

**EFFECT ON META-ANALYSES OF DRUG TRIALS: DISTINCT COMPANY
META-ANALYSIS****R.RAJESHKANNAN*¹ AND MITHILESH K.SINGH*²***Assistant Professor (Sr)¹, B.Tech CSE^{2,3} SCOPE, VIT University, Vellore, Tamilnadu, India***ABSTRACT**

To deal with quality, influence of the product of the same medicine of different companies in India we are going to provide all the details needs by the users. Like the quality of each medicine of different companies year wise based on the user review and influence on patient. Firstly, this report introduces the report of the medicine which is used in day to day life and we do not have any idea of the quality of that company. Secondly, it will show in different periods and their characteristics in different perspective, aiming to explore and analyse the findings and examines the impacts of the quality of the medicine based on the customer's feedbacks and reviews. We will take the quality report from the different sources and will analyse it based on that reports and will provide the best report based on all these information. To work on this report, we are using the business analytical tool for better user experience that will a provide different angle of the information like in pie chart, dash chart, graphical view and year report. Medical performance management (MPM) is a key business initiative that enables companies to align strategic and operational objectives with business activities in order to fully manage the quality of medicine through better informed decision making and action. Effective medical performance requires an organization to model and monitor not only its tactics, but also its strategies and the assumption on which these strategies are built. Here the question is not that the customer are choosing right product or bad product, the question is, because of every bad choice and bad product patient are getting more problem or getting more time to recover from their issue or some time they are effected in a bad way and losing their life so this is not a one way, this is two way effect on the patient. Finally, we have come to concluding that the quality and influence of medicine not only based on the name of the medicine but also on the company which is making this medicine.

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INTRODUCTION

In our day to life, using medicine for any health issue and no one used to think the quality and performance of medicine like they normally used to go to the shop and ask like to give me that medicine and no one care about the company. Here the question is not that the customer are choosing right product or bad product, the question is, because of every bad choice and bad product patient are getting more problem or getting more time to recover from there issue or some time they are effected in a bad way and losing their life so this is not a one way this is two way effect on the patient .So there should be knowledge to the customer about the medicine as well as the company and their performance so we are going to provide a report based on the customer review so that the new customer will aware of the quality of the medicine. Our main objective is to collect data from all companies, which are manufacturing different medicine for different purpose. In general, we can say that the company which is manufacturing medicine X of best quality that does not mean that they will produce medicine Y of best quality, so some time customer's used to confuse regarding these things and can choose the bad quality. In a country like India where, general people do not used to think more in medical issue and leave all to the person who has some knowledge from some other person and this chain keep on increasing and people keep choosing bad products. Medical performance management (MPM) is a key business initiative that enables companies to align strategic and operational objectives with business activities in order to fully manage the quality of medicine through better informed decision making and action. So we are going to take the report of the all companies and corresponding medicine feedback and by the use of business analytical tool, taking all the details in a different perspective like we mention early pie chart, dash chart, graphical view and year report. So that the customer can think and able to take right decision every time whenever they need medicine for any health issue. So whenever they are getting a medicine which is working as expected, in that time we have to make a note of that medicine with all description so if in we future we need it, we can directly refer that medicine and this is not only for good product but also in case of bad product. We have come to the conclusion that before taking any decision make sure that everything is fine with that.

RELATED WORK

Almost all the reports related to health issues are not deals with directly to the consequences of the medicine to the patients, The factors of the medicine for the development of the medical industry only focus on the patients' insurance and the way to reach out to the patients and the medical retailers. The current state of the health care industry is not sustainable. This analysis shows a path forward and suggests that a set of powerful forces will combine to disrupt and transform the industry¹⁵ so there will be a change in the health care industry but in which way people will benefited will be matters most so this will not analysis the solution of

