



DIGITAL MARKETING STRATEGY FORMATION FOR PHARMACEUTICAL COMPANIES

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Abstract. Engagement of pharmaceutical companies in the digital world lacks proper content generation and use of proper social media platform. The aim of this paper is to design a digital marketing strategy which would make sure engagement of customers and their satisfactions are met. The main aim of this article is to structure a digital marketing strategy for pharmaceutical companies. There's an essential need for pharma companies to consider digital marketing criteria based on followers' engagement. This paper has researched through the most engaging social media content for pharma companies and has ranked them based on followers' engagement percentage. Though pharmaceutical companies are not allowed to directly market their products to the public, they should consider the shifts in consumer engagements based on researches done on their posts through social media platforms. This paper has analysed all those findings by implementing AHP and TOPSIS methods in order to rank the contents, social media platforms and their effect on sales of the products in pharmacies. The data presented are real time data collected from pharma companies' digital engagements and provides the most effective and practical model which would help any pharma company in terms of achieving their digital marketing goals. These types of digital marketing models specifically designed for pharma companies are highly needed in the pharma business as similar approaches are extremely limited.

Keywords: Digital marketing, Marketing, Pharmaceutical business, Pharmaceutical marketing, Healthcare business, Business management

Introduction

The digital age has changed the overall concept of communication and awareness. General public is no longer solely dependent on health care professionals for their healthcare consultations and needs. According to one statistic which was done in 2013 59% of US adults have looked online for health care queries and 53% of online diagnosticians talked about their online findings to their physician. (Pew research center, 2013) It is also worth to mention that more than 60% of US adults keep track of their diet and health indicators such as blood pressure and blood sugar online. (Pew research center, 2013) This number is surely increased dramatically in the recent years. Failure to address these statistics into marketing strategy planning and ignoring the disruptive potential of digital marketing will surely result in lack of advancements in marketing approaches and will reduce brand awareness which would therefore result in decreased sales potential. However, it is essential to note that not all the information on online websites is accurate. Based on a study done by Dr Moon et al, which was done to research on the accuracy of internet searches for parents of sick children, 1300 websites were analysed out of which only 43.5% contained information that were in line with AAP¹ recommendations. (Rehman, 2012).

The purpose of this research is to structure a digital marketing strategy for pharma companies. As it is evident, many pharma companies are in constant rivalry to garner trust and interest of the average internet user. What is the best strategy to attract followers on digital media platforms for pharma companies? The answer to that question is highly debatable however, there are statistics and data available which are analysed in this paper. This paper

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¹ American Academy of Paediatrics

constructs a sustainable model which could be used by pharma companies in order to enhance their digital marketing approaches.

Review of literature

Digital marketing may not be a new phenomenon but it surely is a disruption to the current business models which don't include digital marketing. To many, digital marketing and pharmaceutical industry may seem quite distinct and irrelevant. However, there's a big shift in the way majority of people perceive and use the internet now. In fact more than 600 Billion USD was spent in advertising worldwide (Emarketer, 2015) and one cannot fail to notice a huge shift in favor of digitalization over TV and other forms of entertainment especially for the younger generation. (Stephen, 2016) Therefore it is essential for pharmaceutical companies to engage in the digital world of marketing more strongly. There are already digitalized versions of vital sign readings which could be used at home without the need of the patient stepping into a hospital (Mesko & Drobni, 2017). One instance is Kardia (AliveCor, 2011) which is used to monitor ECG of patients via an app on Apple products which is cleared by the FDA and is in use. (Buhr, 2017). National health expenditure (NHE) of the United States has grown from 4.3% to \$3.3 trillion in 2016, or \$10,348 per person, and accounted for 17.9% of Gross Domestic Product (GDP) (NHE Factsheet, 2016). More than 60% of adult Americans use the internet for their healthcare related questions. (Fox & Jones, 2009) It would not be surprising that this number has dramatically increased over the years. Nevertheless the only countries in the world where DTCA² is allowed are USA and New Zealand. (WHO, 2009)³. This means that the rest of the world do not allow advertising drugs directly to consumers. Most notably 22 out of 27 EU members voted against the legislation proposed that would allow even limited information to consumers directly. (Humphreys, 2009) However, this has in no way backlashed or stopped pharmaceutical industries from advancing in digital marketing. There are not many studies done on advising a business/marketing model for a pharma company to attract the highest number of engagements from the public in order to enhance their brand awareness. Pharmaceutical companies which engage the public in their digital marketing campaigns have proven to be more successful in terms of sales and brand awareness. (Ogilvy, 2018) (Akhtar, Arshad, Sharafatullah, & Adnan, 2015). There's lack of awareness especially about "diseases" which pharma companies should seriously consider to advance through in their digital campaigns in the most convenient and understandable way. The literature review clearly shows lack of proper and correct knowledge of the average internet user about disease profiles and their desperate attempts to gather the required knowledge should be acknowledged and responded to. This paper has included all these matters into constructing a sustainable digital marketing strategy.

