

Summer Training at

PlasmaGen Biosciences Pvt. Ltd.
(April 17- June 4, 2012)

Plasma Product Therapy and Blood Banking Scene in India-Facts and Fictions

By
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Under the guidance of
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Post Graduate Diploma in Pharmaceutical Management
2011-2013



Institute of Health Management Research,
Jaipur
2012

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Certificate

This is to certify that Vishal Saini from Institute of Health Management Research, Jaipur has undergone Summer Training at Plasmagen Biosciences Pvt. Ltd, Bangalore from 16 April, 2012 to 10 June, 2012.

The candidate himself carried out the project. His approach to the study has been sincere, scientific and analytical. This summer training is partial fulfillment of the course requirement is recommended for the award of post graduate diploma in Pharmaceutical Management.

I wish him success in all his future endeavors.



Dr. P.R. Sodani
Dean (Academic and Students Affairs)
IHMR, Jaipur



Dr. Nirmal Kumar Gurbani
Associate Dean (PG Pharma)
IHMR, Jaipur

Acknowledgements

I wish to take this opportunity to convey my sincere gratitude to all those who has helped me in the successful completion of this project.

I am very thankful to Dr.Nirmal Gurbani (assistant professor, IIHMR), my mentor for my academic journey in IIHMR, Jaipur, for his very fruitful encouragement and supportive guidance which makes me enthusiastic in completion of project.

My heartiest thanks goes to Dr. Amit Jha (product manager) and Mr. Nipun Gurg (national head), our guide for carrying out the project, without whose constant guidance, co-operation & encouragement my entire project would have remained a distant dream.

I am also extremely thankful to Mr.Dalbir Sing, the placement coordinator of our institute who being a very generous and kind hearted man had never been miser in sharing valuable advices and experiences with me & had been very instrumental in choosing my course of action throughout the project.

I am also very thankful to Dr. Ranjeet Ajmani for imparting us the training on how to carry out the market research and providing us the entire necessary information one would need in carrying out the project successfully. My heartiest thanks go to Mrs. Arathi (HR Head) for mailing us from time to time and keeping us updated with all the latest updates and instructions on behalf of the company.

Finally my sincere acknowledgement to all the doctors and pathologist of blood bank who gave me time in the midst of their busy schedule and helped me pursue this otherwise impossible project.

Date- 20-06-2012

Signature-

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EXECUTIVE SUMMARY

The project undertaken is a market research on the demand, consumption pattern & personal preferences of doctors & patients while buying Plasma products for medication. As plasma products such as IVIG, Human Albumin, Anti-D, Hepatitis and Tetanus Immunoglobulin are all very expensive in the market because their only source is Human Blood & blood donors charge a hefty sum for any donation of blood they make. Despite the fact that all Plasma products are lifesaving drugs & the last line of defense for many doctors, many patients refrain from buying it as their price are well beyond the reach of many poor people which form a large percentage of our population. Also because of the fact that plasma products are new in the market, there is not much of awareness among doctors & patients regarding its uses & implementation. Therefore the plasma market is not a very favorable place to do business in, since the option of minimization of production costs doesn't hold over here.

However the purpose of this market research was to determine what the obstacles are and to draw a perfect reflection of the current plasma market, thereby finding new prospects for Plasmagen Biosciences, a branch of Trigenesis as it sets foot into the plasma market on their own. Throughout the market survey on doctors of reputed hospitals and in clinics in Delhi, Meerut, Gurgaon, Haridwar, Dehradun, Noida, Saharanpur, Rorkee and Faridabad demand, the consumption pattern, personal preferences and quality & availability of currently available blood & plasma brands in the this region of India were determined.

From all the responses collected from the doctors it was evident that availability and quality of plasma products are not very satisfactory in the northern region. A clear majority of the doctors found that the current prices of plasma products are very expensive. Doctors have unanimously said that awareness is required for both patients and themselves regarding plasma products. Consumption rate is very less for plasma products since one in fifty or hundred need to be prescribed with plasma products. And choosing their favorite brand has been done purely on the basis of availability, quality of the product and price.

The following few pages are a detailed account along with graphical representations of all the responses I have gathered during the research. The intentions are to depict a close reflection of the Plasma market scenario in the Jharkhand and Bihar region of India and come up with new business prospects and ways to counter the limitations of trade in Plasma market.

ORGANIZATION PROFILE

The study is conducted by Plasma gen Biosciences Pvt. Ltd. an offshoot of Trigenesis Life sciences situated in 160,KCI Chambers,2nd Floor,5th Main Road, Chamarajapet,Bangalore-560018 which is a pharmaceutical company dealing in protein therapy & plasma products for Indian & global markets. Its estimated sales for 2010-11 is approximately 5.3 million US \$ which would most likely to go up to 24 million US \$ by 2011-12 & 30 million US \$ by 2015. With a capacity of 1,00,000 liters of Plasma collection & having an employee strength of 150 people, they are all set to embark into the plasma market by themselves. Their action mainly includes direct sales in the International & domestic market and plasma products manufacturing by the process of fractionation.

The following few paragraphs are a brief introduction of its parent company Trigenesis Life sciences, its history and its business activities. In the history of Indian Pharmaceutical Life sciences industry, one name is worth a reckon i.e Trigenesis Life sciences (P) Ltd. It is the dominant and vital arm of RSM group having diversified business areas such as Textile clothing, Finance consulting and Plastic additives & moldings along with pharmaceuticals.

In the realm of success, today RSM group earns a standing as one of the top 20 well trounced conglomerate business group of the Indian Inc. with group turnover exceeding Rs. 1600 million. RSM pharmaceuticals, the Flag Ship Company of the group struck its roots in the Indian pharmaceutical distribution and marketing industry in 1987 and presently is one of the top 5 distribution houses, employing around 500 people having an annual turnover of Rs. 500 Million. RSM group is built on the sturdy pillars of reliability, sound infrastructure, operational expertise and financial stability.

The success of RSM group in the distribution sector has given a strong footage for Trigenesis Life sciences (P) Ltd - A business venture destined to the noble cause of social welfare in the emergency and critical care segment.

The Therapeutic Marvels include:

- Biologicals: Plasma products
- Hormonal Therapy
- Recombinant Therapeutics
- Sterile anti infective
- Oncology
- Antibiotics lyophilized
- Anesthetics
- Endocrinal Steroids
- Cardiovascular drugs
- Nutritional Supplements

MISSION:

To propagate the blood component therapy for optimum use of each drop of blood donated and, uses surplus unutilized plasma for preparation of plasma products in India and SAARC regions.

VISION:

To advance plasma therapy in India and SAARC countries.

FINANCIALS

Its estimated sales for 2010-11 is approximately 5.3 million US \$ which would most likely to go up to 24 million US \$ by 2011-12 & 30 million US \$ by 2015. With a capacity of 1,00,000 liters of plasma collection & having employee strength of 150 people, they are all set to embark into the plasma market by themselves. Their action mainly includes direct sales in the international & domestic market and plasma products manufacturing by the process of fractionation.