the problem but it will help some extent to the patients and the medical retailers. Sometimes what happened like, the people using the medicine or the retailers not much aware about the product and the company that manufactured the product, it might contains some more vitamins or minerals or not a good product, caused bad impacts on the patients as well as on the retailers, in worst case patients will lose their life so the factors may be more but the reason will be like in¹⁶ and the solution will only be to aware the people about the bad and good products so that they can take their decision before using it. In many countries like U.S.A, INDIA, there are various laws and making new laws to increase the insurance coverage, kind of safety to the people¹⁷, so this solution will try to help the patient's family and the relative, kind of favour of the patient, but in the simple manner this will not actually deals with the real problems, it needs some modifications for the real implementation of the problems While the law contains few direct provisions for rationing care, it nonetheless sets the stage for government rationing and interference with how doctors practice medicine. The millions of the patients and people are happy with their health but there are not able to keep it for longer because of any reason that does not matters. The effective treatment of infections and diseases, which was taken under guaranty is not much seems to effective for the people and the patients, In other word I can say that the life of the patients after many extension of the previous treatments, are fails because of the end treatments, the reason and solution both are exactly opposite to each other¹⁸ The report reveals that the largest pharmaceutical corporations are complicit in fuelling one of the most serious public health crises facing society today. It is essential for pharmaceutical companies to lift the veil on their supply chains and stop buying antibiotic APIs from polluting Chinese factories. Many governments are not able to control the issues of the medical like controlling cost, fake products and the effective way of the meditation, that cause an side effects on the both patients as well as on the fake companies¹⁹, Every one today care for the laws but after the laws who cares and left it happen what is happening, once some company settle down in the market no one taking care of the their product so that will have to be solve by us and the user who are using their products. There are some organisations, they are dealing with research scope in the area of medicine analysis and they are mainly dealing with the health services, the assessment of the quality, medical audit, clinical audit and quality assurance²⁰ so the report will be useful for by taking decision based on the medical factors. The applied way of improving the patient's safety²², they have worked on the various method, techniques and the solution of the every problems so there will be a sharp improvement in the safety of the patients and also their life style, there would not be any bad impacts on the patients because of the methodology, So my concern is the way they are try to handle the problem with the solution with various factors. There are already various factors of the patient non- safety like radiations of the chemicals, equipment failure²² and after that the medicine failure or the bad product that will badly affect the patient's life. This will also discussed the way to handle all this situation

procedures and operator responses can be improved to lessen or avoid risks associated with hardware and software failures in radiotherapy equipment.

MOTIVATION

Applicants described why they wanted to study medicine or become a doctor and/or researcher. These descriptions appeared to be in line with the published program description. Applicants also provided statements of their enthusiasm and their strength of motivation, or they just expressed that they were motivated. They referred to their interests related to the study and profession, e.g. interest in the human body or helping people or doing research or the social aspect or specific specialties, etc. Applicants sometimes explained why these were their topics of their interest. Applicants explained their choice for our institution, which could be driven by a preference for the organization of the institution or the attractions of the city. Applicants' motivation for applying could originate from personal life events. In our country most people are not more aware about the medical related issues and they are not able to take their decision own, by considering this scenario we come to the point that how can we remove this issues to some extent, so finally we come conclusion, this report will defiantly help them. So sometimes the problems itself motivates to solve it and the related article play a really pivotal role in the way of dealing with the problem

FRAMEWORK OVERVIEW

Medicine-related problems include medication errors (involving an error in the process of prescribing, dispensing, or administering a drug, whether there are adverse consequences or not or same medicine manufactured by different companies) and Medicine-related problems are relatively common in hospitalised

patients and can result in patient morbidity and mortality, and increased costs. In order to get an overview of studies on medicine-related problems in hospitalised patients, with specific attention to the incidence of drug-related problems and their costs, and the knowledge about the company to the possibilities of prevention and to the effect of these interventions, we performed a literature search. Incidences of medication errors reported in studies vary widely. The range of reported incidences of adverse drug reactions is even wider. These wide ranges can be largely explained by the different study methods and definitions used. Problems related to drug therapy may be averted by preventive interventions. Several possibilities for prevention exist, especially for the prevention of medication errors. Using medicine for any health issue and no one used to think the quality and performance of medicine like they normally used to go to the shop and ask like give me that medicine and no one care about the company. . Here the question is not that the customer are choosing right product or bad product, the question is, because of every bad choice and bad product patient are getting more problem or getting more time to recover from there issue or some time they are effected in bad way and losing their life so this is not a one way this is two way effect on the patient. A drug is inappropriate if its potential for harm is greater than its potential for benefit. Inappropriate use of a drug may involve like Choice of an unsuitable drug, dose, frequency of dosing, or duration of therapy, Duplication of therapy, Failure to consider drug interactions and correct indications for a drug, appropriate drugs that are mistakenly continued once an acute condition resolves. Solving the problem of inappropriate use in the elderly requires more than avoiding a short list of medicine and noting drug categories of concern. A patient's entire medicine regimen should also be assessed regularly to determine potential benefit vs. harm.

