HARVARD CATALYST | THE HARVARD CLINICAL AND TRANSLATIONAL SCIENCE CENTER

A SOCIAL, BEHAVIORAL, & EDUCATIONAL RESEARCH (SBER) CASE STUDY OF EDGES OF RESEARCH/IRB PURVIEW

USE OF TEXT MESSAGES IN HUMAN RESEARCH

By: Jennifer A. Graf
with the SBER Subcommittee of Harvard Catalyst's Regulatory Foundations, Ethics, and Law Program

OVERVIEW

The social, behavioral, and educational research (SBER) case studies provide education and guidance on how to identify and mitigate risks associated with SBER. These studies may be used by both IRB administrators and investigators when reviewing and designing research studies that involved SBER components.

Case studies follow a standard format that includes: 1) a fact pattern, 2) regulatory, cultural, and ethical issues, and 3) a risk/benefit analysis and risk management options. This format was created to allow for flexibility in applying the case studies.

By identifying common themes, linking them directly to federal regulations and guidance, and outlining risk mitigation options, the case studies can be used in a variety of ways, which include: 1) as an education tool for training individuals in human subjects research, 2) as a basis for developing reviewer checklists/worksheets, and 3) as a tool in designing research projects.

CASE STUDY

SCENARIO/FACT PATTERN:

A physician in the Department of Infectious Diseases (ID) at the local community hospital and other members of the clinical practice have observed that patients infected with hepatitis C virus (HCV) and who have low English literacy have a higher rate of non-adherence with scheduled clinical appointments compared to other patients seen in the clinic. As a result, this population tends to, among other things, have worse clinical outcomes. These points are consistent with published literature. The clinical staff has discussed various methods to improve adherence to clinical appointment scheduling and have decided to conduct a research study to test one of the ideas.

A protocol has been submitted for IRB review that proposes to enroll adults aged 18-60 years with HCV who are fluent in English and another cohort of adults aged 18-60 years with HCV who require a bilingual physician or medical translator. Up to 50 patients (25 from each population) who own a smart-phone or other device capable of receiving text messages will be invited by their treating ID specialist to participate in the study. Participants in each group will be randomized to either standard communication procedure or enhanced communication. Standard communication entails following current clinic practice, which

involves scheduling the patient's next visit at the conclusion of the present visit, issuing to the patient an appointment reminder card with the date and time of the next scheduled appointment, and no subsequent reminder. The enhanced communication arm will consist of standard procedures plus sending 3 text message reminders to participants. Texts will be sent 2 days prior to an upcoming ID clinic visit, the day before the scheduled visit, and by 8am on the morning of the day of the scheduled appointment. Texts will be translated into the appropriate language for those who are not fluent in English. Participants will be in the study for 6 months and will provide signed consent. In addition, each study participant will be asked to complete a brief study questionnaire at clinic visits related to clinic appointment schedule adherence. Those who do not keep an appointment will be contacted by the study team to have the questionnaire administered.

Participants in the text message arm will be asked if the text reminders were helpful; those in the standard communication arm will be asked if text reminders might be helpful, other possible interventions that might improve appointment non-adherence, etc. At the conclusion of the study the number of appointments kept will be compared and the survey data analyzed. The PI has commented in the protocol that this project constitutes human research as it involves an intervention, is a systemic investigation, and the study team believes that the results are generalizable.

Discussion

Questions/Comments for the researcher:

- Will all non-English speaking persons be eligible? Clarification is also required regarding study team member fluency in foreign languages.
- If a prospective participant does not speak/read English, will the consent form be translated into the participant's native language or will a short form consent form be used?
- What smart phone/device will be used by the study team to send text messages? Will a smart phone or other device be purchased/designated for members of the study team to use for this study only?
- What are the physical security details associated with the study smart phone/device (*e.g.,* storage of the device, access to it)?
- What is the content of the text messages?
- Who will send the text messages and are text messages printed or otherwise recorded for the study file? How will data be stored and protected on this device?
- Will the person who sends texts to a non-English speaker be fluent in that language?
- Will participants in the study be asked to confirm receipt of texts?
- What are the procedures if a study participant responds to a text message with a request for medical information or other communication not related to the study?
- Will participants be paid for participation or receive payment to help defray any potential costs associated with text messaging? How will potential costs associated with text messaging be addressed?
- Provide a method by which a participant may withdraw from the study and discontinue receiving text messages (*e.g.,* texting "STOP" to the study team).

