experiment of an internationally recognised

management support intervention in which health facilities are assessed against comprehensive standards, given an individually tailored quality improvement plan and supported through training and mentoring visits. We find zero to small effects on management scores, suggesting that improving management practices in this setting may be challenging.

Summary and Gap in Empirical Literature

The studies done were carried outside quality assurance practice and performance of private medical diagnostic practice in South East Nigeria and did not focus to best of my knowledge on quality planning and the number of samples processed; quality control and error rate of private medical diagnostic practice in South East Nigeria. Most of the studies reviewed analysed their data through A purposeful sampling technique, Descriptive statistics and appropriate inferential statistics, Purposive Sampling technique, Pearson Moment Correlation Coefficient, Multiple sampling technique, Partial Least Square Structural Equation Modeling (PLS-SEM), Multiple Regression Analysis (MRA) method, Simple linear regression and Pearson correlation coefficient (r) while the present study made use of Z test to test the hypotheses. Therefore, the study aimed at filling this research gap by evaluating the quality assurance practice and performance of private medical diagnostic practice in South East Nigeria.

Methodology

The area of the study was south east, Nigeria. The study was conducted among 45 health facilities' laboratories in 5 South East (Abia, Anambra, Ebonyi, Enugu and Imo states) of Nigeria. Randomly selected sample of secondary health facilities' laboratories (nine per state of private health facilities) and who had been providing ART services to clients for a minimum of two years, were included in the study. The study used the descriptive survey design approach. The primary source of data was the administration of questionnaire. A total population of 197 selected staff of the study organisations. The whole population was used to due small number. One hundred and eighty eight (188) staff returned the questionnaire and accurately filled. That gave 95 percent response rate. The validity of the instrument was tested using content analysis and the result was good. The reliability was tested using the Pearson correlation coefficient (r). It gave a reliability co-efficient of 0.83 which was also good. Data was presented and analyzed by mean score (3.0 and above agreed while below 3.0 disagreed) and standard deviation using Sprint Likert Scale. The hypotheses were analyzed using Z – test statistic tool.

Data Presentation

The relationship between quality planning and the number of samples processed in south East, Nigeria

Table 1: Responses on the relationship between quality planning and the number of samples processed in south East, Nigeria

		5	4	3	2	1	ΣFX	-	SD	Decision
		SA	A	N	DA	SD		X		
1	A sampling plan technique helps to reach percentage of acceptable defects.	350 70 37.2	80 20 10.6	155 45 23.9	54 27 14.4	26 26 13.8	665 188 100%	3.53	1.528	Agree
2	The level of quality applied aids in the standards of the samples processed.	445 89 47.3	80 20 10.6	81 27 14.4	50 25 13.3	27 27 14.4	683 188 100%	3.63	1.609	Agree
3	Quality results are based on the regulations and plans.	370 80 42.6	264 20 10.6	117 38 20.2	30 18 9.6	32 32 17.0	831 188 100%	4.42	1.467	Agree
4	There is retention of customers for quality plan and procedures.	455 91 48.4	140 35 18.6	63 21 11.2	46 23 12.2	18 18 9.6	722 188 100%	3.84	1.489	Agree
5	Affordable costs attract the	520	104	63	32	21	740	3.93	1.559	Agree

number of samples.	104	26	21	16	21	188			
	55.3	13.8	11.2	8.5	11.2	100%			
Total Grand mean and standard deviation							3.486	1.5304	

Source: Field Survey, 2024

Table 1, 90 respondents out of 188 representing 47.8 percent agreed that A sampling plan technique helps to reach percentage of acceptable defects with mean score 3.53 and standard deviation of 1.528. The level of quality applied aids in the standards of the samples processed 109 respondents representing 57.9 percent agreed with mean score of 3.63 and standard deviation of 1.609. Quality results are based on the regulations and plans 100 respondents representing 53.2 percent agreed with mean score of 4.42 and standard deviation of 1.467. Quality results are based on the regulations and plans 126 respondents representing 67.0 percent agreed with mean score of 3.84 and 1.489. Affordable costs attract the number of samples 130 respondents representing 69.1 percent agreed with a mean score of 3.93 and standard deviation 1.559.

