Summer Training at
PlasmaGen Biosciences
(April 16-June 2, 2012)

Gap Analysis Between the Demand and Supply of Plasma Products in Mumbai

By
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Certificate

This is to certify that Apeksha Jaiswal has undergone summer training in PlasmaGen Biosciences,Bangalore from 16th April to 9th June, 2012

The candidate carried out all the studies related to summer training herself. Her approach to the studies has been sincere, scientific, and analytical. This summer training in partial fulfillment of the course requirement is recommended for the award of Post Graduate Diploma in Pharmaceutical Management.

I wish her success in all future endeavors.

Dr .P. R.Sodani

(Dean Academics and student affairs)

ACKNOWLEDGEMENT

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.

My heartiest thanks to **Dr. Amit Jha** and **Mr. Nipun Garg** 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 extremely grateful to my college mentor, **Dr. Dhirendra Kumar** for for his support during and after the project.

I am also extremely thankful to **Mr. Dalbir Singh**, 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.

My heartiest thanks to **PlasmaGen** team 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 acknowledgements to all the **doctors** who gave me time in the midst of their busy schedule and helped me pursue this otherwise impossible project.

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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 we all know that 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 life saving drugs & the last line of defence 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 favourable place to do business in since the option of minimization of production costs doesn't hold over here

However the purpose of our 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 my market survey on doctors of reputed hospitals throughout the western region of India (Mumbai, Navi Mumbai and Goa) I seeked to determine the demand, the consumption pattern, personal preferences and quality & availability of currently available blood & plasma brands in this region of the country.

From all the responses I collected from the doctors it was evident that availability and quality of plasma products are not very satisfactory at these places. 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 favourite 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 my field-work. The intentions are to depict a close reflection of the Plasma market scenario in this region of India and come up with new business prospects and ways to counter the limitations of trade in Plasma market.

ORGANISATION PROFILE

The study is conducted by Plasmagen Biosciences pvt. ltd. an offshoot of Trigenesis Lifesciences 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 litres 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.

Here is a brief introduction of its parent company Trigenesis Lifesciences, its history and its business activities. In the history of Indian Pharmaceutical Lifesciences industry , one name is worth a reckon i.e. Trigenesis Lifesciences (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 & mouldings 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 Lifesciences (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 lyophilised
- Anaesthetics

- Endocrinal Steroids
- Cardiovascular drugs
- Nutritional Supplements

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 are all 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.

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

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 the given region of India which will hopefully come handy when embarking on new business propositions in the plasma market.

OBJECTIVE OF THE STUDY

To study the prescribing behaviour of doctors towards the plasma products in the region of Mumbai and Goa.

RESEARCH METHODOLOGY

The project was all about conducting a survey on the prescribing patterns of doctors regarding plasma products. This data was recorded, analysed and interpreted within the scope of the given objectives.

1. **AREA**

Zones	*Areas covered*
Central Mumbai	Ghatkopar, Sion, Dadar, Parel, Kurla, Powai, Byculla
Western Suburbs	Andheri, Bandra, Borivali, Goregaon, Kandivali, Santacruz, Jogeshwari, Vile Parle, Malad, Mahim
South Mumbai	Charni Road, Napean Sea Road, Pedder Road, Churchgate
Navi Mumbai	Vashi, Nerul, Khargarh
Goa	Bambolim, Margao, Dona Paula, Porvorim

HOSPITALS COVERED

a. K.E.M
b. Bai jerbai wadia
c. Hinduja
d. Breach candy
e. Lady ratan tata
f. Hiranandani
g. Sion hospital
h. Nowrosjee wadia hospital
i. Jaslok hospital
j. Nair hospital
k. Saifee hospital
l. Bombay hospital
m. Tata hospital
n. Seven hills hospital
o. Niramya hospital
p. Yerla medical college
q. Wockhart hospital
r. J.J. hospital
s. Cama hospital
t. Holy family hospital
u. Lilavati hospital
v. Goa medical college
w. Apollo victor hospital
x. Private clinics and small scale hospitals.

2. **RESEARCH DESIGN**

The research design put to use is the descriptive design as all the study was pre planned and rigid.

3. **SAMPLING**

Judgemental and simple random sampling is used for this study.

Judgemental because the specialities of doctors were pre defined and simple random because doctors were surveyed as and when they were available.

TARGET POPULATION

The target population were the doctors of both the corporate as well as the government hospitals of the given areas.

The main specialities of doctors interviewed were-

- IVIG- neurologists, haematologists, paediatrics, intensivists
- Hepatitis b immunoglobulin- paediatrics, neonatologists, gynaecologists
- Albumin- physicians, paediatrics, intensivists
- Anti d ig - gynaecologists
- Anti rabies ig - physicians, internal medicine
- Tetanus hyper ig - physicians, paediatricians, gynaecologists, internal medicine
- Fibrin sealants- neurosurgeons, cosmetologists, cardiologists

- Factor VII and VIII- haematologists
- Fibrinogen- haematologist, cardiac surgeons
- Thrombin and anti thrombin III- cardiologists

The sample size was 200 (different for each product on the basis of usage and popularity of the product.)

4. DATA COLLECTION

TOOL-

Structured questionnaire comprising of both closed and open ended questions was used which was provided by the organisation.

TECHNIQUE-

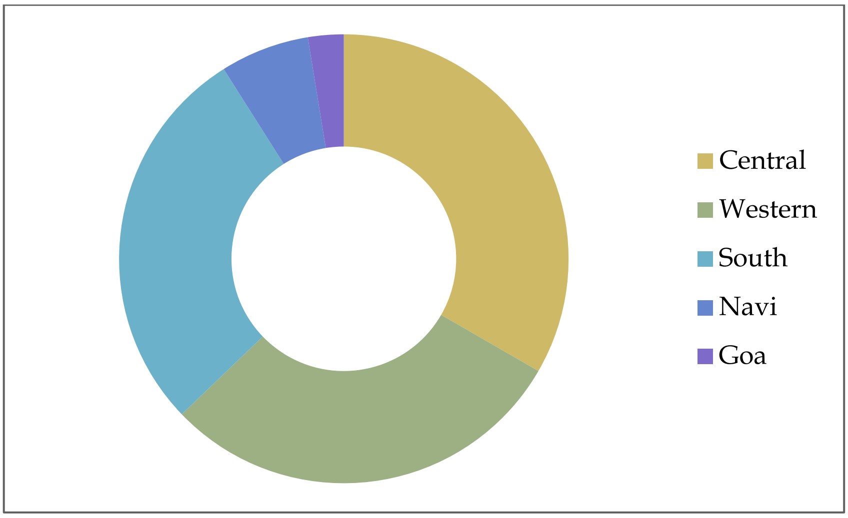
Face to face interview of the doctors was conducted.

DATA ANALYSIS FOR IVIG

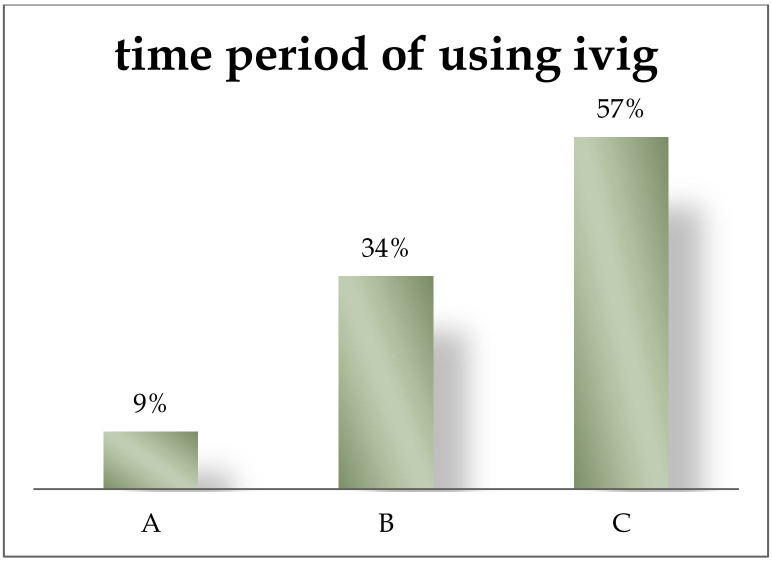
For survey on ivig, 78 doctors were questioned in the various parts of the territory given.

ZONE WISE BREAKUP OF DOCTORS FOR IVIG

Zones	*Total number of doctors*	*Percentage of Doctors(%)*
Central Mumbai	26	33.33
Western Suburbs	23	29.48
South Mumbai	22	`28.20
Navi Mumbai	5	6.41
Goa	2	2.56
Total	*78*	*100*



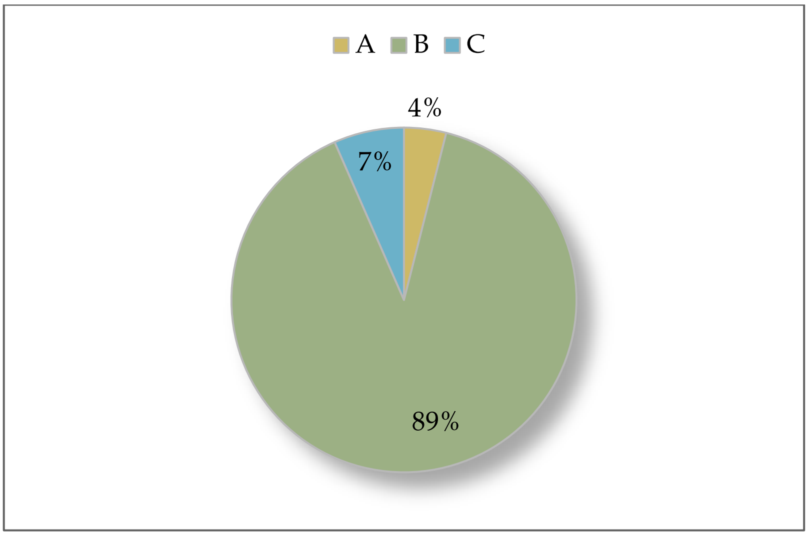
Q1. YEARS OF PRESCRIBING WISE BREAK UP OF DOCTORS



A- Less than 3 years
B- 3-7 years
C- More than 7 years

- This data suggests that maximum (57%) ivig is prescribed by the doctors who are elder practitioners.

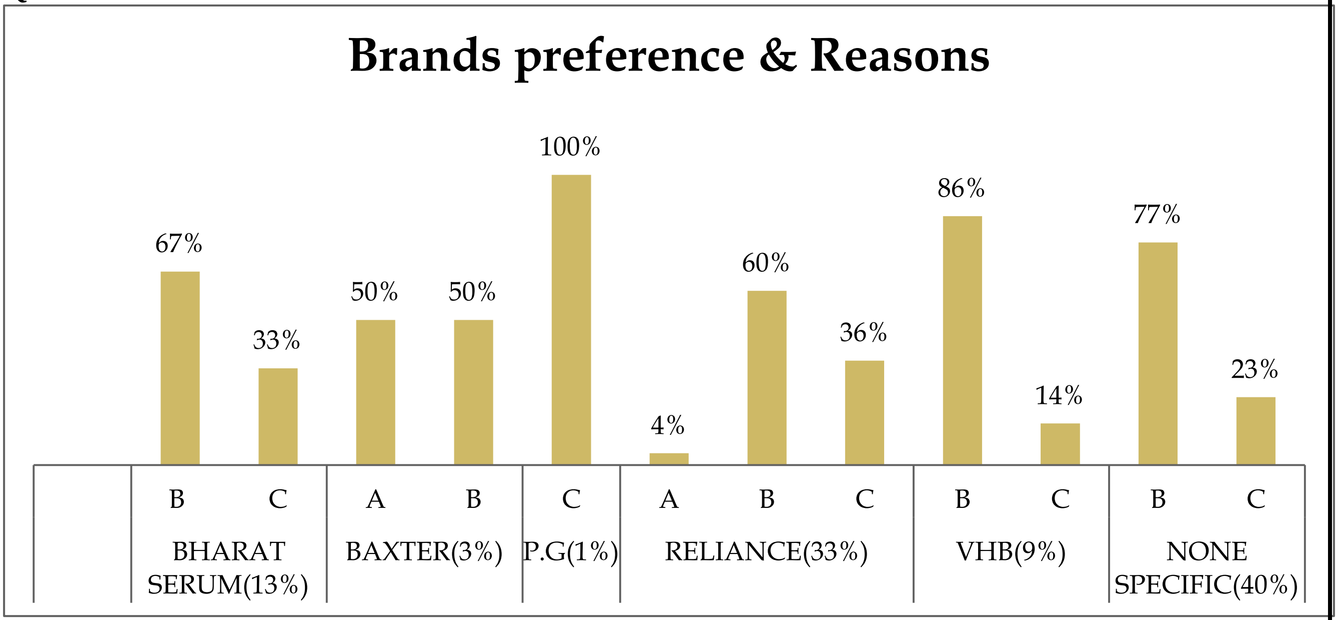
Q2. AVAILABILITY OF THE PRODUCT HAS BEEN........