Digital marketing is a form of direct marketing which links consumers with sellers electronically using interactive technologies like emails, websites, online forums and newsgroups, interactive television, mobile communications etcetera. (Armstrong, 2009) Digital engagement of online followers is highly essential for pharma companies brand awareness and trust among the internet users. The reason why many pharmaceutical companies have failed to engage their followers is lack of implementation and content generation which influence followers' engagement and satisfaction. This disengagement of the followers results in reduced trust, lessens the brand awareness and finally results in reduced sales generation. This paper proves this statement by comparing sales figures of the same generic drug which is sold under different brand names and compares their marketing engagements among other factors. This paper analyses all the factors which should be taken into consideration and constructs a digital marketing strategy for pharmaceutical companies by using real time data from reliable sources.

1. Methodology research

In this research two methods are used in order to rank the criteria of content engagement. These two research methods are mainly considered due to the fact that the research paper had to compare multiple decisions from various criteria and AHP and TOPSIS are very useful for multi decision criteria making.

1.1 AHP

AHP (Analytical Hierarchy Process) is used in this paper whenever ranking the criteria based on experts' opinion was required. This method helps to detect any chances of bias in expert rankings which would highly affect the quality of the paper.

² DTCA: Direct to consumer (drug) advertising

³ WHO: World Health Organization

1.2 TOPSIS

TOPSIS is used in this paper when comparing various brands or companies based on specific criteria was required. This method helped the paper to analyse and compare different companies' stance in the digital world based on consumer engagement. Also, in order to find the most successful brand in terms of sales, different brands could be compared based on their brand awareness, cost etc. using this method.

2. Practical part

2.1. Pharmaceutical digital marketing content analysis & comparison

Arguably the most important section of digital marketing is content generation. Which content is the most engaging remains a very important question in the marketing world.

Ogilvy health world and data specialists Pulsar analysed the pharma social landscape and provided statistical data on the social media activities of pharmaceutical giants. (Ogilvy, 2018) The data was taken from first half of 2016 from top 20 pharmaceutical companies. The survey reported which content was the most shared among all contents posted by the social media. (Ogilvy, 2016). This data was used in order to determine the importance of each section of the contents and kept in AHP for further analysis.

Table 1. Matrix to establish pairwise content analysis (Authors)

Factor	Disease awareness	Company news	Congresses	Corporate social responsibility	Product research update
Disease awareness	1	3	5	7	9
Company news	0.33	1	3	7	9
Congresses	0.2	0.33	1	3	7
Corporate social responsibility	0.14	0.14	0.33	1	3
Product research update	0.11	0.11	0.14	0.33	1

The expert opinions are ranked based on the research done on major pharmaceutical companies digital marketing activities (Ogilvy, 2018) .

As per the AHP calculations, the following are ranked in order of their weight:

1. Disease awareness
2. Company news
3. Congresses
4. Corporate social responsibility
5. Product research update

This comparison shows according to the latest updates in statistics (Ogilvy, 2018), what contents should be considered in priority order for a pharmaceutical company in digital marketing in order to engage the maximum number of participants.

Content generators in the pharma industry should consider the shifts in follower engagements. This analyses helps to provide the most engaging content to be considered for posts in social medias.

2.2. Social media platform comparisons & analysis (AHP method)

After considering which content needs to be prioritized for digital marketing campaigns, social media platforms are next. Not all social medias are promising for pharma industry and the engagement of internet users for pharma industry varies in different social medias. Considering the data gathered on posts which have been done on social media by the top 20 pharmaceutical companies in the first half of 2016 (Health, 2016), the AHP was drawn in the following manner:

Table 2. Matrix to establish pairwise content analysis (Authors)

Factor	Youtube	Instagram	Twitter	Facebook
Youtube	1	0.14	0.2	0.11
Instagram	7	1	5	0.14
Twitter	5	0.2	1	0.11

Facebook	9	7	5	1
Total	22	8.34	11.2	1.37

Table 2 is drawn by using AHP method in which different social media platforms are compared with each other. The most engaging social medias are ranked which should be considered for promotion and posting of the contents generated for digital marketing campaigns of pharma companies.

1. Facebook
2. Instagram
3. Twitter
4. YouTube

2.3. Pharmaceutical companies' social media engagement comparison & analysis

The following is the engagement ratio of top pharmaceutical giants which are active on the social media. Their active participation is researched by the Ogilvy common health and their report for 2018 (Ogilvy, 2018) is as per the following:

Considering the survey done the most successful pharmaceutical companies in the digital world in terms of consumer engagement are considered for comparison in TOPSIS.

