

Digital Marketing Strategies for Pathology Labs: Increasing Service Uptake

Tatiane Moraes Cunha

Universidade Federal de Uberlândia (UFU), Brazil

ABSTRACT

In the modern world, the client is an integral part of any industry that provides services. Accurate pathology lab results and timely reporting are essential at the start of the doctor's treatment. These days, when making decisions and visiting a brand, customers mostly depend on its online visibility and presence. Our team of expert digital marketers for pathology labs handles a wide range of responsibilities with precision and successfully navigates various online challenges. Research based on primary data analysis for determine the research used SPSS software and generate result included pair sample correlation, the pair descriptive statistic, also that control chart analysis between them. Pathology labs need to begin disclosing information to the general public in order to show that they are capable of offering precise services and timely reporting. They can better position and place their brand by getting referrals from doctors and other healthcare professionals. Targeted digital marketing techniques can help improve lab brand awareness locally and reduce overall marketing and publicity expenses for pathology labs. Pathology labs are in a competitive market. When there are more options than ever for Path Labs, how can you set yours apart from the competition? With the aid of successful digital marketing techniques from a respectable digital marketing company like King of Digital Marketing, your small business can expand into a thriving enterprise and become the go-to option in your region.

Keywords: Digital Marketing Strategies (DMS), pathology Labs (PL), Service Uptake (ST)

INTRODUCTION

The environmental conditions have been changing day by day and becoming worse and worse. All the natural resources of water, air, and land have been polluted to such an extent that it gave rise to different and versatile types of pathogens every day. There is no single type of particular pathogen but the different variants of a single pathogen make it different to recognize and treat patients in case of attack by pathogens. So there is a rising need for such suitable systems in laboratories that could be able to provide accurate and timely analysis for determination of the type of pathogen to start swift way of treatment[1]. Now the pathology labs are no more of a traditional type but using the internet of things for betterment in workflow and accurate results. The use of digital Marketing is one of the positive steps for increasing service Uptake in pathology labs. In this introduction, we are going to overview how pathology labs use Digital Marketing Strategies and how these strategies help increase service Uptake. There are various ways by which service Uptake can be increased by using digital Marketing Strategies. For example, the first way by which digital Marketing can be helpful is website optimization[2]. As we know the present world is the world of the internet that has relied all the world on online aspects of life. If there is better website optimization by pathology labs, it can be helpful in online booking for any test. Such website optimization can also be beneficial if there is clear information provided by staff on such websites. This step can save much of the time and can help in increasing service Uptake by website optimization. The other way of digital Marketing in pathology labs is through search engine operations. This is mandatory nowadays because this can help provide websites in the top search by using just keywords[3]. This step will help find suitable websites for pathology labs for Swift work and thus can help increase the service Uptake by using Digital Marketing Strategies. The other way of using digital Marketing Strategies in pathology labs is social media presence. No presence is

away from using social media such as Facebook, Twitter, and others. If there is a presence of any responsible staff on these social media platforms such as Facebook, Twitter, and others, this can be more helpful in online booking, providing information, providing locations, and Marketing of that pathology lab in less time[4]. This step of using social media platforms for improving service Uptake in pathology labs can be proved very beneficial for staff and clients as well. The other most common way of using digital Marketing Strategies in pathology labs is email marketing which has gained much of the importance in recent years. By checking the subscribers of social media platforms, pathology lab staff can send regular emails to such subscribers which can provide them with information and all other updates related to pathology lab as well. This step can be proved effective in attracting people's attraction towards pathology lab information and importance[5]. The other way of using digital Marketing Strategies in pathology labs is content marketing. Content marketing has always been an important way of marketing in all the times. In past years, people were provided with awareness more in the form of books, articles, newspapers, and others. If such a way is adopted again, it can be proved effective and beneficial for spreading awareness. If articles related to health and the importance of pathology labs are printed in health blogs, it can provide better content for people[6]. At the same time, it can be used as an effective way of Digital Marketing Strategies in pathology labs. If we talk about other ways of digital Marketing in pathology labs, the most beneficial is online reputation management. This system of online reputation management is not only confined to health sectors but it is also common in clothing, communication, transportation, and others. If people are encouraged to give reviews and feedback, it will give awareness to other people as well and will increase the confidence of people in the pathology labs. Most people believe in the aspect of feedback and reviews[7]. The other way of