A- Excellent
B- Good
C- Poor

- The data suggests that there is easy availability (89%) of ivig to the doctors, but still they are not fully satisfied as only 4% have rated the availability as 4%.
- Most of the doctors said that ivig is available as and when required and the chemists or general pharmacies don’t keep it in stock with them all the time, which at times becomes problematic for severe conditioned patients.

Q3. ANY SPECIFIC BRAND PREFERANCE AND WHY?

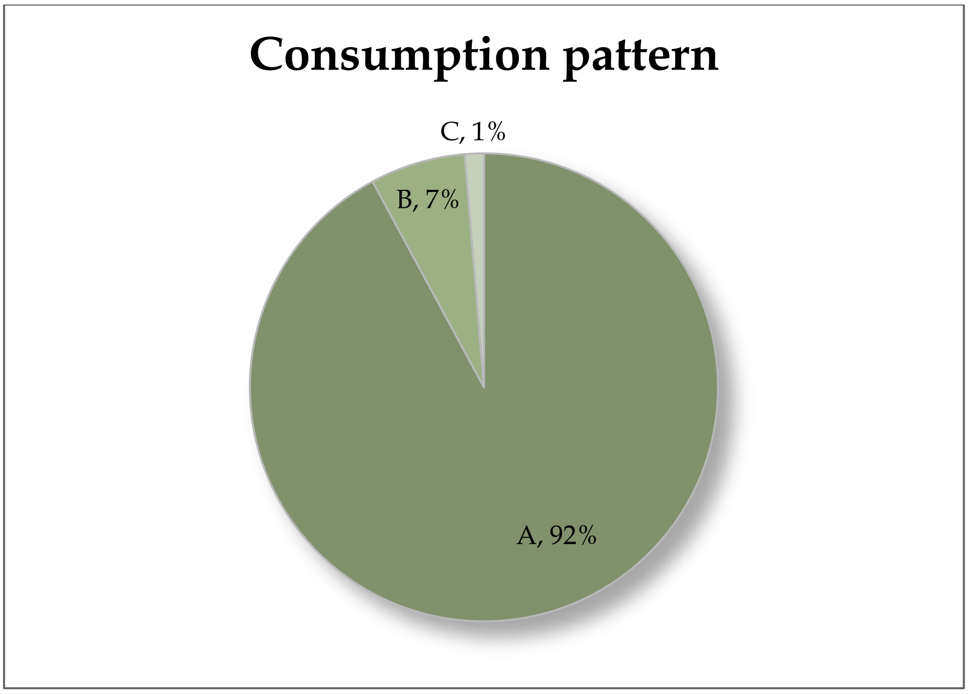


A- Better product
B- Availability
C- Pricing
D- Others

P.G- plasmagen

- This graphical representation tells us about the relation between doctor's brand preference and the reason behind that brand.
- Out of 78 doctors interviewed for ivig, the maximum prescribers are for reliance life sciences having a share of 33% in the market.
- The market reach of reliance is supposedly very good as out of 33% doctors, 60% prescribe it because of its availability.
- Also the pricing of reliance's brand of ivig is having a tremendous effect on the prescribers (36%)
- There is very less or negligible belief of better product of reliance.
- Undoubtedly, reliance is the present market leader of ivig in the given area
- 13% of doctors are using bharat serum on regular basis because of its availability (67%) and it's pricing (33%).
- There is no belief of better product of bharat serum's brand.
- Bharat serum has emerged as the market challenger in this segment.
- Following the market is V.H.B with its 9% of market share mostly because of its availability (86%)
- Out of all the doctors, 40% are such that who do not prescribe any specific brand.
- This 40% can be a very potential market and a great opportunity for Plasmagen to capture.

Q5. GENERAL CONSUMPTION PATTERN



A- Less than 10
B- 10 to 20
C- More than 20

- 92% of the doctors use ivig on less than 10 patients per month.
- This suggests that the demand is not very high.

Q6. IS SOURCE OF PLASMA AN IMPORTANT CRITERION IN SELECTION OF THE PRODUCT??

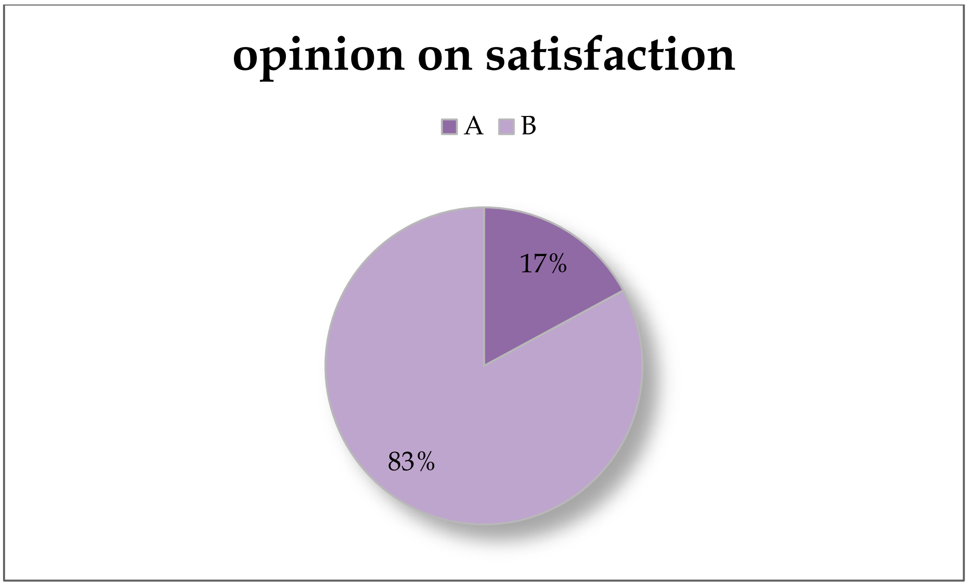
- Out of 78 only 14 doctors consider the source of plasma critical criteria for selection of product i.e. only 10.92% as most of them believe that the companies manufacturing such products follow stringent safety precautions and tests.

Q7. SAFETY ISSUES??

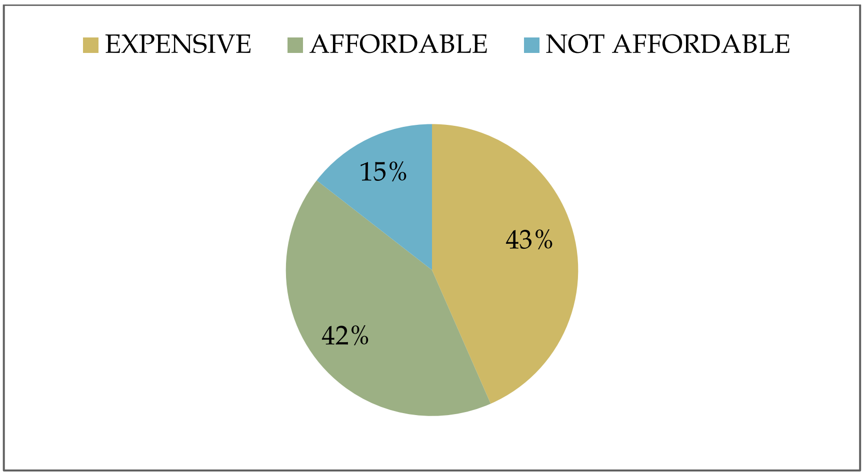
- 96.1% of the doctors surveyed never had a bad experience regarding the safety of the product and say that the companies manufacturing these products are well reputed and approved so chances of safety issues are rare.
- 3 doctors experienced anaphylaxis on patients after administration and the other concern was the amount if igA present.

Q8. SATISFACTION LEVEL

The quality of the product available is highly satisfactory for the doctors as 17% doctors are highly satisfied and the rest 83% are satisfied.

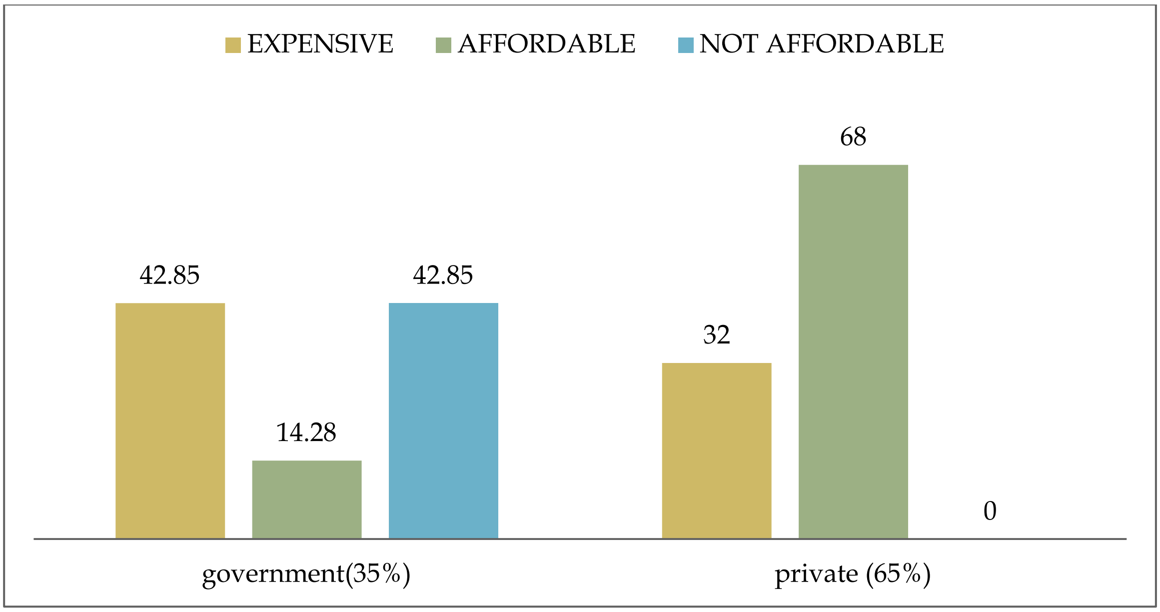


Q9. PRICING



A- EXPENSIVE
B- AFFORDABLE
C- NOT AFFORDABLE

- The data suggests that pricing is still an issue with the patients as 42% doctors believe that the product is not affordable for the patients and another 43% believe that the product is expensive but because of the urgency and life saving nature of the drug, the patient manages to buy the product.
- Pricing can be better understood by dividing the opinion of doctors according to the type of hospitals they see patients at, i.e. Government hospitals and Private hospitals.
- Out of these 78 doctors, 28 were from government hospitals (35% approx) and 50 from private hospitals (65% approx).



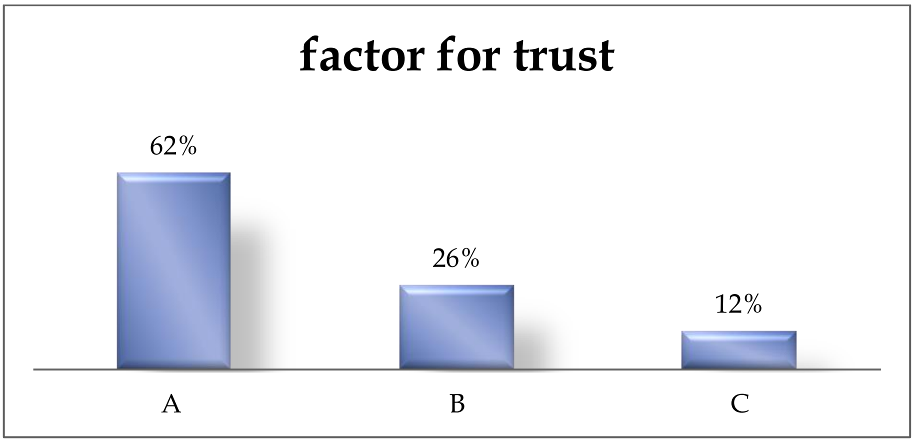
A- Expensive
B- Not affordable
C- affordable

- The graph clearly represents the difference between affordability at a government and a private hospital.
- Government-
  42.85% says expensive
  Only 14.28% says affordable
  And 42.85% says not affordable
- Private-
  Only 16% say expensive
  And for the rest 34% it is affordable.

Q10. AWARENESS PROGRAM

All the 78 doctors believe that there is no awareness program required either for the doctor or the patient.

Q11. HOW DO YOU TRUST A BRAND?



A- Product itself
B- Company's image/safety records
C- Long term relationship

- More than half (62%) doctors believe in the brand because of the product itself.
- 26% develop trust on the basis of the company
- Rest 12% is influenced more by the long term relationship they share with the company or the product.