REGULATORY, ETHICAL, & CULTURAL ISSUES:

46.102 Definitions (in relevant part)

(d) *Research* means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge. Activities which meet this definition constitute research for purposes of this policy, whether or not they are conducted or supported under a program which is considered research for other purposes. For example, some demonstration and service programs may include research activities.

(e) *Research subject to regulation*, and similar terms are intended to encompass those research activities for which a federal department or agency has specific responsibility for regulating as a research activity, (for example, Investigational New Drug requirements administered by the Food and Drug Administration). It does not include research activities which are incidentally regulated by a federal department or agency solely as part of the department's or agency's broader responsibility to regulate certain types of activities whether research or non-research in nature (for example, Wage and Hour requirements administered by the Department of Labor).

(f) *Human subject* means a living individual about whom an investigator (whether professional or student) conducting research obtains

(1) Data through intervention or interaction with the individual, or
(2) Identifiable private information.

Intervention includes both physical procedures by which data are gathered (for example, venipuncture) and manipulations of the subject or the subject's environment that are performed for research purposes. Interaction includes communication or interpersonal contact between investigator and subject. *Private information* includes information about behavior that occurs in a context in which an individual can reasonably expect that no observation or recording is taking place, and information which has been provided for specific purposes by an individual and which the individual can reasonably expect will not be made public (for example, a medical record). Private information must be individually identifiable (i.e., the identity of the subject is or may readily be ascertained by the investigator or associated with the information) in order for obtaining the information to constitute research involving human subjects.

46.110 Expedited review procedures for certain kinds of research involving no more than minimal risk, and for minor changes in approved research.

(a) The Secretary, HHS, has established, and published as a Notice in the FEDERAL REGISTER, a list of categories of research that may be reviewed by the IRB through an expedited review procedure. The list will be amended, as appropriate, after consultation with other departments and agencies, through periodic republication by the Secretary, HHS, in the FEDERAL REGISTER. A copy of the list is available from the Office for Human Research Protections, HHS, or any successor office.

(b) An IRB may use the expedited review procedure to review either or both of the following:

(1) some or all of the research appearing on the list and found by the reviewer(s) to involve no more than minimal risk,

List of categories (in relevant part):

6. Collection of data from voice, video, digital, or image recordings made for research purposes.

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

46.111 Criteria for IRB approval of research.

(a) In order to approve research covered by this policy the IRB shall determine that all of the following requirements are satisfied:

(1) Risks to subjects are minimized: (i) By using procedures which are consistent with sound research design and which do not unnecessarily expose subjects to risk, and (ii) whenever appropriate, by using procedures already being performed on the subjects for diagnostic or treatment purposes.

(2) Risks to subjects are reasonable in relation to anticipated benefits, if any, to subjects, and the importance of the knowledge that may reasonably be expected to result. In evaluating risks and benefits, the IRB should consider only those risks and benefits that may result from the research (as distinguished from risks and benefits of therapies subjects would receive even if not participating in the research). The IRB should not consider possible long-range effects of applying knowledge gained in the research (for example, the possible effects of the research on public policy) as among those research risks that fall within the purview of its responsibility.

(3) Selection of subjects is equitable. In making this assessment the IRB should take into account the purposes of the research and the setting in which the research will be conducted and should be particularly cognizant of the special problems of research involving vulnerable populations, such as children, prisoners, pregnant women, mentally disabled persons, or economically or educationally disadvantaged persons.

(4) Informed consent will be sought from each prospective subject or the subject's legally authorized representative, in accordance with, and to the extent required by §46.116.

(5) Informed consent will be appropriately documented, in accordance with, and to the extent required by §46.117.

(6) When appropriate, the research plan makes adequate provision for monitoring the data collected to ensure the safety of subjects.

(7) When appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of data.

(b) When some or all of the subjects are likely to be vulnerable to coercion or undue influence, such as children, prisoners, pregnant women, mentally disabled persons, or economically or educationally disadvantaged persons, additional safeguards have been included in the study to protect the rights and welfare of these subjects.

