

Analysis of Informed Consent Forms Submitted to Institutional Ethics Committee of a Medical Institute in Southern India: A Cross-sectional Observational Study

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ABSTRACT

Introduction: Informed consent is an essential component in research involving human participants. However, the informed consent obtained may be incomplete and not fulfill the essential criteria of Informed Consent Forms (ICFs). Although the guidelines for developing ICFs have been clearly spelled out by various research bodies, these guidelines are not followed completely.

Aim: To analyse the ICFs submitted to the Institutional Ethics Committee (IEC) of a Medical Institute in Southern India.

Materials and Methods: The present study was a cross-sectional observational study analysing ICFs submitted to the IEC of McGann District Teaching Hospital, Shimoga Institute of Medical Sciences (SIMS), Shivamogga, Karnataka, India, for the period 2014 to January 2023. All research projects containing ICFs during the study period were included in the study. Of the research projects submitted, only 70 had ICFs, and these were subjected to analysis as per Indian Council of Medical Research (ICMR) guidelines criteria. The criteria for ICFs were: statement of research, purpose/methods of the study, duration/frequency of the study, benefits to participants/community, foreseeable risks, discomfort/inconvenience, confidentiality, payment/reimbursement for participation. In addition to these, ICFs were also analysed for additional elements as per ICMR criteria for tissue and blood samples. The results were then subjected

to descriptive statistical analysis and presented as mean and percentages.

Results: Many of the required essential elements were present in nearly 50% of ICFs submitted to the IEC, which include information on the basic purpose/methods of the study 70 (100%), identity of the principal investigator/research team 57 (81.42%), freedom to participate/withdraw from the study 55 (78.57%), confidentiality of records 54 (77.14%), and foreseeable risks, discomfort, and inconvenience to participants 35 (50%). Other essential elements like benefits were present to participants/community 28 (40%), payment/reimbursement for participation 28 (40%), duration and frequency 12 (17.14%), statement of research 9 (12.85%), treatment/compensation for injury 4 (5.71%). Regarding additional elements of ICFs for biological samples, ICFs adhered to the ICMR requirements except none of the submitted forms had any information on the period of storage of biological samples.

Conclusion: The ICF is an essential requirement for conducting research. Ensuring adherence of ICF to guidelines is important from a research perspective. The present study concludes that the majority of the essential elements were present in ICFs with a few exceptions like study as research and information on the storage of biological samples, which was nil.

Keywords: Essential elements, Indian council of medical research, Statement of research

INTRODUCTION

Medical research is an essential requirement for every researcher involved in the medical field. During the research process, the medical researcher has to follow the basic pillars of medical ethics, i.e., autonomy, justice, beneficence, and non maleficence [1]. To implement these ethical principles, the researcher has to obtain informed consent from the research participant [2]. This helps ensure that dignity, safety, rights, and ethical values are upheld, and that the subject participants are protected during the research process. The principle of informed consent applies to various types of research, including surveys, interviews, observations that require participants, as well as other experiments involving diet, drugs, and exercise studies [3].

Although the basic principles for obtaining consent, such as seeking permission before treatment and considering the patient's benefit, have been in use for many decades, historically, the term "informed consent" is relatively recent and has a short history [4-6]. The term "informed consent" first appeared in 1957 [5] in a legal case. The three basic elements required in all Informed Consent Forms (ICFs) are study information, the subject's comprehension and understanding, and voluntary participation [4]. Based on these three

elements, informed consent has been defined as "the full disclosure of the nature of research and the participant's involvement, adequate comprehension by the potential participants, and the participant's voluntary choice to participate" [4]. Various types of consent include broad consent, blanket consent, tiered consent, opt-out consent, dynamic consent, and open consent [4].