This comparison is done in order to rank pharmaceutical companies' participation in the digital world based on the content generation and use of social media platforms. This comparison will also later be used in order to determine the effects of strong digital marketing engagement on brand selection in hospital formularies.

Table 3. Matrix of pharma companies and their criteria considering the weights (**Authors**)

	Benf.	Benf.	Benf.	Benf.
Weights	0.04	0.25	0.11	0.61
Factors	YouTube	Instagram	Twitter	Facebook
Pfizer	22	13.7	233	346
Novonordisk	3	18.8	27.7	525
Johnson&Johnson	33	0	95.9	794
Merck	1.8	11.9	160	90
GSK	12	18.8	171	289
Roche	14	0	184	88
Novartis	11	34.6	242	326

By using TOPSIS the companies are ranked based on their engagement in social media platforms which is as follows:

1. Johnson&Johnson
2. Novonordisk
3. Novartis
4. Pfizer
5. GSK
6. Merck
7. Roche

3. Drug brand selection in hospital formulary

The novelty of this paper is the fact that models of business strategies are usually not applied in medical and healthcare settings especially in hospitals. This paper will also address the fact that business models can be extensively used in hospital settings as well as retail pharmacy settings in order to conclude a rational decision making based on multiple criteria. For this example, this paper considers Paracetamol 500mg tablet form chosen by the experts who are heads of various departments of a multispecialty hospital, as an example of the drug which is necessary to be kept in the hospital formulary. The active ingredient Paracetamol 500mg is sold under more than 100 brand names worldwide. Which brand should be considered to keep in the hospital formulary is the question. Apart from cost of the brand there are other factors which can influence the decision making such as duration of

effectiveness (dose), dosage form and marketing of the drug (Kohli, 2013). In pharmaceutical business, one of the main factors which can influence the prescription pattern of the physician is marketing. Receiving medical samples frequently, desk gifts, invitations to congresses and free lunches are in order of importance of pharmaceutical marketing approaches (Ukessays, 2018).

This paper provides a matrix for the ranking of criteria analysed by physicians of a major multispecialty hospital. (Hospital, 2018) (As per the request of the said doctors the name of the hospital shall remain anonymous).

Table 4. AHP. Matrix of pairwise marketing approaches to doctors (Authors)

Factor	Cost	Marketing	Feedback	Dose
Cost	1	1	9	3
Marketing	1	1	7	3
Feedback	0.11	0.14	1	0.11
Dose	0.33	0.33	9	1
Total	2.44	2.48	26	7.11

In the next step the matrix is normalized in order to determine the consistency measure and consistency ratio of the matrix. In this way the weight of the criteria is determined.

Table 5. Normalization of the matrix (Authors)

Factor	Cost	Marketing	Feedback	Dose	Total	Average	Consistency measure
Cost	0.41	0.4	0.35	0.42	1.58	0.4	4.28
Marketing	0.41	0.4	0.27	0.42	1.5	0.38	4.29
Feedback	0.05	0.06	0.04	0.02	0.16	0.04	4.02
Dose	0.14	0.13	0.35	0.14	0.76	0.19	4.22
						CI	0.07
						RI	0.9
						CR	0.08

By using the AHP method, it is determined that contrary to popular belief, cost, though extremely important, is not the only factor which both patients and doctors look at. Other factors, especially marketing and brand awareness of the product play crucial roles. The following are the ranks of various factors which influence brand decision making of the final consumer:

1. Cost
2. Marketing
3. Dose
4. Feedback

3.1. Comparison & analysis of drugs to use in hospital formulary (TOPSIS)

In order to determine the best brands ranked in order, to be used in hospital formulary for the particular generic name of the drug, the following matrix is drawn comparing 4 top brands in the market. The weights of each criterion measured in the previous step is used in order to compare and rank the brands. This table can finally show us the highly crucial effect of brand awareness on final sales.

Table 6. Matrix drawn against the weights (Authors)

	Non Benf.	Benf.	Benf.	Benf.
Weights	0.38	0.41	0.04	0.17
Factors	Cost	Marketing	Feedback	Dose
Brand A	0.0425	4	3	5
Brand B	0.05	1	1	5

Brand C	0.159285714	5	5	5
Brand D	0.11	3	2	5

In every hospital setting, one of the most influential factors is cost. However, power of marketing of a drug is almost as important than the cost of the drug. In many instances the company which invests more in marketing of their product, both to physicians and the public, has a higher chance in leading the market as it creates a strong aura of trust within its customers, both professional and public.