STRATEGY

Plasmagen is focused on bridging the gap between demand and supply of plasma products. Under their study they would like to evaluate the present scene, the challenges and making India sufficient in the field of blood plasma. The study in this new area will add significant depth to the existing scenario and overcome the major challenges faced by Nation. Company is trying to focus on delivering world-class plasma products at affordable prices.

PRODUCTS: Recently company is available with 2 products in market that is Plasma-Hep and Ronsen-Glob. Plasma-Hep is a sterile, non-pyrogenic, solution of Hepatitis B-Immunoglobulin used for intramuscular use only. Ronsen-Glob is normal human immunoglobulin for intravenous use collected by plasma apheresis technique.

OBJECTIVE OF THE STUDY

Plasma products such as IVIG, Human Albumin, Anti-D, Hepatitis and Tetanus Immunoglobulin, Anti rabbi's immunoglobulin, fibrin selent, blood clotting factors are all very expensive in the market because their only source is Human Blood & blood donors charge a hefty sum of money for any donation of blood they make. Despite the fact that all Plasma products are lifesaving drugs & the last line of defense for many doctors, many patients refrain from buying it as their price are well beyond the reach of many poor people which form a large percentage of our population. Also because of the fact that plasma products are new in the market, there is not much of awareness among doctors & patients regarding its uses & implementation. Therefore the plasma market is not a very favorable place to do business in since the option of minimization of production costs seldom works over here.

The study is conducted by Plasmagen Biosciences Pvt. Ltd. an offshoot of Trigenesis Life sciences which is a pharmaceutical company dealing in protein therapy & plasma products for Indian & global markets .The purpose of our market research was to determine what the obstacles are and to draw a perfect reflection of the current plasma market finding new prospects of business for them, as it sets foot into the plasma market on their own.

During my market survey on doctors of reputed hospitals throughout the region of India, my objectives had been to determine the demand, the consumption pattern, personal preferences and quality & availability of currently available Blood plasma brands in that area. This is going to give us an idea of the current market scenario prevalent in those cities which will serve as vital information of the market where business is intended to be done. The following few pages are a detailed account along with graphical representations of all the responses I have gathered during my field-work in those cities. The intentions are to portray a close reflection of the plasma market scenario in that area and come up with new business prospects and ways to counter the limitations of trade in plasma market.

- To determine the demand, the consumption pattern, personal preferences and quality & availability of currently available Blood plasma brands in region of India given to me.
- To study the perception of doctors towards plasma products and to know about the supply and demand of the plasma products in India.

PROBLEM STATEMENT

For an aspiring company to do business in protein therapy, the plasma market is not a very congenial place to do business in since plasma products such as IVIG, Human Albumin, Anti-D, Hepatitis and Tetanus Immunoglobulin all are very expensive, their only source being Human Blood & blood donors have to be paid hefty sums of money for any donation of blood they make. There for availability of blood in our country and fractionation facilities are limited and not sufficient to fulfill nations demand for this entity of medicine. Another issue, which was troubling us, is the lack of awareness since it is new to the market and there is little awareness among doctors & patients alike regarding its uses & implementation.

Some of the other concerns would include:

- Ever rising cost of plasma.
- Government control of pricing.

Since the government does not want the prices of plasma products to jet off beyond the reach of the common man.

- Poor Worldwide harmonization of regulatory issues.
- Import Limitations.

With an in depth market survey on the plasma market I seek to determine the demand, the consumption pattern, personal preferences and quality & availability of currently available blood & plasma brands in central Region of India which will hopefully come handy when embarking on new business propositions in the plasma market.

METHODOLOGY

The project undertaken is a market survey of the demand, consumption pattern & personal preferences of doctors, paramedical staffs, interns & pharmacies alike when it comes to using and prescribing plasma products for therapy. Hopefully I will draw a nearly perfect image of the prevalent plasma market in Delhi, Uttar Pradesh and Uttaranchal. The following few pages lists all the methodologies adopted.

1. TARGET POPULATION:

During my market survey of the plasma market in those cities the target population had been primarily the doctors of well reputed hospitals of all the states as directed by our mentor. Few of my responses had been from Marketing representatives and Hospital pharmacies which constitute a tenth of my total responses.

- For IVIG I have consulted Hematologists, Neurologists, General physician, Gynecologist
- For Human Albumin I have consulted Hematologist, Gynecologist, Pediatrician, General surgeon.
- For Anti-D I have consulted Gynecologists only.
- For Hepatitis B Immunoglobulin I have consulted Physician (MD), Gastroenterologists, Gynecologist and Pediatrician
- For Tetanus Immunoglobulin I have consulted Internal Medicine, Physician MD, Pediatrics.
- For Anti Rabies Immunoglobulin I have consulted Neurologists, General physician, Gynecologist
- For Fibrin Sealant I have consulted Neurosurgeon, Cardiac surgeon, Plastic surgeon ,General surgeon
- For Factor VII, VIII, IX I have consulted Intensivist , Hematologists, Cardiac surgeon, Neurosurgeon, Pediatrics
- For Prothrombin Complex Concentrate I have consulted Intensivist , Hematologists, Cardiac surgeon, Neurosurgeon, Pediatrics

2. DATA COLLECTION:

- Data collection for most of my respondents had been through Questionnaire made by me with the help of my ever helpful mentor Mr. Amit Jha of Plasmagen Biosciences Pvt. Ltd.
- I have taken some doctor's interview by Email also.

3. TYPE OF RESEARCH DESIGN:

The market survey undertaken is an example of a descriptive research since the overall research design is rigid and pre-planned all throughout our study.

Judgement and simple random sampling both have been used in our study. We have done Judgement sampling while consulting doctors as mentioned in the list of doctors given to us & SR sampling is used while meeting random doctors as they come, in a hospital visited. There is also a preplanned and fixed statistical design, i.e., to use compound bar diagrams for every question to represent our findings. Observational Design is also well structured since the same questionnaire prepared by us had been used all throughout our research work. So these are some of the reasons for including our market survey under a descriptive research design.

4. TYPE OF SAMPLING:

Judgement sampling or Non-Probability sampling had been majorly used in selecting samples for my market research since doctors list constituting the top doctors in the western region of India, had been provided to me in word and excel format from the company. Apart from this I have also used Simple Random Sampling while meeting doctors randomly as they come in any hospital I had visited.

5. TYPE OF SCALING:

The simplest form of scaling, i.e. , ordinal scaling had been used to measure doctors' preferences such as "Highly satisfied" or "Not satisfied" or "Satisfied", which had been assigned alphabets like a, b ,c etc. and represented in graphs.

6. STUDY TIME:

The survey was conducted for a period of time i.e. starting from 16 April to 2 June 2012.

7. STATISTICAL DESIGN:

Compound Bar Graph has been used to represent responses for each questions. Pie Charts have also been used to represent responses for individual questions

8. QUESTIONNAIRE:

PlasmaGen Biosciences Pvt. Ltd.
No.160, KCI Chambers, 2nd Floor, 5th Main Road,
Chamarajapet, Bangalore-560018.
Ph.: + 91-80-42154535/36/37 Fax: + 91-80 - 421 545 38 Email: info@plasmagen.in

Name:.....

