

**Summer Training at
PlasmaGen Biosciences
(April-June 2013)**

**GAP ANALYSIS - DEMAND AND SUPPLY OF HYPER
IMMUNE PROTEINS IN THE INDIAN PLASMA PRODUCT
INDUSTRY**

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**Post Graduate Diploma in Pharmaceutical Management
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**Institute of Health Management Research,
Jaipur
2013**

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CERTIFICATE

This is to certify that Ashutosh Joshi, student of Post Graduate Diploma in Pharmaceutical Management (PGDPM) Batch-04, Institute of Health Management Research, Jaipur has undergone summer training in PlasmaGen Biosciences and has done study on "GAP analysis - demand and supply of hyper immune proteins in the Indian plasma product industry".

The candidate has successfully carried out the mentioned studies assigned to him during summer training from 24th April 2013 to 15th June 2013 and his approach to study has been sincere, scientific and analytical.

I wish him success in all his future endeavors.

Dr. Seema Mehta 
Assistant Professor and Mentor
IIHMR, Jaipur


Dr. Ashok Kaushik
Dean (Academic and Student Affairs)
IIHMR, Jaipur

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EXECUTIVE SUMMARY

Plasma contains special types of proteins which are of huge clinical significance and can be extracted and converted into biopharmaceutical products. These products are extracted from specialized plasma and used in hepatitis b, tetanus, rabies, Rh incompatibility..Though India has made progress in medical sciences but still these products are out of reach to the poor patients and doctors don't prescribe it due to high cost of these products and lack of awareness and knowledge about these products

This project was undertaken to help us in understanding the market dynamics of these products and how can we address various challenges to make this product available to patients. The purpose of market research to show the perfect scenario of "HYPER-IMMUNE PROTEINS" in terms of demand, consumption, availability, affordability, brand choice and factors related to their growth in cities viz. Nagpur, Wardha, Amravati, Durg, Raipur and Sambalpur

After completion of project and data analysis it is clear that consumption pattern of these products are higher in Govt. Hospitals as compared to private clinics and nursing home. And second most important thing is that doctors prescribe only salt name for particular HIPs and patients take it from store of hospital in good cities. So to have tender of these becomes important for increase in market of these products

In small cities these products are still far from reach due to high price and availability. The market of these products depends upon the socio economic status of cities specially of state Orissa and Chhattisgarh

Most doctors demand that the prices of these products should lower down and also some doctors admitted that the awareness level is less. Some doctors are not able to differentiate between toxoid and these HIPs.

Detailed Information regarding all the aspects of these HIPs is in the next pages along with the graphs which I have collected during my project work. Also the very important information about the tender market and wholesale market is collected by me which will be hopefully helpful for the company regarding this project

Problem Statement:

To launch a new product is always a difficult task for the company specially when product is plasma or blood related product which includes a very high investment.

Organization has to consider every single aspect related to the product very deeply and carefully .As small mistake can turn into a big disaster.

Some key points which greatly affects regarding the HIPs

1. Awareness level
2. Demand level
3. Key competitors
4. Factors related to the growth
5. Satisfaction level

Some Major concerns

- High cost of these products
- Less awareness level specially in TIER II cities
- Govt. regulation
- Monopoly of products in particular segment

GAP analysis - demand and supply of Hyper immune proteins in the Indian plasma product industry.

Title

“Hyper-immune Plasma Proteins in Indian Tier I and Tier II Cities- determine the public health perspective on the availability, affordability, safety, consumption pattern and market potential of each product.”

Objectives of the study

For each category of product:

- To estimate awareness about hyper immune products
- To understand public health perspective of hyper immune products in the regions.
- To determine the number of diagnosed cases in the given region.
- To understand the disease management by doctors
- To analyze whether the existing demand for the products are fulfilled.
- Perception of doctors in these regions regarding the hyper immunes.
- Factors affecting the growth of hyper immune plasma protein market in Tier I and Tier II cities
- To determine the factors that would promote usage of these products in Tier I and Tier II cities

RESEARCH METHODOLOGY:

(A)Area

I was assigned central zone for the study the cities covered are:

- Nagpur
- Wardha
- Amravati
- Raipur
- Durg
- Sambalpur

In these cities both private as well as Govt.Hospital were covered

(B) Research Design:

Descriptive research design was used as this study was pre planned

(C) Sampling:

Judgmental sampling was done as we judge the doctors by our self to get the information about majority

Target population

Doctors from both private and govt. sector were the target population

Different doctors according to specialty were interviewed

(D)Data collection

Tool

Structured questionnaire designed by plasma was used as a sampling tool having both open-ended and close ended questions

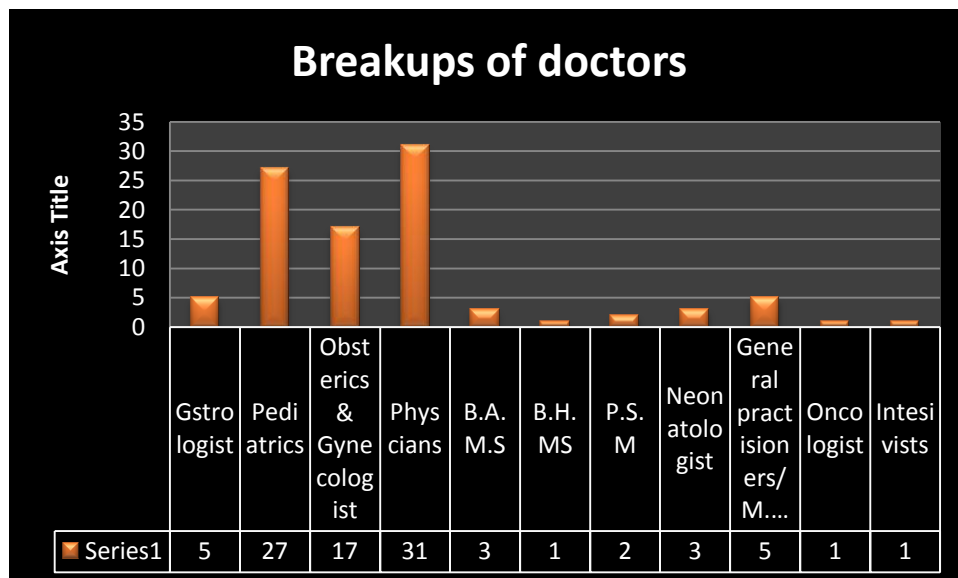
Technique

Face to face interview was used as a survey technique

DATA ANALYSIS

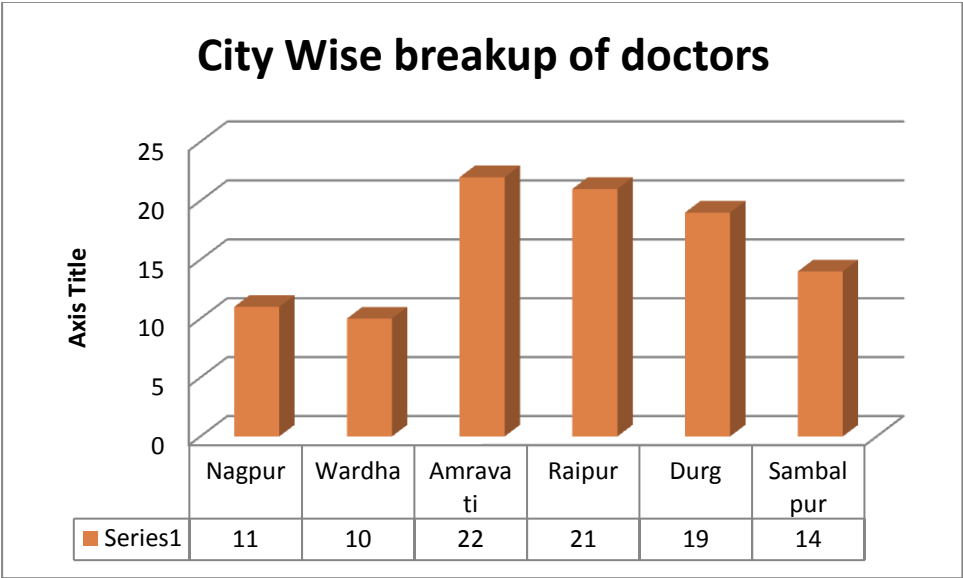
Data analysis for each category is done but before that there is some general analysis of all categories

Total 96 Doctors were covered from 6 cities.

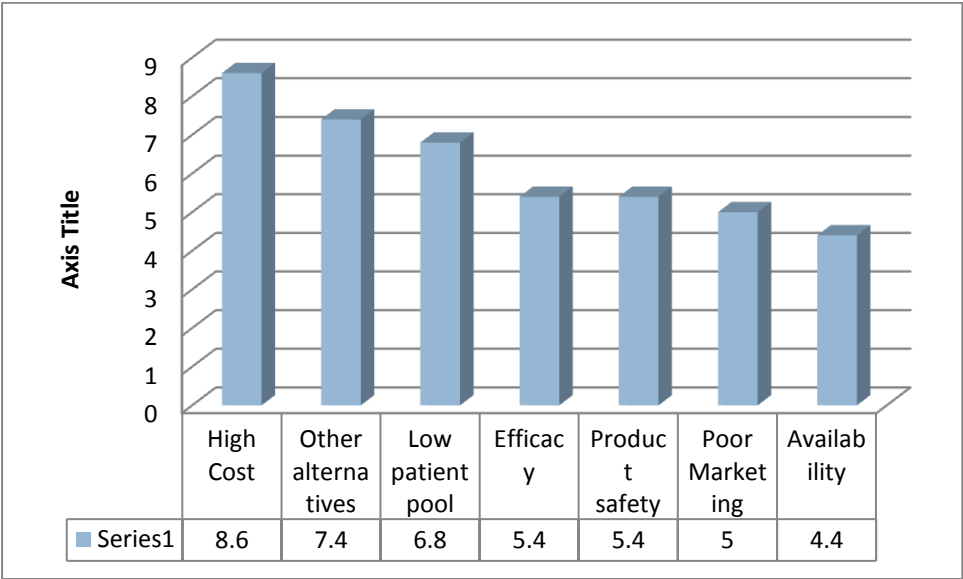


- Overall 96 doctors were covered out of which major categories physicians 31, pediatric 27 and gynecologist 17
- These vaccines and IGs don't come in the practice of B.H.M.S/B.A.M.S doctors. Some say that is not allowed legally.

City Wise Breakup of Doctors

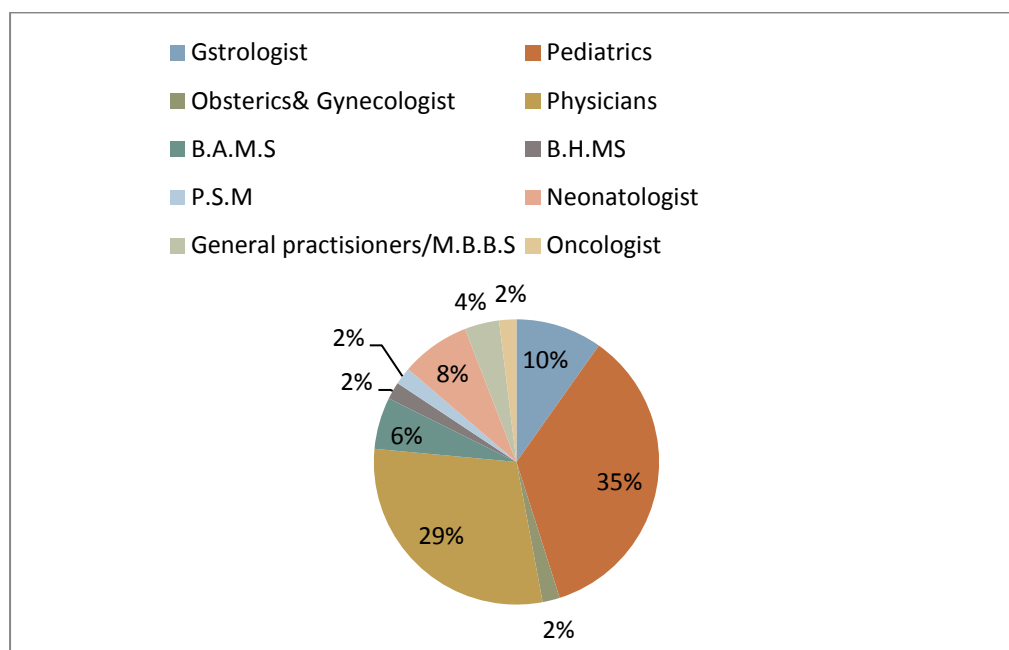
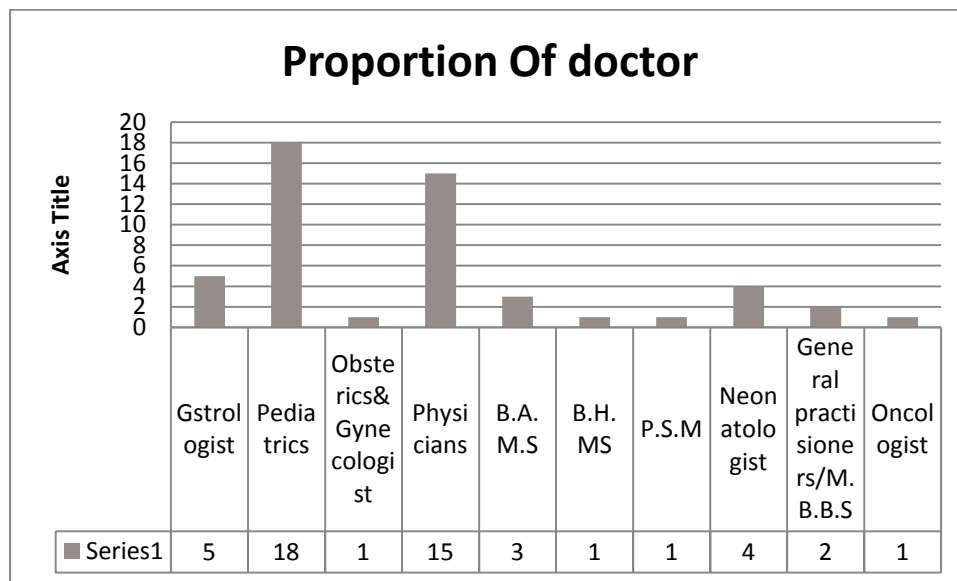