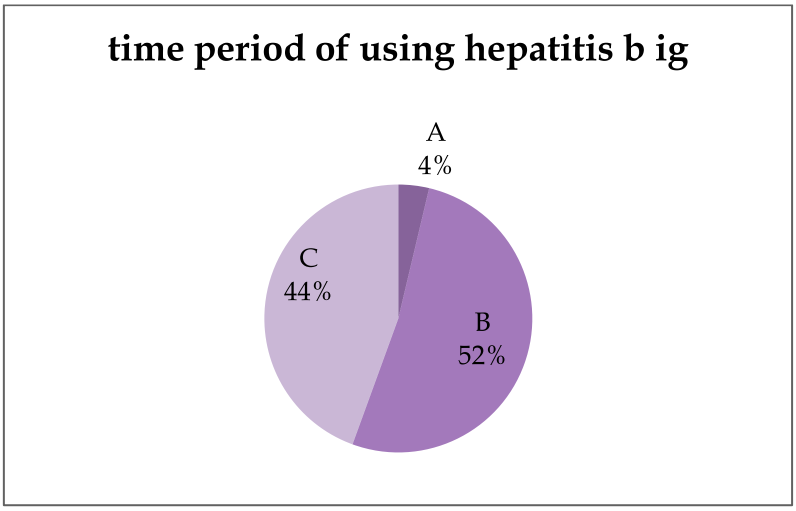
DATA ANALYSIS FOR HEPATITIS B IMMUNOGLOBULIN

For survey on hepatitis b immunoglobulin, 29 doctors were interviewed from different parts of the territory.

ZONE WISE BREAKUP OF DOCTORS

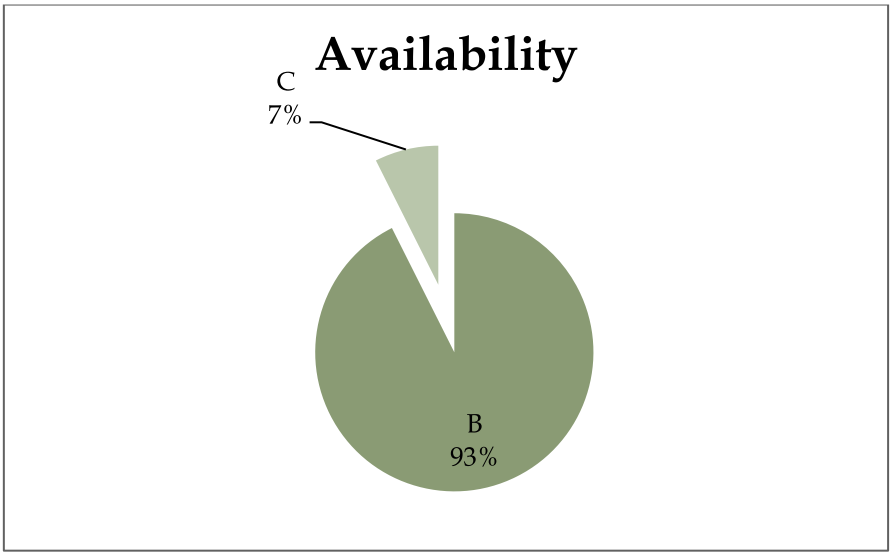
Zones	*Total number of doctors*	*Percentage of Doctors(%)*
Central Mumbai	12	41.37
Western Suburbs	11	37.93
South Mumbai	4	`13.79
Goa	2	6.89
Total	*29*	*100*

Q1. YEARS OF PRESCRIBING WISE BREAKUP-



A- Less than 3 years
B- 3 to 7 years
C- More than 7 years

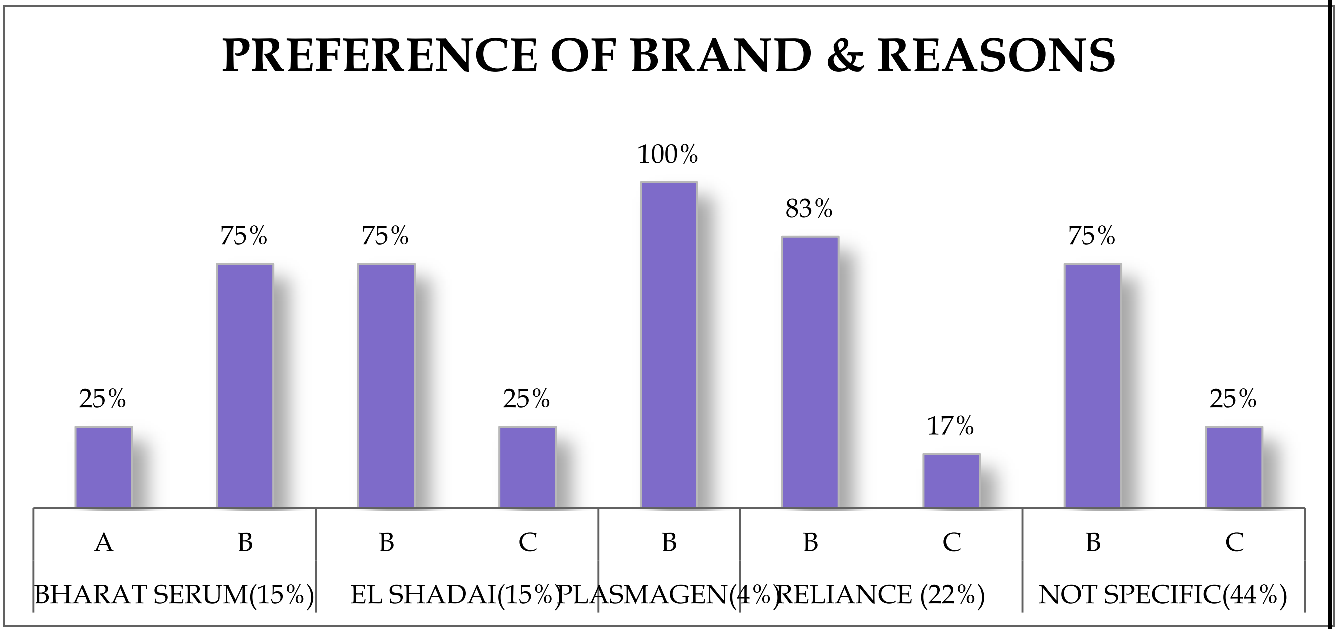
Q2. AVAILABILITY OF THE PRODUCT HAS BEEN.......



A- Excellent
B- Good
C- Poor

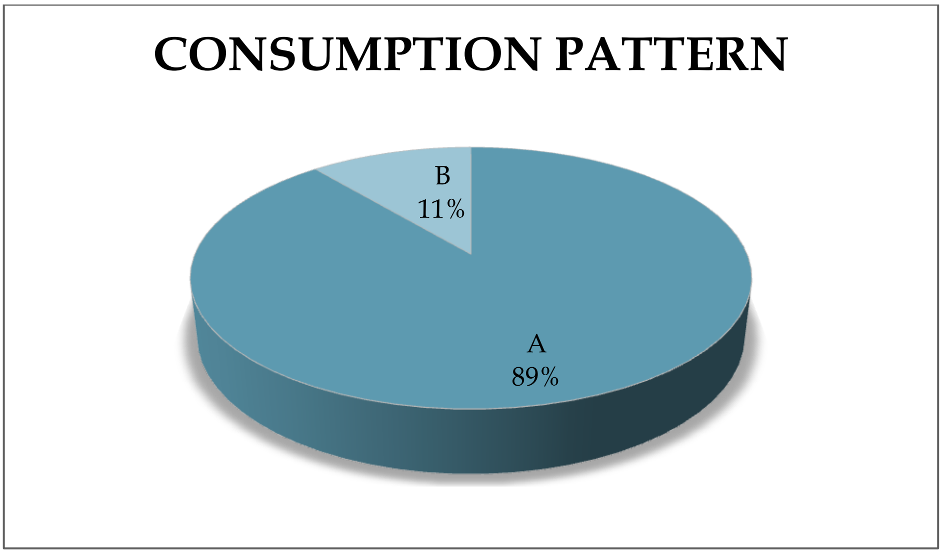
- This data suggests that the reach of the product is not very good as no doctor has said excellent availability and 7% have also said poor availability.
- Thus it is an opportunity for Plasmagen to cover this unreached and untapped market.

Q3. BRAND YOU PREFER AND WHY??



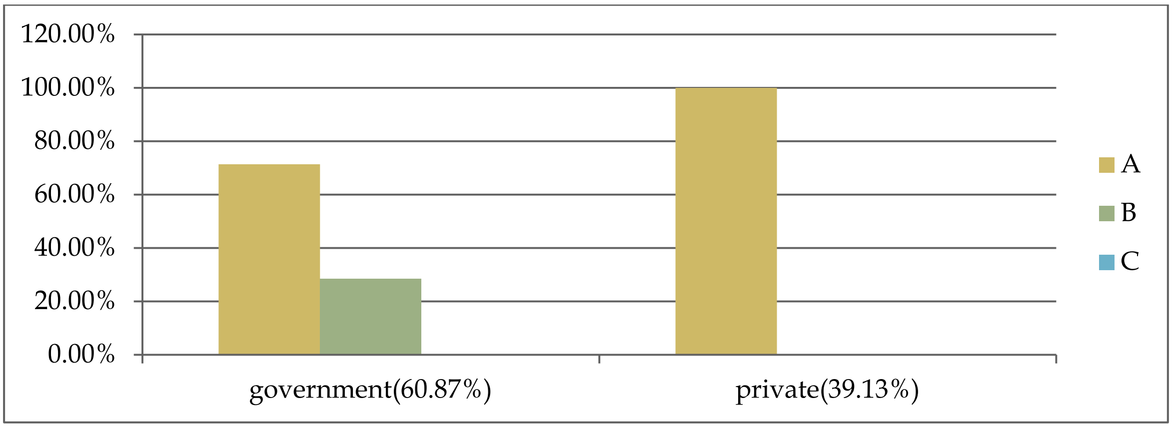
- Reliance emerges out as the market leader with a market share of 22% mainly due to its reach and availability (83%) and partly because of its pricing (17%).
- Bharat serum and el shadai are holding the same market position with equal weightage to availability (75%), but the other 25% for bharat serum is due to the better product whereas for el shadai it is due to the price of their product.
- 4% of the market is also acquired by Plasmagen due to its availability.
- Rest 44% of doctors do not write any specific brand and leave it on the products availablility (75%) and price (25%) respectively.

Q4. GENERAL CONSUMPTION PATTERN



A- Less than 10
B- 10-20
C- More than 20

- The demand of the product is not very high according to the data.
- Consumption pattern can be studied more closely by segmentation of the hospitals into- government and private.
- Out of 29, 60.87% doctors were interviewed from government hospitals, rest 39.13% from privates.
- Furthermore, 28.571% of government hospital doctors said that they have 10-20 patients per month whereas in privates none required more than 10 vials.



This graph clearly indicated that the consumption and requirement of hep b ig is more in government hospitals.

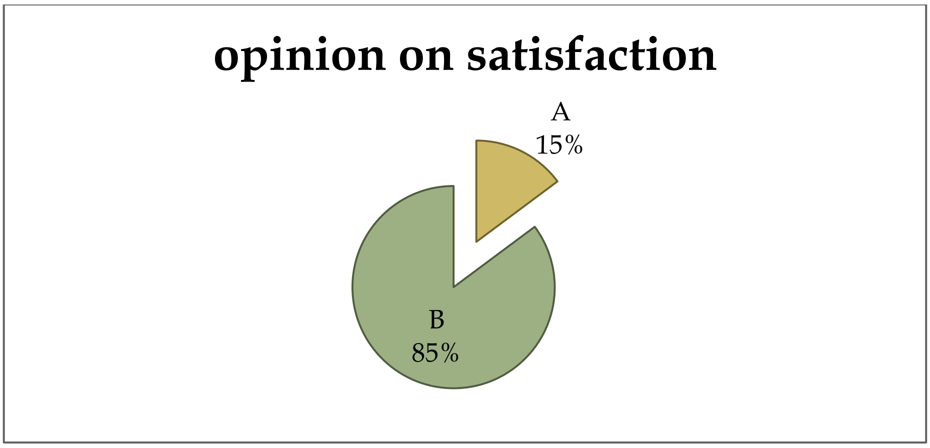
Q6. IS SOURCE OF PLASMA AN IMPORTANT CRITERION IN SELECTION OF THE PRODUCT??

Only 5 out of 29 doctors i.e. 17.24% doctors consider the source of plasma an important criteria for selection of the product as most of them believe that the companies manufacturing such products follow stringent safety precautions and tests.

Q7. SAFETY ISSUES..??

Out of the doctors interviewed, none faced any problems with any of the brands available.

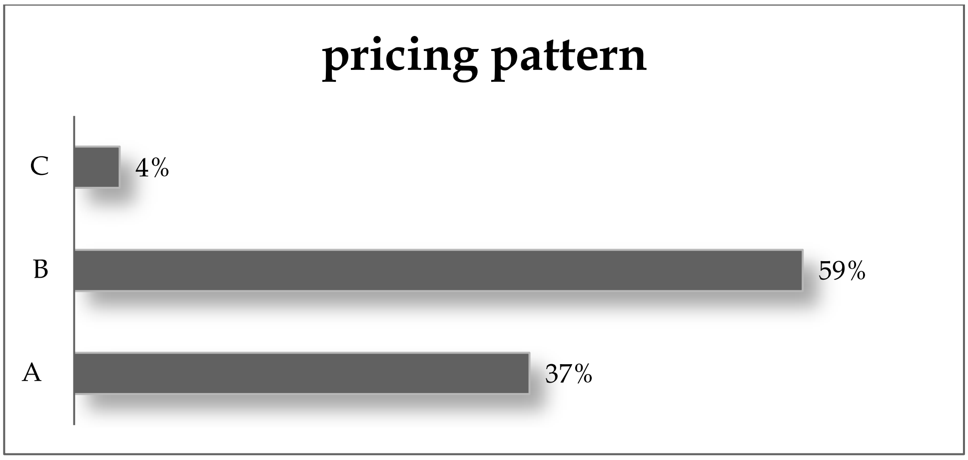
Q8. SATISFACTION LEVEL



A- Highly satisfied
B- Satisfied

- The doctors seem to be quiet content with the quality of the products as 85% are satisfied.
- But only 15% said that they are highly satisfied with the quality which indicates scope of improvement.

