



ISSN NO. 2320-5407

Journal homepage: <http://www.journalijar.com>

INTERNATIONAL JOURNAL  
OF ADVANCED RESEARCH

## RESEARCH ARTICLE

### Blood donor deferrals: - How can this be reduced?

**Dr. Amit H. Agravat<sup>1</sup>; Dr. Rajesh Kumar Vais<sup>2</sup>; Dr. Gauravi A. Dhruva<sup>3</sup>; Dr. Kaushal R. Bhojani<sup>4</sup>; Dr. Krupal M. Pujara<sup>5</sup>**

1. Associate Professor Department of Pathology, P.D.U. Medical College&Hospital, Rajkot, Gujarat, India
2. Second Year Resident Department of Pathology, P.D.U. Medical College&Hospital, Rajkot, Gujarat, India
3. Professor & Head Department of Pathology, P.D.U. Medical College&Hospital, Rajkot, Gujarat, India
4. Assistant Professor Department of Pathology, P.D.U. Medical College&Hospital, Rajkot, Gujarat, India
5. Tutor Department of Pathology, P.D.U. Medical College & Hospital, Rajkot, Gujarat, India

#### Manuscript Info

##### Manuscript History:

Received: 18 May 2015  
Final Accepted: 25 June 2015  
Published Online: July 2015

##### Key words:

#### Abstract

In our study blood donation and deferrals were studied at Blood Bank PDU medical College Rajkot in the year of 2014. Prevalence of different causes of blood donor deferral studied retrospectively. In prospective study deferred donors were interviewed, impact of deferral on donor and blood donation was studied.

##### \*Corresponding Author

Copy Right, IJAR, 2015., All rights reserved

**Dr. Amit H. Agravat1**

## INTRODUCTION

Blood donation is important link between supply and demand of blood component. Many times a donor is deferred for various reasons. A donor presenting to blood donation camp or blood bank for donation is enthusiastic about blood donation. At this hour if donor is deferred it is a sad experience for him and it leads to loss of precious blood/component available for transfusion.

#### Objective:-

This study is done to find out different causes of deferrals, their frequency among donors and how we can reduce them.

#### Materials and methods:-

In retrospective study, the data about donor deferrals was collected from the donor deferral register of year 2014 from Blood Bank of PDU Medical College and Hospital Rajkot, Gujarat. Against 1000 donors accepted for donation, total number of donors deferred were studied.

In prospective study, the deferred donors were interviewed personally to find out cause of rejection, their level of education, impact on donor, and willingness to donate in future (in case of temporary deferrals). The number of deferrals against 600 blood donations was evaluated.

#### Result and Discussion:-

The number of donors deferred against total donors accepted for donation was evaluated. A total of 188 (18.8%) donors were deferred against 1000 accepted donors. Of these total deferred donors, 48.5% belonged to long-term category (61-730 days), while 43.2% belonged to short-term category (1-60 days). Permanent deferrals constituted 8.3% of total deferrals.

1. Approximately 10% of attempted blood donations are not allowed because of low haemoglobin (Hb) deferrals. Low Hb deferral is associated with female gender, older age and lower body weight in men<sup>[1],[7]</sup>. Among female donors low haemoglobin (25%) was the commonest cause for donor deferrals. It has been reported that 95% of deferrals for low Hb occur in women.

2. The second most common cause of deferral was hypertension (8.6%) especially in males. Hypertension in some was diagnosed for first time, while rest were the cases of uncontrolled hypertension on medication.

3. Intake of medication (7.5%) by donors was third cause. This included antibiotics, anti-allergic and analgesics for which donor is deferred for few days, to drugs like anti tuberculosis treatment or ayurvedic medicines for which donor is deferred for 1-2 years.

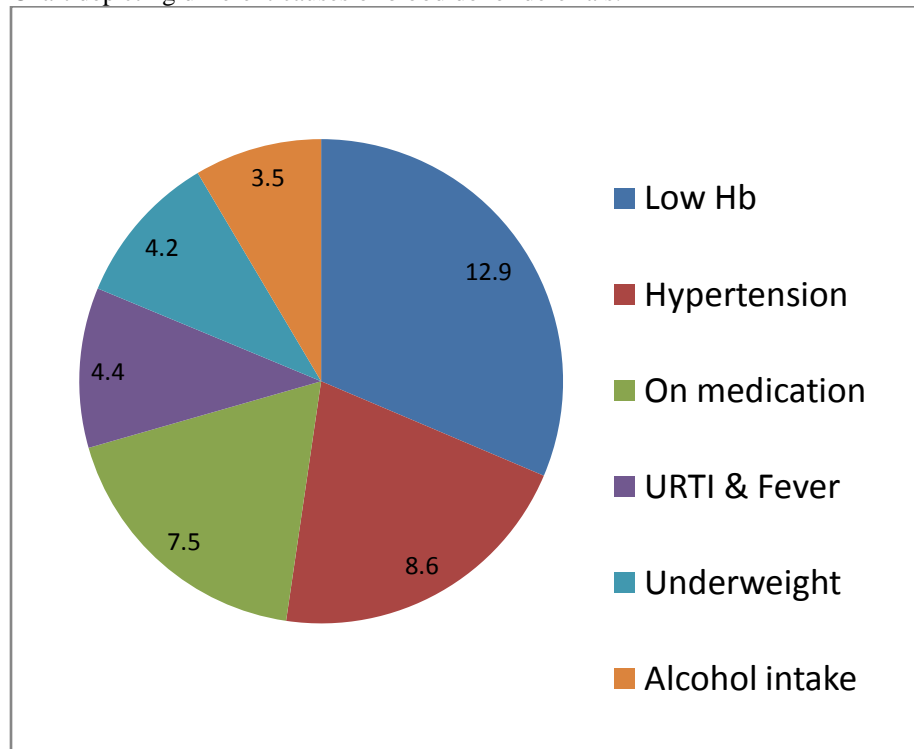
4. Suffering from upper respiratory tract infection ( URTI ) and fever at the time of donation was a cause of deferral in 4.4% cases. This may be simple viral infection, which requires deferral of few days, or the cough may be of long duration and suggestive of tuberculosis (which is common in our country).