Pseudo Code – Using the concept of data miming Companies_Performance ()

```
{
Input: The data set containing the user review based on the same medicine of different
Output: The result Fin [ ] will be in the order based on the user review and the company performance throughout the yeas
1. For Comp i=1.....m do
2.   For Comp j=1.....k do
3.     Res [n] = Compare (mi, mj)
4.     Compare all company data with each other based on users feeds
5.   End for
6. End for
7. For each (user: k)
8.   Retrieve previous result and compare it with medicines
9.   Fin [i] = BestReiv (k, Fin[i-1])
10. End for each
11. Return Fin [ ]
}
```

(i) Drug Analysis

The lead role in any data visualization projects are the data sets and the source of the desired data, like the data may be from any source, they may contains redundant as well as garbage value but the actual data after parsing leads us to the desired result. This project

retrieves data from online source, cloud data as well as the manually converted data, all the data with different sources are cleaned first using the data mining concept and they it has been stored in the data mart for further processing, the data marts contains the compatible data for the data visualization tools (as shown in figure

1), We have used one of the best tool of data visualization that is tableau desktop, that is always used for business analysis.

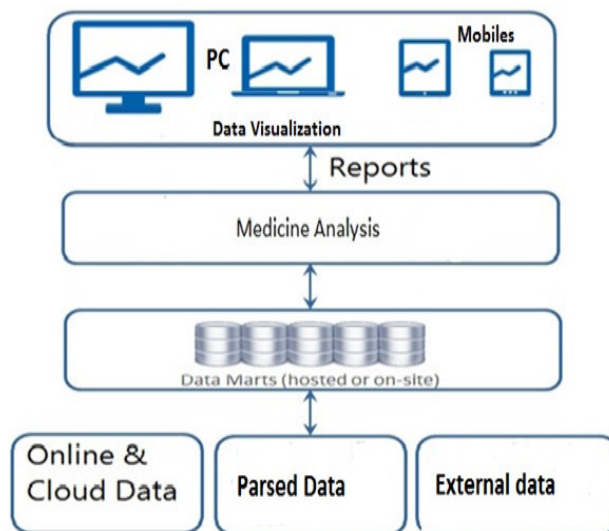


Figure 1
Architecture Diagram: Drug Analysis

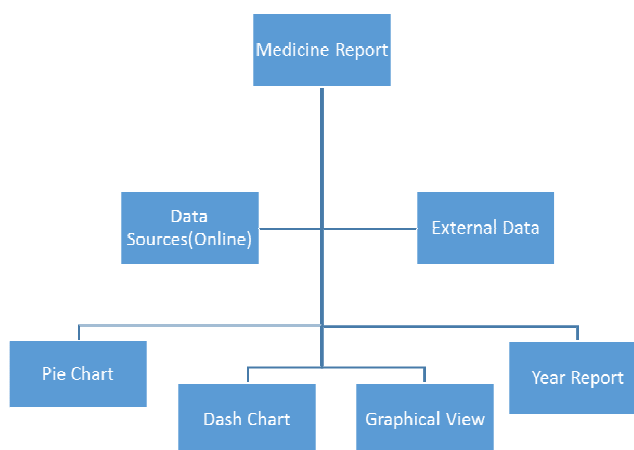


Figure 2
Flow of data- from different sources

The result of the tool will show the different perspective of the data visualization so that the user can understand with all factors that may be rigid for him in past. The flow of the report will flow from data set to the different representation of the results that has been explained in the flow diagram (figure 2). The data source will be any on-line as well as the manual data and the external data will be the data from the unknown sources. The results will be shown to the user based on their needs and that will explain them the actual scenario of the problem as well as the accurate result.

TABLEAU DESKTOP VIEWPOINT REPORT

Tableau Desktop is data analysis that keeps you in the flow. It's easy to learn, easy to use, and it is faster than any existing tools. It's built on breakthrough technology that translates pictures of data into optimized database queries. It's designed to support how people think. Drag and drop on the canvas. Leverage your natural ability to spot visual patterns quickly. Experience an analytics solution built for speed and ease of use. Whether it's in a spreadsheet, a SQL database, Hadoop, or the cloud, you can connect to any data, anywhere. Access big data with a click combine disparate data sources without writing code. Discover what all your data has to

say. How many opportunities are hiding in your data? Tableau Desktop is a product that everyone can use to ask new questions, spot trends, identify opportunities, and make data-guided decisions with confidence. Create interactive presentations. Control the narrative while allowing your audience to explore. Let your data do the talking. Real analytics demands more than a pretty dashboard. Build new calculations from existing data, drag in reference lines and forecasts, and access statistical summaries. Experiment with trend analyses, regressions and correlations. The Figure 1 shows our data set and the cleaned data that has performed before the further processing, the next task is to supply this data to the tool that used for the data visualization and business analysis.