using digital Marketing in pathology labs is through influencer partnerships. It means that partnership is done with such influential personalities which can attract the attention of the masses to promote the marketing of pathology labs. There are many benefits of using digital Marketing as compared to door-to-door marketing. The first benefit is that the digital Marketing cost is much less as compared to primitive ways of marketing. In Digital Marketing, there is less use of human resources and more reliance on computer-based systems which means there is less need for human resources. The other benefit of using digital Marketing in pathology lab is that it is a Swift way of marketing as compared to primitive ways of marketing. By using the internet, the information can be provided and marketing can be done in just a few seconds[8]. While using primitive ways of marketing there is a need for long-distance traveling and much time to market any service of pathology labs. The other benefit of using digital Marketing in pathology labs is that it does not need to convince people because people are mostly interested in feedback and reviews that they get from online reputation management. In primitive and manual ways of marketing, there is a need of face to face-to-face interactions to convince people that is quite time activity[9]. The other benefit of online booking is also not available in primitive ways of marketing but it is available in digital Marketing ways. It has been proven in recent years that by using digital Marketing Strategies, the service Uptake has increased in pathology labs to much extent. If the Internet and Digital Marketing Strategies are properly used in pathology labs, they can be effective in increasing service Uptake[10].

Research Objective

The main objective of this research is to understand the term Digital Marketing Strategies in pathology labs and how these can help increase service Uptake in pathology labs. This study has effectively overviewed those digital Marketing Strategies which are helpful in pathology labs.

LITERATURE REVIEW

Researchers claim that digital pathology has occupied the mainstream position in the healthcare sector because of the digitalization process. The immense development shown by digital pathology labs in the last few decades has enhanced its role as a diagnostic laboratory. The gynecologist practices and training are provided in digitalized pathology labs to make the trainees practice in an environment that provides them with real-life experience[11]. Studies suggest that the commercialization process of medicine is done using social media as a source social media plays a great role in making something good or bad. For promoting the services provided by digitalized pathology labs the use of social media is made for advertisement purposes [12]. Studies explain that incorporating technology in health sectors has resulted in a great revolution in the health field. Different determinants impact the services provided by health sectors. These determinants could be social, economic, or political. To encounter the impact of these determinants on health sectors the use of modernized technology is promoted in health industries[13]. Studies predict that in developed countries the process of determination of health-related demands and supplies is possible through the digitalized systems. The adaptation of medicine laboratories to technology systems has improved the quality of practices carried out in these labs[14].

Studies show that digital pathology labs are equipped with digitalized microscopes. The main feature of these microscopes is that they provide high precision during the immunohistochemistry assessment process. The digital microscopes allow pathologists to get detailed insight into the tissue slide under examination[15]. Studies elaborate that digitalized pathology systems provide pathologists with an environment that allows them to extract useful data from it. the process of disease diagnosis and disease identification has become easy due to digital pathology systems. The health organizations prompting the digitalization of pathology labs are growing at a rapid rate[16]. Studies explain that in health sectors the strategic approach of digitalizing the laboratories is prominent. the framework of pathology labs is built on modern technology to tackle all the challenges related to pathology labs. Health-related crises are becoming more common due to the lack of digitalized systems. For facing health crises digitalized medical tools are used by health organizations[17]. Studies concluded that social barriers hinder the digitalization process of genetic testing. By addressing the cause of the barrier it becomes easy to tackle the problems associated with genetic testing. Improvement in the genetic testing process requires the use of modernized technology software in medical devices[18]. Studies predict that for evaluating the working efficiency of pathology labs a regulatory committee has been developed by pathologists. This committee consists of the members of the pathology society that work together as a committee to address the performance of DP. The environment of GLP is fully dependent on the efficient working of digitalized pathology labs. Also, the pathology lab organizational flexibility is achieved through the process of digitalization[19]. Scholars suggest that DHTs is a digitalized approach combining the concepts of medicine with bioinformatics. DHT is a business approach that works to provide personalized health services to patients using digital techniques. the innovation in the health filed is directly associated with the development of advanced clinical practices[20]. Studies suggest that to understand the use of digital devices in pathology labs the pathologist are taught about the use of these devices' trough an educational teaching program. The pathology teaching institutes guide the pathologist about the use of modern technology tools in pathology lab to achieve desire result[21]. Studies claim that understanding the genetic basis behind the onset of disease helps in predicting the complexity of disease. Advanced technology systems in diagnostic labs provide medical reports using the biological data related to patients' medical conditions. The biological data of patients is retrieved from EHDS to accelerate the disease-diagnosing process[22]. Studies reveal that providing excellent diagnostic opportunities to patients is the utmost duty of a pathologist. The chances of occurrence of diagnostic error in labs are greater than medication error.to minimize the chances of these errors the pathologist uses digitalized diagnostic techniques. In hospitals, physicians are provided with guidelines to use accurate and precise methods for evidence-based disease diagnosis[23]. Studies predict that data obtained from pathology labs is used in medical labs for proper medicines. therefore pathology las provide the most accurate data using a digital system[24]. Studies suggest that providing evidence-based decisions for disease treatment is archived through the approach of digital therapeutics. DTx is a modern solution for modern health problems. Moreover, the approach of IVD has gained popularity as it provides digital health solutions against severe diseases[25]. Studies suggest that obtaining patients' information from histopathology images is useful in predicting patient-related

