

Screening Blood Donors with the Donor History Questionnaire

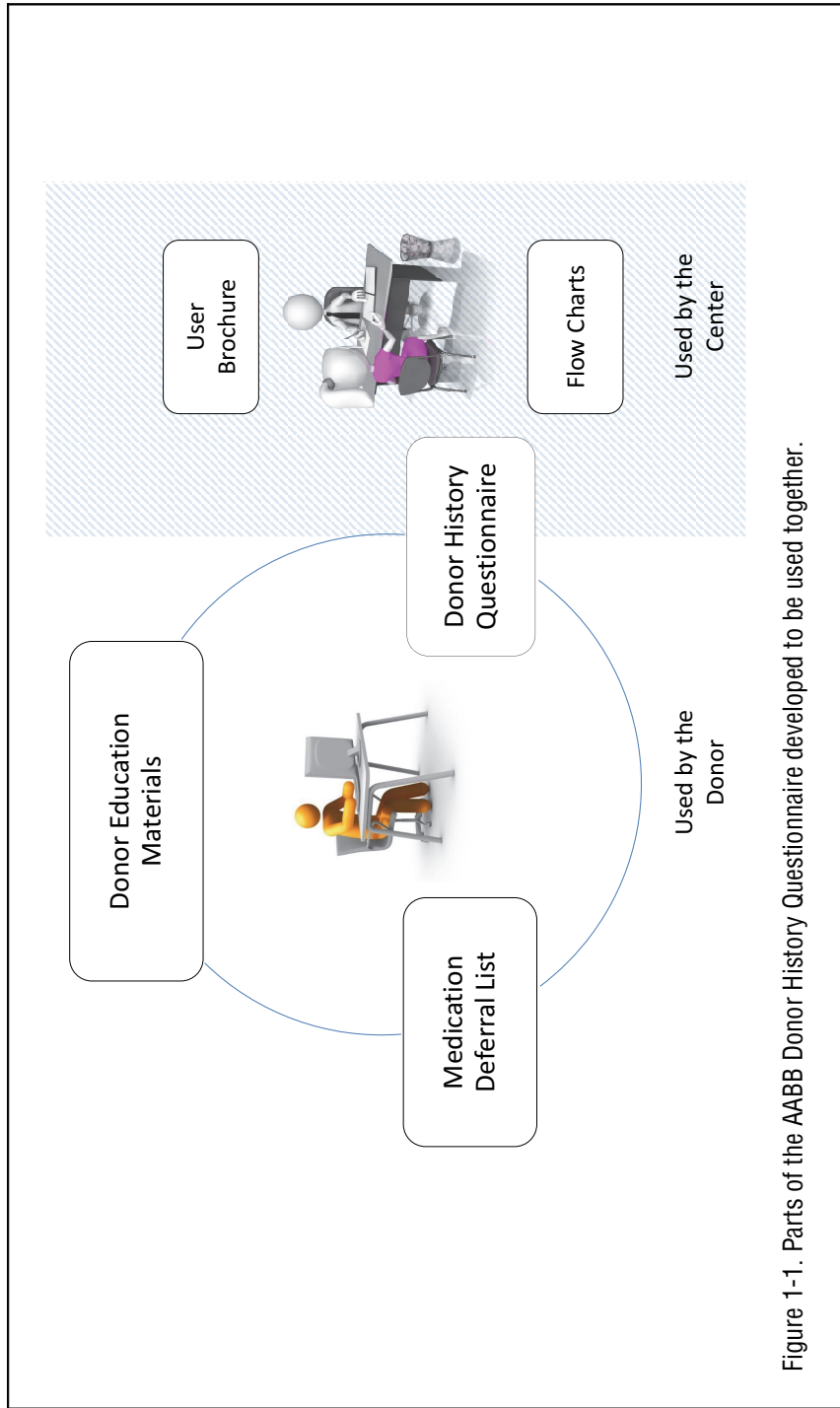


Figure 1-1. Parts of the AABB Donor History Questionnaire developed to be used together.