Reason for not using these products



ANALYSIS OF HEPATITIS B IG

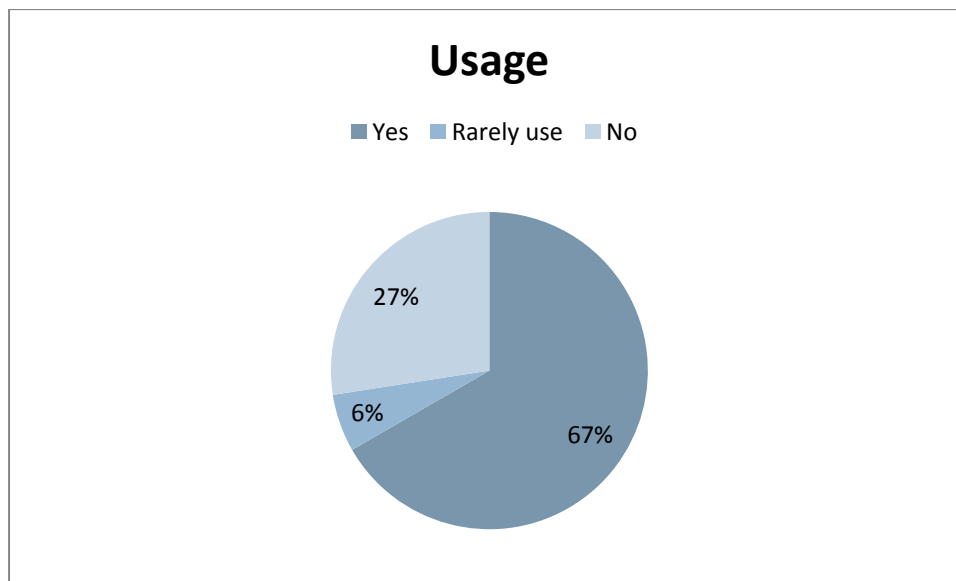
Break up of doctors



- **Pediatrics are the major prescribers of the hep b ig followed by physicians i.e 35% and 29%**

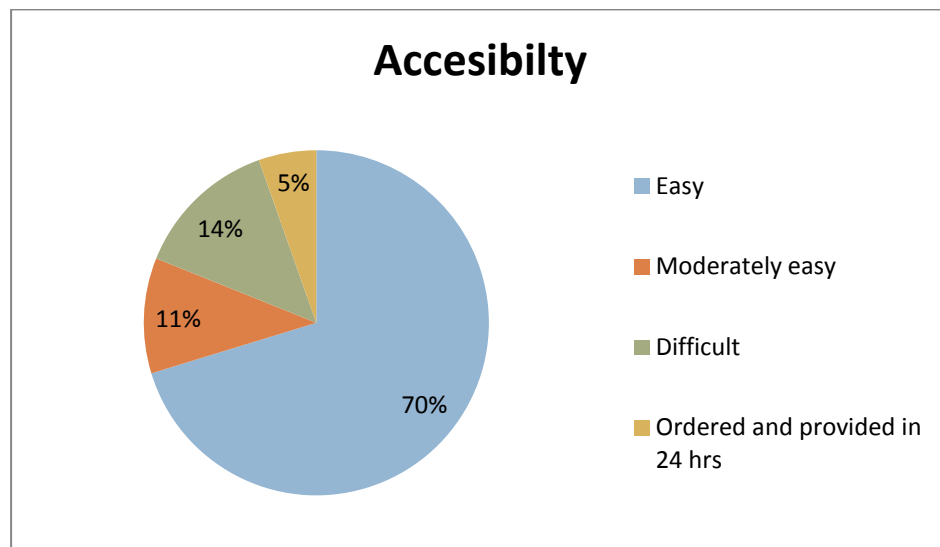
- Very less proportion of gastro and liver doctors prescribe this
- There are 14 doctors which do not use any kind of HIPs

Question 1: Are you using any of the plasma products (Albumin, Immunoglobulin, Anti D IG, Anti Rabies IG, Hep-B IG, Anti Tetanus IG, Coagulation Factor, alpha-1 Antitrypsin) in course of your treatment?



- 67% doctors use plasma products
- 27% doctors don't use
- There are also 3 % doctors which rarely or very less frequently use
- There were some doctors who pretend to be knowledgeable but in most of the such type of cases they were not using because they hardly know about this hep b iG

Question 2: How easy/difficult it is to get this product?

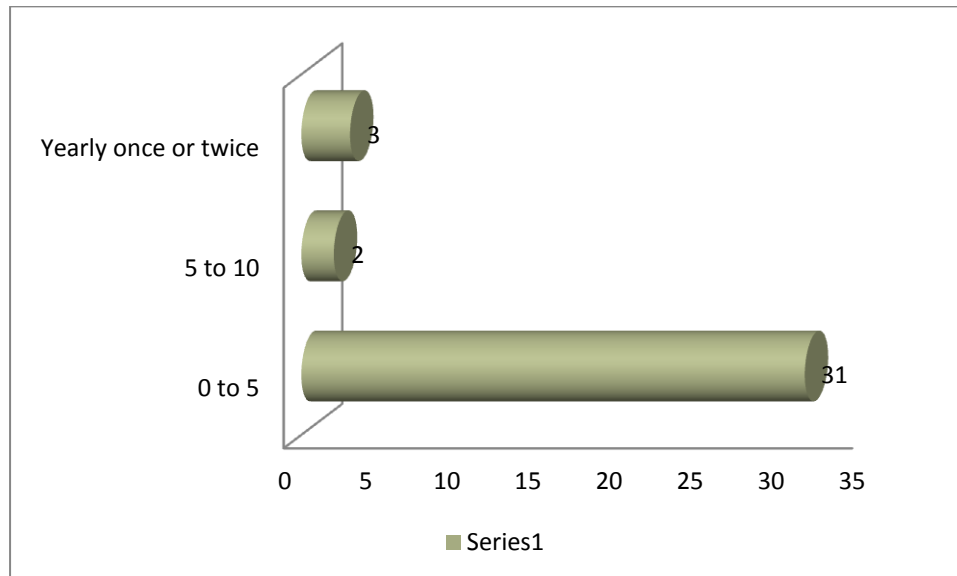


- **The cities like Durg, bhillai give rise to another category. There Doctor has to order to M.R or chemist for hep b iG if there is requirement. Than that product is made available in 24 hrs.**

Question 3:

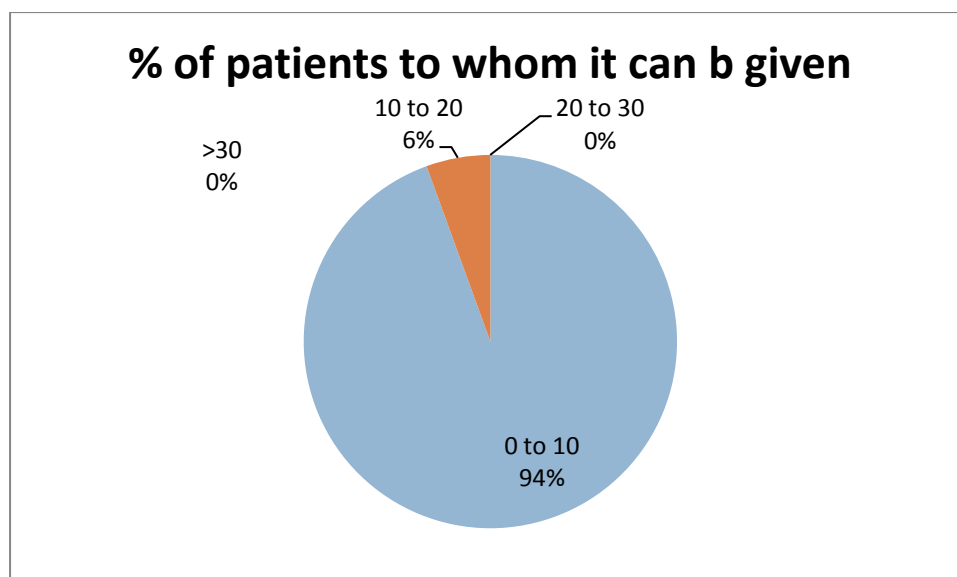
A: - No of cases of Hepatitis B per month

B: - % of patients who can be administered Anti Hep B Ig



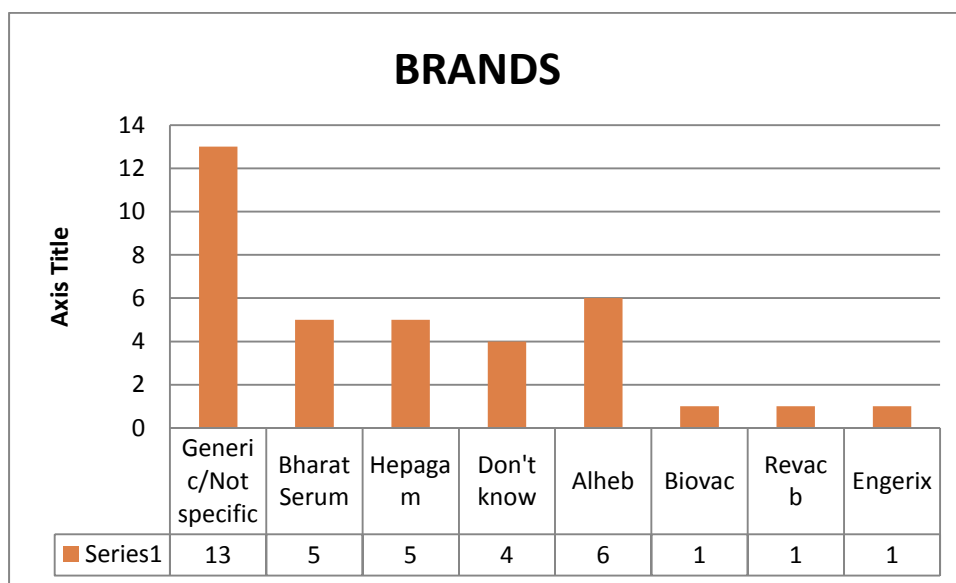
- Most of the cases lies in between 0 to 5
- I have made another category for doctors who only 2- 3 cases in a year

B



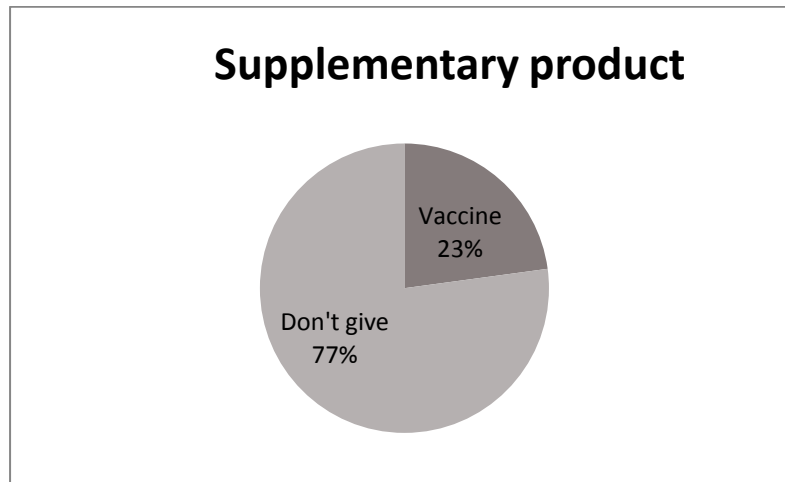
- Majority of doctor's responses lies in 1st category that is 0 to 10
- No response was recorded for category 3rd and 4th

