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Part 1: Introduction



Why are recruitment and retention important?

The purpose of a clinical study is to answer a research question. To do this, researchers must:

- Recruit an adequate number of appropriate participants.
- Retain as many of those participants as possible for the time period specified in the study protocol.

Overly optimistic recruitment and retention projections are common in clinical studies. If either recruitment or retention falls short, a study may fail to achieve its objective. The researchers may be unable to answer the research question they posed and participants who were recruited to the study may have been placed at risk for no purpose. Thus, recruitment and retention of participants are key to the success of any clinical study.

A successful recruitment and retention strategy requires informed and detailed planning, commitment of adequate resources, careful monitoring, and timely identification and resolution of problems.

Recruitment and retention strategies, including the wording, presentation and the mode of communication of advertising materials, must be approved by the designated [Institutional Review Board](#) (IRB) prior to implementation.

Recruitment and retention are challenges that involve much time and effort on the part of both clinicians and researchers. This module discusses the issues to be considered in the recruitment and retention of participants to studies. Part 1 deals with recruitment and Part 2 addresses retention.

Part 2: Recruitment



What are the major elements of recruitment?

Recruitment to a study has two major elements:

- Defining a population of appropriate participants to answer the research question.
- Recruiting appropriate participants in an ethical manner.

Issues to Consider in Defining a Population of Participants for a Study

Defining the participant population for a clinical study involves consideration of various issues, as described below.

Purpose of the Study

The purpose of a study will often define the appropriate participant population for the study. For example, the purpose of a study may be to test an intervention that is aimed at pregnant women with gestational hypertension, runaway teenage girls who are involved in the criminal justice system, military veterans who use tobacco products, or another defined population subgroup.

Generalizability of Results

It is important that findings from a clinical study be relevant to people who were not in the study but have the same characteristics as the study participants. This is called *generalizability*. The number of participants must be adequate so that the study's results can be applied to the general population that might benefit from the research.

Considerations of Fairness

The 1979 **Belmont Report** established the three key principles on which the current system of human research protections rests: respect for persons, beneficence, and justice.

The principle of justice requires that participants be selected fairly. Researchers must attempt at all times to distribute the risks and benefits of participation in a study fairly and without bias across the population.

When deciding to select some people for a study and exclude others, researchers must ensure that participants are chosen for reasons that are directly related to the problem being studied and not simply because of their availability, their compromised position, or their vulnerability.

Unless there is a clear justification for doing so, research should not involve persons from groups that are unlikely to benefit from subsequent applications of the research. For example, it would be unethical to select as study participants only persons on welfare, institutionalized persons, or members of a specific racial or ethnic group unless the intervention being studied was intended to directly benefit that group of people.

Adequate Representation of Women and Minorities

Women and minorities should be adequately represented in the study population so that the research findings will be meaningful for these groups and so that members of these groups can share in the benefits of the research. This is particularly important for studies of diseases, disorders, and conditions that disproportionately affect women or minorities.

Since 1994, the National Institutes of Health has required researchers to provide a clear and compelling rationale for proposing to conduct a study in a population in which women and minorities are not adequately represented. (See [NIH Policy and Guidelines on the Inclusion of Women and Minorities as Subjects in Clinical Research – Amended October 2001](#).)

Protection of Vulnerable Participants

Certain groups of participants are considered potentially more vulnerable to coercion to participate in research. Children, prisoners, economically disadvantaged, or educationally disadvantaged persons are all considered to be vulnerable populations.

Generally, participants from vulnerable populations should be enrolled only in studies that pertain directly to their circumstances. For example, pregnant women should be enrolled only in studies in which pregnancy is pertinent to the research question (e.g., investigating if one treatment strategy is more effective than another in pregnant substance abusers).

When participants from vulnerable populations are to be recruited for a study, appropriate additional safeguards must be included in the protocol to ensure that their rights and welfare are protected. (This issue is also addressed in the [Informed Consent](#) and [Institutional Review Boards](#) modules.) However, vulnerable populations should not be overprotected to the extent that they are excluded from participating in research.

Reasonable Inclusion and Exclusion Criteria

The inclusion and exclusion criteria define precisely who is eligible to participate in the study and who is not. These criteria must be defined in the study protocol. They must also be carefully reviewed for every potential participant.