outcomes. Due to certain limitations of traditional pathology labs, the process of image-based histopathology gets slow. To improve this process digital technology is used in pathology labs to aid pathologists in their disease perception process. Also the WSI slides are scanned through AI based process for rapid determination of disease condition [26]. Studies of scholars conclude that many disciplines around the world have evolved due to technology related revolution. Technology involvement in almost all fields has resulted in the improvement of services provided to the people. Social media is used as a marketing strategy for advertising the modernization of various health fields. The multidisciplinary technology innovation approach has helped physicians and health professionals in carrying out their tasks more carefully [27]. Studies claim that in many medical sectors the lack of medical staff poses great challenges for the health sector. The cost of treatments provided in health-related institutes is increasing because of lack of health staff. The only solution to these challenges is the use of a digitalized system. The digitalization of hospitals reduces the need of medical staff and thus the quality of medical services improves. Moreover, the digital world requires the solution of problems through technology. Using digitalized solutions for medical industry is one of the coping strategies against health crisis [28]. Studies prediction related to digitalization of pathology labs suggest that these labs provide high quality data regarding the patient medical condition in short period of time by using the advanced data format. The DP labs are specialized to tackle data handling problems. Using scientific measurement approach in DP improves the quality of research undergoing in pathology labs [29]. Studies suggest that genomic laboratories are the hubs for getting the most updated data related to the cancer diagnostic approaches to optimize the quality of diagnostic testing for cancer pathologists. Cancer biomarker testing approach. The access to this testing approach is provided by GMS [30].

Methodology

The research determines that digital marketing strategies for pathology labs. The research based on primary data analysis for determine the data used SPSS software and generate result included paired sample statistical analysis, the chi square analysis, also that control chart between them. We cannot deny the importance of marketing strategies for enhancing the image and outcome of any business. In recent years, marketing was only confined to the field of business but now pathology labs and other hospitals also adopted the strategy of marketing to improve outcomes. In the past times, there were different methods for marketing such as door-to-door marketing, posters, newspapers, articles, and others. But as the world has made progress through science and technology, the means of marketing have also changed from being manual to digital. Now digital marketing strategies are used mostly in Pathology Labs which has many advantages. The following are important implications of digital Marketing Strategies in pathology labs:

Providing Online Services and Enhanced Engagement of People:

In recent years, we know that people had to visit to make appointments, provide samples, check the date of reports, take reports from pathology labs, and then analysis of these reports. All of these processes used to take too much time of people which has created people dissatisfaction. But now, with the advancement of science and technology, all the possible services of pathology labs

have been shifted to online portals. Now people do not have to visit to make appointments in pathology labs but they can confirm their online booking by using the website of that pathology lab. The other important aspect of online services is that they can provide all important information about services that are available in pathology labs so that you do not need to visit that pathology lab to get information about services. Secondly, the accurate schedule of pathology labs is updated on that Portal so that people can come on their turn without wasting any time in pathology labs. The other most important aspect is that the report results of patients can also be accessed online without any need to visit pathology labs for this purpose. The people get ideas about any pathology lab services by their digital Marketing Strategies. So, we can say that when there are better conditions and usage of digital Marketing Strategies in pathology labs, there will be a better online presence of staff to attend to patients online. The second most important implication of digital Marketing Strategies in pathology labs is that it enhances the engagement of people. As digital Marketing relies on using social media platforms for marketing, it engages people on different platforms such as Instagram, Twitter, Facebook, and others. In this way, digital Marketing Strategies will help to engage and educate people as well. The people are given awareness through these social media platforms about different diseases, their related pathogens, and the mode of transmission of these pathogens. In this way, medical awareness also increases and the reputation of pathology labs will also become better. These described implications explain about importance of digital Marketing Strategies in pathology labs for increasing service Uptake.

Cost-Effective and Increased Referrals

Effective marketing depends upon cost cost-effective plan with better outcomes. In primitive ways of marketing, there was much expense in transportation, accommodations, and other aspects of marketing. Usually, it was such a lengthy process because there was much dependence upon face-to-face communication for better marketing. But in modern ways of digital Marketing, we do not have to use much means, we just rely on internet services for marketing pathology labs. Digital Marketing is cost-effective as compared to primitive ways of marketing because there is no need to use expenses on transportation and accommodations for the marketing team. By just using Internet services, we can deliver our message to all other people across the world in just a few seconds. The other aspect is that the primitive ways of marketing cannot be proven beneficial for remote areas as there is less access to a marketing team for marketing purposes. But by using of digital Marketing system, such remote areas can also be covered in the aspect of marketing in less cost. The other important implication of digital Marketing Strategies in pathology labs is the aspect of referral and feedback systems. The people are encouraged to give their feedback after getting services from any pathology lab. This feedback can be used as a reference for others. These feedback systems increase the satisfaction level of other people so they get attracted to these pathology labs for getting services. In this way, digital Marketing is dependent upon a feedback system. These feedback systems also help pathology labs in this way that it is beneficial to know about flaws and imperfections of pathology labs related to services or staff. So, this feedback system can be used to improve the services of pathology labs. These important implications of digital Marketing related to cost and reference system make it effective from business point of view.

Lab Information Systems and Search Engine Optimization:

A few years back, we can say that people had to face great difficulty in finding the location, schedule, and service information of any pathology lab. At the same, there was very little information provided on the internet about any pathology labs. However, with the advancement of digital Marketing Strategies, there is the introduction of another important aspect of digital Marketing in pathology labs which is named lab information system which is abbreviated as LIS. All the information related to location, schedule, services, staff, pathologists, and online booking is provided on these websites. Each pathology lab has its particular website which can

provide information about specific pathology labs. In this way, digital Marketing has created easiness for people to save time. The other aspect related to Digital Marketing in pathology labs is the aspect of search engine optimization which is abbreviated as SEO. This factor helps in enhancing digital Marketing in pathology labs by providing a website of that particular pathology lab by just using keywords. This implication is important in such a way that it helps people to find particular websites of pathology labs without wasting time. These implications of digital Marketing Strategies in pathology labs prove that it can be cost-effective for people with more advantages as compared to primitive ways of marketing.

Table 1: Result of Paired Samples Statistic

		Paired Samples Statistics			
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Digital Marketing Strategies 1	1.6600	50	.71742	.10146
	Pathology Labs 1	1.5000	50	.61445	.08690
Pair 2	Digital Marketing Strategies 2	1.4600	50	.61312	.08671
	Pathology Labs 2	1.4800	50	.57994	.08202
Pair 3	Digital Marketing Strategies 3	1.5000	50	.58029	.08207
	Pathology Labs 1	1.5000	50	.61445	.08690

The above result shown in table 1 demonstrate that paired sample statistical analysis result describes that mean values, standard deviation rates, the standard error value. The first pair is digital marketing strategies 1 and pathology labs 1 its shows that mean value is 1.6600 the standard deviation rate is 0.71742 its shows that standard error of the mean value is 0.101 its means positive 71% deviate from mean and 10% error of the mean value between digital marketing strategies and pathology labs.