.....

Address.....

.....

.....

.....

.....

City

Ph. No.

Mobile:.....

Email:

.....

.....

1. How long you have been using?

- a. Less than 3 yrs., b. 3-7 yrs., c. More than 7 yrs.

2. Availability of product has been...

- a. Excellent, b. Good, c. Poor.

3. Any specific brand you prefer

4. Is it because of

- a. Better Product b. Availability c. Pricing d. Other (Specify)

5. What is general consumption pattern?

- a. Less than 10 b. 10- 20 c. More than 20

6. Because it is a biologic “made out of human plasma”; would you consider source of plasma important criterion in selection of the product?

- a. Very critical, b. Critical, c. Not critical.

7. Any safety issues for these products?

8. Your opinion on the quality of currently available brands?

- a. Highly satisfied b. Satisfied c. Not satisfied d. Need

improvement

9. Pricing of currently available brands?

- a. Expensive, b. Affordable, c. Not Affordable.

10. Does any awareness program about blood/ plasma products is required for patients / doctors / paramedical staff?

- a. Yes b. No.

11. How do you trust a brand of blood plasma product?

- a. Product itself b. Company's image / safety record
c. Long term relationship d. Any other factor ()

12. What are the major issues in prescribing plasma products to the patients.

13. Any references, if you would like to give

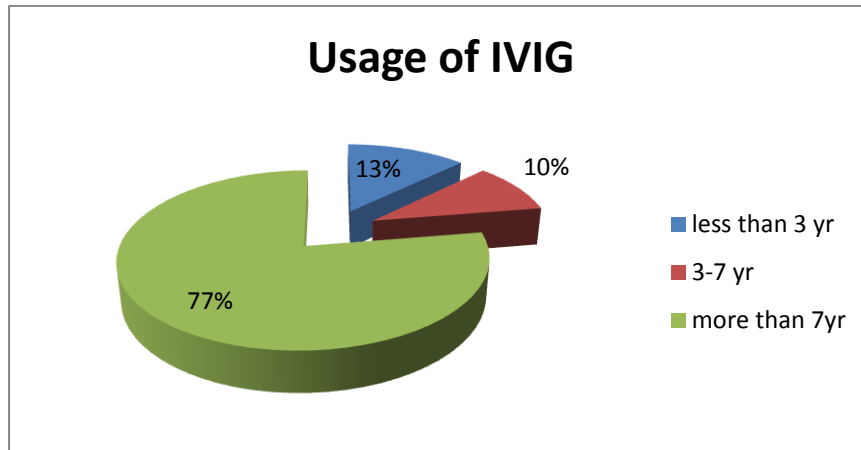
ANALYSIS & FINDINGS

All the responses gathered using the above questionnaire has been recorded below in the form of compound graphs & tables. Hopefully a graphical representation will bring out a better comparison and help to draw a desirable conclusion from it.

1. IVIG

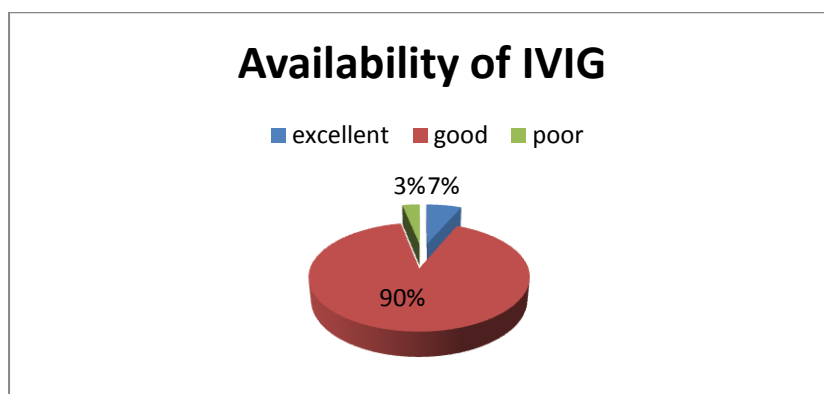
1.Usage of IVIG.

Out of the total respondents 77% of the respondents have been using IVIG for more than 7 years, 13% are using it for less than 3 yr and 10% have been using it for 3-7 years.



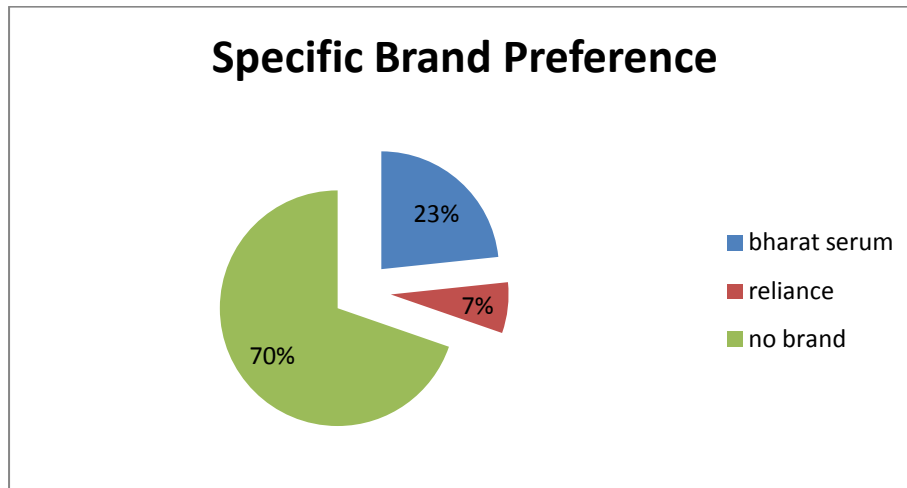
2. Availability of IVIG.

The availability of IVIG has been good for 90% respondents, while 7% of respondents reported it excellent and only 3% reported that the availability of the product was poor.



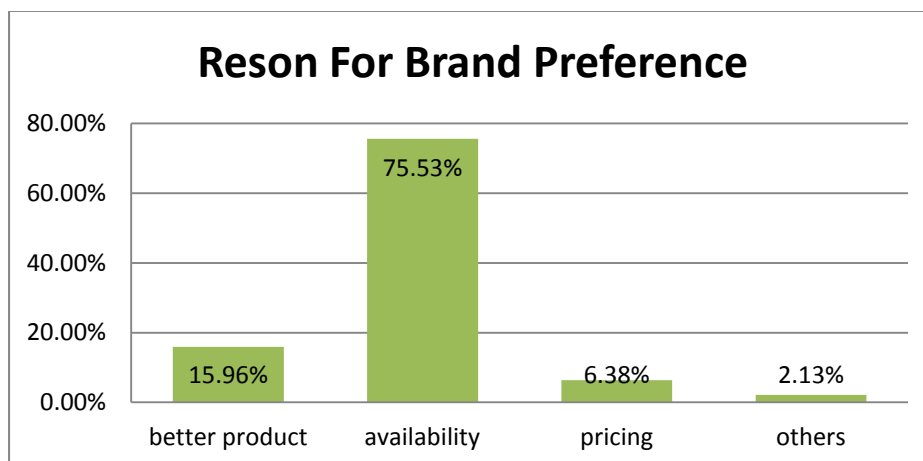
3. Specific Brand Preference:

Most of the doctors prefer Bharat Serum around 23%, 7% doctors prefer Reliance and other doctors (70%) don't prefer any particular brand.