- Inclusion criteria are the characteristics that make a potential participant eligible to enroll in a study. Generally, every potential participant must meet *all* inclusion criteria in order to be eligible.
- Exclusion criteria are the characteristics that prohibit a potential participant from enrolling in a study. Generally, a potential participant will be ineligible if he or she meets one of the exclusion criteria.

Inclusion and exclusion criteria must be reasonable and appropriate to the study purpose. No individual or group should be excluded from eligibility to take part in the study without a valid reason. On the other hand, no individual or group should be included unless they are likely to benefit from applications of the research.

Inclusion and exclusion criteria that are too stringent may make it difficult to recruit an adequate number of participants into the study. Modification of overly stringent admission criteria for a study can have a profoundly positive effect on recruitment. On the other hand, inclusion and exclusion criteria that are too broad may make it more difficult for the study to reach meaningful conclusions and may also result in increased safety concerns.

Part 3: Recruitment Strategies

Elements of a Successful Recruitment Strategy

Elements of a successful recruitment strategy include the following:

- Avoid specifying unnecessarily restrictive inclusion and exclusion criteria in the protocol.
- Develop a compensation strategy that adequately reimburses participants for their time and expenses without being coercively generous.
- Develop a recruitment plan during the protocol planning stage.
- Have the necessary recruitment budget for start-up training, advertising, staff time, and other expenses.
- Develop a profile of prospective study participants:
 - What would motivate prospects to join the study?
 - From what sources do they obtain information?
 - What radio and television stations and programs do they listen to and watch?
 - Where do they live, work, shop, and play?
 - In what media outlets would it be appropriate to place recruitment advertisements?
 - Which caregivers and relatives might serve as referral sources?
- Review recruitment rates, dropout rates, and screening success rates from previous studies. Identify and implement strategies that build on previous successes and incorporate lessons learned.
- Choose appropriate staff members to conduct recruitment.
- Develop a system to track the number of participants enrolled per recruiter per site.
- Monitor recruitment carefully and intervene quickly to change recruitment techniques that are proving unsuccessful.
- Identify barriers to recruitment.

In general, recruitment strategies are most effective when they are used together in a coordinated fashion.

Specific Strategies for Recruiting Participants into Clinical Studies

- Contact interested prospects as soon as possible. The longer a prospective participant has to wait before hearing back from study staff, the less likely it is that he or she will ultimately enroll in the study.
- Cultivate potential sources of referrals to the study, network with clinic staff who are not working on the study, as well as with other local health care providers. Send direct mailings to selected health care providers.
- Give presentations about the study for clinic staff and provide periodic updates on the study's progress.
- Participate in health fairs, speaking engagements, support groups, television and radio interviews, and other forums.
- Ask for public service announcements on radio and television.



Special Considerations in the Recruitment of Alcohol or Drug Abusers into Clinical Studies

Researchers wishing to recruit alcohol or drug abusers into clinical studies must ensure that potential participants are not taken advantage of.

The [National Advisory Council on Alcohol Abuse and Alcoholism](#) has issued guidelines for studies involving alcohol-abusing participants. These guidelines apply equally well to studies involving participants who abuse drugs other than alcohol. With regard to the recruitment of alcohol- or drug-abusing participants, the guidelines state:

- Alcohol or drug abusers should not be recruited as participants merely because of their easy availability, low social or economic status, or limited capacity to understand the nature of the research.
- The proposed population for any study must be appropriate in terms of age, sex, familial or genetic background, prior alcohol use, other drug use, and general medical and psychological condition, including, if appropriate, alcoholism recovery status.

Ethically Acceptable Strategies for Recruiting Participants into Clinical Studies

Most study participants are recruited in one of three ways:

- Clients already receiving treatment at a research site that are asked to consider enrolling in appropriate studies.
- Other health care providers will refer clients who are potential study participants.
- Individuals interested in participating in a study will respond to advertisements placed in newspapers or flyers as well as advertisements announced on the radio or over the television.

Studies can also use websites to recruit and screen participants. This approach can be especially useful when recruiting for studies concerned with socially embarrassing diseases or conditions.

All recruitment strategies must be approved by the designated [Institutional Review Board](#) (IRB) before recruitment for a study may begin. In particular, certain rules apply when participants are recruited through advertising; these rules are discussed in the next section.