Q 4 Brands Preference

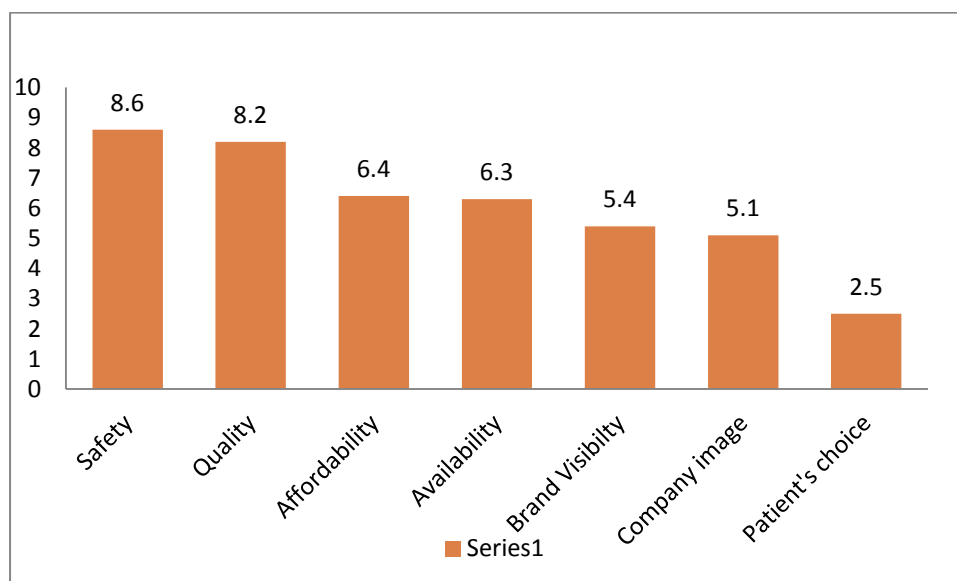


- Most of the Govt.Hospital don't have any particular choice regarding brand. they mostly say we prescribe simply salt name or generic
- 4 doctors don't know the brand as they prescribe very less which also clearly indicates that M.R of any company do not visit them
- Alheb ,hepagam and Bharat serum are in the neck to neck competition
- These 13 doctors 36% doctors are the potential market for us. But this would be possible if we have tender for those Govt.Hospital

Q4 B



Q 5 Choice of Brand

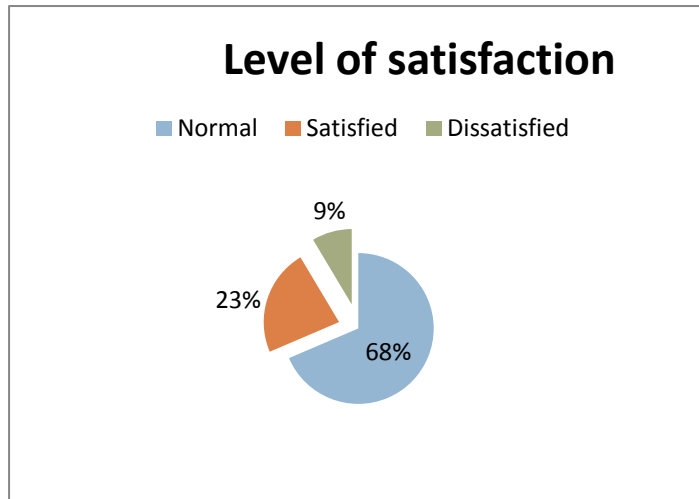


- The average of each category was taken and the outcome shows that doctors 1st choice is safety and then Quality having almost same avg.

Q6 For any other indication it can be prescribed or not??

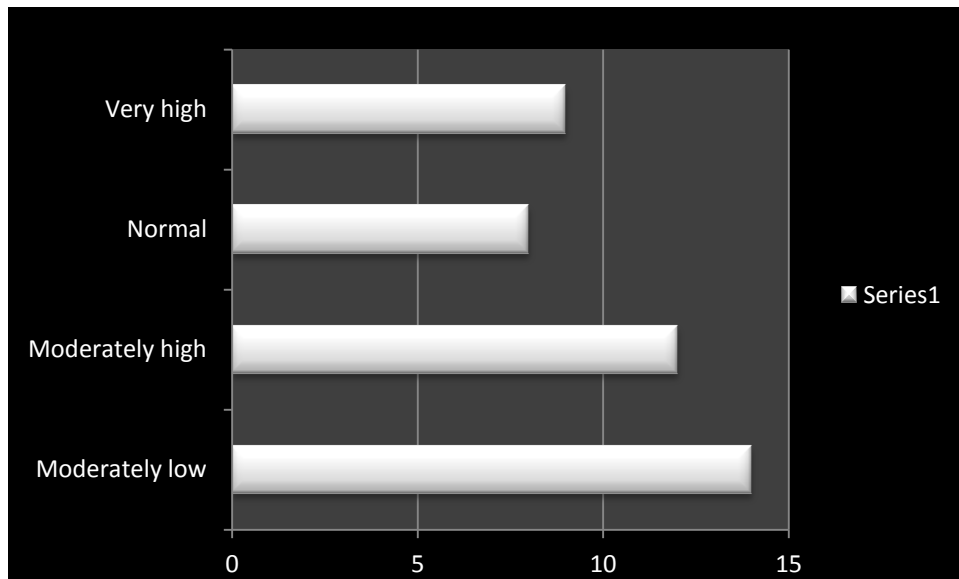
There were some doctors who said that hep b iG can be prescribed in case of prophylaxis, vertical transmission and if mother is positive than neonate should be given such type of product

Q7 Level of satisfaction



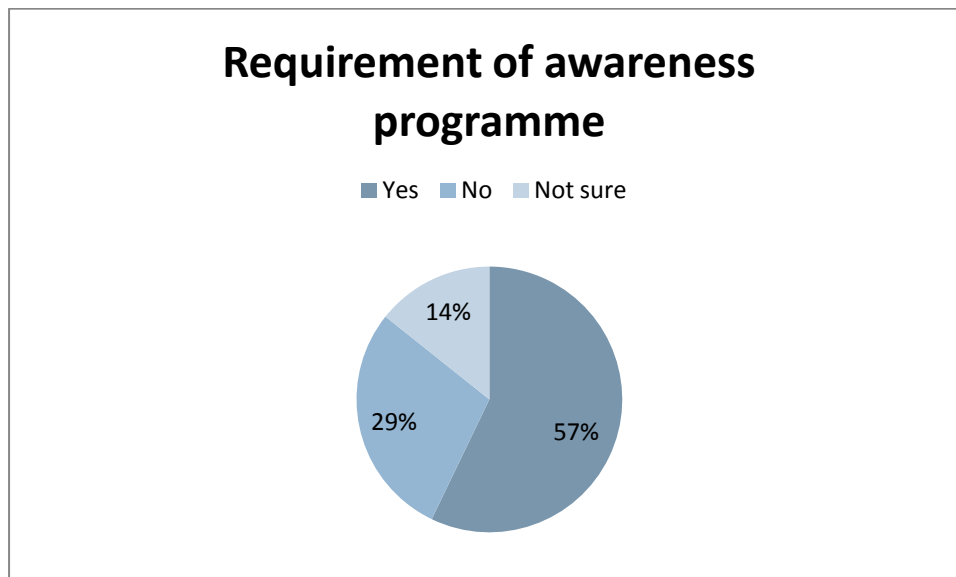
- **68% are normal .out of these normal there are some doctors which are using due to lack of choice means they are ok ok type**
- **13% doctors are satisfied from the currently available brands**
- **9% doctors are not satisfied with the available brands .Reason for their dissatisfaction is high costs and availability**

Q8 Awareness level



- Graph clearly shows that the awareness level of about hep b is moderately low which is one of the major reason of its less use

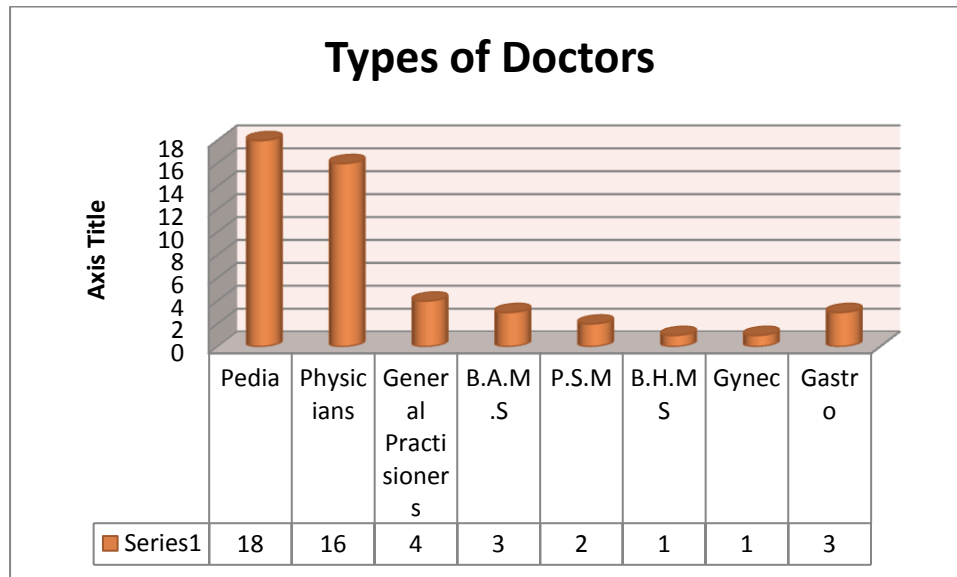
Q 10



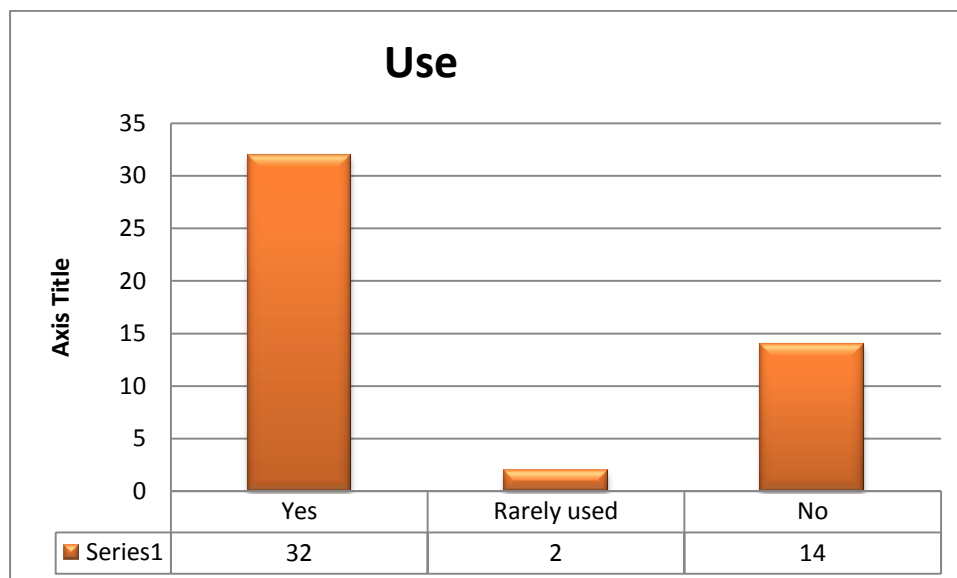
- Almost 90% of doctors who want awareness program suggested that cme's and seminars may increase the level of awareness
- Some doctors said that specialist already aware but the general practitioners have low knowledge about that

DATA ANALYSIS FOR ANTI-RABIES IG

Breakup of doctors

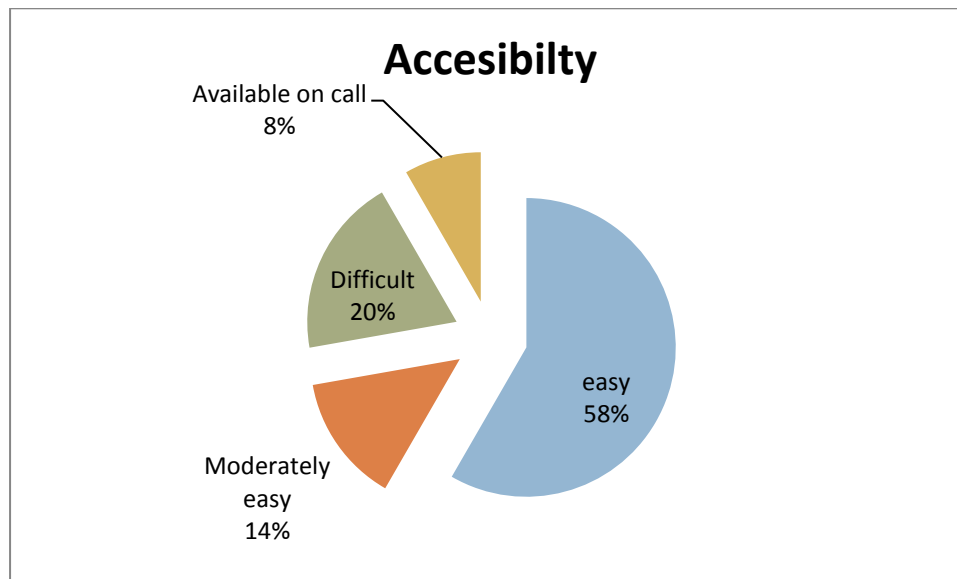


Question 1: Are you using any of the plasma products (Albumin, Immunoglobulin, Anti D IG, Anti Rabies IG, Hep-B IG, Anti Tetanus IG, Coagulation Factor, alpha-1 Antitrypsin) in course of your treatment