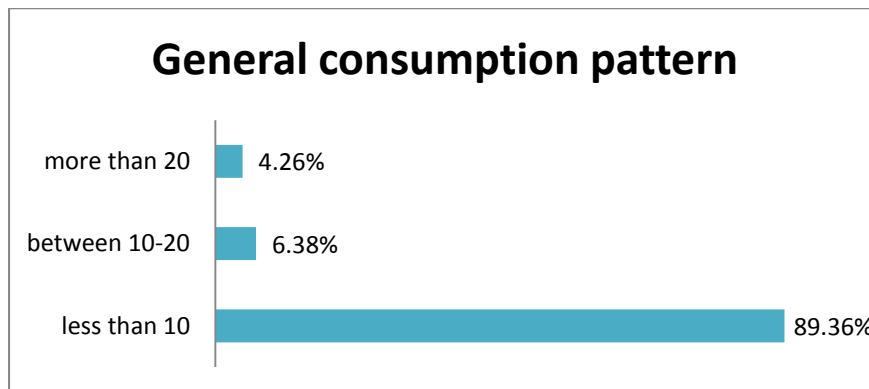
4. Reason For Brand Preference.

The reason for preferring any IVIG brand is better product in 90.47% of the cases, followed by better product 10% of the respondents.



5.Consumption Pattern Per Month:

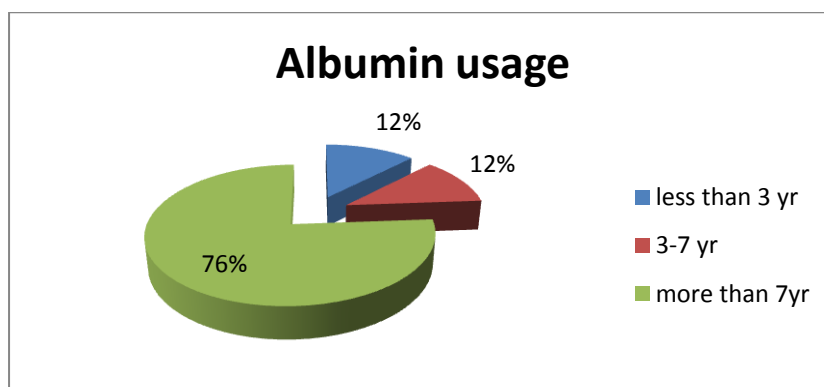
Out of total respondents,89.36% of respondents prescribe <10 IVIG per month on an average, followed by 6.38% of respondents who prescribe 10 to 20 IVIG per month. Only 4.26% of the respondents prescribe more than 20 vials per month per patients.



2.ALBUMIN

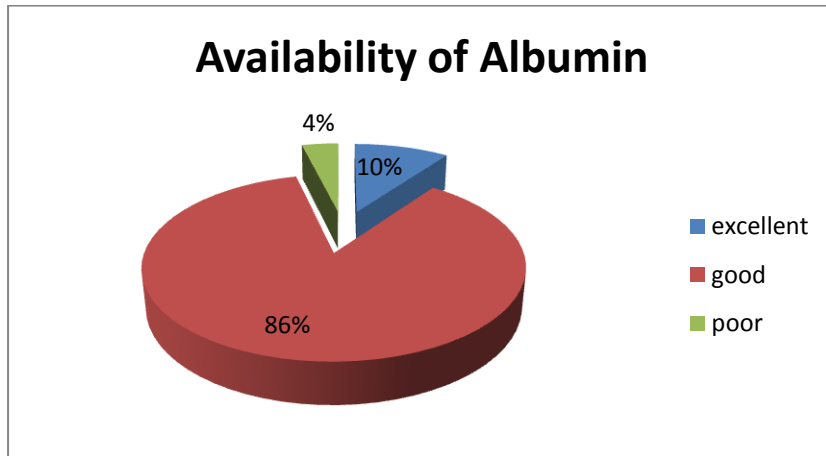
1.Usage of Albumin

Out of the total respondents 77% of the respondents have been using IVIG for more than 7 years,13% are using it for less than 3 yr and 10% have been using it for 3-7 years.



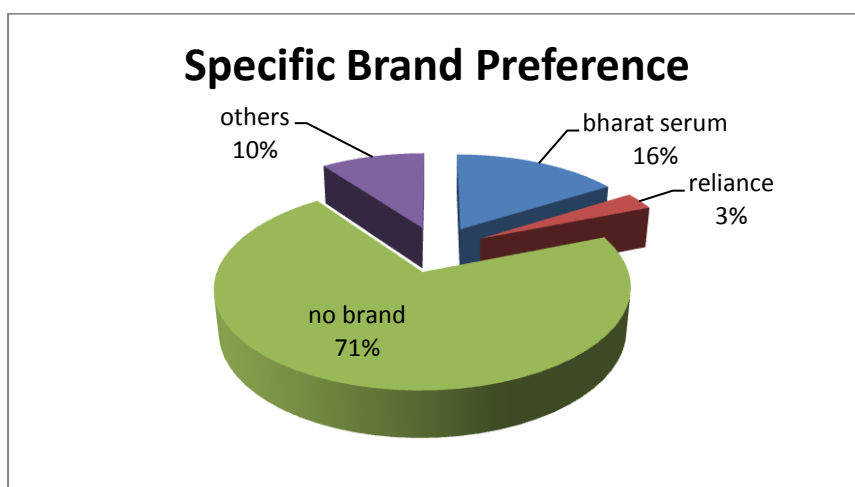
2. Availability of Albumin

The availability of IVIG has been good for 90% respondents, while 7% of respondents reported it excellent and only 3% reported that the availability of the product was poor.



3. Specific Brand Preference:

Most of the doctors prefer Bharat Serum around 23%, 7% doctors prefer Reliance and other doctors (70%) don't prefer any particular brand.



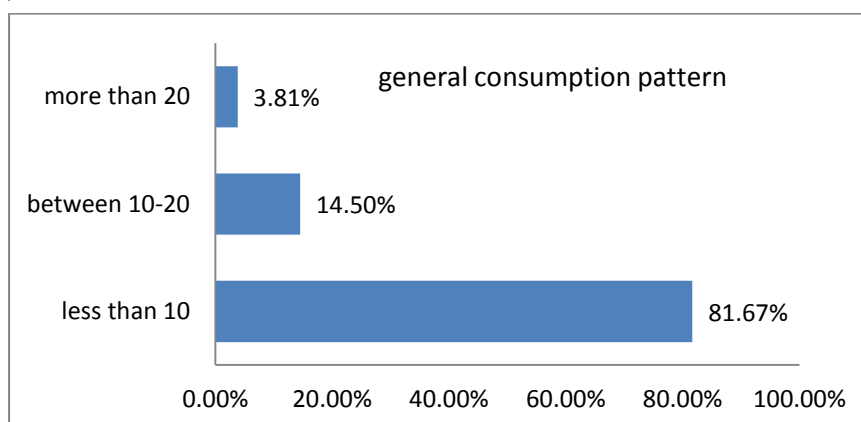
4.Reason For Brand Preference.