46.112 Review by institution.

Research covered by this policy that has been approved by an IRB may be subject to further appropriate review and approval or disapproval by officials of the institution. However, those officials may not approve the research if it has not been approved by an IRB.

46.116 General requirements for informed consent.

Except as provided elsewhere in this policy, no investigator may involve a human being as a subject in research covered by this policy unless the investigator has obtained the legally effective informed consent

of the subject or the subject's legally authorized representative. An investigator shall seek such consent only under circumstances that provide the prospective subject or the representative sufficient opportunity to consider whether or not to participate and that minimize the possibility of coercion or undue influence. The information that is given to the subject or the representative shall be in language understandable to the subject or the representative. No informed consent, whether oral or written, may include any exculpatory language through which the subject or the representative is made to waive or appear to waive any of the subject's legal rights, or releases or appears to release the investigator, the sponsor, the institution or its agents from liability for negligence.

(a) Basic elements of informed consent. Except as provided in paragraph (c) or (d) of this section, in seeking informed consent the following information shall be provided to each subject:

(1) A statement that the study involves research, an explanation of the purposes of the research and the expected duration of the subject's participation, a description of the procedures to be followed, and identification of any procedures which are experimental;

(2) A description of any reasonably foreseeable risks or discomforts to the subject;

(3) A description of any benefits to the subject or to others which may reasonably be expected from the research;

(4) A disclosure of appropriate alternative procedures or courses of treatment, if any, that might be advantageous to the subject;

(5) A statement describing the extent, if any, to which confidentiality of records identifying the subject will be maintained;

(6) For research involving more than minimal risk, an explanation as to whether any compensation and an explanation as to whether any medical treatments are available if injury occurs and, if so, what they consist of, or where further information may be obtained;

(7) An explanation of whom to contact for answers to pertinent questions about the research and research subjects' rights, and whom to contact in the event of a research-related injury to the subject; and

(8) A statement that participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled, and the subject may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled.

(b) Additional elements of informed consent. When appropriate, one or more of the following elements of information shall also be provided to each subject:

(1) A statement that the particular treatment or procedure may involve risks to the subject (or to the embryo or fetus, if the subject is or may become pregnant) which are currently unforeseeable;

(2) Anticipated circumstances under which the subject's participation may be terminated by the investigator without regard to the subject's consent;

(3) Any additional costs to the subject that may result from participation in the research;

(4) The consequences of a subject's decision to withdraw from the research and procedures for orderly termination of participation by the subject;

(5) A statement that significant new findings developed during the course of the research which may relate to the subject's willingness to continue participation will be provided to the subject; and

(6) The approximate number of subjects involved in the study.

(c) An IRB may approve a consent procedure which does not include, or which alters, some or all of the elements of informed consent set forth above, or waive the requirement to obtain informed consent provided the IRB finds and documents that:

(1) The research or demonstration project is to be conducted by or subject to the approval of state or local government officials and is designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs; and

(2) The research could not practicably be carried out without the waiver or alteration.

(d) An IRB may approve a consent procedure which does not include, or which alters, some or all of the elements of informed consent set forth in this section, or waive the requirements to obtain informed consent provided the IRB finds and documents that:

(1) The research involves no more than minimal risk to the subjects;

(2) The waiver or alteration will not adversely affect the rights and welfare of the subjects;

(3) The research could not practicably be carried out without the waiver or alteration; and

(4) Whenever appropriate, the subjects will be provided with additional pertinent information after participation.

(e) The informed consent requirements in this policy are not intended to preempt any applicable federal, state, or local laws which require additional information to be disclosed in order for informed consent to be legally effective.

(f) Nothing in this policy is intended to limit the authority of a physician to provide emergency medical care, to the extent the physician is permitted to do so under applicable federal, state, or local law.

46.117 Documentation of informed consent.

(a) Except as provided in paragraph (c) of this section, informed consent shall be documented by the use of a written consent form approved by the IRB and signed by the subject or the subject's legally authorized representative. A copy shall be given to the person signing the form.