Q9. PRICING



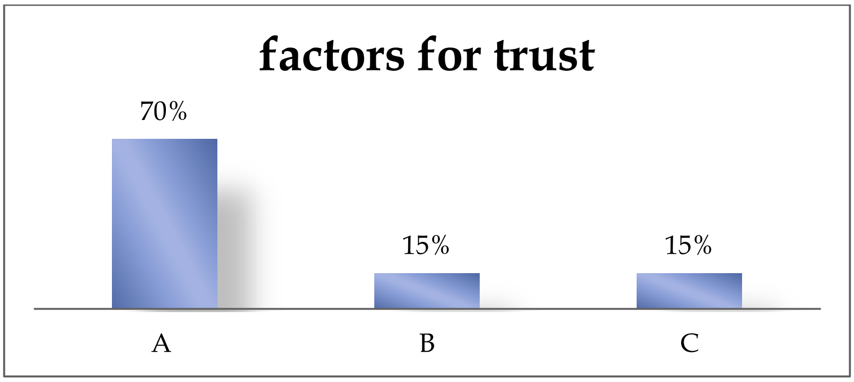
A- Expensive
B- Affordable
C- Not affordable

- 59% of the doctors feel that the pricing is right and the drug is affordable as it is a onetime treatment and only a single vial is required.
- Still 37% doctors say that the medicine is expensive but the patients are critical and it is a life saver medicine, so they arrange it somehow.
- Only 4 % doctors feel that the drug is not affordable for their patients and on closely monitoring the data it was found that those 4% of doctors were from government hospitals only.

Q10. AWARENESS PROGRAM

- All the 29 doctor interviewed did not feel the need of any sort of awareness program either for themselves or for the patients about hep b ig.

Q11. HOW DO YOU TRUST A BRAND



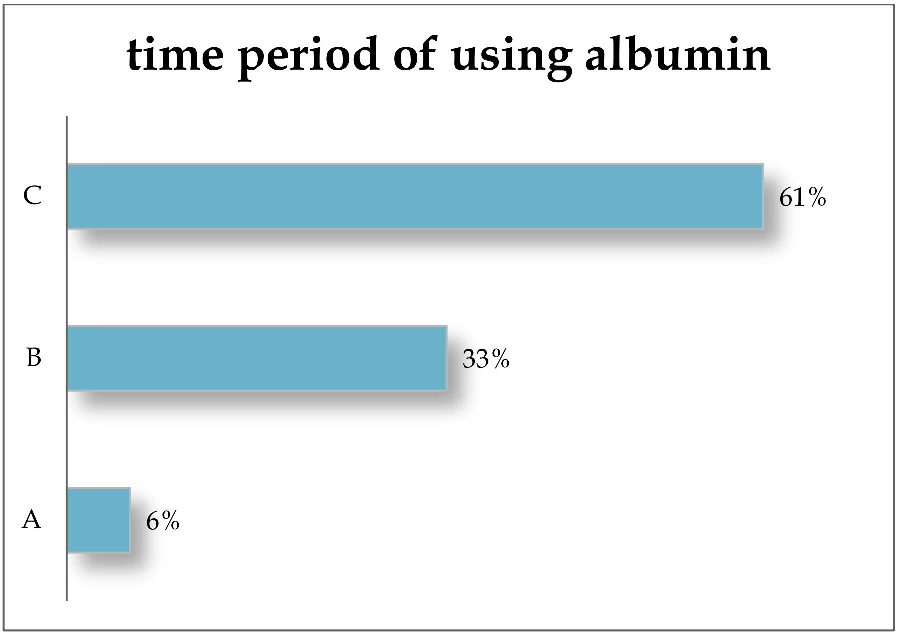
A- Product itself
B- Company's image/safety records
C- Long term relationship

- 70% of the doctors develop trust on a brand of hep b ig on the basis of the product, its effectiveness and safety.
- 15% trust on the basis of company' s name and the relation which they share respectively.

DATA ANALYSIS FOR ALBUMIN

For survey on ALBUMIN, 36 doctors were interviewed from different parts of the territory.

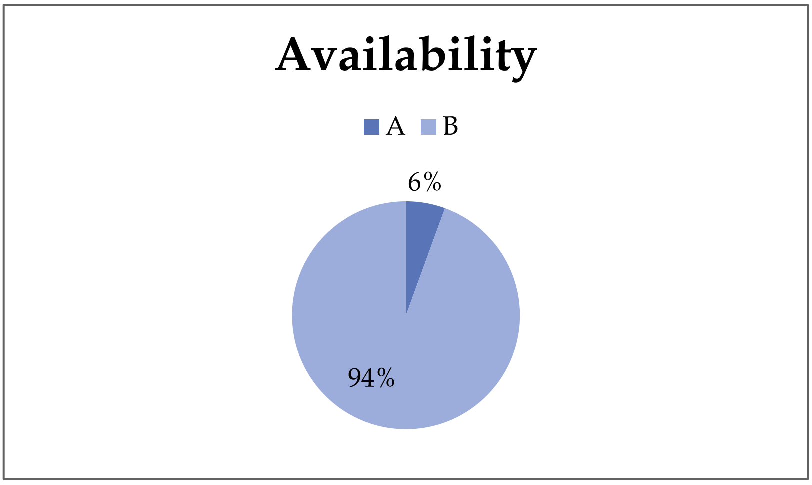
Q1. YEARS OF PRESCRIBING WISE BREAKUP-



A- Less than 3 years
B- 3-7 years
C- More than 7 years

- These vaules suggests that doctors practicing since 7 years or more have the maximum usage of albumin with 61%.

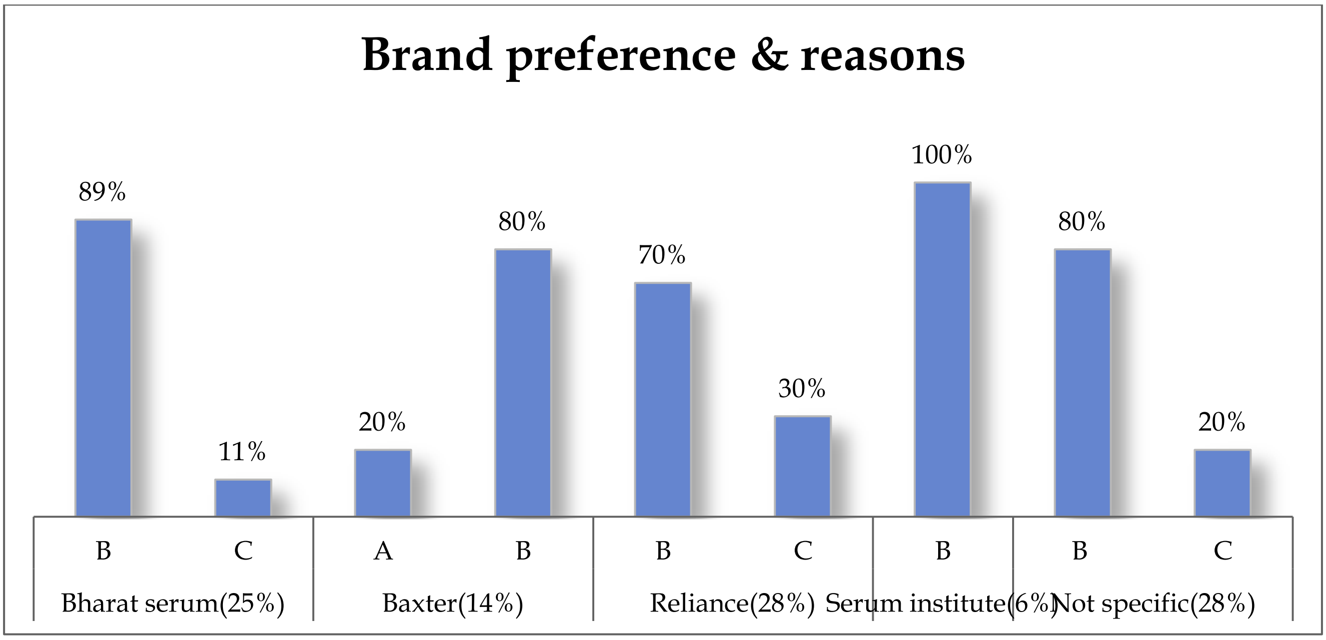
Q2. AVAILABILITY



A- Excellent
B- Good

- ➢ According to 94% of the doctors, the product is easily available but still has some loop holes because only 6% of the doctors say that the availability is excellent.

Q3. BRAND YOU PREFER AND WHY??

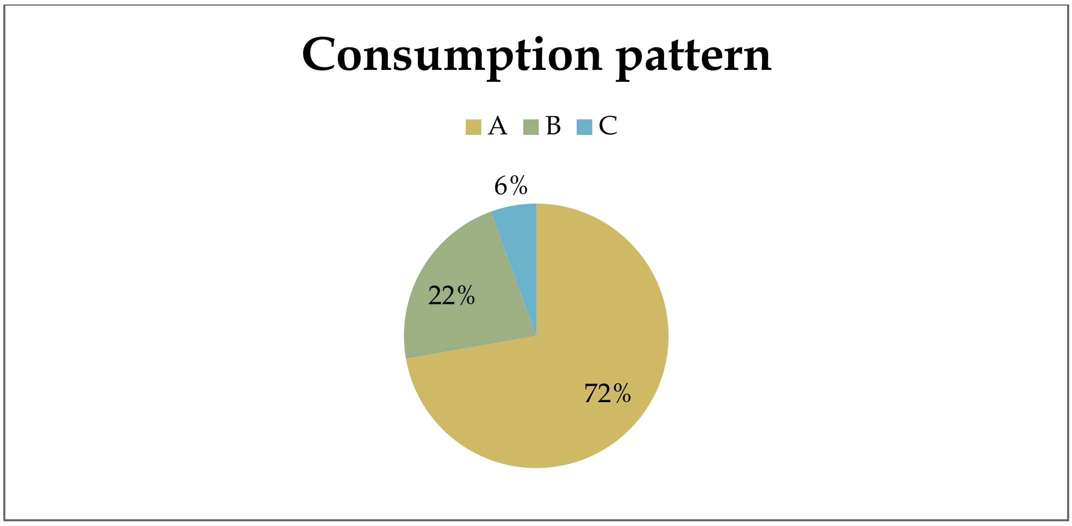


A- Better product
B- Availability
C- Pricing

- ➢ The above data suggests that reliance and bharat serum are the market leader in the field of albumin in the given territory with 28% and 25% market share respectively.

- Both the brands have this hold on market due to their better availability and reach as 70% reliance and 89% bharat serum responses are for B i.e. availability.
- But in this case also, reliance has an advantage over bharat serum on the basis of pricing.
- Baxter holds a market share of 14% out of which 20% is because of the better product and the rest 80% due to availability.
- Baxter is the only product having an advantage of the image of a better product.
- Serum institute's 6% market share is attributed to its availability only.
- Out of 36 doctors, 28% still don't prescribe a particular brand which again gives Plasmagen an opportunity to launch and have a hold over this segment.

Q5. GENERAL CONSUMPTION PATTERN



A- Less than 10
B- 10-20
C- More than 20

- Major chunk of the doctors (72%) prescribe not more than 10 vials per month.
- 22% doctors have patients such that 10 to 20 vials are required and these were mainly the intensivists and paediatrics.
- Only 6 doctors require more than 20 vials per month.

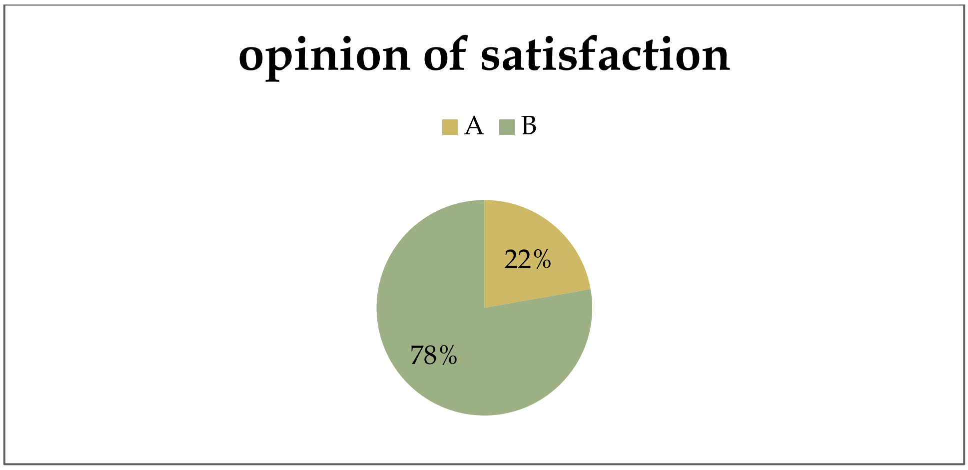
Q6. IS SOURCE OF PLASMA AN IMPORTANT CRITERION IN SELECTION OF THE PRODUCT??