Part 4: Advertising for Study Participants



Advertisements, fliers, and brochures that are prepared to inform potential participants about a study and recruit them are considered part of the [informed consent](#) process. As such, they must be reviewed and approved by the designated [IRB](#).

Recruitment of participants may not begin until the IRB has approved the protocol, informed consent documents, and proposed recruitment and advertising materials.

The IRB reviews not only the wording of advertising materials but also the presentation and the intended mode of communication (e.g., print, radio, television). The purpose of the IRB's review is to ensure that no aspect of the advertising materials might be considered *coercive* or *misleading*.

Part 4: Advertising for Study Participants

Interactive: Coercive or Non-Coercive Advertising

Users are instructed to review each of the scenarios given and to answer the question: **Would the IRB consider these scenarios *Coercive* or *Non-Coercive*? The consider the feedback.**

Scenarios 1: Only clients who agree to enroll in a study will continue to receive treatment.

Feedback: Would the IRB consider this scenario *Coercive* or *Non-Coercive*? Making study participation a condition of continued treatment is not ethical. Therefore, the correct response is *Coercive*.

Scenarios 2: An employer or counselor says, "I would *really* appreciate it if you signed up for this study."

Feedback: Would the IRB consider this scenario *Coercive* or *Non-Coercive*? Having a person of authority or influence suggest they would appreciate participation is not ethical. Therefore, the correct response is *Coercive*.

Scenarios 3: Study staff handing out fliers about a drug treatment study to passersby on the street.

Feedback: Would the IRB consider this scenario *Coercive* or *Non-Coercive*? This is a random and non-invasive way of recruiting potential study participants. Therefore, the correct response is *Non-Coercive*.

Scenarios 4: Offer of payment that appears in an advertisement in larger or bolder type than other information about the study.

Feedback: Would the IRB consider this scenario *Coercive* or *Non-Coercive*? Payment cannot be used to recruit study participants. Therefore, the correct response is *Coercive*.

Part 4: Advertising for Study Participants

How might advertising for study participants be misleading?

The following are examples of statements or actions that might be considered misleading:

- Saying that a study will involve no invasive procedures when, in fact, participants will be required to have blood drawn.
- Appearing to promise a favorable outcome by:
 - Using the terms "new treatment," "new medication," or "new drug" without explaining that the treatment is investigational.
 - Suggesting that the drug or treatment is equivalent or superior to any other available drug or treatment.
 - Offering "free medical treatment" instead of stating that participants will not be charged for participating in the study.
 - Making a statement such as "We will cure you in six easy steps."

Part 5: Retention



Why is retention of study participants important?

Recruitment of an adequate number of participants, although essential, does not in itself assure the success of a study. Once participants are recruited into a study, they must complete the study to ensure their information/data can be included in the final analysis.

Unless an adequate number of participants are retained for the duration of the study, investigators may not obtain enough data to answer the research question they posed, which was the reason for performing the study in the first place. Also, the cost (in time and resources) of retaining and managing a participant who is already enrolled is considerably less than the cost of recruiting a new participant.

Retention means assuring that participants:

- Undergo study procedures at the required intervals.
- Complete questionnaires or responses to interviewers' questions.
- Participate in any other activities required by the study protocol.
- Attend follow-up visits as required.

Part 6: Retention Strategies



Elements of a Successful Retention Strategy

Successful retention involves:

- Treating the participant with respect.
- Being considerate of the participant's time.
- Identifying and overcoming barriers to retention.
- Including retention strategies in the budget.
- Identifying and resolving problems in a timely manner.

When devising a retention strategy, the following issues should be considered.

Retention Begins with the Participant's First Visit

During the first visit, while the participant is going through the [informed consent process](#) ensure the participant understands the time and procedures involved and talk about why it is important to complete all the required study procedures and visits. Often, study templates or electronic CRFs are created to record a participant's contact information, also called locator forms. Using a locator form, the study staff may record the participant's address, phone number, and contact information for friends and family members who may be called, of course, with the consent of the participant. This information will help the clinic to locate the participant later if he or she misses a visit.