(b) Except as provided in paragraph (c) of this section, the consent form may be either of the following:

(1) A written consent document that embodies the elements of informed consent required by §46.116. This form may be read to the subject or the subject's legally authorized representative, but in any event, the investigator shall give either the subject or the representative adequate opportunity to read it before it is signed; or

(2) A short form written consent document stating that the elements of informed consent required by §46.116 have been presented orally to the subject or the subject's legally authorized representative.

When this method is used, there shall be a witness to the oral presentation. Also, the IRB shall approve a written summary of what is to be said to the subject or the representative. Only the short form itself is to be signed by the subject or the representative. However, the witness shall sign both the short form and a copy of the summary, and the person actually obtaining consent shall sign a copy of the summary. A copy of the summary shall be given to the subject or the representative, in addition to a copy of the short form.

(c) An IRB may waive the requirement for the investigator to obtain a signed consent form for some or all subjects if it finds either:

(1) That the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality. Each subject will be asked whether the subject wants documentation linking the subject with the research, and the subject's wishes will govern; or

(2) That the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.

In cases in which the documentation requirement is waived, the IRB may require the investigator to provide subjects with a written statement regarding the research.

Massachusetts Mandated Reporter Laws

Child Abuse

M.G.L. c. 119 § 51A requires that nurses who have reasonable cause to believe that a child is suffering physical or emotional injury resulting from: (i) abuse inflicted which causes harm or substantial risk of harm to the child's health or welfare, including sexual abuse; (ii) neglect, including malnutrition; (iii) physical dependence upon an addictive drug at birth; or (iv) being a sexually exploited child; or (v) being a human trafficking victim must immediately communicate with the Department of Children & Families (DCF) orally and, within 48 hours, submit a written report to DCF detailing the suspected abuse or neglect.

Any mandated reporter who fails to make required oral and written reports of witnessed or suspected child abuse and/or neglect shall be punished by a fine of up to $1,000. Any mandated reporter who willfully fails to report child abuse and/or neglect that resulted in serious bodily injury or death shall be punished by a fine of up to $5,000 and up to 2½ years in jail, and be reported to the person's professional licensing authority. Whoever knowingly and willfully files a frivolous report shall be punished by: (i) a fine of not more than $2,000 for the first offense; (ii) imprisonment in a house of correction for not more than 6 months and a fine of not more than $2,000 for the second offense; and (iii) imprisonment in a house of correction for not more than 21/2 years and a fine of not more than $2,000 for the third and subsequent offenses.

Elder Abuse

M.G.L. c. 19A §15 requires that nurses who have reasonable cause to believe that an elderly person is suffering from or has died as a result of abuse to immediately make an oral report and submit a written report within forty-eight hours. Elder abuse is defined as an act or omission which results in serious physical or emotional injury to an elderly person or financial exploitation of an elderly person; or the failure, inability or resistance of an elderly person to provide for himself or herself one or more of the necessities essential for physical and emotional well-being without which the elderly person would be unable to safely remain in the community. Forms of abuse include physical, sexual, emotional, neglect, financial exploitation, and self-neglect. However, no person is considered to be abused or neglected for the sole reason that such person is being furnished or relies upon treatment in accordance with the tenets and teachings of a church or religious denomination by a duly accredited practitioner thereof.

Mandated reporters who fail to make elder abuse reports when appropriate are subject to a fine up to $1,000. In addition, the law provides mandated reporters with immunity from any civil or criminal liability that otherwise could result from making a report, provided the reporter did not commit the abuse.

Abuse of a Disabled Person

M.G.L. c. 19C, § 10 requires that nurses who have reasonable cause to believe that a disabled person is abused must report the situation to the Disabled Persons Protection Commission (DPPC). Abuse of a disabled person includes acts of physical, sexual, emotional, verbal abuse and omission by a caregiver of a person with a physical disability between the ages of 18 and 59. Abuse of a disabled person under age 18 must be reported as child abuse and if older than 59 as elder abuse (see above). In addition to reporting suspected abuse and neglect, mandated reporters are also required to report to the DPPC all cases in which an individual with a disability has died, regardless of whether or not abuse or neglect is suspected.

