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Blood donation and donors: insights from a large German teaching hospital

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Key Findings

- In line with other regions in Germany, the Netherlands and Switzerland, we observe falling donations and donors.
- The findings appear to contradict an overall trend observed in the case of volunteerism in Germany.
- Donors donated well below their capacity and their blood type was in line with the wider German donor population.

What Problem Was This Research Addressing?

Despite the introduction of restrictive transfusion policies and patient blood management strategies, blood collection services still face multiple challenges in meeting supply. An ageing population and an increase in the number of medical innovations available have increased the demand for care and thus for blood and blood products. Furthermore, the short shelf life of blood (3-5 weeks) makes the stockpiling of reserves challenging and the unpredictable nature of events such as natural disasters (e.g. floods, storms, etc.) and viral epidemics such as influenza may increase the short-term demand for blood, making meeting supply challenging. We report changes in whole blood donations, donors and their behaviour over 9 years at a large German teaching hospital.

What This Research Adds

Very few studies have looked in detail at changes in the donor base and donations over longer periods. Our findings provide context to the changing pattern of prosocial activities in Germany and show that despite increased rates in prosocial behaviour in the case of volunteerism overall,

blood donations have decreased in our setting as has been reported across other regions in Germany.

These findings are important in that they provide our centre with essential information for guiding future recruitment campaigns. We recommend that Highly Active and former Highly Active donors are more carefully considered when planning donor engagement strategies and effort made in (at the very least) maintaining their donation activity.

Methods

An analysis of over 34,000 donors and 265,000 donations from a large university hospital's blood centre was conducted using data from July 2008 to December 2017. The analysis focussed on (a) whole blood donations and (b) donor characteristics and how they changed over time. We categorised donors into four categories according to their donation activity (First-Time, Highly Active, Active and Reactivated) (Table 1). The classification system was adapted from existing definitions used for reporting to the Robert Koch Institute (RKI) and aligned with those used by DOMAINE, a European wide project (Donor management in Europe) [1].

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Table.1 Classification of donors by year

Donor category	Sub category	Definition
First-Time (FT)	-	First time donation within study year.
Repeat (RD)	Highly Active (RD<6)	Donor presents in study year within 6 months of last donation and is neither First-Time nor Reactivated.
	Active (RD 6-24)	Donor presents in study year within 6-24 months of last donation and is neither First-Time, Reactivated nor Highly Active.
	Reactivated (RD>24)	Last time donor appeared to donate was over 24 months prior to donation in study year.

Research Findings

We observed falling donations over time and an increase in the average time between donations, suggesting that donors donated less frequently. The results show a peak in donations in 2011 with over 31,000 donations and a steady decline in donations over time falling to 24,520 donations in 2017 (Figure 1). Furthermore, we show a downward trend in the number of Highly Active donors and a more stable trend in First Time donors. Highly Active donors dropped to just over 5,500 donors in 2017 from 6,851 donors in 2009 (Figure 2). We also provide evidence that donors donated well below their donation capacity and that the blood type of donors appeared to be in line with the wider German donor population.

In line with other regions in Germany, the Netherlands and Switzerland, we observe falling donations and donors. The trends observed in the blood donation context appear to contradict a wider trend observed in prosocial activities across Germany reported in the case of volunteerism, where despite volunteers spending less time volunteering, participation rates have increased from 35.9% in 2009 to 43.6% in 2014 according to a large government survey [2]. The return rates following a first time donation in particular fell quite substantially over the time period, falling from 72% in 2008 to 57% in 2016.

This Policy Brief was adapted from a full article [3].

Policy Relevance of Research

- The findings are relevant to blood collection agencies in that they provide information for guiding future recruitment campaigns.
- Highly Active and former Highly Active donors should be carefully considered when planning donor engagement strategies and effort made in (at the very least) maintaining their donation activity.
- We show a large drop in return rates among first-time donors, we therefore recommend developing interventions that aim to improve donor retention for early career donors.
- Given that we observed a higher preference for donations at lunchtime, before and after work, we recommend centres consider extending opening hours to accommodate for these periods.

Figure 1. Total, first-time and repeat whole blood donations, 2008-2017

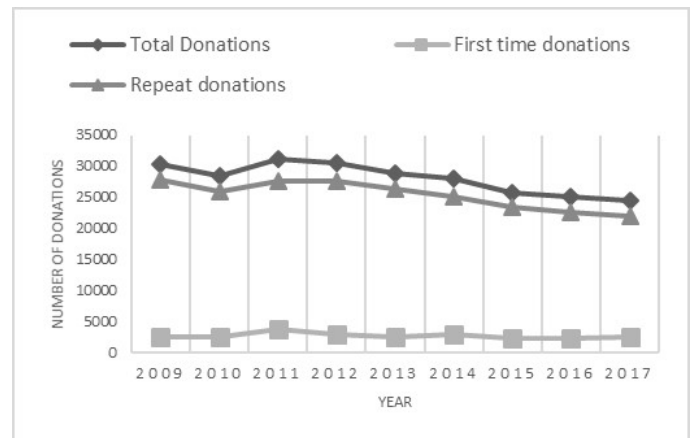
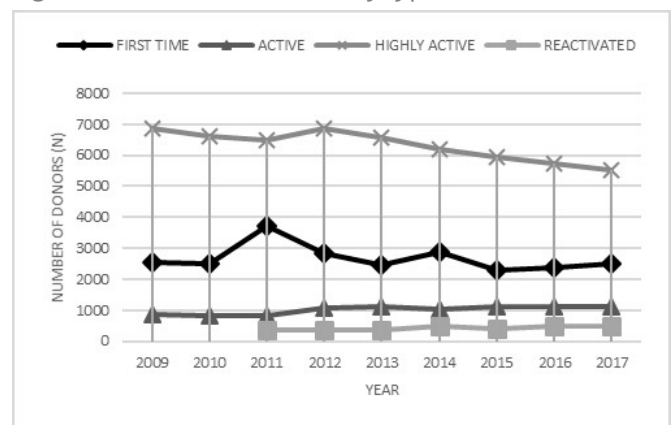


Figure 2. Whole blood donors by type, 2009-2017



References

1. De Kort W, Veldhuizen I: Donor management manual. Nijmegen, the Netherlands: DOMAINE project 2010
2. Federal Ministry for Family Affairs, Senior Citizens, Women and Youth: Volunteering in Germany: Key Findings of the Fourth German Survey on Volunteering. 2017
3. Chandler T, Hiller J, Peine S, et al.: Blood donation and donors: insights from a large German teaching hospital (2008–2017). Vox sanguinis

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