Only 7 out of 39 doctors consider the source of plasma an important criterion for selection of the product as most of them believe that the companies manufacturing such products follow stringent safety precautions and tests.

Q7. SAFETY ISSUES..??

Out of the doctors interviewed, none faced any problems with any of the brands available.

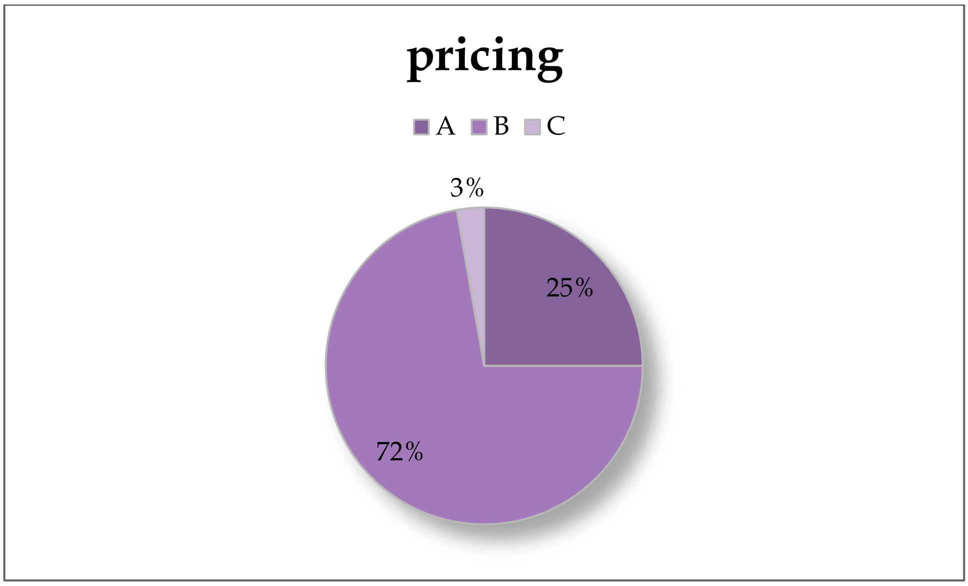
Q8. SATISFACTION LEVEL



A- Highly satisfied
B- satisfied

- The quality and performance of the brands available can be considered satisfactory as 22% doctors were highly satisfied and the rest 78% were satisfied.

Q9. PRICING



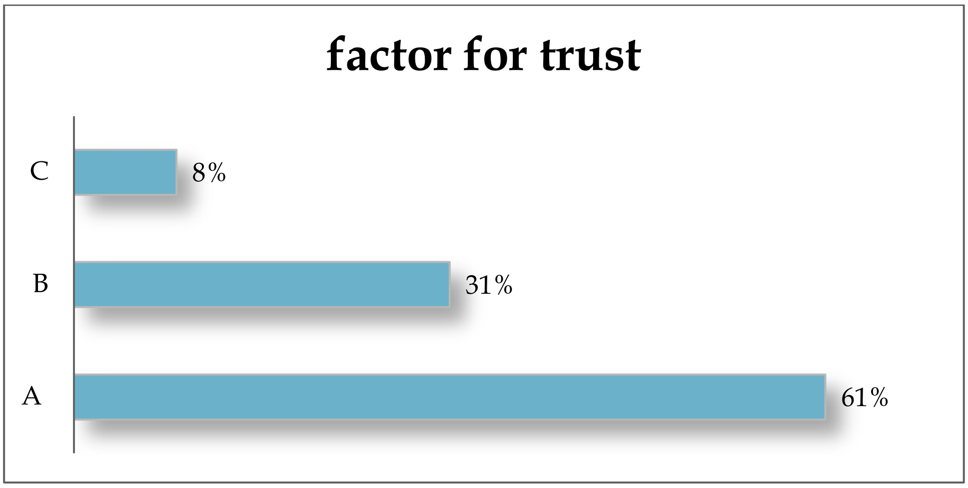
A- Expensive
B- Affordable
C- Not affordable

- 72% of the doctors find albumin affordable, 25% say that it is expensive and the rest 3% find it to be not affordable by their patients.

Q10. AWARENESS PROGRAM

- Out of 39, only one doctor feels that there is a need for awareness programs for doctors or patients about the product.

Q11. HOW DO YOU TRUST A BRAND



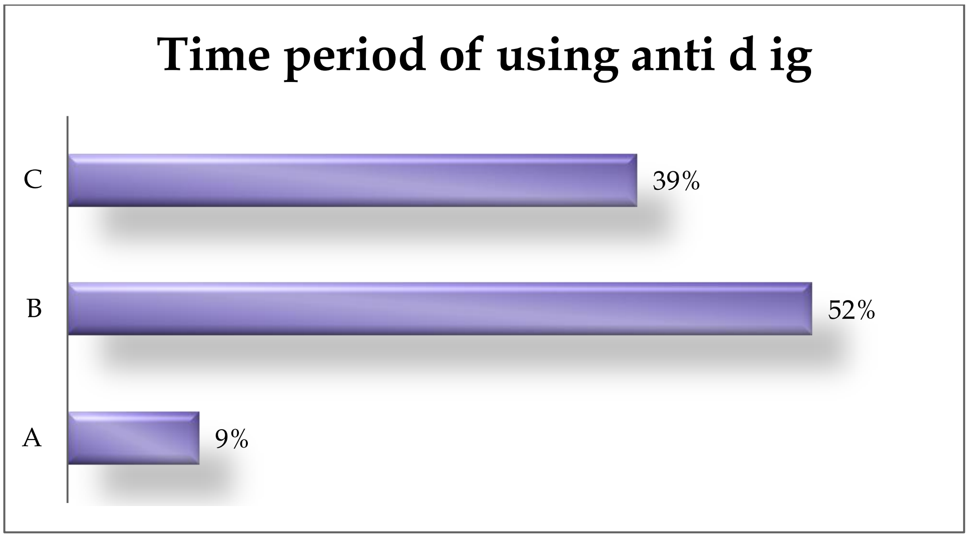
A- Product itself
B- Company's image/safety records
C- Long term relationship

- Maximum chunk of the doctors (61%) trust a brand on the basis of the product quality and effectiveness.
- 31% say that their trust is based upon the company' image
- Only 8% of the doctors feel that they trust a company because of the relationship they hold with the company.

DATA ANALYSIS FOR ANTI D IMMUNOGLOBULIN

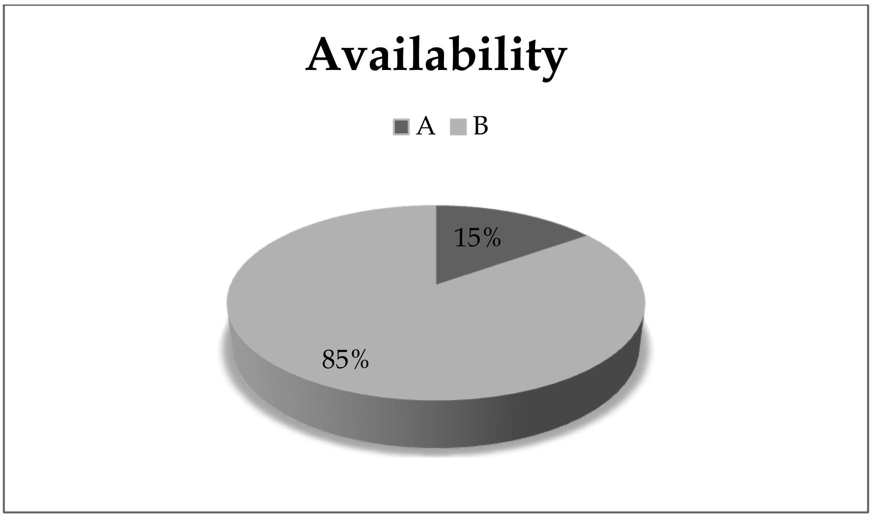
For survey on ANTI D IMMUNOGLOBULIN, 34 doctors were interviewed from different parts of the territory.

Q1. YEARS OF PRESCRIBING WISE BREAKUP-



- This data suggests that doctors who are practicing since less than 3 years rarely use this product.

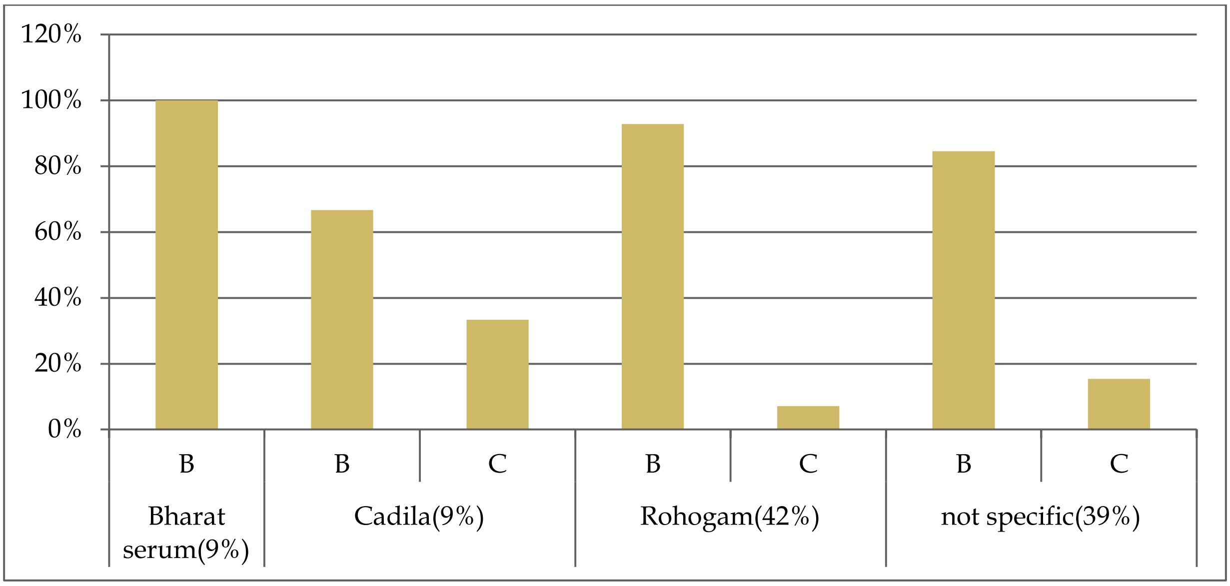
Q2. AVAILABILITY OF THE PRODUCT



A- Excellent
B- Good
C- Poor

- 85% of the doctors feel that the availability of anti d is good and the rest 15% say it to be excellent.

Q3. BRAND YOU PREFER AND WHY??



A- Better product
B- Availability
C- pricing

- Out of 34 doctors, 42% of them say that they use rohogam, i.e. rohogam has a very strong market hold in this segment.
- This monopoly of rohogam is attributed to its easy availability.
- Bharat serum and cadila are at the same position with 9% of the market share.

- The data also suggests that cadila has a bit of price advantage over other brands.
- Rest 39% doctors do not prescribe any specific brand.

Q5. GENERAL CONSUMPTION PATTERN

Out of 39 doctors, none of them prescribe this product more than 10 times a month. (Generally the answer used to be between 3 to 5 times a month)

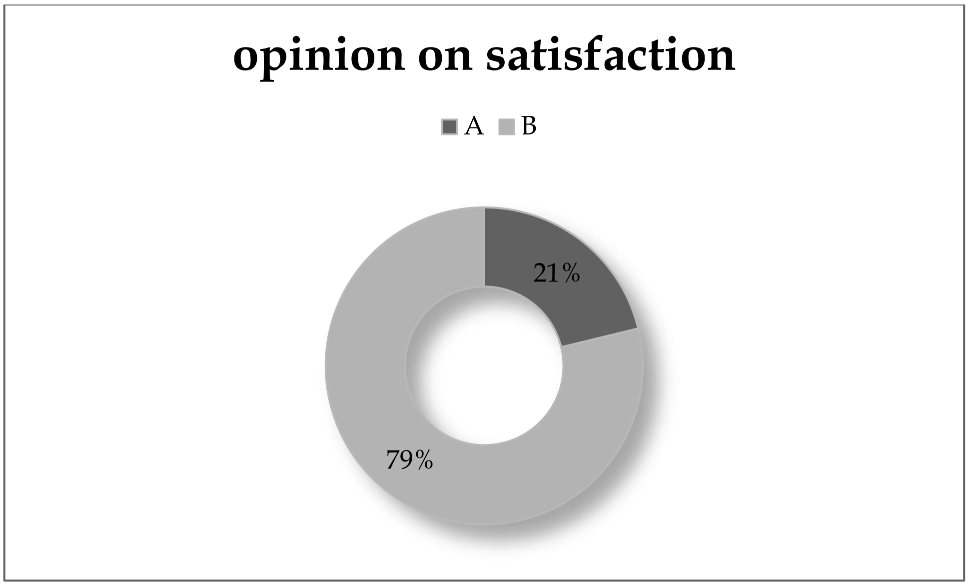
Q6. IS SOURCE OF PLASMA AN IMPORTANT CRITERION IN SELECTION OF THE PRODUCT??