The reason for preferring any IVIG brand is better product in 90.47% of the cases, followed by better product 10%of the respondents.



5.Consumption Pattern Per Month:

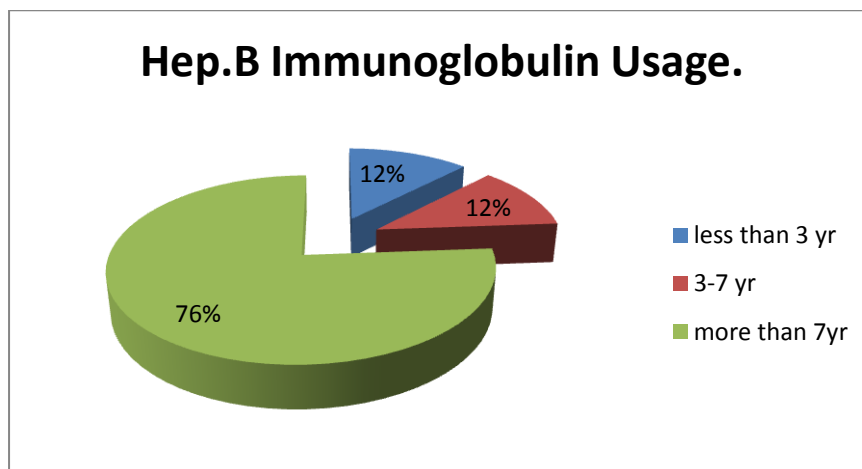
Out of total respondents,89.36% of respondents prescribe <10 IVIG per month on an average, followed by 6.38% of respondents who prescribe 10 to 20 IVIG per month. Only 4.26% of the respondents prescribe more than 20 vials per month per patients



3.HEPATITIS B IMMUNOGLOBULIN

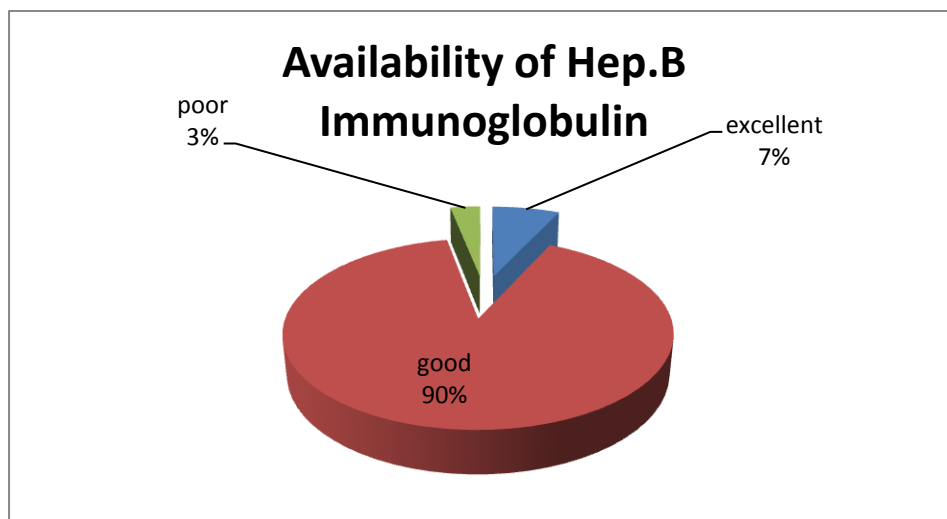
1.Usage of Hepatitis B Immunoglobulin

Out of the total respondents 77% of the respondents have been using IVIG for more than 7 years,13% are using it for less than 3 yr and 10% have been using it for 3-7 years.



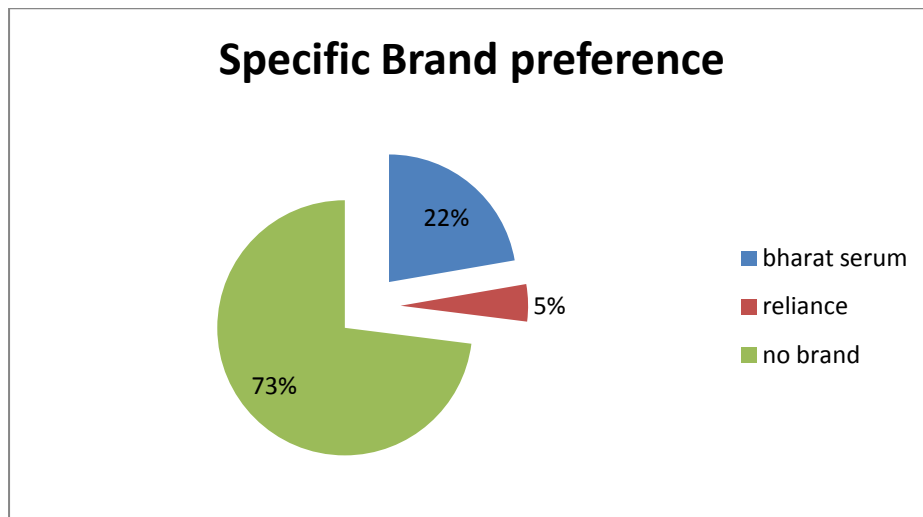
2. Availability of Hep.B Immunoglobulin

The availability of IVIG has been good for 90% respondents, while 7% of respondents reported it excellent and only 3% reported that the availability of the product was poor



3. Specific Brand Preference:

Most of the doctors prefer Bharat Serum around 23%, 7% doctors prefer Reliance and other doctors (70%) don't prefer any particular brand.



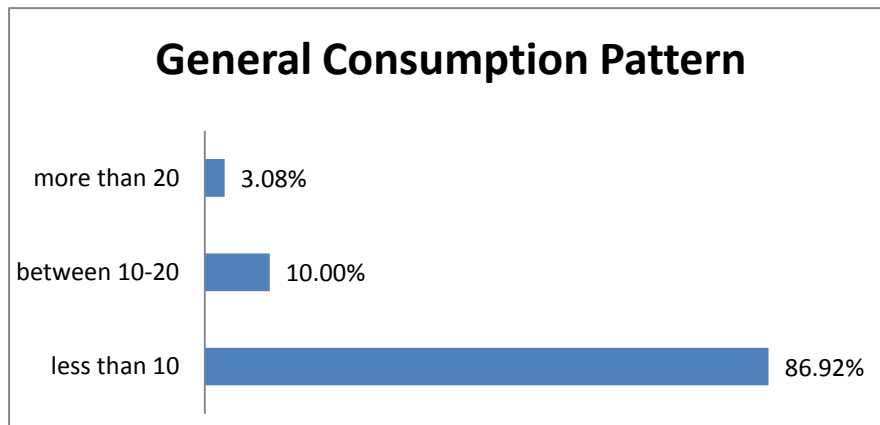
4. Reason For Brand Preference.