The second pair is digital marketing strategies 2 and pathology labs 2 its shows that standard deviation rate is 61% also that its error of the mean value is 86% and 82% respectively. The third pair is digital marketing strategies 3 and pathology labs 1 its shows that 61% and 58% deviation from mean values. The area of marketing known as "digital marketing" is the use of the Internet and online-based digital technology, including smartphones, desktop computers, and other digital media and platforms, to advertise goods

and services. During the 1990s and 2000s, it has drastically changed how companies and brands use technology for marketing. Digital marketing campaigns have become commonplace, utilising a variety of strategies such as search engine optimisation (SEO), search engine marketing (SEM), influencer marketing, content automation, campaign marketing, data-driven marketing, e-commerce marketing, social media marketing, social media optimisation, e-mail direct marketing, display advertising, e-books, and optical discs and games. These strategies have been employed as digital platforms have become more and more integrated into marketing plans and daily life.

Digital marketing includes non-Internet platforms that offer digital media, including telephones, television, mobile phones (SMS and MMS), and mobile ringtones for when you're on hold. The difference between online and digital marketing is the expansion to non-Internet outlets.

Table 2: Result of Paired Samples Correlations

		Paired Samples Correlations		
		N	Correlation	Sig.
Pair 1	Digital Marketing Strategies 1 & Pathology Labs 1	50	-.069	.632
Pair 2	Digital Marketing Strategies 2 & Pathology Labs 2	50	-.289	.042
Pair 3	Digital Marketing Strategies 3 & Pathology Labs 1	50	-.029	.844

The above result of table 2 demonstrates that paired correlation analysis in between digital marketing strategies and pathology labs. The first pair is digital marketing strategies 1 and pathology labs 1 its correlation rate is -0.069 the significant value is 0.632 its shows that negative but 63% significant relation between them. the second pair is digital marketing strategies 2 and pathology labs 2 its shows that -0.289 and its significant rate is 0.042 shows that 4% significant relation with them. similarly, the third pair is digital marketing strategies 3 and pathology labs 3 its shows that 84% significantly level between them.

Measurement Across Platforms

The complexity of measurement techniques is increasing along with the number of marketing channels. To integrate media planning and audience measurement, a cross-platform perspective is required. Although the impact of Omni-channel on customer

behaviour cannot be quantified when adverts appear on a consumer's device, market researchers still need to understand this. Important components of cross-platform measurement are the elimination of duplication and realising that, with another platform, you have advanced incrementally instead of gaining additional impressions against those you have already reached. "ESPN and comScore partnered on Project Blueprint discovering the sports broadcaster achieved a 21% increase in unduplicated daily reach due to digital advertising," can be used as an example. The electronic medium that competes with digital and other technology advertising is the television and radio businesses. However, because digital technology allows for cross-platform advertising, television advertising does not directly compete with online digital advertising. Through cross-platform usage and online streaming material, radio also becomes more powerful. Radio and television continue to influence and persuade viewers on a variety of media. Marketers

employ a variety of factors, such as targeting, viewability, brand safety, and invalid traffic, to support digital advertising. Digital advertising in the form of cookies is tracking tools that are installed on desktop devices. They have several drawbacks, such as the inability of web browsers to delete cookies, the inability to distinguish between multiple users on a device, inaccurate estimates of unique visitors, oversimplifying reach, and issues with ad servers that are unable to distinguish between instances in which a user has deleted cookies and instances in which they have not previously seen an advertisement. The target market has a diverse range of

demographics because of the errors caused by cookies. Digital marketing also has an impact on "viewability," or whether the customer actually saw the advertisement. Many advertisements are unnoticed by consumers and may never be seen by the target audience. Whether or not the advertisement was created in an unethical or insulting manner raises the question of brand safety. Ad fraud detection is another issue that marketers must deal with. This pertains to invalid traffic because, while non-premium sites are more problematic, premium sites are better at identifying false traffic.