- Only 8 out of 34 doctors consider the source of plasma an important criterion for selection of the product saying that a bad product might affect the health of the baby.
- Rest, most of them believe that the companies manufacturing such products follow stringent safety precautions and tests.

Q7. SAFETY ISSUES

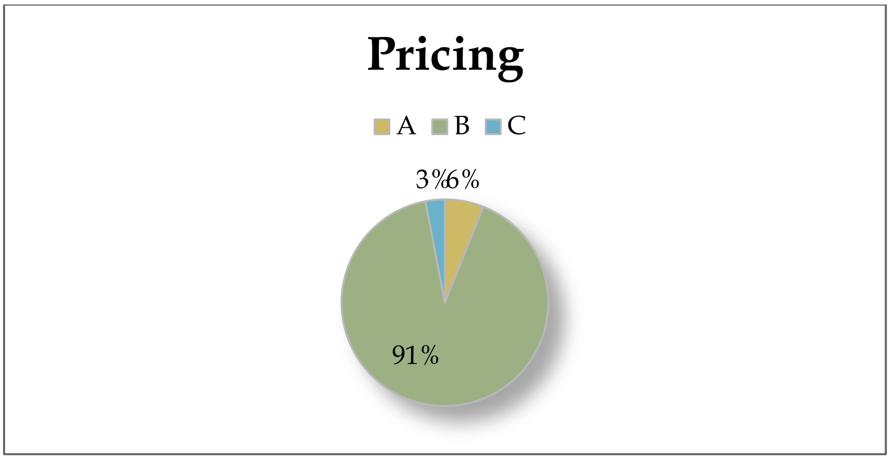
- None of the doctors interviewed ever faced any problem or safety issues with the product and seemed quite comfortable with the usage of the product.

Q8. SATISFACTION LEVEL



A- Highly satisfied
B- Satisfied

Q9. PRICING



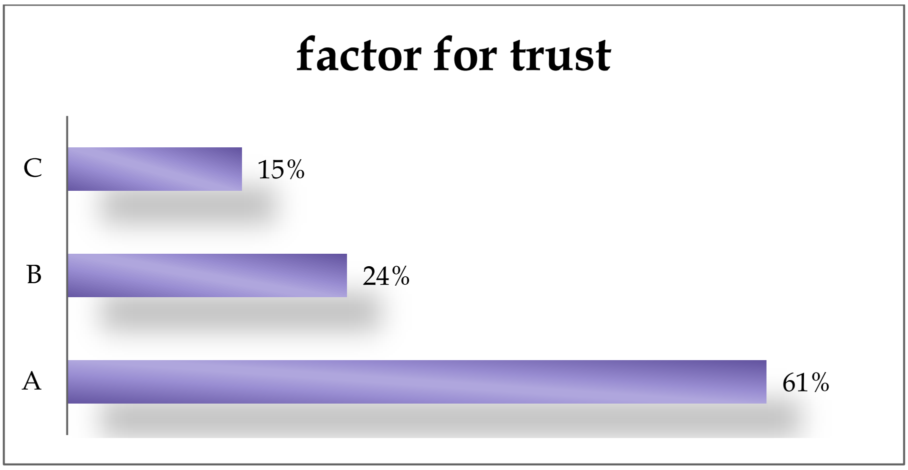
A- Expensive
B- Affordable
C- Not affordable

- Most of the doctors (91%) found the product to be affordable as it is a onetime dosage and patients are willing to buy it.

Q10. AWARENESS PROGRAM

None of the doctors feel that there is a requirement for awareness either with the patients or with the doctors themselves.

Q11. HOW DO YOU TRUST A BRAND



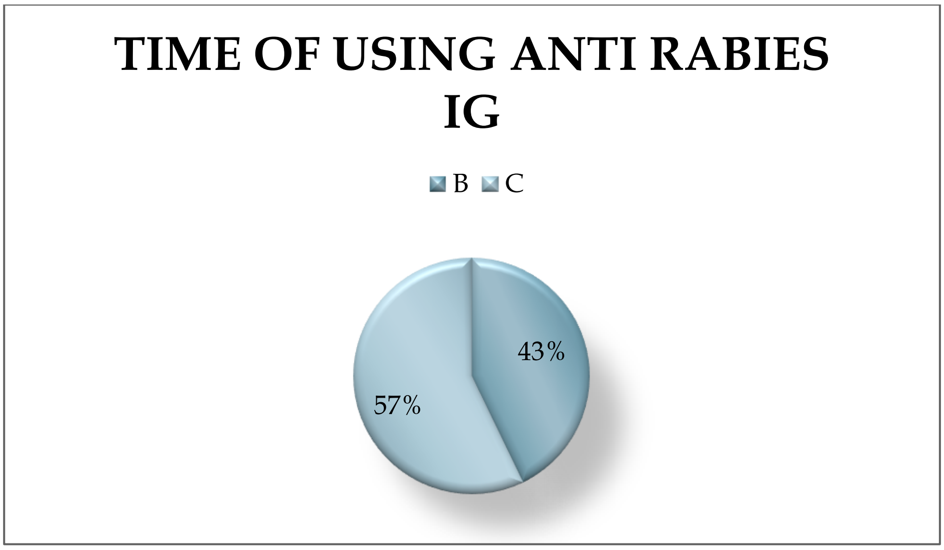
A- Product itself
B- Company's image/safety record
C- Long term relationship

- 61% doctors develop trust on a brand on the basis of the product itself.

DATA ANALYSIS FOR ANTI RABIES IMMUNOGLOBULIN

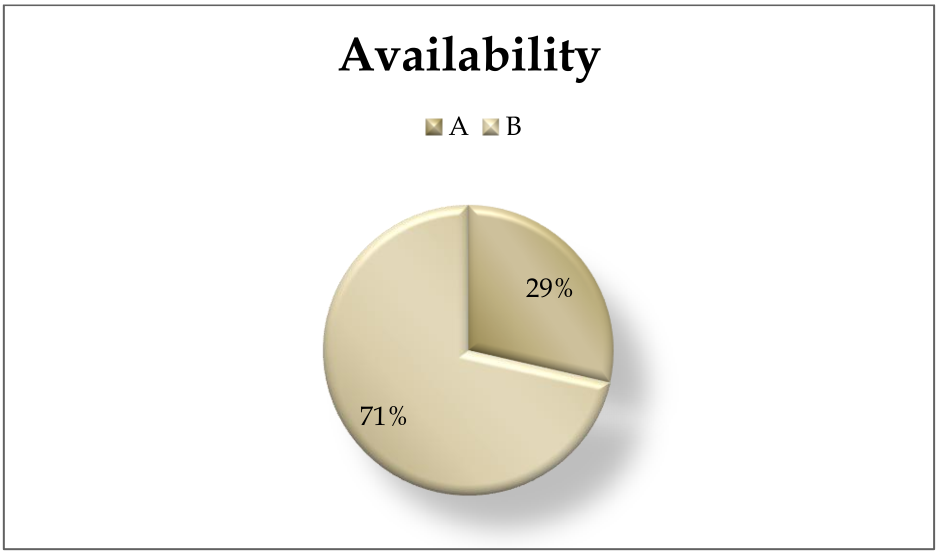
For survey on ANTI RABIES IMMUNOGLOBULIN, 14 doctors were interviewed from different parts of the territory.

Q1. YEARS OF PRESCRIBING WISE BREAKUP-



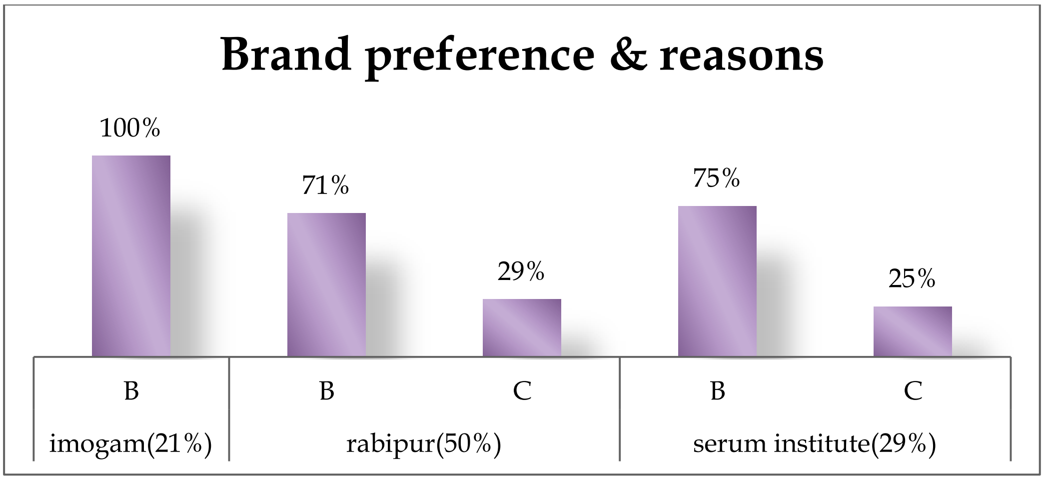
A- Less than 3 years
B- 3-7 years
C- More than 7 years

Q2. AVAILABILITY



A- Excellent
B- Good
C- Poor

Q3. BRAND YOU PREFER AND WHY??



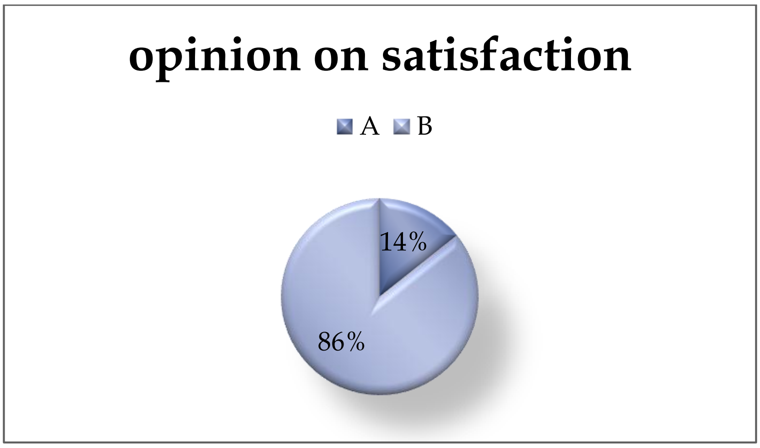
A- Better product
B- Availability
C- Pricing

- 50% of the doctors answered rabipur for their brand preference (which as of my knowledge is a vaccine and not an immunoglobulin)
- 29% said serum institute was their brand of preference due to its availability (75%) and also pricing (25%).
- 21% doctor's brand of choice was imogam due to its availability only.

Q5. CONSUMPTION PATTERN

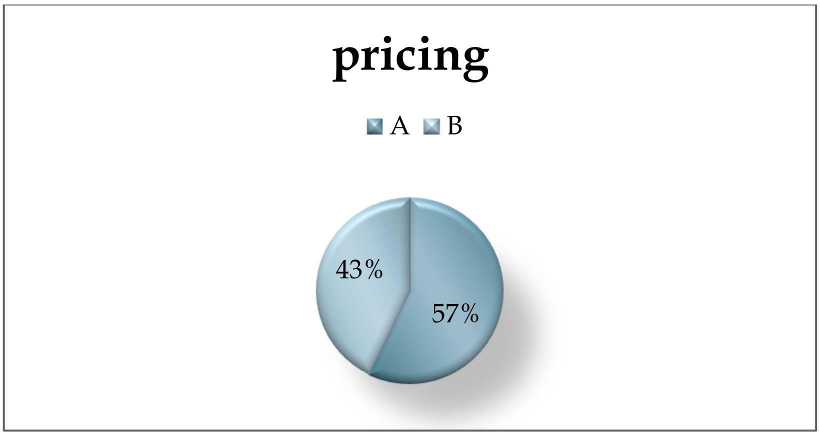
None of the doctors use this immunoglobulin more than 10 times a month.