The reason for preferring any IVIG brand is better product in 90.47% of the cases, followed by better product 10% of the respondents.



5.Consumption Pattern Per Month:

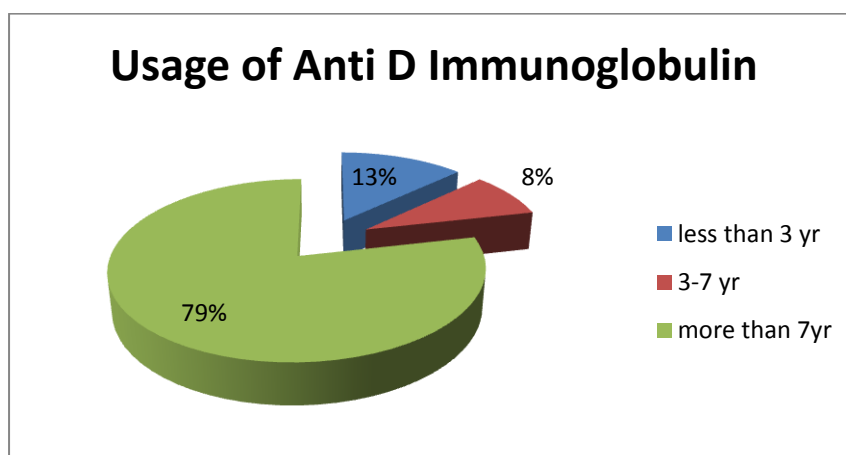
Out of total respondents,89.36% of respondents prescribe <10 IVIG per month on an average, followed by 6.38% of respondents who prescribe 10 to 20 IVIG per month. Only 4.26% of the respondents prescribe more than 20 vials per month per patients.



4.ANTI-D- IMMUNOGLOBULIN

1.Usage of Anti D Immunoglobulin

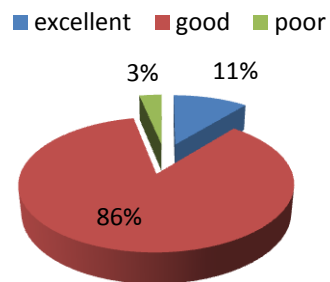
Out of the total respondents 77% of the respondents have been using IVIG for more than 7 years,13% are using it for less than 3 yr and 10% have been using it for 3-7 years.



2. Availability of Anti D Immunoglobulin

The availability of IVIG has been good for 90% respondents, while 7% of respondents reported it excellent and only 3% reported that the availability of the product was poor.

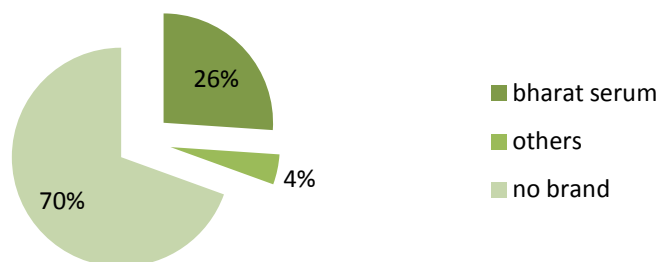
Availability Of Anti D Immunoglobulin



3. Specific Brand Preference:

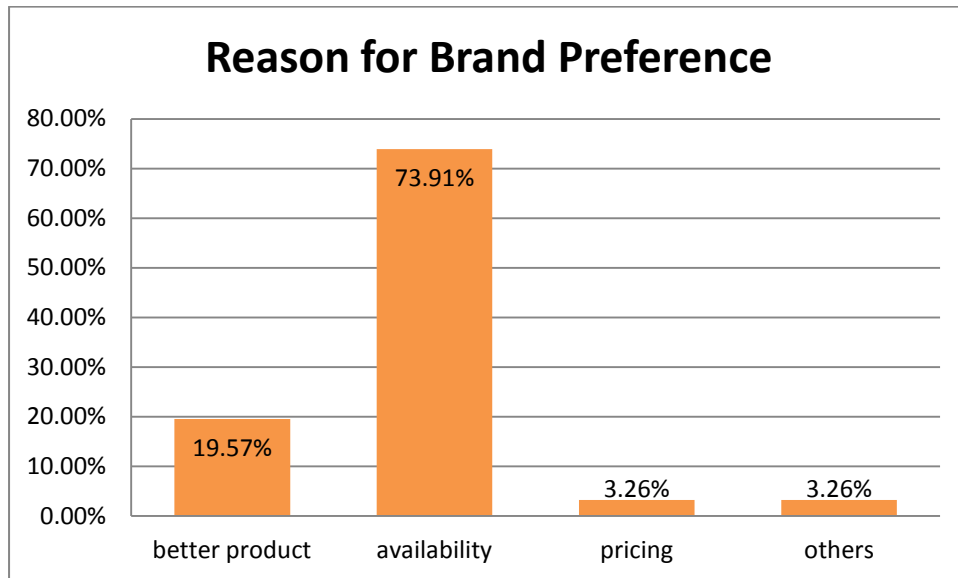
Most of the doctors prefer Bharat Serum around 23%, 7% doctors prefer Reliance and other doctors (70%) don't prefer any particular brand.

Specific Brand Preference



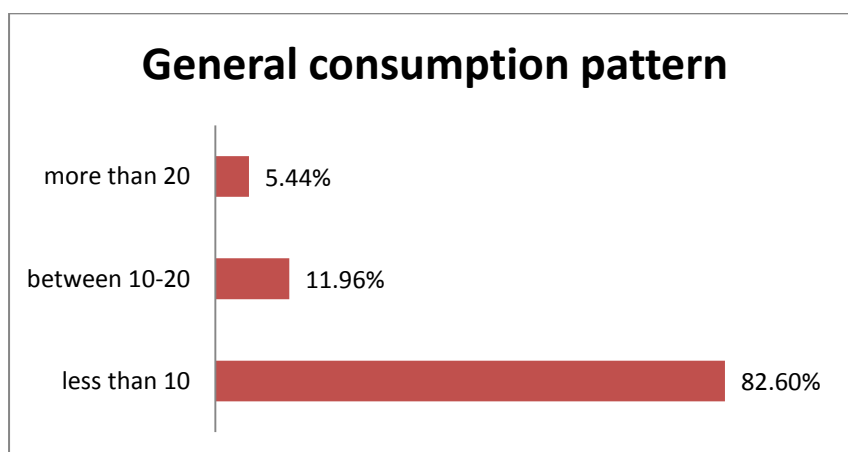
4.Reason For Brand Preference.

The reason for preferring any IVIG brand is better product in 90.47% of the cases, followed by better product 10%of the respondents.