	MED_ID	USER_ID	RATING	COM_ID		COM_ID	CNAME	FROMYEAR	LOC_ID	COM_TYPE
93	MED2	U2	3	C4	1	C1	COM1	1977	L1	TYPE1
94	MED3	U2	4	C4	2	C2	COM2	1980	L2	TYPE2
95	MED4	U1	3	C4	3	C3	COM3	1988	L3	TYPE3
96	MED4	U2	4.2	C4	4	C4	COM4	1994	L4	TYPE4
97	MED4	U3	4	C4	5	C5	COM5	2000	L5	TYPE5
98	MED1	U4	2.6	C4	6	C6	COM6	2001	L15	TYPE6
99	MED2	U4	3.1	C4	7	C7	COM7	2005	L6	TYPE7
100	MED3	U4	3.2	C4	8	C8	COM8	1990	L7	TYPE8
101	MED4	U4	4	C4	9	C9	COM9	2005	L8	TYPE9
102	MED1	U5	3	C4	10	C10	COM10	2015	L9	TYPE10
103	MED2	U5	3.5	C4	11	C11	COM11	2016	L10	TYPE11
104	MED3	U5	4	C4	12	C12	COM12	2006	L11	TYPE12
105	MED4	U5	4.1	C4	13	C13	COM13	1960	L12	TYPE13
106	MED1	U6	4.2	C4	14	C14	COM14	2015	L13	TYPE14
107	MED2	U6	3.2	C4	15	C15	COM15	2016	L14	TYPE15
108	MED3	U6	4.2	C4						
109	MED4	U6	3	C4						
110	MED1	U7	5	C4						

Figure 3
Cleaned data

ANALYSIS REPORT

By considering the real life scenario of the medicine report we store the data from different sources of medical and by use of Tableau tool we come to conclusion that this report will provide the different user view point with different perspective. So the report will consider the data assumption based on the real life

data. So the user or viewer can easily understand the situation and can take their decision. This report is based on the user rating and company performance throughout the year, we consider the user review, and total number of the review. By analysis this facts we come to conclusion that which company is leading with which type of the medicine.



Figure 4
company-wise report of the medicine based on the user response

This will help the new customer as well as the user to identify which company is manufacturing the best medicine. From above I can say that medicine MNAME1 is leading for all the company. We can consider the various view point to analysis our data. So the user can easily can understand the whole scenario (as shown in figure 4). When the user can understand the all comparison of the medicine as well the company with all other company, in this situation this result will help them like they can understand the whole rating and the maximum rating gain by the company for which particular medicine and how much rating will gain by the particular company. The performance of the company for every medicine can easily be visualized

(figure 5). The rating scale show the total rating for the whole industry and the rating for the particular company for particular medicine out of the all rating. From the above report I can clearly say that medicine MNAME1 is leading for all the medicine manufacturing company. The lowest useful medicine in the list is MNAME2 which has minimum user ratings. So company needs to improve the quality of this medicine (refer figure 5). The below report is same but it is showing with different perspective so that report can be understandable to everyone and they can take their decision (figure 6). The shape visualization also help the people understand the whole scenario like the most rated medicine will have the big shape with dark colours.

