

# **e-Safe Blood**

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## **Abstract**

E-Safe Blood is a system to be implemented in Saudi Arabia whose mission is to mitigate blood transfusion risk by sharing donor data and facilitating communication. In the process, infectious donor risk is decreased. Additionally, the increased communication between the donation centers and blood donors enables these networked institutes to better recruit donors and use the service to satisfy other goals.

The project is run via a consumer-oriented website. It uses the content management system Joomla to manage the system layout and PHP to program the site's functions. Client-friendly communication options are also managed via external means, such as SMS service. Overall, the system is divided into four main modules: general, admin, donors, and donation centers. Each of these modules differs according to their intended function. Also, as part of development stage function and usability testing is done; for instance, selected group is questioned in order to perform usability testing. The current version of the system provides a backbone for communication between donor centers. The next step in the process toward a fully functional version is to build a real-time database housing data from donation institutes. While this step was discussed during the design phase, its implementation depends on several factors such as access permissions and work overload. Finally, the future versions will have additional that promise to improve the services provided by blood transfusion centers, such as blood waste minimization, stabilization, supply, and risk management.