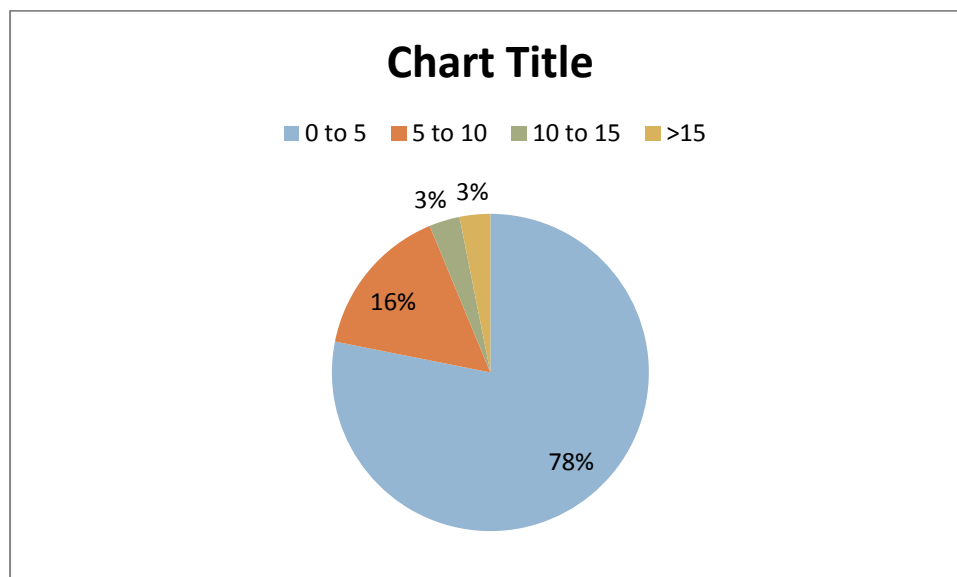


From this category 32 doctors use anti rabies ig ,there are 2 doctors which used it rarely one year ago or like that

Q2 Accessibility

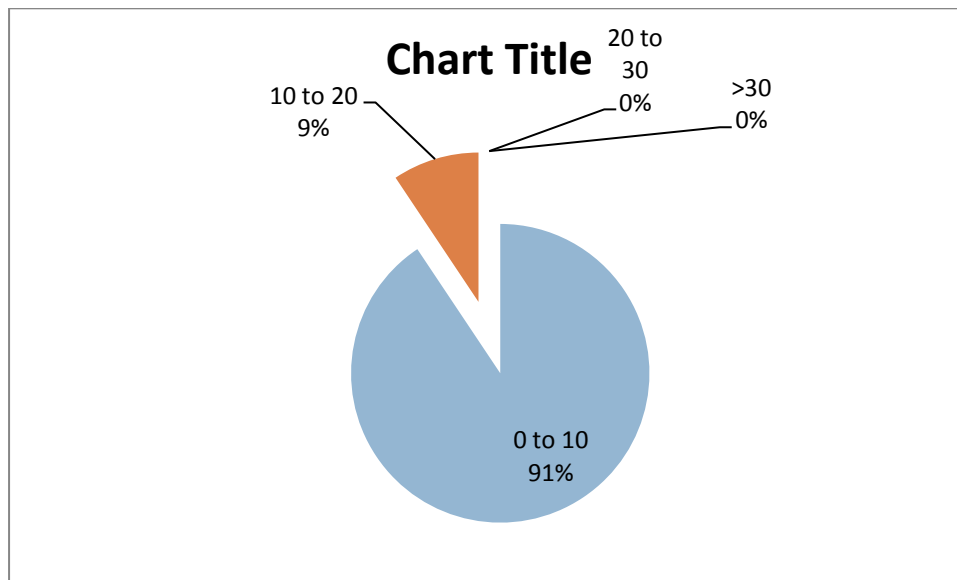


Q3 No. of patients /month

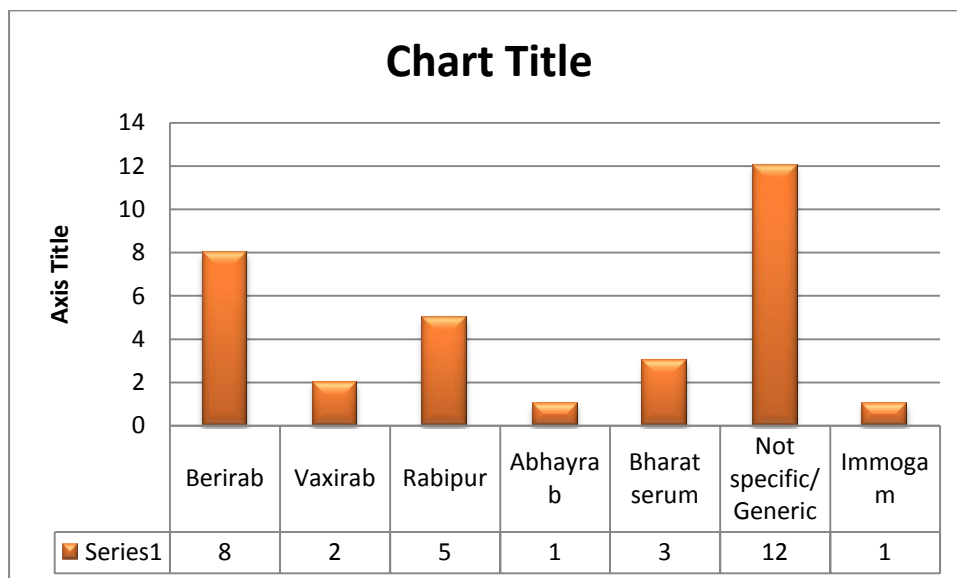


- Here also 78% doc said that no of case of patients is 0 to 5 .Sometimes 1 case in two months .In Govt. hospital of sambalpur I found that there is one more category which use these is P.S.M(preventive social measurement).Here the no. of cases were good

Q3 B

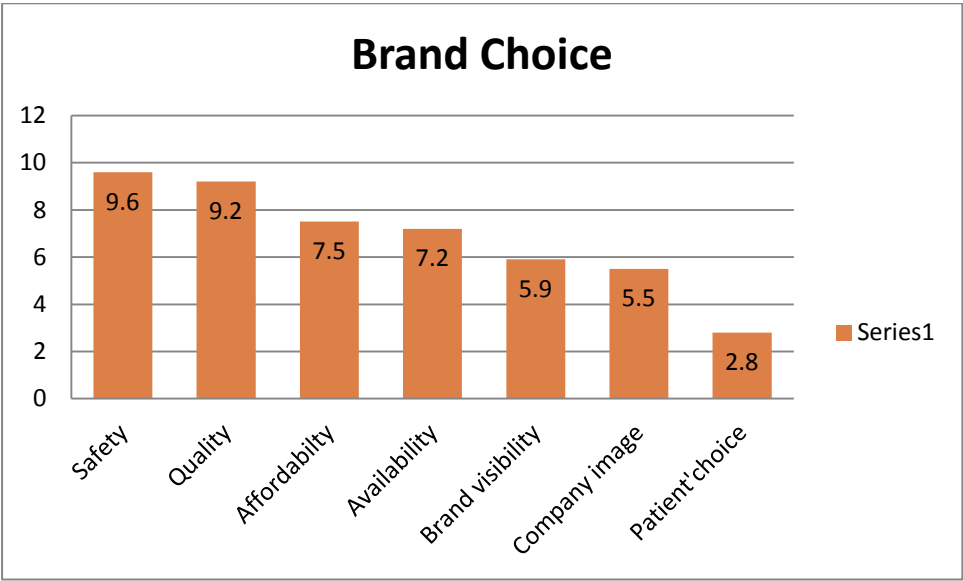


Q4 Brands preference



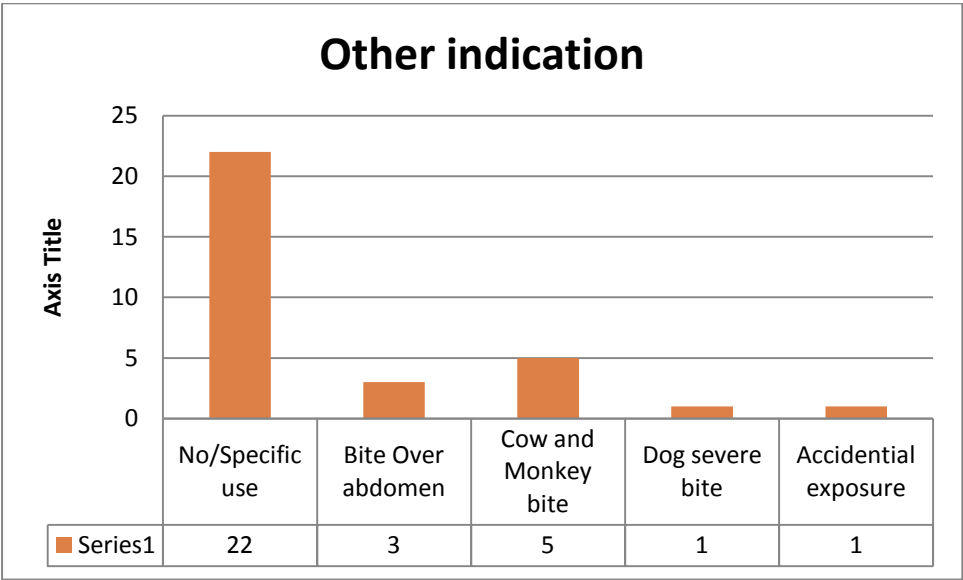
- Here also most of the doctors are not specific about their brands
- 16% doctors said that they use rabipur which is vaccine
- Berirab has a good share of 25% followed by Bharat serum

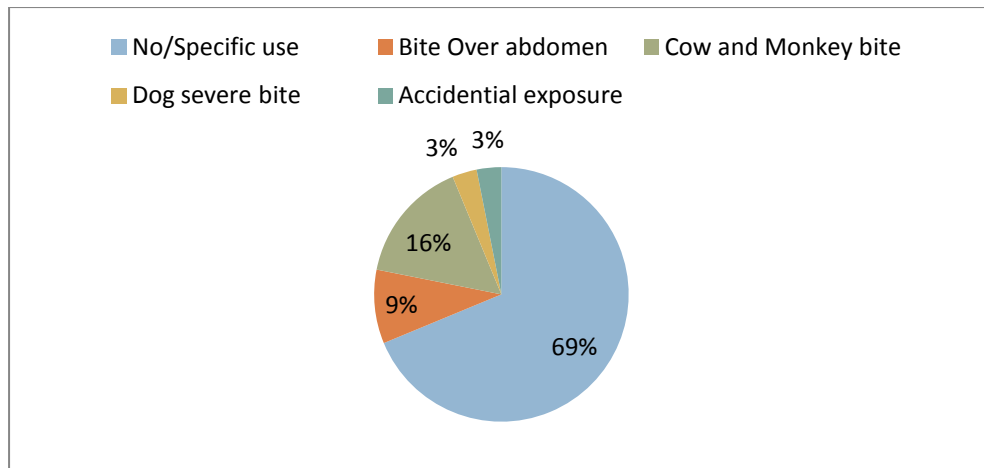
Q 5 Brand choice



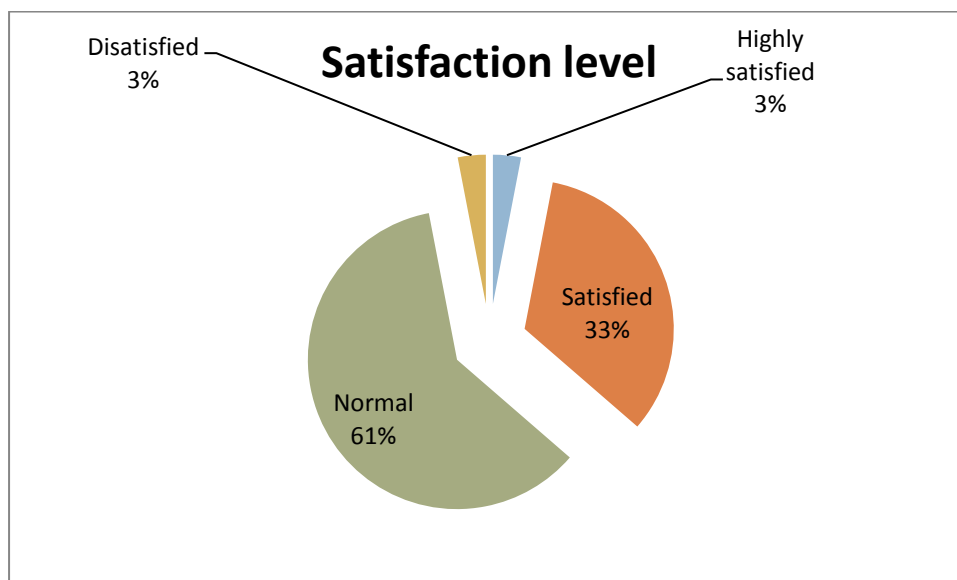
➤ Here also the average was taken and in this category also doctors prefer two parameter i.e. safety and quality