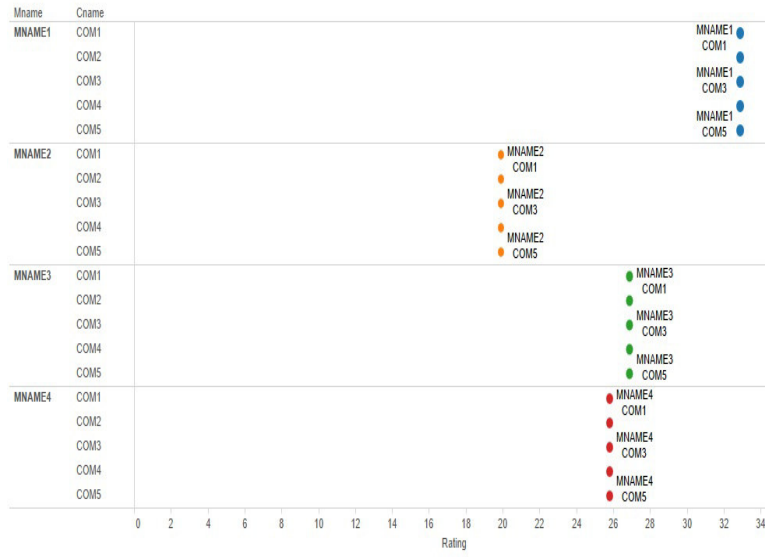


Figure 5
The different medicine produced by the company and its performance

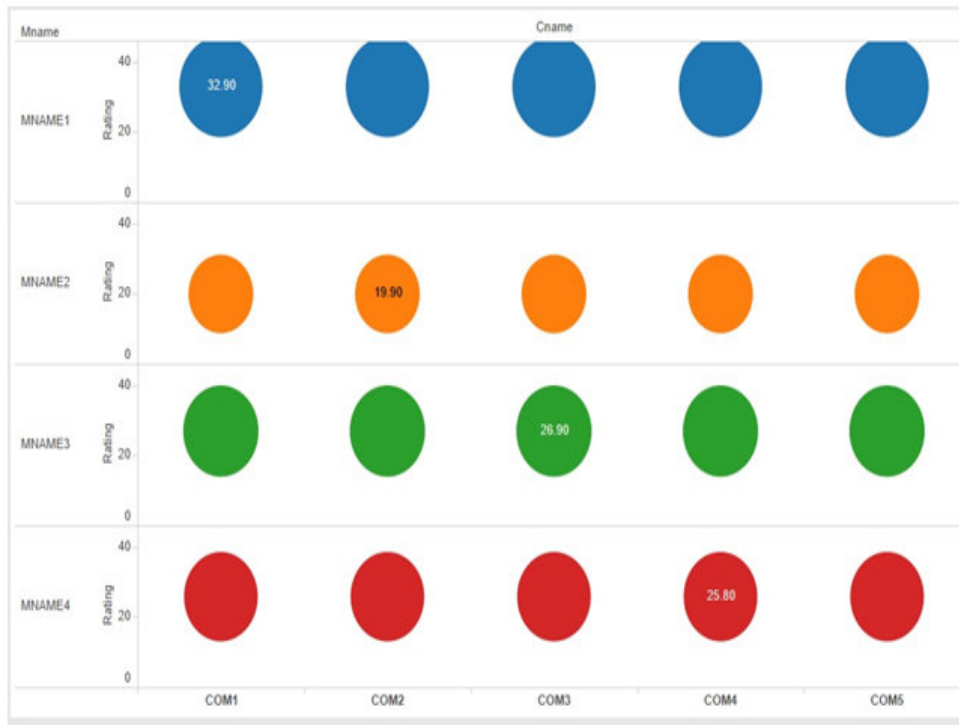


Figure 6
More visual data of the performance of the medicine over a specific period

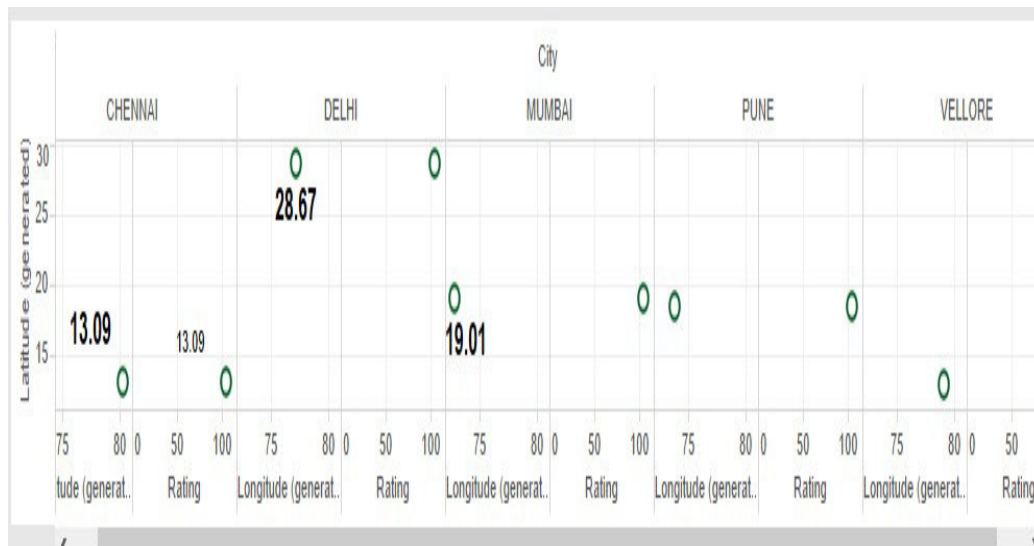


Figure 7
The geographical wise report of the company and its products

Say some people is going from one place to the another place they can take their decision based on this report and they can also select their city, which may be best for this kind of health issues. The location based result have many perspective like it can be visualised as the city with the rating like which city gain maximum rating for the particular medicine and the best manufacture company of the city easily be identified (figure 8). This result will help the people living in some other country and interested in the country performance and the status of the particular medicine over the years. So the map view of Data will be helpful