5.Consumption Pattern Per Month:

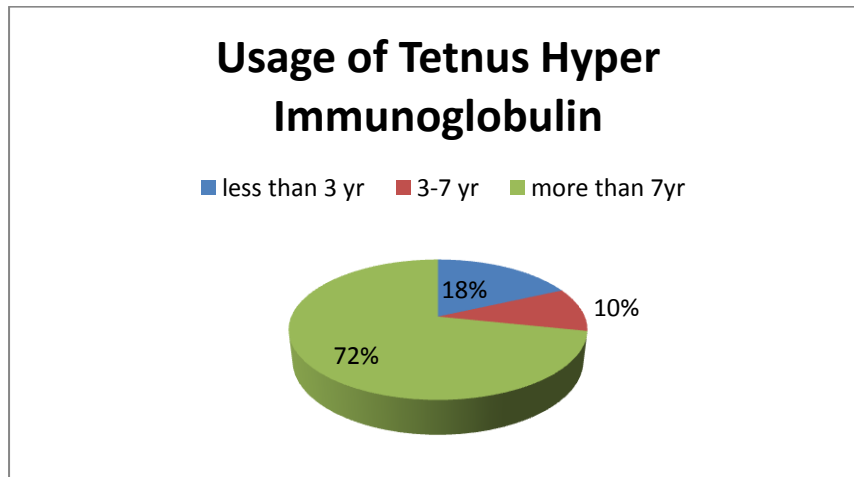
Out of total respondents,89.36% of respondents prescribe <10 IVIG per month on an average, followed by 6.38% of respondents who prescribe 10 to 20 IVIG per month. Only 4.26% of the respondents prescribe more than 20 vials per month per patients.



5.TETNUS HYPER IMMUNOGLOBULIN

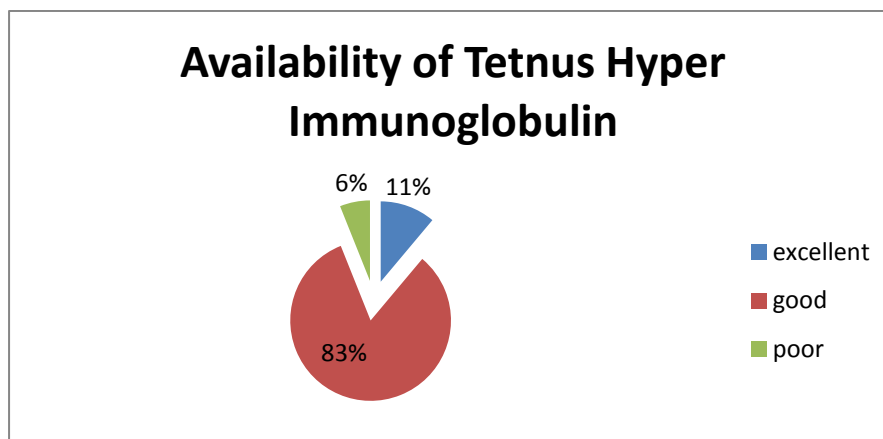
1.Usage of Anti D Immunoglobulin

Out of the total respondents 77% of the respondents have been using IVIG for more than 7 years,13% are using it for less than 3 yr and 10% have been using it for 3-7 years.



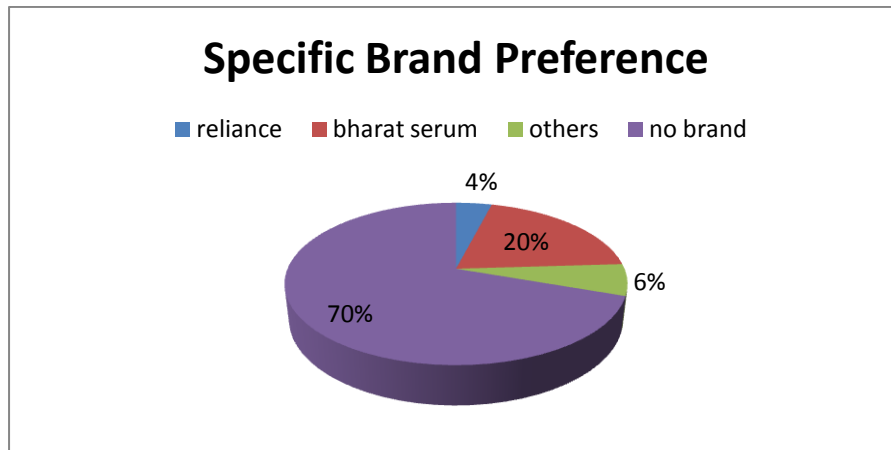
2. Availability of Anti D Immunoglobulin

The availability of IVIG has been good for 90% respondents, while 7% of respondents reported it excellent and only 3% reported that the availability of the product was poor.



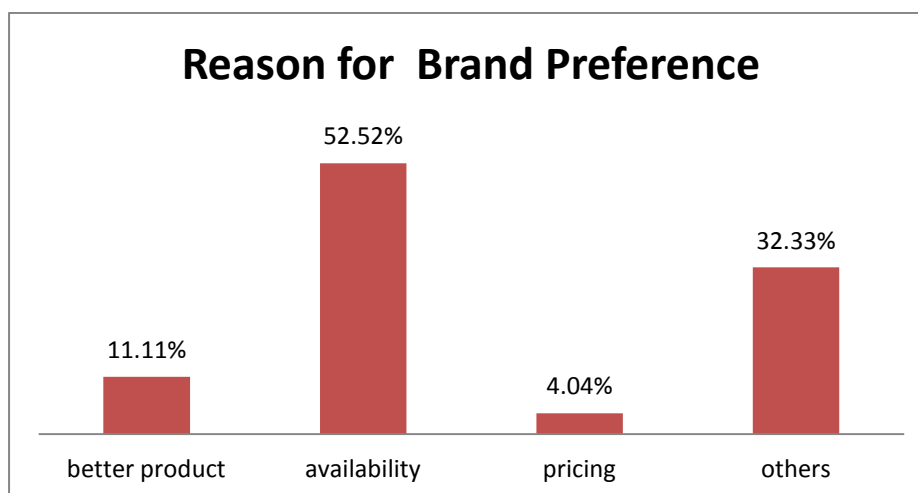
3. Specific Brand Preference:

Most of the doctors prefer Bharat Serum around 23%, 7% doctors prefer Reliance and other doctors (70%) don't prefer any particular brand.



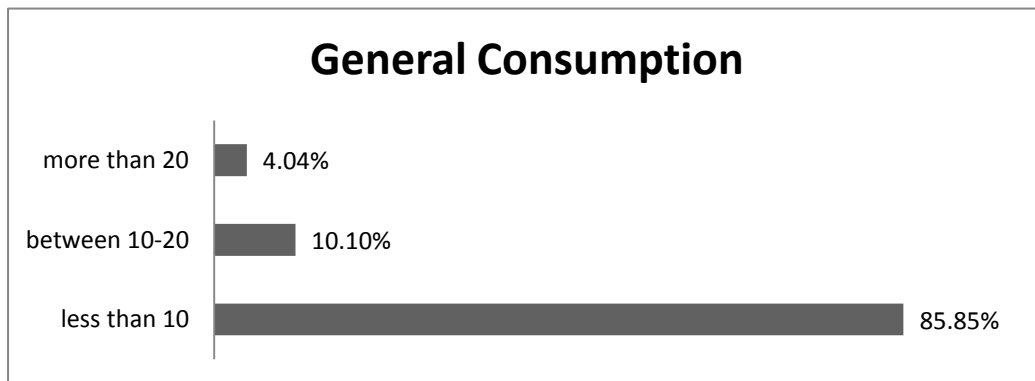
4. Reason For Brand Preference.