Q8. SATISFACTION LEVEL



A- 14%
B- 86%

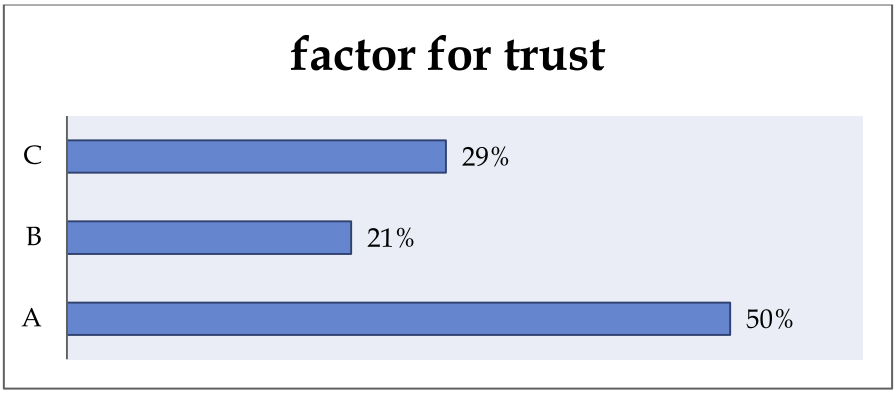
Q9. PRICING



A- Expensive
B- Affordable
C- Non affordable

- An alarming 57% of the doctors feel that anti rabies ig is expensive.
- Rest 43% find the drug affordable

Q11. HOW DO YOU TRUST A BRAND

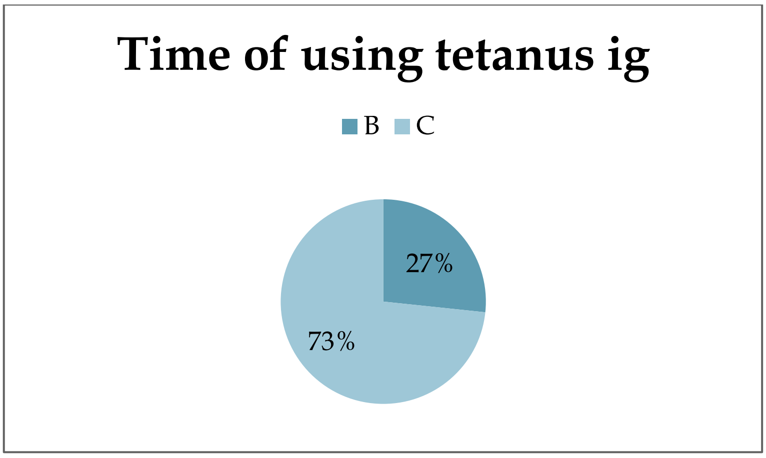


A- Product itself
B- Company image/safety records
C- Long term relationship

DATA ANALYSIS OF TETANUS HYPER IMMUNOGLOBULIN

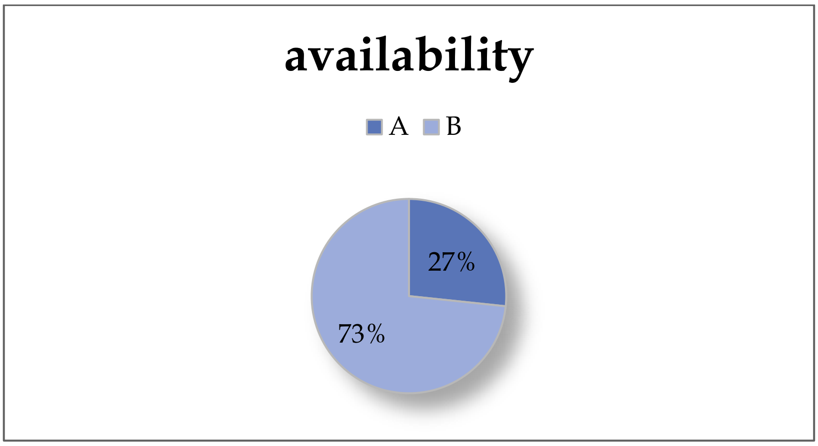
For survey on ANTI RABIES IMMUNOGLOBULIN, 14 doctors were interviewed from different parts of the territory.

Q1. YEARS OF PRESCRIBING WISE BREAKUP-



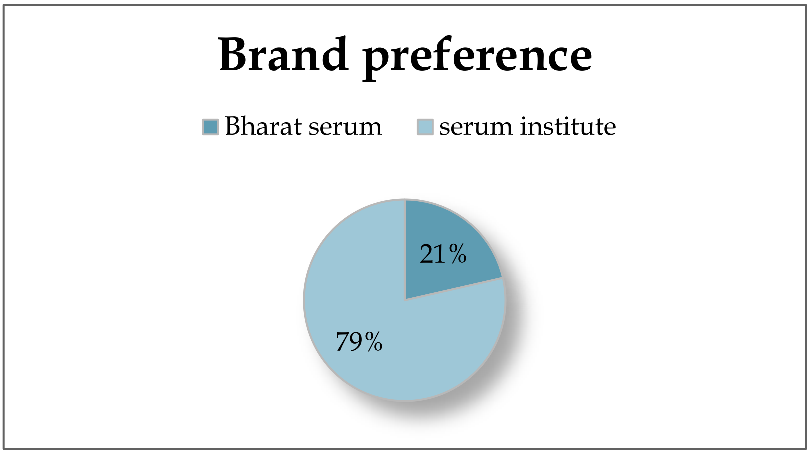
A- Less than 3 years
B- 3-7 years
C- More than 7 years

Q2. AVAILABILITY



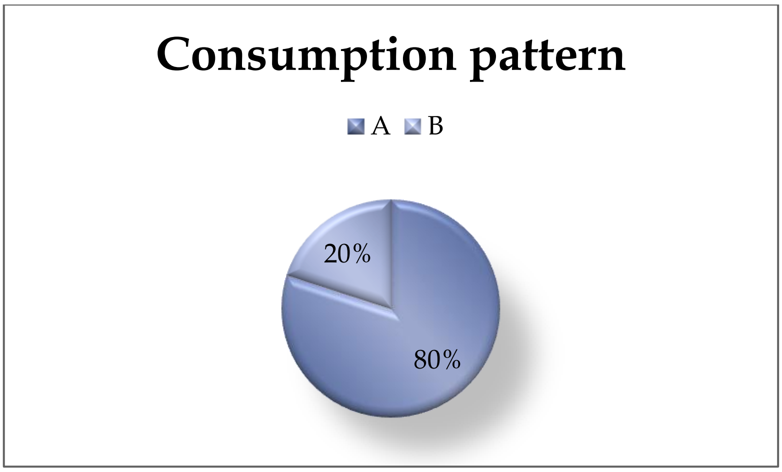
A- Excellent
B- Good
C- Poor

Q3. BRAND YOU PREFER AND WHY??



- In this segment, serum institute has the market leadership with 79% of shares which is all due to its availability and brand recalling by the doctors

Q5. GENERAL CONSUMPTION PATTERN



A- LESS THAN 10
B- 10-20

80% of the doctors prescribe tetanus immunoglobulin 10 to 20 times a month, i.e. the demand of the product is relatively high.

OBSERVATION AND FINDINGS

For IVIG-

- The data suggests that maximum (57%) ivig is prescribed by the doctors who are elder practitioners.
- There is easy availability (89%) of ivig to the doctors, but still they are not fully satisfied as only 4% have rated the availability as 4%.
- Most of the doctors said that ivig is available as and when required and the chemists or general pharmacies don't keep it in stock with them all the time, which at times becomes problematic for severe conditioned patients.
- Out of 78 doctors interviewed for ivig, the maximum prescribers are for reliance life sciences having a share of 33% in the market.
- The market reach of reliance is supposedly very good as out of 33% doctors, 60% prescribe it because of its availability.
- Also the pricing of reliance's brand of ivig is having a tremendous effect on the prescribers (36%)
- Undoubtedly, reliance is the present market leader of ivig in the given area
- 13% of doctors are using bharat serum on regular basis because of its availability (67%) and it's pricing (33%).
- Bharat serum has emerged as the market challenger in this segment.
- Following the market is V.H.B with its 9% of market share mostly because of its availability (86%)
- Out of all the doctors, 40% are such that who do not prescribe any specific brand.
- This 40% can be a very potential market and a great opportunity for Plasmagen to capture.
- 92% of the doctors use ivig on less than 10 patients per month.This suggests that the demand is not very high.
- The data suggests that pricing is still an issue with the patients as 42% doctors believe that the product is not affordable for the patients and another 43% believe that the product is expensive but because of the urgency and life saving nature of the drug, the patient manages to buy the product.

For hepatitis B immunoglobulin

- Reliance emerges out as the market leader with a market share of 22% mainly due to its reach and availability (83%) and partly because of its pricing (17%).
- Bharat serum and el shadai are holding the same market position with equal weightage to availability (75%), but the other 25% for bharat serum is due to the better product whereas for el shadai it is due to the price of their product.
- 4% of the market is also acquired by Plasmagen due to its availability.
- Rest 44% of doctors do not write any specific brand and leave it on the products availability (75%) and price (25%) respectively.
- It was found that the consumption and requirement of hep b ig is more in government hospitals.
- 59% of the doctors feel that the pricing is right and the drug is affordable as it is a onetime treatment and only a single vial is required.
- Only 4 % doctors feel that the drug is not affordable for their patients and on closely monitoring the data it was found that those 4% of doctors were from government hospitals only.

RECOMMENDATIONS AND CONCLUSION

With the data collected at the time of the project, now we have a clear understanding of the market position of the company and the loop holes in the demand and supply of the product.

Reliance is undoubtedly the market leader in this segment due to their low pricing and extensive availability.

Bharat serum stands out as the second best or the market challenger in the current market scenario.

But plasmagen also has the opportunity to cover the untapped market and the share of doctors who are currently not prescribing any particular brand by improvising on its market reach.

Also plasmagen will have to do extensive marketing so as to establish the brand and create awareness about the company and its products available.

The market still has tremendous potential and the doctors also have started recognising the company giving it a fair advantage.

Also, the company must expand its research and development laboratories and come up with a wider product mix.

BLOOD BANKS

PROBLEM STATEMENT

Blood component therapy is advantageous in terms of increasing the effective availability of blood units and reducing the transfusion-related risks. One unit of blood can be separated into components and made available to multiple patients by transfusing suitable components. It is often believed that most, if not all, of the blood should be fractionated. But the process of componentizing increases the availability of blood products at the expense of increased costs of holding, processing, and wastage at a blood bank.

OBJECTIVES OF THE STUDY

- ✓ To determine the number of blood banks involved in blood componentization.
- ✓ To know the amount of surplus plasma available with the blood banks which can be used for componentization.

RESEARCH METHODOLOGY

5. **RESEARCH DESIGN**

The research design put to use was the descriptive design as all the study was pre planned and rigid.

6. **SAMPLING**

Judgemental sampling was used for this study as a list of blood bank was given.

TARGET POPULATION

All the blood banks in the given territory had to be covered.

Zones	*Areas covered*
Central Mumbai	Ghatkopar, Sion, Dadar, Parel, Kurla, Powai, Byculla
Western Suburbs	Andheri, Bandra, Borivali, Goregaon, Kandivali, Santacruz, Jogeshwari, Vile Parle, Malad, Mahim
South Mumbai	Charni Road, Napean Sea Road, Pedder Road, Churchgate
Navi Mumbai	Vashi, Nerul, Khargarh
Goa	Bambolim, Margao, Porvorim

7. **DATA COLLECTION**

TOOL-

Structured questionnaire comprising of both closed and open ended questions was used which was provided by the organisation.

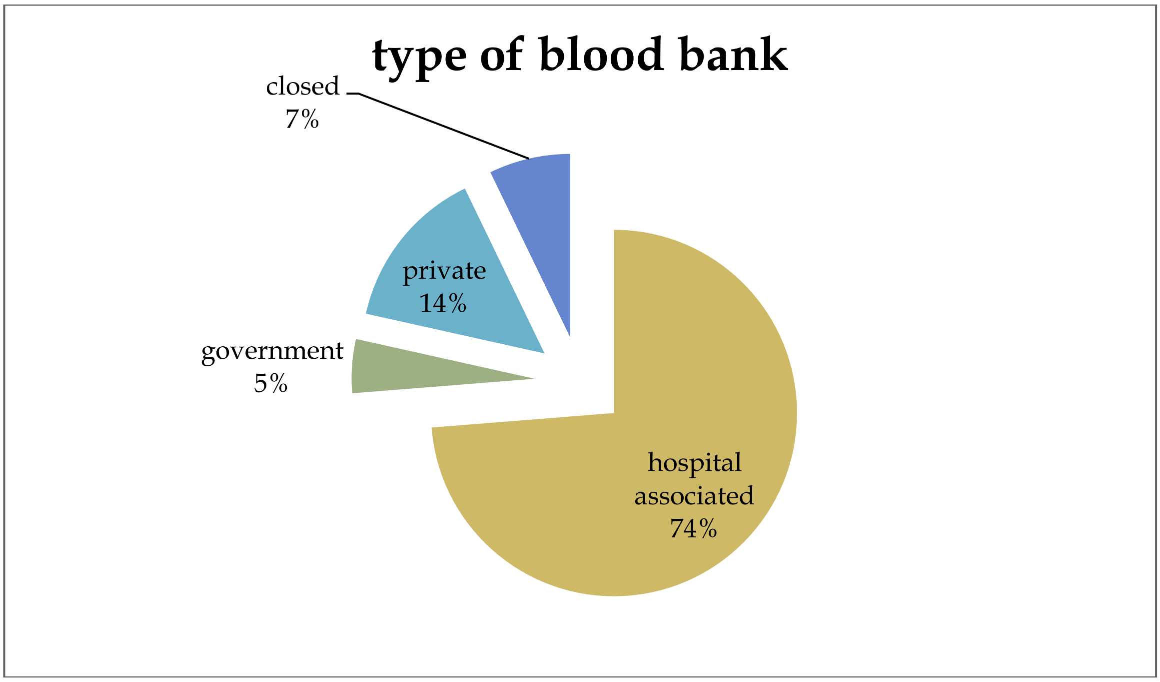
TECHNIQUE-

Face to face interview of the blood bank officials was conducted.