for the international users or people who are interested in the particular country or the medicine or the performance of the company globally. Now I can say the all type of the data visualization can help the people at most so that they can take their decision based on the results shown to them. The above report is more useful for the people where they are living. They can select the best product from the best company in their city. This report is based on the city wise performance and the location of the customer (figure 9). They can visualise the performance based on the geographical map so that they will understand the situation how it is changing.

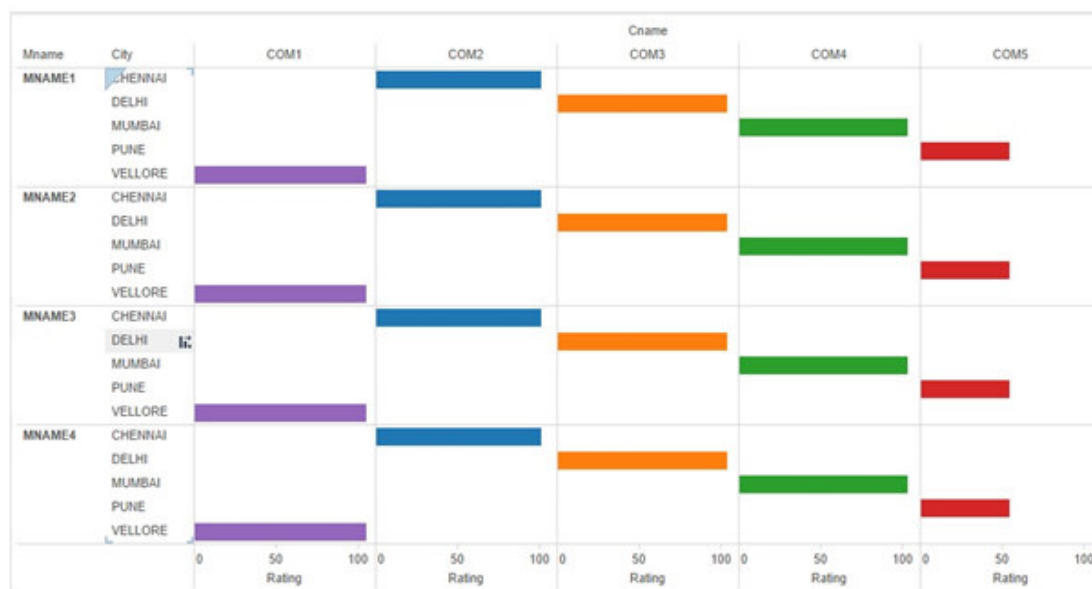


Figure 8
The city-map of the performance of the medicines of the every company.

We have taken in consider of all the aspect of the user as well as the people who is taking interest in this area. Now can people can understand where we are lacking and what should we take decision to overcome this. So the people can understand the whole scenario with the different angle of representation of the report and they

can safe places and decision for their coming issues and they will keep safe from this issue and that will increase the chain of the safe people and that will leads to decrease the affected people and trade people will consider it as a big issue and they can take action regarding this.



Figure 9
Geo-view of the company and its all product over the global map

CONCLUSION

The report has considers the different patient and doctor's viewpoint with respect to their own profit, so no one gets harmed from the fake or bad product. We have taken the different company for the same medicine and based on the user report, we conclude that which will be more efficient for the patients. By considering the real life scenario of the medicine report we store the data from different sources of medical and by use of Tableau tool we come to the conclusion that this report will provide the different user view point with a different perspective. So the report will consider the data assumption based on the real life data. So the user or viewer can easily understand the situation and can take their decision. So we can say in real life

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implementation the bad product of any company can never succeed and hence the company must stop selling the product and they will improve their product. So I can say my report is not only useful for the customer, but also most useful for the companies, so they can improve their product based on the user review and their competitor companies.

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CONFLICT OF INTEREST

None.

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