Q6 Any other indication



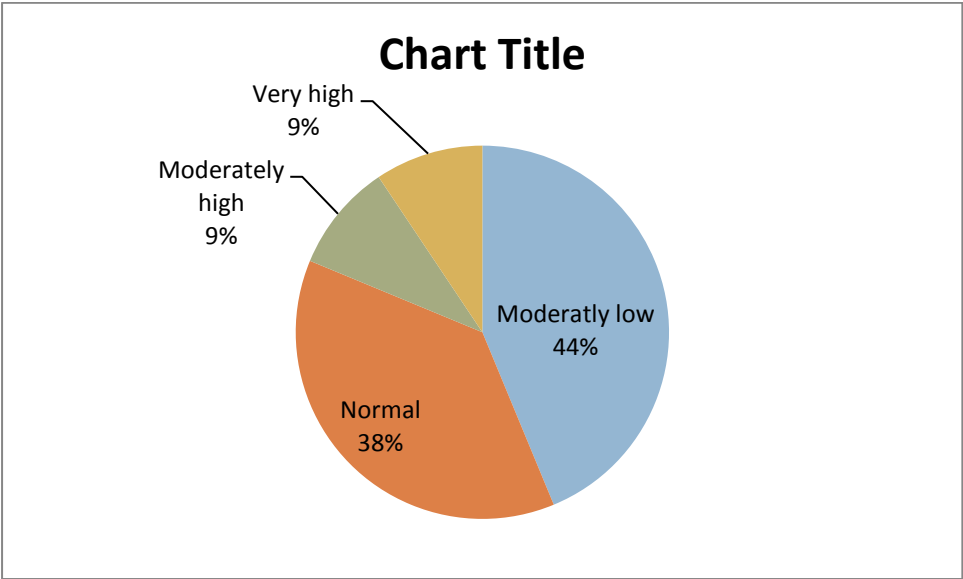


Q7 Satisfaction level

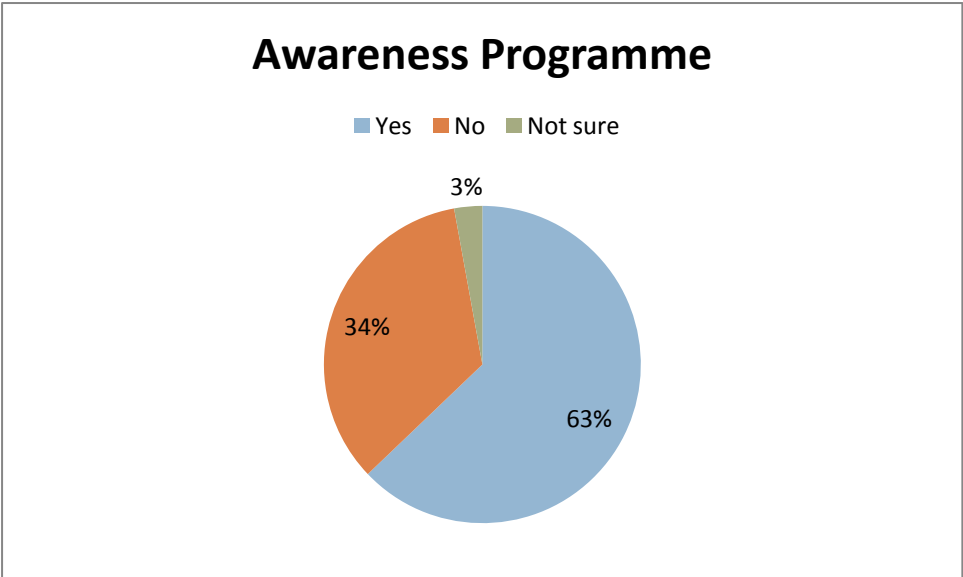


- The 61% doctors said that they are normally satisfied which means the product available in the market is not so bad and not so good type
- 33 % doctors are satisfied from the product
- 3 % dissatisfied and 3% highly satisfied

Q8 Awareness level

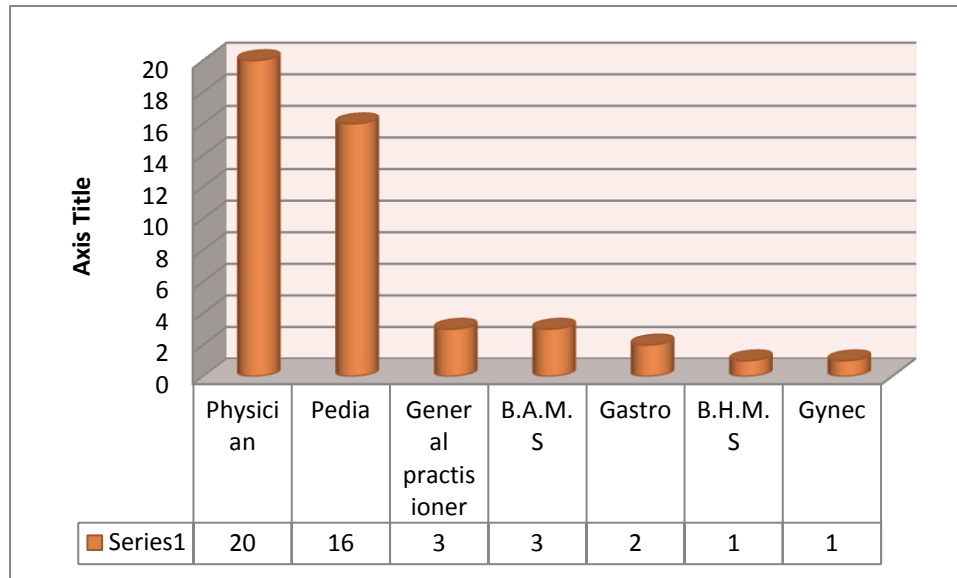


Q10 Awareness programme required or not

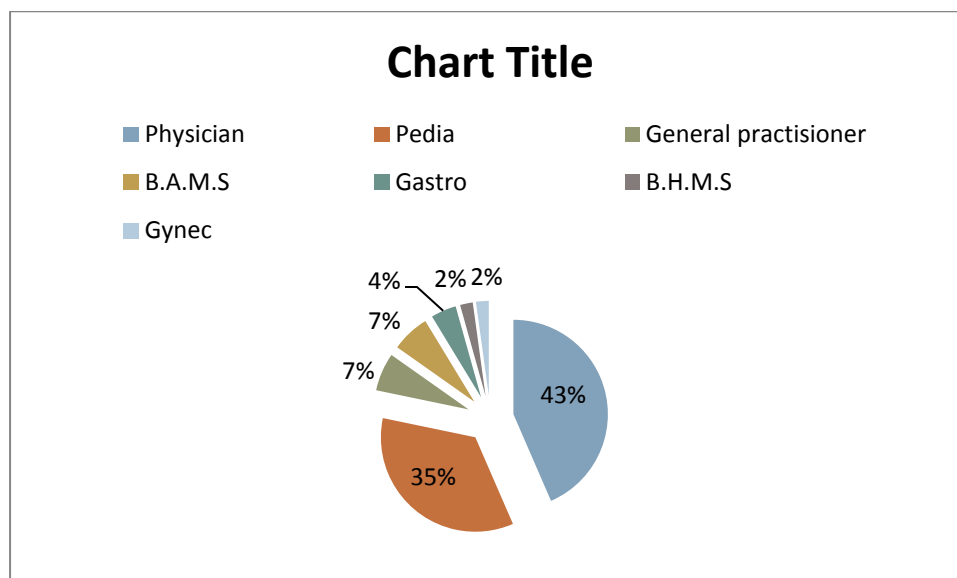


DATA ANALYSIS FOR ANTI-TETANUS IG

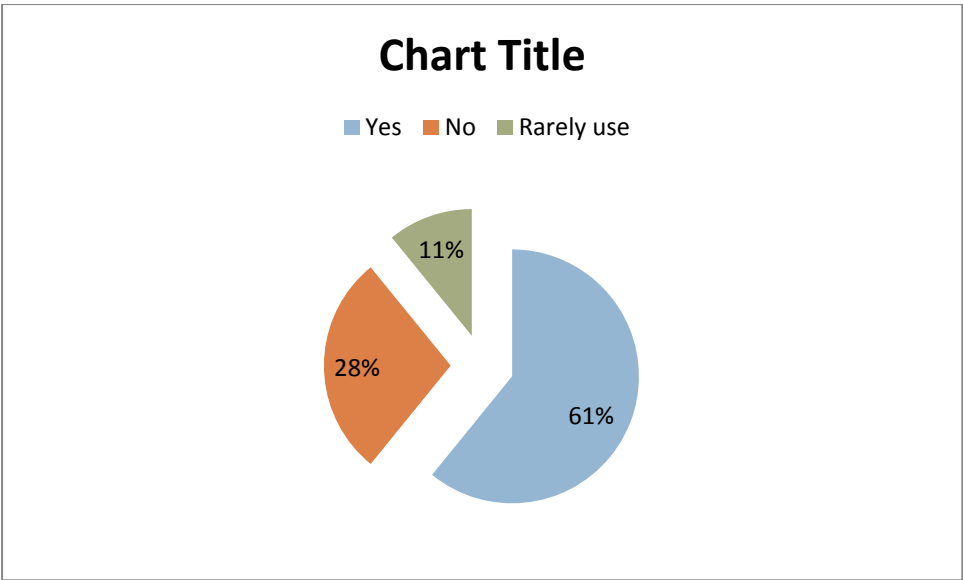
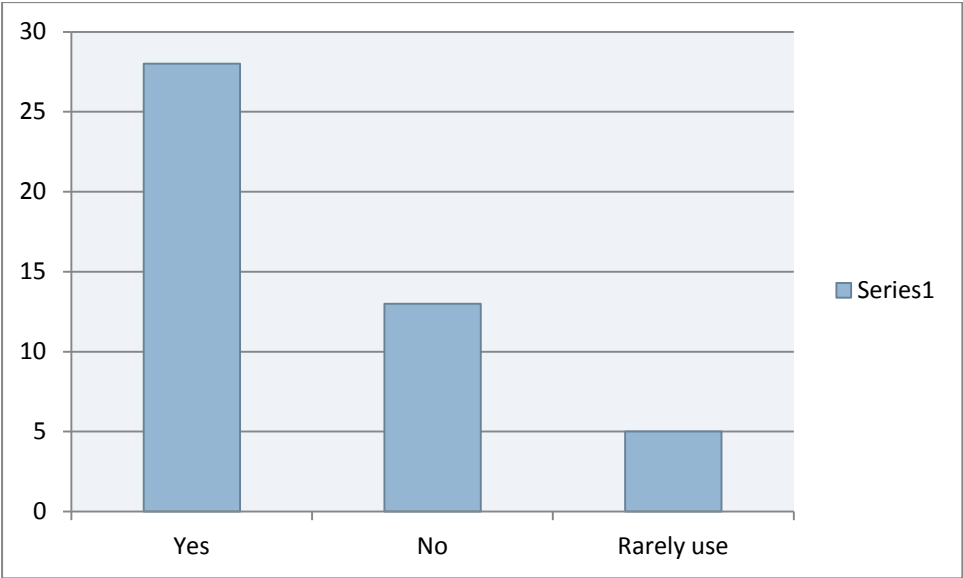
Breakup chart of doctors for this segment



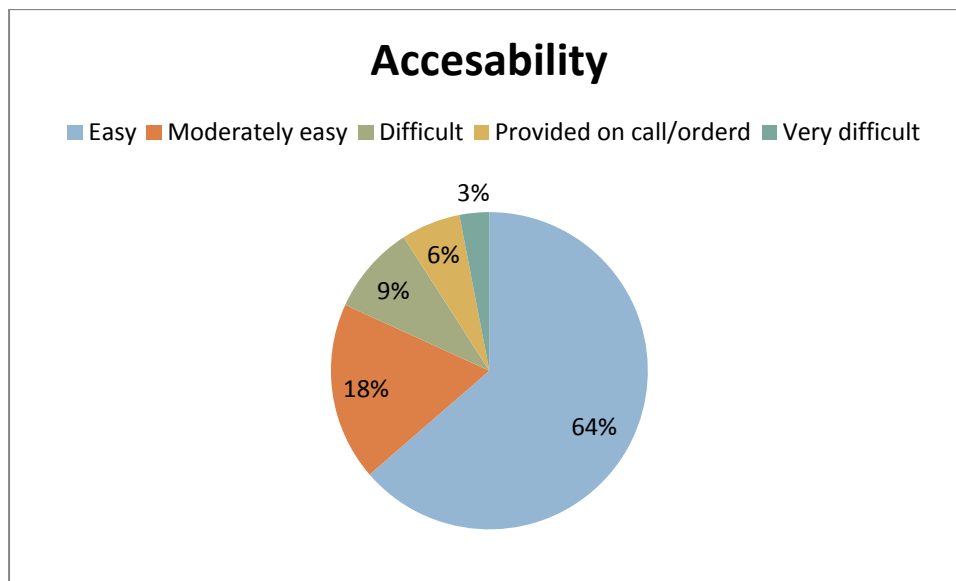
- Physicians are the major prescribers of this category followed by pediatrics doctors
- Out of total, 17 doctors don't use it



Question 1: Are you using any of the plasma products (Albumin, Immunoglobulin, Anti D IG, Anti Rabies IG, Hep-B IG, Anti Tetanus IG, Coagulation Factor, alpha-1 Antitrypsin) in course of your treatment?