Questionnaire Design

Questions Should Be Simple, Grouped in a Logical Order, and Organized by Time Frames

Clarity and simplicity of the questions is essential. The AABB DHQ strives to use single-item questions. Compound questions asking about more than one item have two main problems, both relating to the comprehension step. Firstly, if more than one item is asked in a question, it creates confusion. If the answer to one part is “yes” and the other part “no,” it is not clear how to answer. Secondly, donors do not attend to all items in the question equally. In a study in which donors were asked about their recall of what they had been asked immediately after completing the DHQ, they remembered the first item on the list or the last item better. Those in the middle were the least attended to.^{9,13} Where possible, questions should be simplified to use the fewest words possible and words that are commonly understood by most people.

To improve focus and attention, it is desirable to group together questions about similar topics. For example, if questions about health history are grouped together, the donor is thinking about any diseases or treatments he/she may have had. Memory recall is more efficient because there is some overlap in recall. Survey questionnaires sometimes ask the least sensitive questions first to build commitment as the participant works their way through. For the AABB DHQ, this is less important because people who want to donate blood are motivated to complete the screening process and most understand that sensitive questions are necessary.

People tend to store memories in temporal sequences. For the AABB DHQ, the donor eligibility criteria refer to behaviors or events that occurred during specific time frames. This means that the donor must remember not only that an event has occurred, but also when it occurred. Pinpointing the date when something happened can be challenging. In some cases, the

donor may remember the event as being more recent than it was (forward telescoping). She/he will answer “yes” to the question, and then with further questioning from the donor historian and the chance of being deferred, memory often improves. However, in other cases, the donor may access more recent memories (backward telescoping) and feel she/he has adequately searched their memory and thus decide the answer is “no,” when in fact it should be “yes.” In this case the donor may be incorrectly assessed as eligible. It is unlikely that any questionnaire can entirely prevent these errors. The AABB DHQ is organized by time frames from the most recent periods to those farther in the past—“Have you ever. . .” questions. This approach was considered to have the best chance of walking the donor through an effective memory search, particularly since many spend very little time on each question. Within each time frame, the questions are grouped according to topics.

E-Questionnaires

Over the past 20 years, electronic questionnaires have gradually been implemented in the US and other countries. They offer several advantages over traditional pen-and-paper questionnaires, including ease of configuration, online completion, and enhanced privacy.

Ensuring privacy is key to the success of donor screening. Prospective donors are asked about personal information, including health history and sexual background. Creating a sense of privacy can improve people’s willingness to disclose sensitive information.⁹ There is some evidence that use of an electronic questionnaire improved disclosure of HIV risk factors in blood donors, as opposed to answering questions asked by a donor historian in a face-to-face interview.¹⁴ However, the donor still must review their answers with a donor historian and will be deferred if they do not meet the eligibility criteria. Thus, true anonymity is not possible, and even with an e-questionnaire it can be challenging to provide adequate privacy so that other

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donors and staff cannot hear the interview. In permanent sites, interview rooms can be provided, and on mobile sites temporary screening booths are often set up. An effort is made to keep the booths a reasonable distance from others, and white noise machines can help to muffle the conversation to others.

E-questionnaires can be configured to include additional questions in the flowchart rather than asking them in the screening room. In addition to allowing the donor to complete more of the process on their own, this feature has the potential to allow broader capture questions. Donors can also be identified for the aDHQ based on their donor record, ensuring that the correct questionnaire is administered.

Many programs allow the donor to complete the questionnaire online before arriving at a collection site on the day of the donation. This streamlines the donation process and is popular with donors.

Additionally, e-questionnaires can record all of the donor's answers and maintain them in a retrievable format with minimal physical storage, as opposed to paper questionnaires, which require costly, secure storage, are prone to damage, and are not easily retrieved. Common responses to the flowcharts can be preprogrammed for point-and-click selection, which reduces error and makes it quick and easy for the donor historian to screen.

There are also some technical challenges involved in implementing and maintaining an electronic questionnaire. A change in questions is more than a matter of printing new paper questionnaires. A Blood Establishment Computer System (BECS) is regulated as a medical device by the FDA. It takes time and expertise to program the BECS and to validate the programming to ensure that there are no errors. Programming and validation must be repeated each time a question is changed. There are increased requirements for maintenance and troubleshooting of BECS hardware and accessories. A backup manual system needs to be retained including SOPs and regular staff training in case of malfunction.