DATA ANALYSIS

- For the survey on blood banks, 42 blood banks were visited out of which 31 (73%) were hospital associated, 2 were government blood banks, 6 private and 3 have been closed.

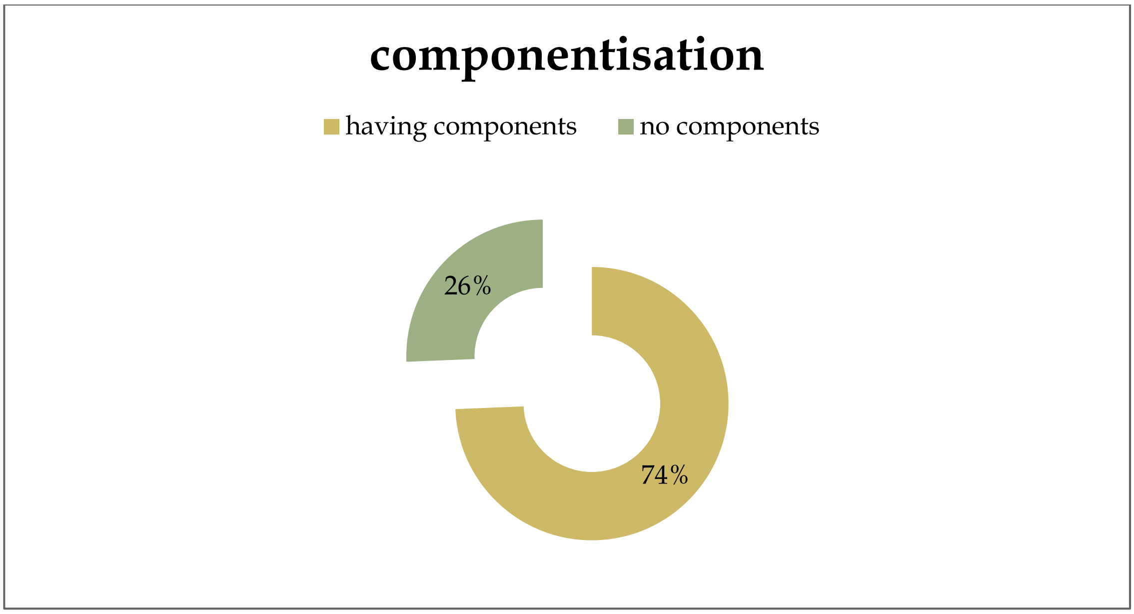
TYPES OF BLOOD BANK



- Out of 42, only 25 blood banks gave their licence numbers.
- All the blood banks held donation camps.

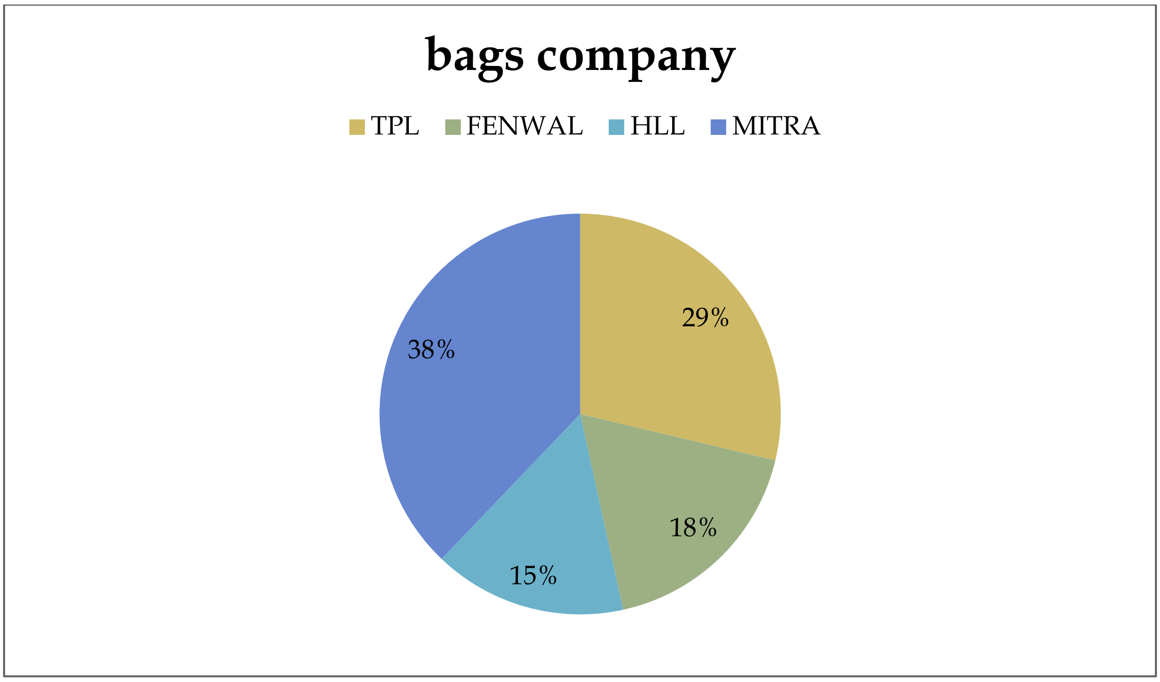
COMPONENTISATION

- Out of 39 running blood banks 29 have componentisation facility.



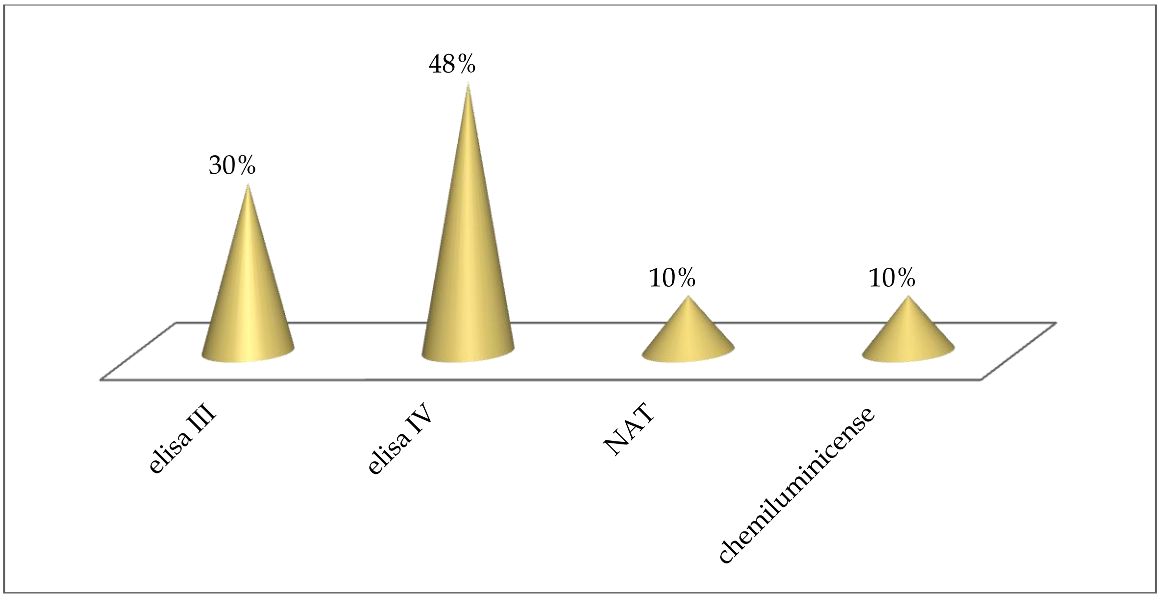
BLOOD BAGS USED

- 13 (33%) blood banks use terumo pempol blood bags, 8 (20.5%) use fenwal, 7 (17.9%) HLL and 17 (43.5%) mitra.



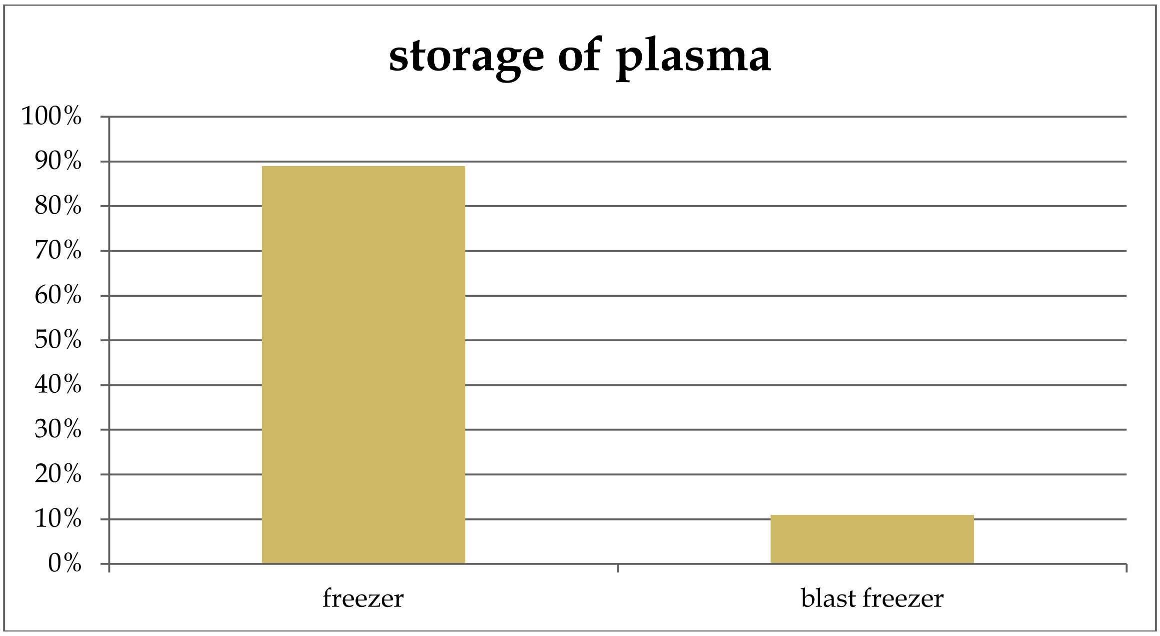
TESTING METHOD

Blood testing methods used by the blood banks-
30% of the blood banks use elisa generation IV for the blood screening.
48% of the blood banks use elisa generation III for blood screening.
10% of the blood bank use NAT for blood screening.
10% of the blood banks use chemiluminicense.



STORAGE-

89% of the blood banks use freezer to store plasma.
Rest of the 11% use blast freezer.



- 18 blood banks prepare cryoprecipitate. Those 18 are-

- Breach candy hospital blood bank
- LH hiranandani blood bank
- Holy family hospital blood bank
- KEM hospital blood bank
- Nair blood bank
- Ashirwad blood bank
- Jaslok hospital blood bank
- Tata memorial hospital blood bank
- S.LRaheja hospital blood bank
- Saifee hospital blood bank
- B.s.e.s.m.g hospital blood bank
- Borivalli blood bank
- Navjeevan blood bank
- Soi meenatai thakrey blood bank
- Nanavati hospital blood bank
- B.d petit parsi general hospital blood bank
- Goa medical college blood bank

- 21 out of 29 blood banks say that formation of a consortium would be helpful for all concerned.
- 11 blood banks are willing to give their plasma for fractionization.
- Those 11 are-
    - Cooper blood bank
    - Ashiwad blood bank
    - Bombay hospital blood bank
    - Tata memorial hospital blood bank
    - Raheja hospital blood bank
    - Navjeevan blood bank
    - Hinduja blood bank
    - Cumballa hill hospital blood bank
    - Nanavati blood bank
    - Prince aly khan hospital blood bank.

FINDINGS AND OBSERVATIONS

- For the survey on blood banks, 42 blood banks were visited out of which (73%) were hospital associated, 2 were government blood banks, 6 private and 3 have been closed.

- All the blood banks held donation camps and all have voluntary blood collection.

- Out of 39 running blood banks 29 have componentisation facility.

- 13 (33%) blood banks use terumo pempol blood bags, 8 (20.5%) use fenwal, 7 (17.9%) HLL and 17 (43.5%) mitra.

- 30% of the blood banks use elisa generation IV, 48% of the blood banks use elisa generation III, 10% of the blood bank use NAT, 10% of the blood banks use chemiluminicense.

- 89% of the blood banks use freezer to store plasma and rest of the 11% use blast freezer.

- 18 blood banks prepare cryoprecipitate.

- 21 out of 29 blood banks say that formation of a consortium would be helpful for all concerned.

- 11 blood banks are willing to give their plasma for fractionization.

RECOMMENDATIONS

1. There is a large amount of surplus plasma available at different blood banks which can be used for componentization. Hence appropriate measure should be taken to discourage such wastage of blood.
2. More awareness should be created about the uses of blood components.
3. Blood donation camps should be conducted regularly to encourage people to donate more and more blood.
4. Organization should buy surplus blood from the blood banks which are ready to sell it, to make components.

ANNEXURE

1. QUESTIONAIRRE

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 yr, b. 3-7 yr, c. More than 7 yr.
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
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