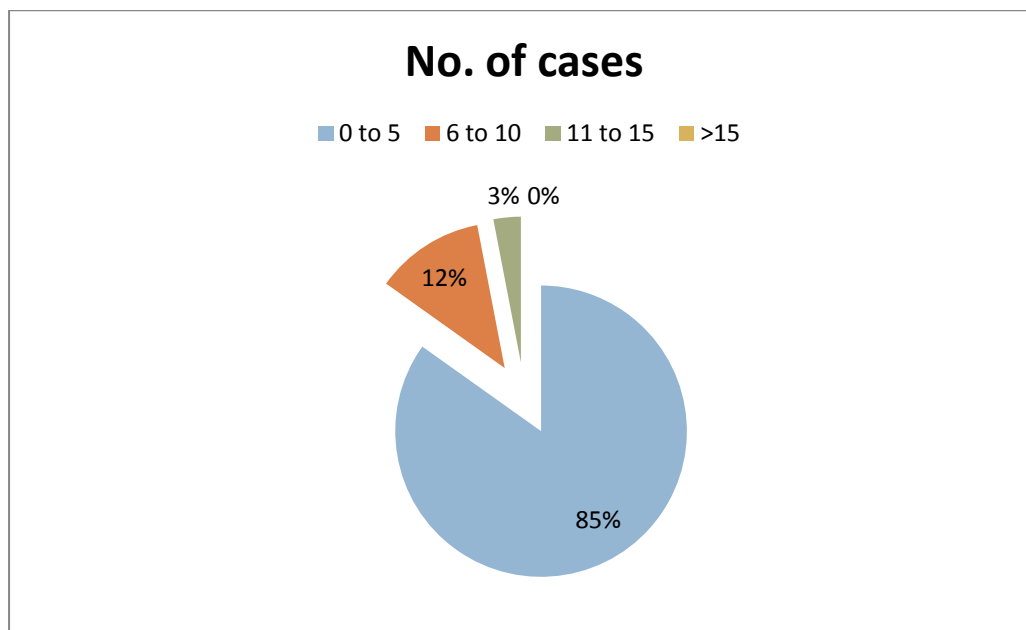


Question 2: How easy/difficult it is to get this product?



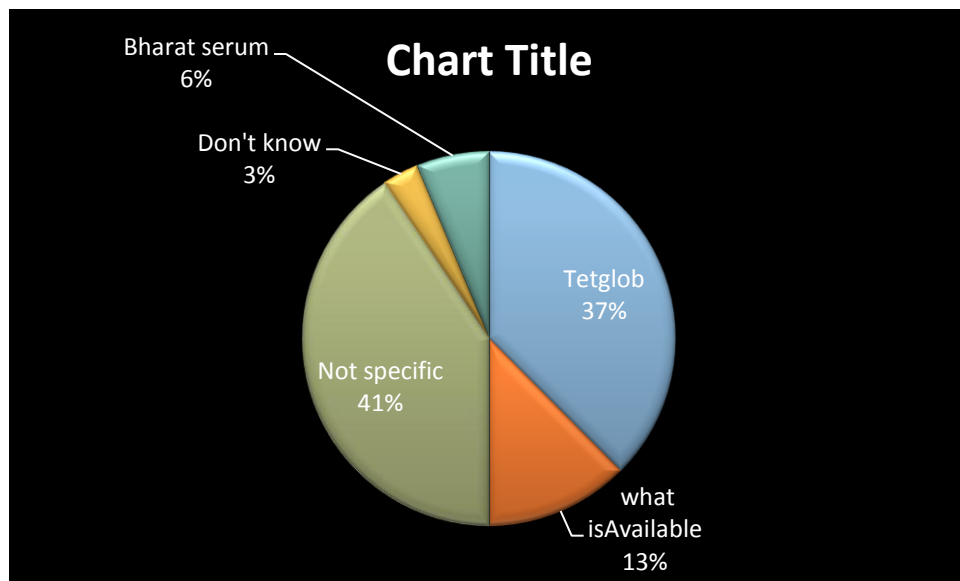
Q3 A: - No of cases of tetanus per month

B: - % of patients who can be administered Anti Tetanus Ig



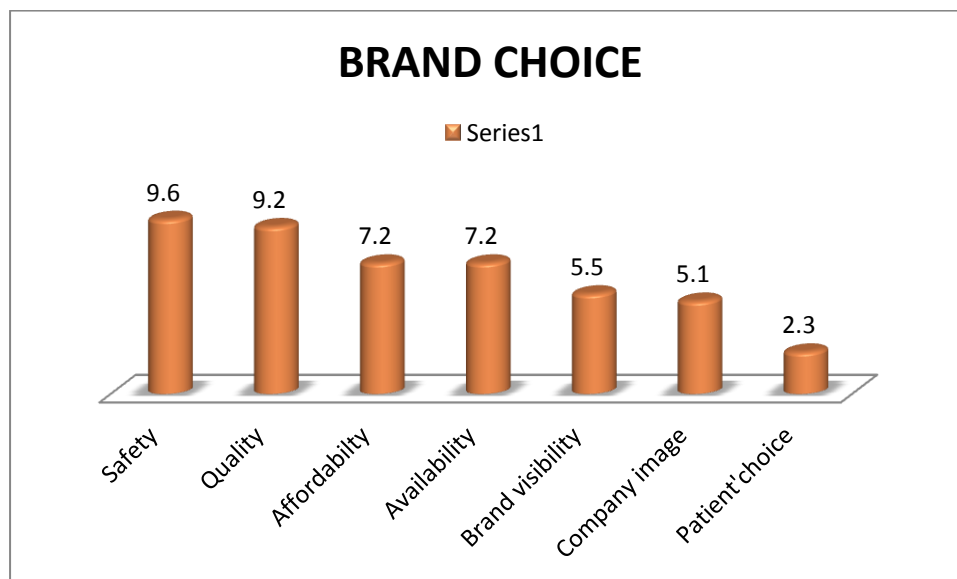
➤ All doctors response lies in the 0 to 10% for part B of this question

Question 4: Brand Preference



- Tetglob is the leading brand of this segment. Personally I felt that this was the only brand which don't was not taking time who are using this
- Again 41% are those who are not brand specific and most of them are from govt. hospitals
- Due to availability issues most of doctors 13% prescribe salt and patient take which is available at store

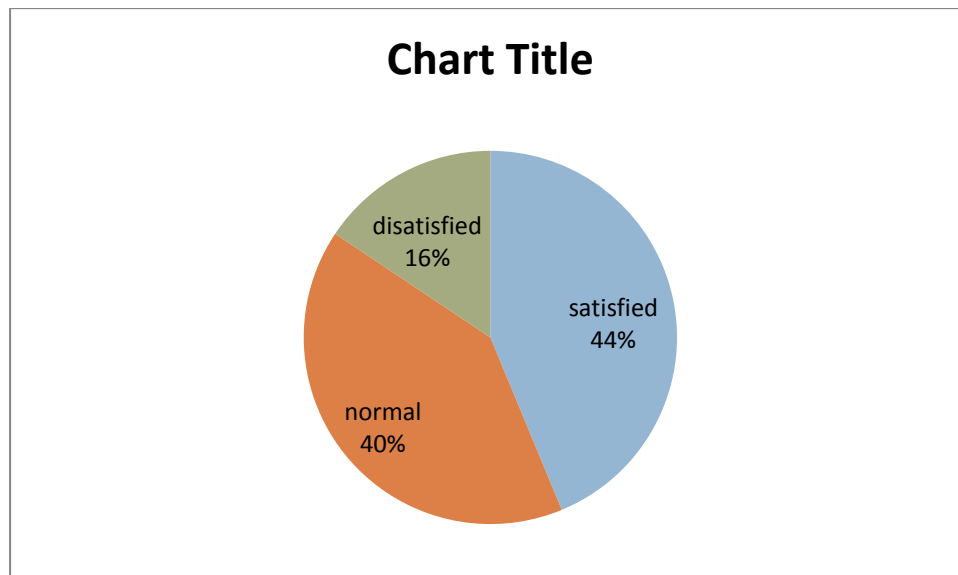
Question 5 Brand choice



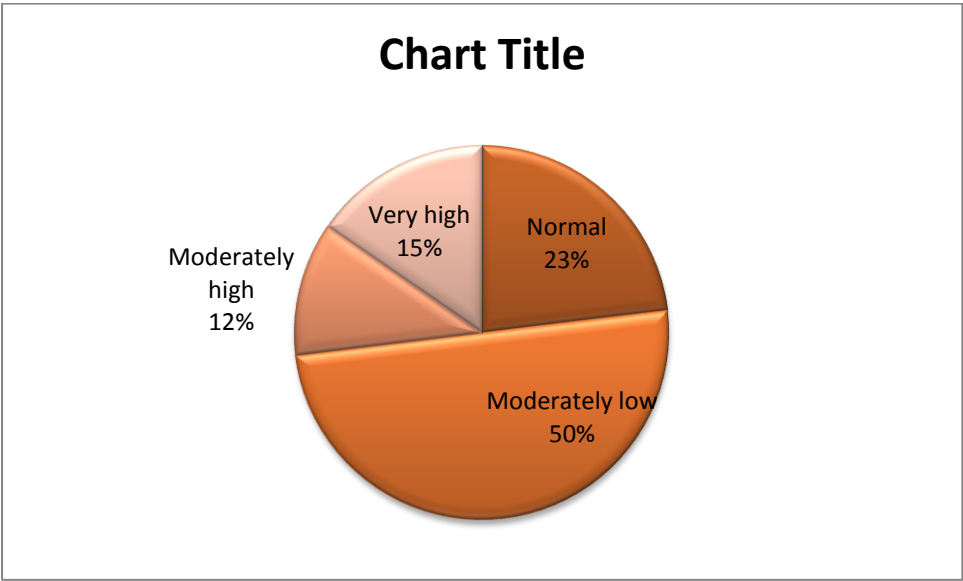
Question 6: Any other indication for which Anti Tetanus Ig can be prescribed?

Most of doctors said that anti tetanus ig is used for specific indications. Some doctors said that this may be used when cow and monkey bites or the animal bites above abdomen or near neck.

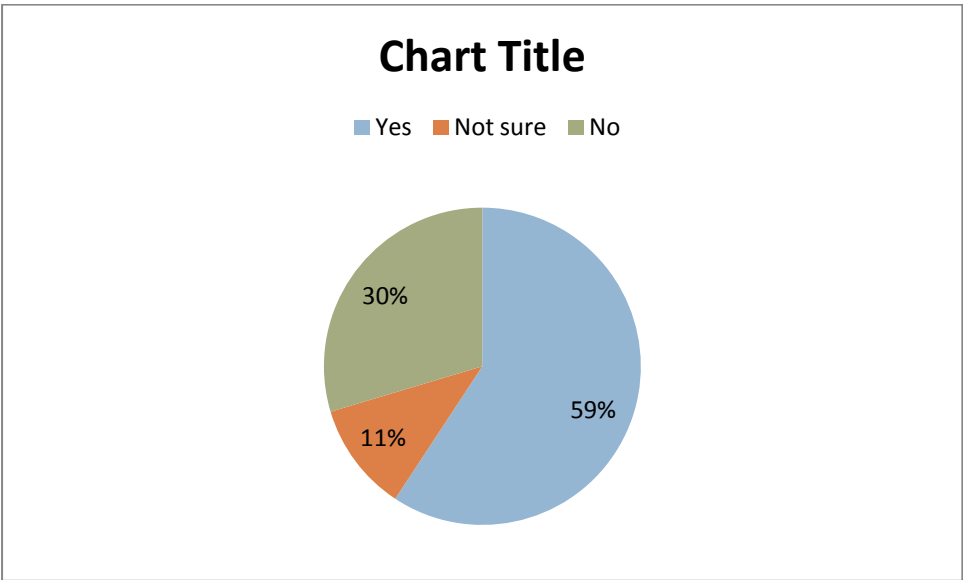
Question 7: Your opinion on the usage of currently available brands?