The relationship between quality control and error rate of private medical diagnostic practice in South East Nigeria

Table 2: Responses on the relationship between quality control and error rate of private medical diagnostic practice in South East Nigeria

		5	4	3	2	1	ΣFX	-	SD	Decision
		SA	A	N	DA	SD		X		
1	Adequate inspection reduces sample mix-up.	465	140	51	38	24	718	3.81	1.528	Agree
		93	35	17	19	24	188			
		49.5	18.6	9.0	10.1	12.8	100%			
2	The organization consistent standard minimizes the number of pre-analytical errors.	435	156	54	28	30	703	3.74	1.609	Agree
		87	39	18	14	30	188			
		46.3	20.7	9.6	7.4	16.0	100%			
3	Effective training reduces mislabeling.	525	192	51	36	40	844	4.48	1.467	Agree
		105	48	17	18	40	188			
		55.9	25.5	9.0	9.6	17.1	100%			
4	Proper documentation helps proper storage.	465	228	36	26	13	768	4.08	1.489	Agree
		93	57	12	13	13	188			
		49.5	30.3	6.4	6.9	6.9	100%			
5	The supplier and adequate communication within the organization promotes suitable sample collection methods.	375	204	36	56	22	693	3.69	1.559	Agree
		75	51	12	28	22	188			
		39.9	27.1	6.4	14.9	11.7	100%			
	Total Grand mean and standard deviation							3.486	1.5304	

Source: Field Survey, 2024

Table 2. 128 respondents out of 188 representing 68.1 percent agreed that Adequate inspection reduces sample mix-up with mean score 3.81 and standard deviation of 1.528. The organization consistent standard minimizes the number of pre-analytical errors 126 respondents representing 67.0 percent agreed with mean score of 3.74 and standard deviation of 1.609. Effective training reduces mislabeling 153 respondents representing 81.4 percent agreed with mean score of 4.48 and standard deviation of 1.467. Proper documentation helps proper storage 150 respondents representing 81.4 percent agreed with mean score of 4.08 and 1.489. The supplier and adequate communication within the organization promotes suitable sample collection methods 126 respondents representing 67.0 percent agreed with a mean score of 3.69 and standard deviation 1.559.

Test of Hypotheses

Hypothesis One: Quality planning has relationship with the number of samples processed in South East Nigeria

		A sampling plan technique helps to reach percentage of acceptable defects.	The level of quality applied aids in the standards of the samples processed.	Quality results are based on the regulations and plans.	There is retention of customers for quality plan and procedures.	Affordable costs attract the number of samples.
N		188	188	188	188	188
Uniform Parameters ^{a,b}	Minimum	1	1	1	1	1
	Maximum	5	5	5	5	5
Most Extreme Differences	Absolute	.372	.473	.426	.484	.553
	Positive	.138	.144	.170	.096	.112
	Negative	-.372	-.473	-.426	-.484	-.553
Kolmogorov-Smirnov Z		5.105	6.491	5.835	6.637	7.585
Asymp. Sig. (2-tailed)		.000	.000	.000	.000	.000
a. Test distribution is Uniform.						
b. Calculated from data.						

Decision Rule

If the calculated Z-value is greater than the critical Z-value (i.e $Z_{cal} > Z_{critical}$), reject the null hypothesis and accept the alternative hypothesis accordingly.

Result

With Kolmogorov-Smirnon Z – value ranges from $5.105 < 7.585$ and on Asymp. Significance of 0.000, the responses from the respondents as display in the table is normally distributed. This affirms the assertion of the most of the respondents that Quality planning had significant positive relationship with the number of samples processed in South East Nigeria

Decision

Furthermore, comparing the calculated Z- value ranges from $5.105 < 7.585$ against the critical Z- value of 0.000 (2-tailed test at 95 percent level of confidence) the null hypothesis were rejected. Thus the alternative hypothesis was accepted which states that Quality planning had significant positive relationship with the number of samples processed in South East Nigeria

Hypothesis Two: Quality control has relationship with error rate of private medical diagnostic practice in South East Nigeria

		Adequate inspection reduces sample mix-up.	The organization consistent standard minimizes the number of pre-analytical errors.	Effective training reduces mislabeling.	Proper documentation helps proper storage.	The supplier and adequate communication within the organization promotes suitable sample collection methods.
N		188	188	188	188	188
Uniform Parameters ^{a,b}	Minimum	1	1	1	1	1
	Maximum	5	5	5	5	5
Most Extreme Differences	Absolute	.495	.463	.564	.548	.420
	Positive	.128	.160	.096	.069	.117
	Negative	-.495	-.463	-.564	-.548	-.420

Kolmogorov-Smirnov Z	6.783	6.345	7.731	7.512	5.762
Asymp. Sig. (2-tailed)	.000	.000	.000	.000	.000
a. Test distribution is Uniform.					
b. Calculated from data.					