Questions for the IRB:

- Would it be acceptable for a medical translator to send foreign language texts or should it be required that a member of the study team be fluent in each language of enrolled participants?
- As it pertains to foreign language communication, should the IRB require that the protocol specify that persons be proficient in writing the foreign language, not just "fluent" (*i.e.,* a person may speak the language fluently, but may not be fluent in written communication)?
- Does the study qualify for a waiver of documentation of consent and a Health Insurance Portability and Accountability (HIPAA) waiver?
- Should participants in the enhanced communication arm be advised about the MA Mandated Reporter laws/requirements?
- Are there other institutional policies to consider *(e.g.,* electronic communication policies, other Information Technology policies)?
- Should the IRB require that only persons with a data plan or access to secure Wi-Fi be enrolled? Should participants in the enhanced communication arm be instructed to text only while using their data plan or secure Wi-Fi?

RESOLUTION & DISCUSSIONS:
Risk/Benefit Analysis:

- How could the messages be worded to be sufficiently vague as to the medical nature of the appointment, but still detailed enough to be a useful reminder?
- Is there a need for the Information Technology department to review this study or is IRB review sufficient?
- Are there ways to help reduce inadvertent texts being sent to the study team?
- Does participation in the study potentially put subjects at increased risk for self-disclosure of sensitive information or illegal behavior?

Mitigation/Management of Risks:

- To eliminate the possibility of sending an inadvertent text message, instruct study participants to delete study texts once they are received and read. The consent form is to state whether the data

will still be retained somewhere once the texts are deleted (*e.g.,* cloud). The consent should explain not only how texts might be stored, but also how long data are stored and whether identifiers will be associated with it.

- While the telephone number text messages are sent to is an identifier, by not including information about the nature of the upcoming appointment protected health information, as defined by HIPAA, is not involved.
- To the extent possible, design the study to limit the use of identifiers.
- Make clear at the time of enrollment and periodically remind participants in the enhanced communication arm that other than verifying that a text message has been received, text communications will not be responded to by the study team. Participants need to be reminded that the text system should not be used to obtain medical or other emergency help.
- Inform each participant that if his/her smart-phone or other device is lost or stolen the participant should immediately inform the study team to ensure that study texts are discontinued. It should also be addressed whether a methods exists for the study team to render all data on the smart phone or other device unreadable (*i.e.,* "wipe it").

ALTERNATE DETAILS:

- What if the study population involved minors; what issues might this impact and how?
- What if videoconferencing was used instead of text messaging; would this simplify or complicate matters?
- The researcher is contemplating an amendment, with consent from each participant, to request to activate the GPS function on each participant's smart phone/device to track location to see if location plays a role in appointment adherence. How might this impact the study?

Other Events:

- A participant randomized to the enhanced communication arm accidentally sends a text message of a sensitive nature to the study team. The content would not otherwise have been shared with the study team. How should this be handled by the study team and should the incident be reported to the IRB? Is this an unanticipated problem?
- What if the event described above included information about illegal conduct; how should that be handled by the study team and should the incident be reported to the IRB? Is this an unanticipated problem?
- The partner of one of the study participants saw a study text message and calls the researcher demanding to know what the message and the study are about.
- The research team member who is responsible for sending study texts loses the study smart phone, which includes participants' contact information, text messages, etc. Should this be reported to the IRB? Is this an unanticipated problem? Should all participants be informed or only those currently enrolled in the study?

REFERENCE(S):

45 CFR 46.111-112:
http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.html#46.111

45 CFR 46.102:
http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.html#46.102

45 CFR 46.110:
Prior to January 19, 2018: https://www.hhs.gov/ohrp/regulations-and-policy/regulations/45-cfr-46/index.html#46.110; January 19, 2018 and later: https://www.gpo.gov/fdsys/pkg/FR-2017-01-19/pdf/2017-01058.pdf

45 CFR 46.116:
https://www.hhs.gov/ohrp/regulations-and-policy/regulations/45-cfr-46/index.html#46.116

45 CFR 46.117:
https://www.hhs.gov/ohrp/regulations-and-policy/regulations/45-cfr-46/index.html#46.117

Massachusetts Mandated Reporter Laws:
http://www.mass.gov/eohhs/gov/departments/dph/programs/hcq/dhpl/nursing/complaint-resolution/mandatory-abuse-reporting.html