The reason for preferring any IVIG brand is better product in 90.47% of the cases, followed by better product 10% of the respondents.



5. Consumption Pattern Per Month:

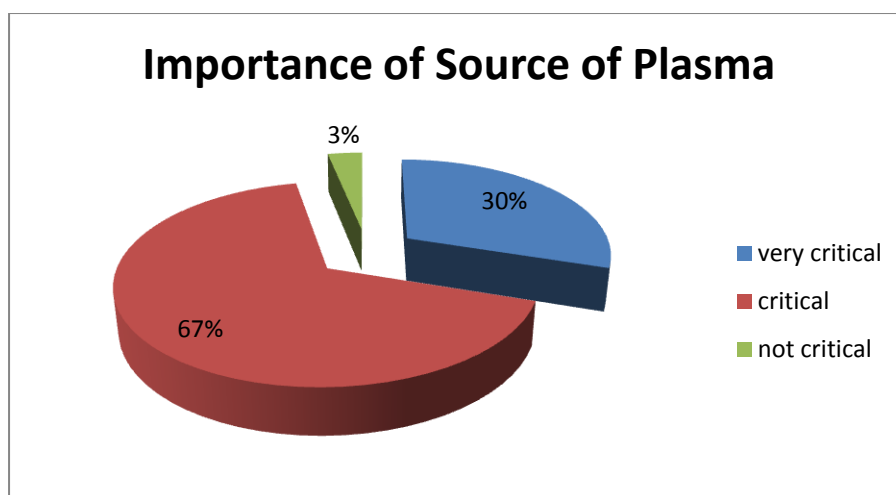
Out of total respondents, 89.36% of respondents prescribe <10 IVIG per month on an average, followed by 6.38% of respondents who prescribe 10 to 20 IVIG per month. Only 4.26% of the respondents prescribe more than 20 vials per month per patients.



Common Analysis for all Plasma Products:-

1. Importance of Source of Plasma

30% of the respondents consider source of plasma as a very critical factor in the selection of Plasma Product, While 67% of the respondents consider it critical and only 3% of the respondents think that it is not critical.



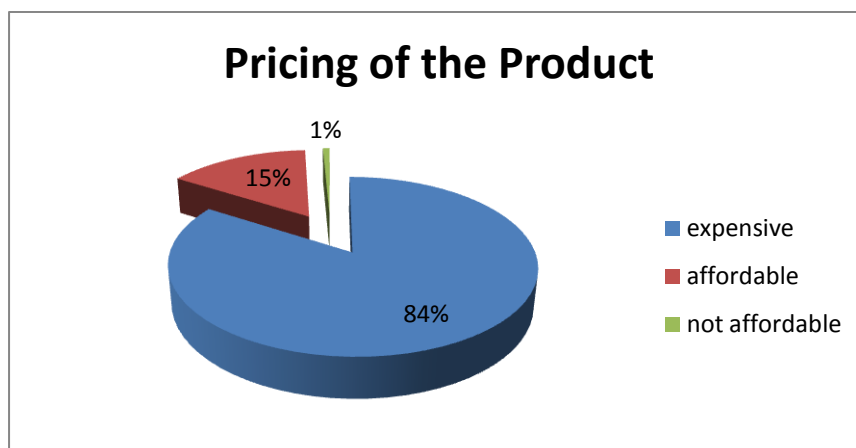
2.Satisfaction on the Quality of Currently Available Brands.

96.66% of respondents were satisfied with the quality of currently available brands, 1.6% were highly satisfied ,0.14% were not satisfied with the quality of the product and only 1.6% of the respondents thinks that it need improvement.



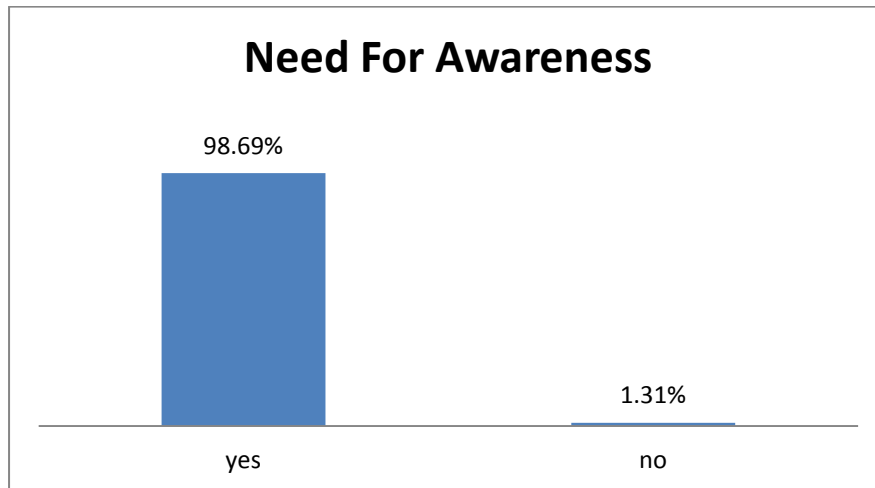
3.Pricing of the Currently Available Products

Majority i.e 84% of the respondents opinion is that the products are expensive,15% of the respondent think its affordable and only 1% of the respondents thinks that its not affordable.



4..Need for Awareness Program

Out of total respondents 98.69% of the respondents feel there is a need of awareness program for patients doctors and paramedical staff.



CONCLUSION:

The plasma product market is still an untapped one and has a lot of scope of improvement and awareness. There is presence of few market competitors. Therefore companies should put some more efforts to develop their research and development strategies and also to make people aware of the use of plasma product and its emerging uses in today's world. Availability and pricing is major factor to get market's grip. Absence of good cold chain and quality is demand of market for these products. Government hospitals and privet hospitals have different prospective for product preferences. Plasma product therapy has wide range of specialty division for implication of plasma product.

RECOMMENDATIONS

1. As Availability of few Plasma Products is not found to be very good, and majority of plasma products are used mainly on the basis of availability, the company should try to make this product readily available in the market.
2. The companies should follow competitive pricing, as has been found by the analysis, these products are expensive but the major concern for doctors is quality and availability.
3. The doctors want the Plasma product to be of high quality, so that the reactions caused due to their administration is minimum, therefore the company can highlight on the quality, purification and safety record part, which could add to their benefit.
4. The doctors are not very well aware about the usage of these products, therefore the company should also focus on increasing the awareness about the usage of these products by incorporating awareness programs on these plasma products.
5. Many of the doctors visited were not aware of any brand from PlasmaGen Biosciences, So the company should try to increase their products awareness by increasing their sales team and by making frequent visits to the doctors.