As we can see further in the analysis, the feedback of the drug's efficacy (from both patients and physicians) is to some extent related to the marketing strength of the same company the drug is manufactured in. The cost of the products is retrieved from an online pharmacy (Real time cost) and the feedback is based on the online reviews of each brand. (Drugs.com, n.d.)

In order to provide a consistency in the ratio, brands with the same doses are chosen (500mg per tablet). Please note that even though the doses are the same, the bioavailability may differ.⁴

Brands of the generic ranked are in the following order:

1. Brand C (0.16 cents per tab)
2. Brand D (0.11 cents per tab)
3. Brand B (0.05 cents per tab)
4. Brand A (0.04 cents per tab)

The following graph explains all the factors which must be considered in structuring a digital marketing strategy for pharma companies. Starting from how brand awareness could be improved it's explained what content needs to be generated more often and in which social media platform. Also, sponsorship plays a vital role in advancing digital marketing campaigns towards success (Authors).

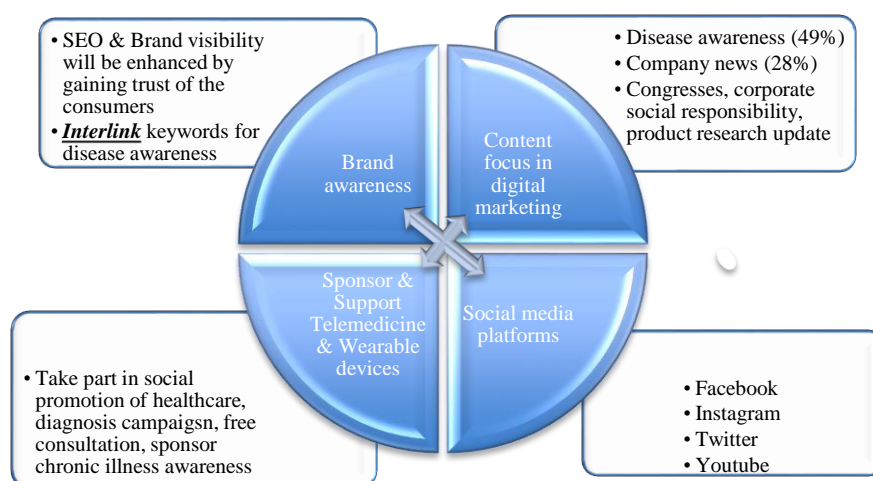


Figure 1. Digital marketing plan (Authors)

Brand awareness: In order to improve brand awareness, the following must be considered:

- Improve SEO by considering “interlink” of what users search for online. Majority of users search for diseases and disease related information which should be interlinked with the company’s medical information website or social media page concerning the same
- Brand visibility will be enhanced through more clicks and increases SEO

Content generation: Content generation must include disease awareness primarily with strongest focus. Providing the followers with the right type of medical information enhances their trust in the brand and will potentially improve the chances of choosing the company’s brand over other companies while attempting purchase.

Sponsorship: Sponsoring free diagnostic campaigns, counselling, telemedicine and wearable devices use and other relatable information will drastically enhance the average user’s knowledge regarding their health. This will in turn result in customer satisfaction and improves trust among the users.

⁴ Bioavailability is defined as the availability of the drug in vivo. In other words, the efficacy of the drug is defined as it’s bioavailability.

Social media platforms: Facebook and Instagram must be actively participated in. Promoting healthcare and healthy life styles through posters and infographics, reminders of health check-ups, daily healthcare tips, promotion of ways of preventing diseases etc. should be the most essential parts of social media engagements.

Conclusions

1. This paper concludes that the most engaging content is “disease awareness” which needs to be highly considered to be the top priority in content generation.
2. This paper also comes to a conclusion that not every social media is to be targeted. It is important to consider the customer engagement of different social medias which are also analysed in this paper. “Facebook” and “Instagram” are the most engaging social medias for pharma companies. The pharma companies which do not have Instagram accounts needs to reconsider.
3. Cost and marketing are equally important in terms of brand selection of a drug by the final consumer. A well marketed drug which has a high cost per tablet has shown to generate more sales than a drug with lower cost but poor marketing approaches, especially digital marketing strategies of pharma companies play a vital role.
4. It is no surprise to come to a conclusion that the **Brand A** which is ranked the highest amongst all the brands and has the highest potential to be chosen in hospital formulary is the cheapest in terms of cost. However it must not be ignored that **Brand C** which belongs to the leading pharmaceutical company in its related OTC⁵ NSAID⁶ market, is also amongst the top 3 companies in terms of **Digital marketing** rankings done in this paper and stands out among other brands containing the same active ingredient.

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⁵ Over the counter

⁶ NSAID: Non-Steroidal Anti Inflammatory Drugs

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