Question 8: Present awareness level about Anti tetanus Ig in the medical fraternity:

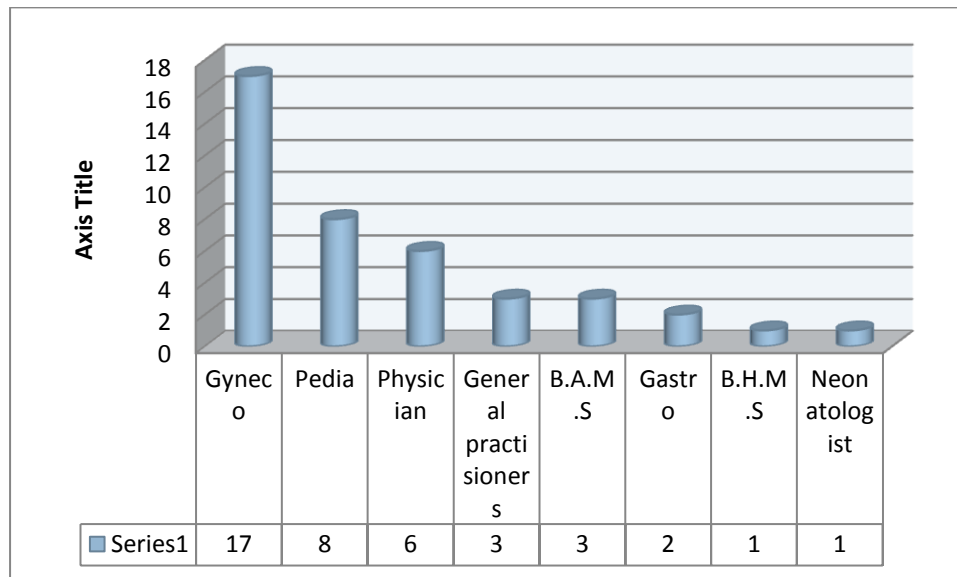


Question 10: Do you think conducting awareness program would help the medical fraternity? If so, what kind of awareness program you would recommend.



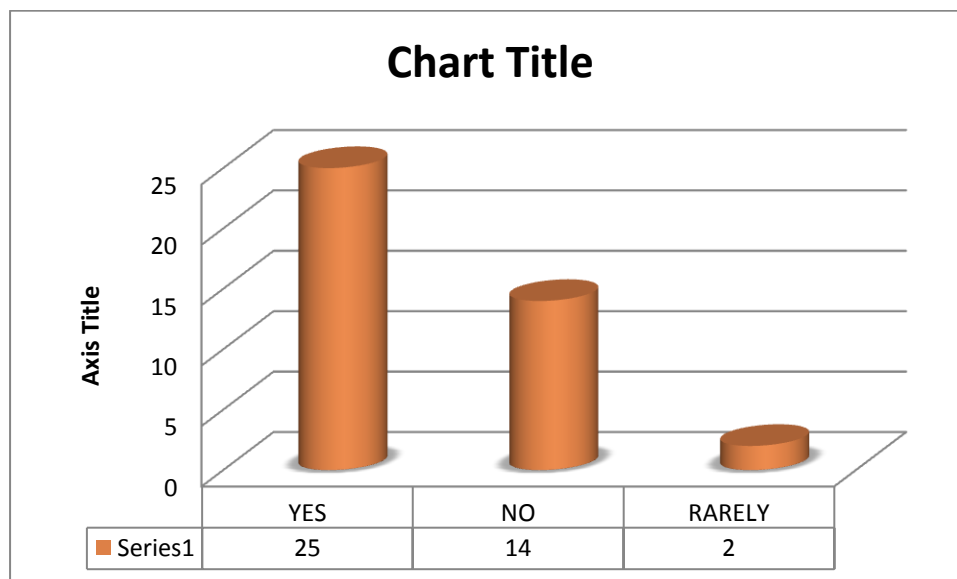
ANALYSIS OF ANTI-RABIES IG

Breakup chart of doctors for this segment



- Gynecologists are the leading prescriber of this segment 42%
- Most of pedia and neonatologist in multispecialty hospitals are also prescribes this

Question 2: How easy/difficult it is to get this product?



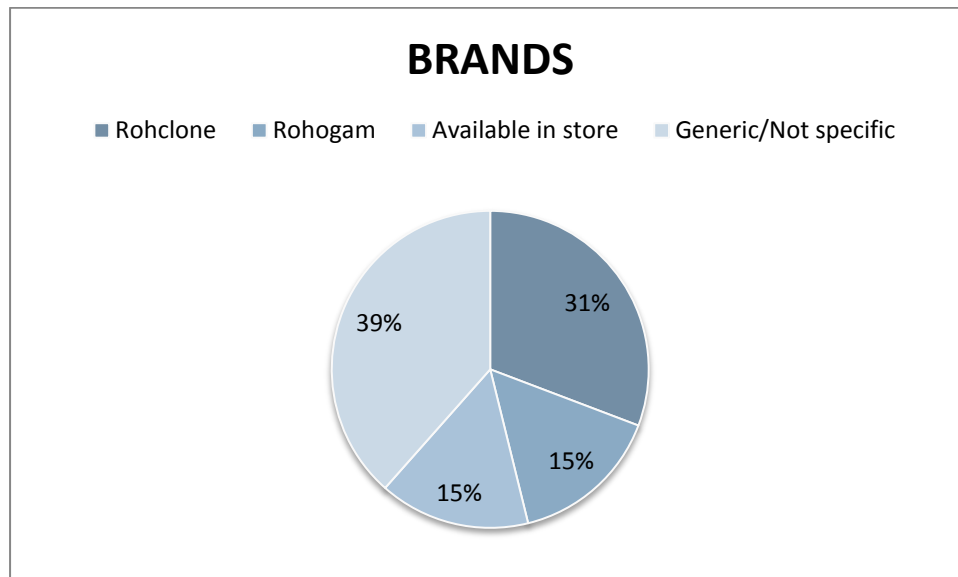
Question 3A: - No of cases of Rh Incompatibility per month

B: - % of patients who can be administered Anti D IG

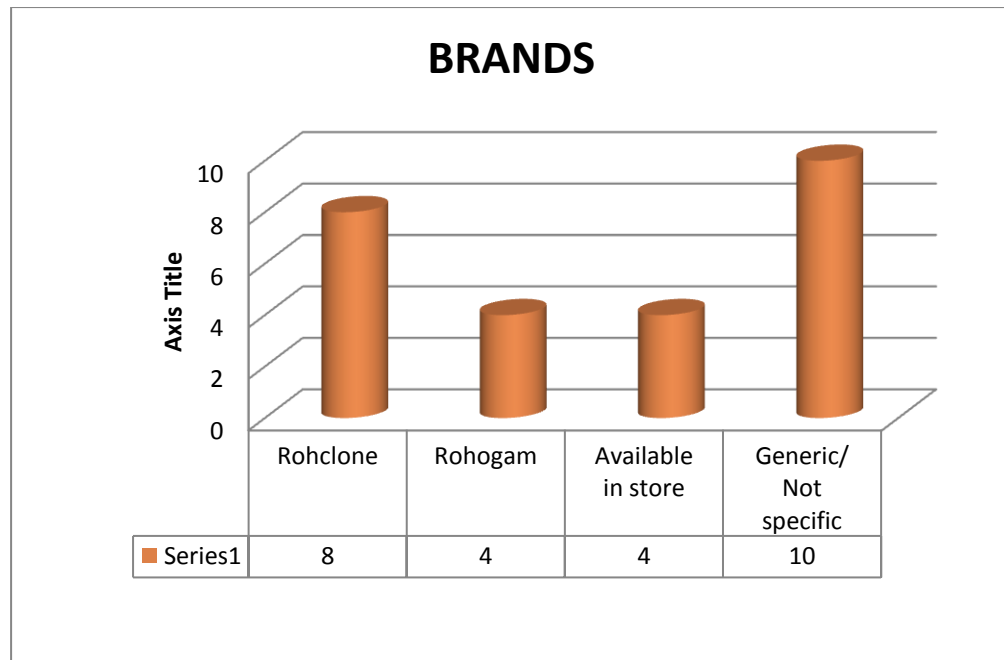
A: All doctors who prescribe anti d said that no of cases /month lies in between 0 to 5 only. Sometimes we see one patient in 6 months of Rh incompatibility

B: In this question all the response lies in between 0 to 10%

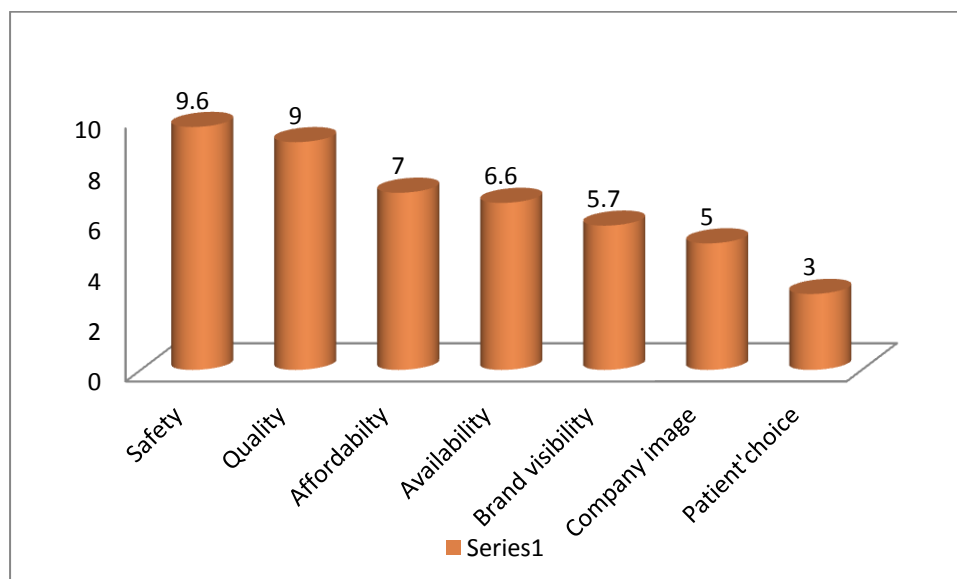
Question 4: Brand Preference



- Rohclone is the king of this segment with 39% share
- Rohgam also good share of 31
- Here also 15% of doctors simply prescribe the salt as the non consistent availability of one type of brand

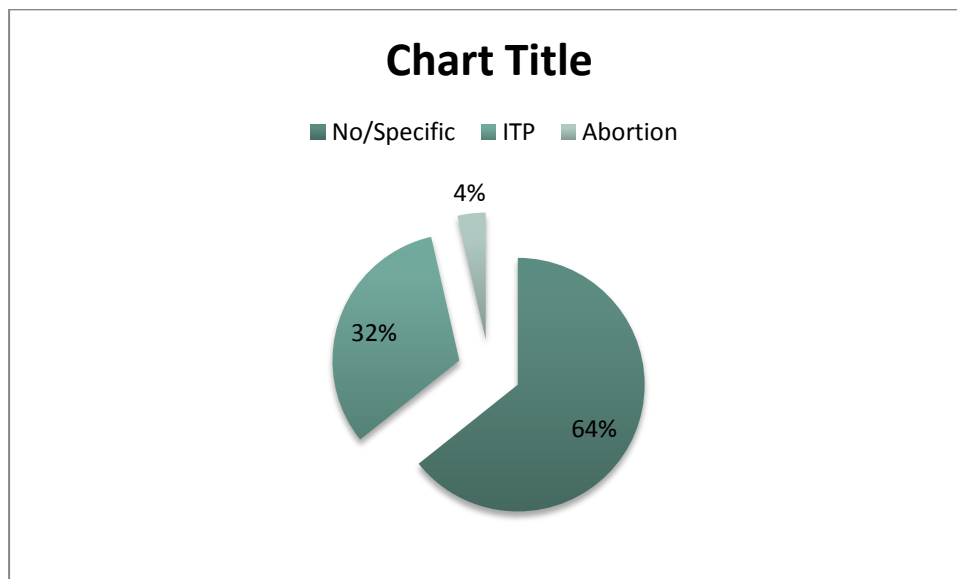


Question 5: BRAND PREFERENCE

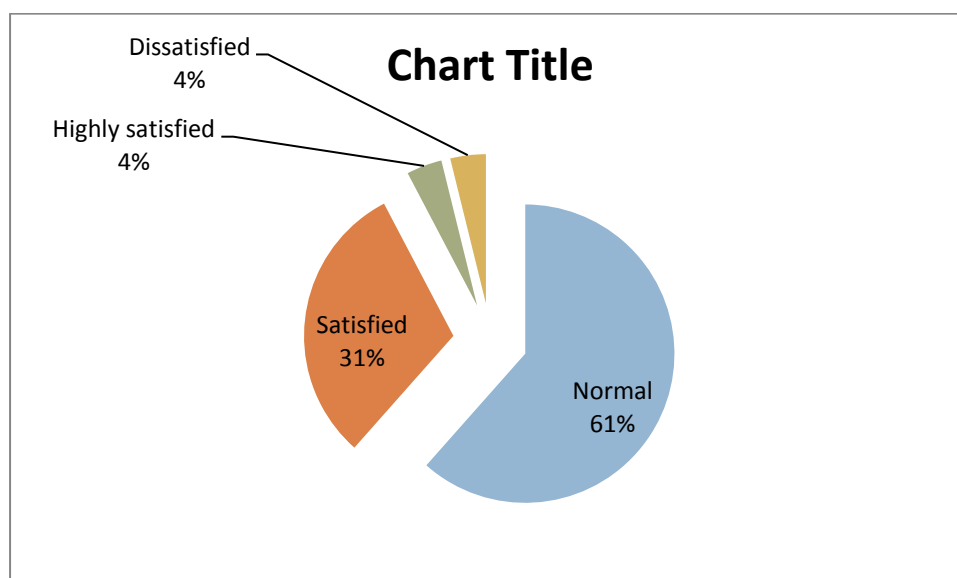


- Here the average score is taken
- Consistently in each segment doctors are preferring quality and safety

Question 6: Any other indication for which Anti D Ig can be prescribed?