Table 3: Result of Test Statistic

Test Statistics					
	Digital Marketing Strategies 1	Digital Marketing Strategies 2	Digital Marketing Strategies 3	Pathology Labs 1	Pathology Labs 2
Chi-Square	32.400 ^a	21.880 ^b	20.440 ^b	19.240 ^b	21.280 ^b
df	3	2	2	2	2
Asymp. Sig.	.000	.000	.000	.000	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.5.
b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 16.7.

The above result of table 3 describe that chi square analysis result demonstrate that digital marketing strategies shows that chi square values is 32.400, 21.880, 20.440, 19.240 and 21.280 all of

them are present positive chi square value. Overall significant rate is 0.000 shows that 100% significant level between the digital marketing strategies and pathology labs.

Table 4: Result of Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.300 ^a	.090	.030	.60504

a. Predictors: (Constant), Digital Marketing Strategies 3, Digital Marketing Strategies 1, Digital Marketing Strategies 2

The above result shown in table 4 demonstrate that model summary analysis result represents that R value is 30% the R square

value is 0.090 the adjusted R square value is 0.030 respectively. The standard error of the estimated value is 60% of model 1.

Table 5: Result of Coefficients

Model		Coefficients			t	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	.999	.454		2.200	.033
	Digital Marketing Strategies 1	.029	.129	.034	.224	.824
	Digital Marketing Strategies 2	.310	.151	.309	2.058	.045
	Digital Marketing Strategies 3	.000	.150	.000	.003	.997

a. Dependent Variable: Pathology Labs 1

The above result shown in table 5 demonstrate that linear regression analysis in between digital marketing strategies and pathology labs. The result describes that unstandardized coefficient values included beta and standard error. The t statistic value, also that significant value of each independent variable. the digital marketing strategies 1 is main independent variable result shows that its beta value is 0.029 the t statistic value is 0.224 the significant rate is 0.824 its shows that positive and 82% significant level between them. the digital marketing strategies 2 shows that t statistic value is 2.058 the significant rate is 0.045 shows that positive and 4% significant link with pathology labs. Similarly, the digital marketing strategies 3 is another independent variable result shows that its t statistic value is 0.003 the significant rate is 0.997 shows that positive and 99% significantly level between them.

Conclusion

After an overview of the implications of digital Marketing Strategies in pathology labs, we can conclude that digital Marketing

is a better way to create a good reputation for pathology labs for increasing service Uptake. Digital marketing has become a vital tool in the healthcare industry for pathology labs looking to improve their online presence and reach a larger audience. With the increasing availability of online health information, pathology labs can leverage digital marketing strategies to build relationships with patients, doctors who refer them, and other healthcare professionals. One essential component of pathology labs' digital marketing strategies is the development of an intuitive and instructive website.

The lab's online shopfront is a well-designed website that provides visitors with essential information about services, areas of specialisation, and contact details. By utilising search engine optimisation (SEO) techniques to ensure that the website appears highly in search engine results, pathology services seekers may find it easier to access the website. Social media platforms allow pathology labs to engage with their audience on a more personal level. Labs can create and maintain profiles on social media platforms like Facebook, Twitter, and LinkedIn to share information

about services, patient success stories, and educational resources. This encourages trust and a sense of unity among current and potential clients. Content marketing is another effective digital strategy for pathology labs. Creating and sharing relevant and instructional content, such as blog posts, articles, and infographics, not only positions the lab as an authority in the subject but also informs the public about the value of pathology services. This could have a big impact on spreading proactive health management and increasing awareness. With email marketing, pathology labs can keep up a strong audience relationship. Regular bulletins include updates on pathology advances, new diagnostic techniques, and special offers and occasions. Through email marketing, labs can

stay in touch with doctors who refer patients by educating them about the services and capabilities the lab provides. Additionally, pathology laboratories can employ online advertising through platforms like Google Ads to target specific demographics and geographic areas. This maximises return on investment by concentrating marketing efforts on the most relevant target market. In conclusion, pathology labs must use digital marketing if they hope to prosper in the modern healthcare setting. These strategies can significantly boost the lab's visibility, credibility, and overall success in interacting with and supporting the community. They include everything from having an optimised website to employing social media and targeted online advertising.

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