Decision Rule

If the calculated Z-value is greater than the critical Z-value (i.e $Z_{cal} > Z_{critical}$), reject the null hypothesis and accept the alternative hypothesis accordingly.

Result

With Kolmogorov-Smirnon Z – value ranges from $5.762 < 7.731$ and on Asymp. Significance of 0.000, the responses from the respondents as display in the table is normally distributed. This affirms the assertion of the most of the respondents that Quality control had significant positive relationship with error rate of private medical diagnostic practice in South East Nigeria.

Decision

Furthermore, comparing the calculated Z- value ranges from $5.762 < 7.731$ against the critical Z- value of 0.000 (2-tailed test at 95 percent level of confidence) the null hypothesis were rejected. Thus, the alternative hypothesis was accepted which states that Quality control had significant positive relationship with error rate of private medical diagnostic practice in South East Nigeria.

Discussion of Findings

From the result of the hypothesis one, the calculated Z- value ranges from $5.105 < 7.585$ against the critical Z- value of 0.000, which implies that Quality planning had significant positive relationship with the number of samples processed in South East Nigeria. In the support of the result in the literature, Nworah, Nzotta, Chiegwu, Aronu and Oyekunle (2018) conducted a study to assess the compliance of some quality control (QC) parameters of some conventional X-ray equipment to a known standard. Setting was in Nigeria and a cross-sectional design was used. The result obtained showed that the magnitude of deviation in KVP accuracy ranged from 0.01 to 6.07 % in all the four machines checked while the magnitude of deviation in mAs accuracy ranged from 0.00 to 19.20 %. In a similar way, exposure time accuracy deviated from 0.01 to 12.32 %. The study revealed that only one out of the four X-ray units at the teaching hospital in the Southern-Eastern part of Nigeria failed exposure time, mAs and KVP accuracy compliance test.

From the result of the hypothesis two, the calculated Z- value ranges from $5.762 < 7.731$ against the critical Z- value of 0.000 which implies that Quality control had significant positive relationship with error rate of private medical diagnostic practice in South East Nigeria. In the support of the result in the literature. Powell, King, Makungu, Quaife & Goodman (2023) conducted a study on the adoption of management practices in over 220 private for-profit and non-profit health facilities in 64 districts across Tanzania and link these data to process quality-of-care metrics, assessed using undercover standardised patients and clinical observations. We find that better managed health facilities are more likely to provide correct treatment in accordance with national treatment guidelines, adhere to a checklist of essential questions and examinations, and comply with infection prevention and control practices. Moreover, Akinwale and George (2023) conducted a study on the rationale behind medical workers' brain-drain syndrome and the quality healthcare delivery in the Nigerian public healthcare sector. The findings of this study are significant as postulated. The study discovered that poor quality worklife experienced by Nigerian medical personnel was attributed to the brain-drain effect and poor healthcare delivery. Lastly, the study discovered that inadequate remuneration and pays discouraged Nigerian professionals and allied healthcare workers from being productive and ultimately pushed them to the global market.

Conclusion

The study concluded that Quality planning and Quality control had significant positive relationship with the number of samples processed and error rate of private medical diagnostic practice in South East Nigeria. Quality assurance (QA) is essential aspects of any laboratory testing process. It will ensure that the data generated by the laboratory are consistent from one day to the next and that the results from one laboratory can be compared with those generated by others.

Recommendations

Based on the findings the following recommendations were proffered:

1. The management of the medical diagnostic firms should promote and establish confidence in the results of clinical research, as quality planning will help and design a process that will be able to meet established goals under operating conditions.
2. To detect and minimize Laboratory-Originated errors, verify Consistency in Active Ingredient Levels and ensure reliability and compliance with industry standards, there is need for quality control.

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