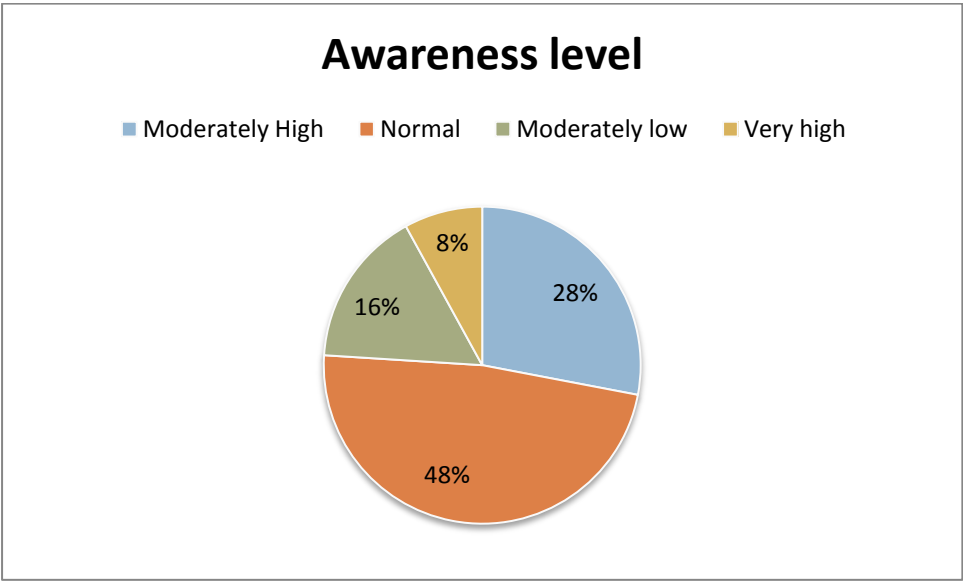


Question 7: Your opinion on the usage of currently available brands?

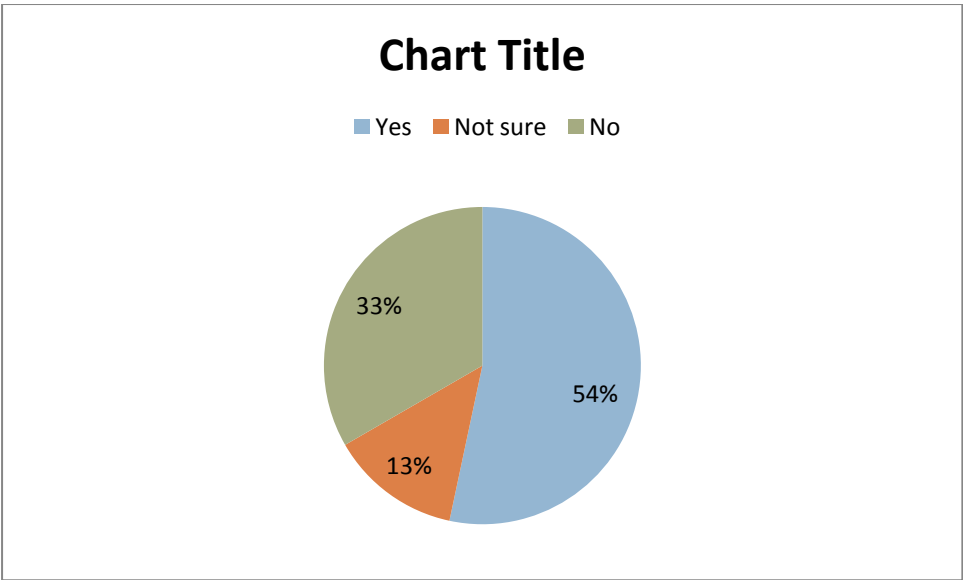


- 61% doctors have normal satisfaction from the available brands neither satisfied nor dissatisfied
- 31% doctors are satisfied with the available brands

Question 8: Present awareness level about Anti D Ig in the medical fraternity:



Question 10: Do you think conducting awareness program would help the medical fraternity? If so, what kind of awareness program you would recommend



FINDINGS AND OBSERVATIONS

- **Pediatrics, gynecologist and physicians are the major prescribers of these products account more than 88%.**
- **These products are mainly used in Govt.Hospital as compared to private hospitals.**
- **Tetglob,Rohclone,Rohgam,Elhep,Hepagam share the maximum part of their category**
- **Doctors of govt. hospitals are not brand specific mostly**
- **In each section 10 to 15 % doctors prescribe Hips by generic name due to non consistent availability of particular brand**
- **ANTI D availability and awareness is good as compare to other HIPs**
- **In TIER II cities like Durg Bhilai and sambalpur there is not a single vial of hyper immune globulins at district hospitals**
- **In such cities Doctor either ordered in advance or keep the vial with himself only**
- **The source for these HIPs in these cities is M.R or Chemist**
- **Most of the Doctors sitting at the district hospitals of these TIER II cities don't know about that. This is also the major reason along with cost**
- **As plastic surgery is limited to few areas and few people these HIPS are alike them only in these areas**

- This is costly drug so market HIPs majorly depend upon the socio-economic status of these cities which is too low.

RECOMMENDATIONS

- The biggest opportunity to increase our market share is to have tender of Govt.Hospital cum medical college of big cities as in each category almost 30 to 40% doctors are not brand specific
- There were few doctors who demand that the price of these products should be lower down with increase in benefits
- Some doctors made these HIPs available by order or keep the vial in advance by contacting M.R or chemist so we should contact them
- There 10 to 15% doctors who always prescribe simple salt name due to unavailability of particular brand .So we can grab that proportion by making our brands available all the time.
- Marketing of these markets are not so good leaving Nagpur.

ABOUT THE TENDOR MARKET

I was not able to get exact information mentioned in the questionnaire but I have tried to get maximum information about how the medicine are procured and which body is responsible to contact the companies

What are the no of vials required in the hospitals and how many vials /month are sold out in the city and which brand by visiting wholesale market

MAHARASHTRA:

NAGPUR:

In Nagpur when I visited to hospitals and clinics (private) I found that the use of HYPER IMMUNE PROTEINS (HIP) is less. I asked doctor and even chemist about that they said mostly these are either used in super multispecialty hospitals or in govt medical college i.e. (GMC). When I went to GMC NAGPUR for the questionnaire (general as well as tender questionnaire) I got a new information after a long negotiation that we don't directly contact the company for the procurement. First we give our requirements to the D.H.S (Department of health services). They release out the tenders for the companies to participate and the big thing is that the D.H.S releases out for all the govt hospitals and govt. medical college located in Maharashtra. There also one another type of hospital located i.e. ESIS (employment state insurance scheme hospitals) whose procurement is also done by the same govt. authority.

When I went to Meditriana (super multispecialty hospital) located at Ramdaspath. Staff of that hospital made me run here and there but at the end they simply said we can't give you as these are against HR policy. But there was a person who may be from store department I didn't ask to get required information. He said actually this hospitals or you can say most of the multispecialty hospitals don't release tenders as the use of these are very less. In this hospital yearly 30 – 40 vials are used. So for this small quantity we don't release tenders. We buy it from wholesale market.

WARDHA:

In Wardha the use of the HIP is less in comparison to Nagpur. Here even Specialist docs don't prescribe them what to say about general practitioners'. The city is also not well developed. It was just like town. I went to wholesale market. All the wholesale shops of the city is located in one area only known as MEDITRADE. At this most of the shops don't keep these HIPs. Only few shops are there who keep these HIP like Gopi rattan agency, B.S Pharma and Renuka medical and not all HIP some keeps tetanus iG some keeps anti d IG and. And the sale of these products

are very less. Gopi rattan agency said that only 40 -50 anti d iG is sold every month in whole Wardha .On asking the name he said rohclone and rohgam is sold mostly but he didn't provide me the entry print out .Hep b IG and Tetanus IG sale is even less than anti d iG.

In Wardha there is very renowned medical college i.e. is MGIMS (Mahatma Gandhi institute of medical sciences) having kasturba hospital. This is private institution and the procurement is done by themselves .But the lady sitting over there didn't give me the required information. She sends me to the Mr.Kalantri (Medical superintendent of the college) who didn't treat me well.

AMRAVATI:

This is good city .Also there are good no. Of doctors but here also usage is less but more than Wardha The wholesale market is located near wallcut compound only. There also only 3 to 4 agencies who keep these HIPS. 80 to 90 vial of anti d, 30 to 40 vials of hep b and tetanus. TETGLOB AND ALHEB is mostly supplied.

***** One imp. Thing that is totally like money making and unethical thing i found in this city also in other small cities like durg,bhillai and sambalpur is that doc. themselves keep the HIPs and administered that to patients .Because there were some doc .in private setup who said that they do prescribe the salt or they are not brand specific so i went to the chemist shop located near their compound or in their compound to ask which HIP brand you sell or doc prescribes .They give the shocking statement that they don't have these HIP.DOC keep with themselves only by contacting company or M.R as these are costly so profit is also high.

There is also a medical college that is DR.P.D.M.M medical college located in panchvati. This is also private college. Here the procurement is done by them only. Here i able to get good information from senior clerk of store department.

He said that every year in the month of December we releases out the tenders but the surprising and opportunistic fact is that no company fills the tender. So in last they purchases these HIPs from Wholesale market .Although the requirement is near about 80 – 90 vials only. Tender starting date is April month.

RAIPUR, DURG AND SAMBALPUR

Raipur is good city and the state capital. Here the usage of HIPS is good but not good as Nagpur. We may call like Amravati. Here specialist doctors use it but not quite often. Although there use is higher in Govt.Hospital CUM Medical college (Dr.BHIM RAO AMBEDKAR HOSPITAL)

.In Raipur and Durg wholesale markets are not so established in the city like maharashtra.qnd also they are not located at one place

But similar fact like Maharashtra is that here also Govt.Hospital sends their requirement to D.H.S (department of health survey).This department is located at Raipur only. This department releases tender for all the medicine. And one more thing I want to add that all the Govt.Hospital of every state procure their medicine through this department. And the tender release around the month of December. For complete and correct information about the tender release date we should have someone in the department and that too very strong person.

But the sad fact is that GOVT.HOSPITALS OF DURG AND BHILAI (Lal bhadur shastri hospital of Bhilai and of Durg i don't know the name) DON'T HAVE HIPS IN THEIR STORE NOR THEY PROCURE THESE HIPS.Doc. Here said that "patient don't have enough to eat how they can purchase these HIPS. And also patient who comes mostly belongs to lower class.IN Case of severe emergency they take it from outside". IN WHOLE DURG AND BHILAI only KAMAL MEDICALS near sector 9 hospital keep these HIPS but not all HIPS

When i talk about this to private doctors while filling this questionnaire like DR .Prabaht PANDEY and DR. Rajesh shukla who are very renowned doc said that we have to order it in advance and then available in 24 hrs from Raipur or Bhubaneswar by contacting MRs. In these areas even good gyne doc.don't prescribes ANTI-D-IG. They are not ready to talk on this due to lack of their knowledge like DR.N.khan and DR. Madhuri gupta.

What I felt during my journey that the HIPS scenario in cities like Wardha, Durg, Sambalpur, Bhilai is still 5 years far away. As plastic surgery is limited to few areas and few people these HIPS are alike them only in these areas. You can Judge the usage and availability of these by visiting to the govt .hospitals and super specialty hospital (only written like super specialty but are like normal nursing home.

In these areas the source of HIPS is MR only to whom doc. Contacts ad some time small medical stores to avail the HIPS.

The usage is related to socio economic status of the people living here which is low and will take around 5 years for upliftment.