Retention is an Ongoing Process

Do not wait until the last participant is enrolled before starting to think about retention. Devise retention strategies during the study design phase. Depending on the population being studied, it may be beneficial to review the participant's contact information with him or her at every visit. For example, many drug-dependent individuals change their home address or job frequently. Ensure that up-to-date contact information is always on file for every participant.

Retention is Everyone's Responsibility

All clinic staff should be trained to understand the importance of maintaining up-to-date contact information for all participants. A participant may casually mention at any time that he or she is about to move, change jobs, or change his or her marital status. This information should be recorded in the participant's file and communicated to all members of the research team.

Specific Strategies for Retaining Participants in a Clinical Study

- Stress the importance of compliance during the informed consent interview and throughout the study.
- Establish rapport with participants.
- If a participant cannot be found and has not withdrawn consent, use the participant's contact information to try to find him or her. Telephone the participant's home, telephone his or her contacts, or (if the participant has given consent for home visits) visit the participant's home.
- Use public information to try to locate the participant. For example, in some states, the motor vehicle administration and other government agencies will release an individual's contact information if it is considered to be part of the public record.
- Consider amending the protocol to ease or eliminate assessments or other procedures that participants find disagreeable and that may deter retention.
- Use regular teleconferences to brainstorm retention strategies with local and national project staff.
- Send reminder notes to let the participant know you will be calling shortly to perform or schedule their next assessment.
- Conduct research interviews at a location convenient for the participant.
- Offer participants transportation to and from the study site.
- Be persistent and document all attempts to contact participants — keep trying.
- Ensure that all of these efforts preserve the privacy of the participant.

Part 7: Using Incentives for Study Participation



Use Incentives for Study Participation

Research participants may be offered rewards such as monetary payments, free medical care, extra vacation time, food, and lodging. Such rewards are not considered benefits of study participation but rather incentives for participation.

Receiving a monetary payment, or receiving something for free that would normally have to be paid for, is an inducement. Any inducement may be coercive or an undue influence on a potential study participant. People who are poor or needy may be induced to do something, possibly against their better judgment, by the offer of money or another reward.

Because incentives for participation are potentially coercive, the amount and conditions of such incentives must be reviewed and approved by the IRB (See related material from the [Institutional Review Boards module](#)).

Is it ethical to offer incentives to alcohol or drug abusers to participate in research?

Many potential participants in drug and alcohol research are unemployed or otherwise economically disadvantaged. Concerns about unduly influencing such participants have led some investigators to decline to offer any incentives for study participation. It is unfair, however, to assume that any remuneration that is given to abusers of alcohol or other drugs will serve as an undue influence.

Part 7: Using Incentives for Study Participation

Interactive: Study Recruitment - Criteria for Incentives

Users are instructed to complete the statements below with “should” or “should not” to make the criteria correct. Then consider the feedback.

1. Incentives offered to any potential research participants, including alcohol or other drugs, _____ **be valuable enough to: induce participants to enter or remain in a study against their better judgment.**

Feedback: Which did you choose: Should or Should Not? The correct response is Should Not. Incentives should not be valuable enough to: induce participants to enter or remain in a study against their better judgment.

2. Incentives offered to any potential research participants, including alcohol or other drug abusers, _____ **be valuable enough to: enable recruitment of an adequate number of participants.**

Feedback: Which did you choose: Should or Should Not? The correct response is Should. Incentives should be valuable enough to: enable recruitment of an adequate number of participants.

3. Incentives offered to any potential research participants, including alcohol or other drug abusers, _____ **be valuable enough to: compensate participants for the time and inconvenience of study participation.**

Feedback: Which did you choose: Should or Should Not? The correct response is Should. Incentives should be valuable enough to: compensate participants for the time and inconvenience of study participation.

4. Incentives offered to any potential research participants, including alcohol or other drug _____ **be given for taking risks.**

Feedback: Which did you choose: Should or Should Not? The correct response is Should Not. Incentives should not be given for taking risks.

5. Incentives offered to any potential research participants, including alcohol or other drug _____ **be given for taking medications.**

Feedback: Which did you choose: Should or Should Not? The correct response is Should Not. Incentives should not be given for taking medications.

Part 7: Using Incentives for Study Participation

Guidelines for Establishing Appropriate Incentives for Study Participation

Three issues must be considered in determining the appropriateness of incentives for participation in a study.