5. Low weight was encountered 4.2% of all deferrals.

5. Alcohol consumption within last 24 hours (3.5%) was fifth common cause.

History of sexual exposure was observed as a common of permanent deferral especially in the younger age group between 18 to 30 years. It, being a permanent cause of deferral, can lead to tremendous loss in future blood donation. Level of education did not have any influence on the percentage of deferrals. There were equal number of graduates and less-educated prospective donors who were deferred. Similar finding was observed in Turkish population.<sup>[2]</sup>

Chart depicting different causes of blood donor deferrals:-



**PDU Medical College & Hospital Rajkot, Gujarat (India)**

When we compare data with other studies :-

	Causes	Our study	JNMC Aligarh <sup>[3]</sup>	Tertiary hospitals, South India <sup>[4]</sup>	King Fahd Hospital of the University (KFHU) Al-Khobar <sup>[5]</sup>
1.	Low haemoglobin	12.9%	11.43%	9.09%	15.5%
2.	Hypertension	8.6%	2.09%	12.7%	5.7%
3.	On medication	7.5%	4.17%	6.76%	26.8%

4.	URTI and Fever	4.4%	3.75%	5.48%	5.8%
5.	Underweight	4.2%	6.79%	3.61%	14.6%
6.	Alcohol Intake in last 24 hour	3.5%	5.68%	5.13%	—

### Conclusion:-

From above comparative studies it is evident that anaemia is most common cause of donor deferrals, followed by high blood pressure, patient on medication, common illness, underweight patient, alcohol intake etc.

### Recommendation to reduce blood donor's deferrals:-

The information regarding selection criteria for blood donation if made available to prospective blood donors prior to the day of donation may help reduce deferrals. One should also make an effort to avoid any psychological effect or negative impact on the prospective donors, which may prevent them from future donations.

- To reduce deferrals due to anaemia it has been suggested that haemoglobin standard be lowered to increase female eligibility and to offer iron treatment for premenopausal woman who want to donate or who are frequent donors. <sup>[6]</sup>
- For hypertension prospective donors on regular antihypertensive therapy can get their blood pressure checked by their family physician few days prior to the donation camp if they are aware of uncontrolled BP being a cause of temporary deferral.
- For donors on medication, to avoid inconvenience interested donors should always be informed that if they are on medication they should not donate.
- Deferral due to alcohol intake can be easily avoided if donors are previously informed.
- Most of temporary deferrals (86.6%) in prospective study agreed to return for donation in future.
- Blood donation camps which are kept on religious occasions many donors come empty stomach, camp organizer should inform them beforehand to eat according to religious practice and eat properly on that day.
- It is important to provide donors with a clear message on their deferral status. Deferrals for whatever reason represent loss of time and effort for both potential donors and blood bank staff.
- If a practice is made by the concerned blood bank to educate the main organizer or the organizing team of the blood camp as regards to some of the causes of the temporary deferrals, few days prior to the date of donation camp, we are sure the number of deferrals would definitely reduce.

### References:-

- <sup>1</sup> Alan E. Mast, Karen S. Schlumpf, David J. Wright, Brian Custer, Bryan Spencer, Edward L. Murphy, and Toby L. Simon. **Demographic Correlates of Low Hemoglobin Deferral among Prospective Whole Blood Donors.**
- Arsalan O. Whole blood donor deferral rate and characteristics of the Turkish population. *Transfus Med* 2007;17:379-83
- <sup>3</sup> **Suhailur Rehman<sup>1\*</sup>, SayeedulHasan Arif<sup>1</sup>, Ghazala Mehdi<sup>2</sup>, Sadaf Mirza<sup>1</sup>, Noora Saeed<sup>1</sup> and Faraz Yusuf<sup>3</sup>.**The Evaluation of Blood Donor Deferral Causes: A Tertiary Care Centre-based Study  
1J N Medical College, Aligarh Muslim University, Aligarh, India 2Department of Pathology, J N Medical College, Aligarh Muslim University, Aligarh, India 3Department of Ophthalmology, J N Medical College, Aligarh Muslim University, Aligarh, India.
- <sup>4</sup> **Fred John** and Mary RithuVarkey, **Evaluation of blood donor deferral causes in a tertiary hospital, South India.** *International Journal of Biomedical and Advance Research* 2015; 6(03): 253-258.
- <sup>5</sup> **Layla A.M. Bashawri, MD, FCP** King Fahd Hospital of the University (KFHU) Al-Khobar. A REVIEW OF PREDONATION BLOOD DONOR DEFERRALS IN A UNIVERSITY HOSPITAL.

6. Newman BH. Adjusting our management of female blood donors: the key to an adequate blood supply. *Transfusion* 2004;44:591-6.
7. Rabeya Y, Rapiaah M, Rosline H, Ahmed SA, Zaidah WA, Roshan TM. Blood pre - donation deferrals -a tertiary hospital Experience. *Southeast Asian Journal of Tropical Medicine and public Health* 2008;39:571-4.