Monetary Value

The value of an incentive should reflect the burden posed by participation in the study. The value should not be so high that the incentive could be considered coercive or an excessive influence on an individual's decision to participate in a study.

Method and Timing of Payment

Incentive credits should accrue as the study progresses. Payment should not be conditional on the participant's completion of the entire study. However, it may be acceptable to create a payment schedule that provides some incentive for the participant to complete the study. The completion bonus should not be large enough to induce participants to remain in the study when they would otherwise have withdrawn.

In some circumstances, participants who withdraw from a study may be paid at the time they would have completed the study had they not withdrawn. For example, if a study lasts for only a few days, it may be acceptable to pay all participants on study completion, including those who withdrew.

Forms of Payment

Forms of payment may include cash, store gift cards, money orders, or check cards. Some IRBs are reluctant to approve cash payments for certain populations, such as drug using populations out of concern that drug users might use study payments for drug purchases. On the other hand, avoiding cash payments can be viewed as paternalistic and disrespectful. Some forms of payments, such as money orders or check cards, may require the individual to show identification, which can be a potential problem for some populations, such as drug users. Payments over a certain amount may also be subject to taxes, and the participant should be made aware of this.

Part 8: What to do when a Participant Leaves a Study

The study protocol should include criteria for withdrawal and procedures for when a participant voluntarily leaves a study, is withdrawn early from the study for safety concerns, or is discharged after completing a study. The protocol should specify:

- When and how to withdraw participants.
- What type of data, if any, will be collected for withdrawn participants.
- Whether follow-up of some or all participants that have been withdrawn from the study may occur.

Common end-of-study procedures include, but are not limited to, a closing interview, referral, and follow-up for a specified period of time.

Part 8: What to do when a Participant Leaves a Study

CLOSING INTERVIEW

The closing interview is important because it is the final opportunity to obtain study data and likely the last contact the research team will have with the study participant. This interview also provides an opportunity to document any adverse events the participant experienced that may need follow-up after the study ends.

REFERRALS

The research team is responsible for ensuring that a participant who leaves the study has any referrals that he or she needs to obtain services or help elsewhere, if desired.

FOLLOW-UP

Some protocols include a requirement for a follow-up interview to be conducted at a predetermined time point (e.g., one month) after the participant is discharged from the active treatment phase of the study. It may be helpful to remind the participant of this requirement during the closing interview and, if possible, to schedule the day and time of the follow-up interview. Also, review the participant's locator form to ensure that all contact information is up-to-date.

Part 8: What to do when a Participant Leaves a Study

Most trial participants view the experience positively and would be open to participating in another trial if asked. Gaining acceptance to contact a participant for future studies is often part of the informed consent document and process. In order not to squander this potential resource, keep participants who have completed a study informed to the extent possible of the study's status and findings and let them know that their participation was valuable. Such efforts can also serve as "word-of-mouth" advertising. A thank-you card or certificate of appreciation can indirectly serve as a recruitment tool for the study, as well as for future studies.

Part 9: Summary of Key Points

- Recruitment and retention of participants are key to the success of any clinical study.
- A successful recruitment and retention strategy requires informed and detailed planning, commitment of adequate resources, careful monitoring, and timely identification and resolution of problems.
- Recruitment of participants may not begin until the Institutional Review Board (IRB) has approved the protocol, informed consent documents, and proposed recruitment and retention strategies.
- Advertisements, fliers, and brochures that are prepared to recruit potential participants and inform them about a study are considered part of the informed consent process. As such, they must be reviewed and approved by the IRB (see ICH GCP 3.1.2).
- Recruitment for a study has two major elements:
 - Defining a population of appropriate participants to answer the research question.
 - Recruiting appropriate participants in an ethical manner.
- Recruitment of an adequate number of participants, although essential, does not in itself assure the success of a study. Unless an adequate number of participants are retained for the duration of the study, investigators will not obtain enough data to answer the research question they posed, which was the reason for performing the study in the first place.
- Research participants may be offered rewards such as monetary payments or medical care at no cost. Such rewards are not considered benefits of study participation but rather incentives for participation.
- Because incentives for participation are potentially coercive, the amount, form, and conditions of such incentives must be reviewed and approved by the IRB (see ICH GCP 3.1.8).