Blanket consent provides full authorisation for the broad use of subjects' data without information on the use of the data for future research and information on further oversight by participants regarding their data [7]. Broad consent also grants the same rights to subjects but gives participants the ability to impose conditions on some research data to be used [8]. Tiered consent allows research participants to choose general research areas and exclude others [9]. Opt-out consent is based on broad consent by the participant unless the participant clearly expresses a desire to opt-out [10]. However, this consent method is viewed as not ethically acceptable. Dynamic consent is more precise and adheres to the three basic pillars required in the informed consent process. It enables participants to receive real-time information about the research study's progress and allows them to choose to participate or decline consent for the research [11,12]. However, the main drawback of the dynamic

consent process is that it is too expensive to implement and maintain, participants may not represent the population regarding the required education level, it is time-consuming, and it may lead to information overload and withdrawal from the research study [4]. Open consent is a type of consent that relies on researchers to openly share their data for the public good, and to society, it is an entirely voluntary process [4].

Previous studies by Tam NT et al., have shown that the non inclusion of various components in Informed Consent Forms (ICFs) can lead to decreased comprehension and understanding of the research purpose among study participants, thus defeating the very purpose of obtaining informed consent [13]. Another study by Koyfman SA et al., revealed that certain essential elements of ICFs were often omitted when conveying information to participants [14]. Literature evaluating the informed consent process has highlighted major challenges such as diminished autonomy, the influence of various groups, a paternalistic attitude towards doctors, and implicit trust in the medical profession when obtaining informed consent from participants [15].

Informed consent plays a central role in any research study, as researchers must adhere to ethical principles, current legislation, and good clinical practice guidelines to ensure ethical standards are upheld during the study process [16,17]. Various other studies have documented the incompleteness of the ICFs submitted to the Institutional Ethics Committee (IEC) [18,19]. The aim of the study was to analyse the ICFs submitted to the IEC of a Medical Institute in Southern India, as per the Indian Council of Medical Research (ICMR) guidelines [20].

MATERIALS AND METHODS

The present research study is a cross-sectional observational analysis of Informed Consent Forms (ICFs) submitted to the Institutional Ethics Committee (IEC) of McGann District Teaching Hospital, SIMS, Shivamogga, Karnataka, India, over a period from 2014 to January 2023. The study was conducted after obtaining permission from the IEC of the teaching hospital through letter Ref NO: SIMS/IEC/566/2021-22. Information collected about research participants during the study was kept strictly confidential. A total of 70 ICFs were included in the submitted research proposals during the study period and were analysed in the present study.

Inclusion criteria: All research projects submitted to the IEC containing ICFs in their research studies were included in the study.

Exclusion criteria: Research projects involving animals and submitted to the Institutional Animal Ethics Committee. The completeness of the ICFs was assessed using a checklist prepared by the Indian Council of Medical Research (ICMR) on National ethical guidelines for biomedical and health research involving human participants, 2017 [20]. ICMR guidelines stipulate that ICFs submitted to IECs should include two components: Main elements and additional elements (for biological samples).

The following aspects of the informed consent document were evaluated: Main elements and additional elements (for biological samples) as shown in [Table/Fig-1].

STATISTICAL ANALYSIS

A descriptive analysis of the research data was conducted. The data obtained was entered into a Microsoft excel spreadsheet, and the results were expressed as means and percentage values.

RESULTS

A total of 70 Informed Consent Forms (ICFs) from various research studies submitted to the Institutional Ethics Committee were analysed in the present study. Out of the 70 ICFs submitted, nearly 50% clearly explained the essential elements required, such as the basic purpose and methods of the study present in all 70

Main elements of ICF	Additional elements of ICF
A statement that it is research	Period of storage
Purpose and methods of study	Information on sharing of data and biological materials.
Duration and frequency, estimated number of participants	Right to prevent use of biological samples
Benefits to participants and community	Provisions to safeguard confidentiality
Foreseeable risks, discomfort and inconvenience	Postresearch plan/benefit sharing discussion
Confidentiality of records	Current and future uses.
Payment/reimbursement for participation	
Treatment/compensation for injury	
Freedom to participate/withdraw from the study	
The identity of the research team/principal investigator.	

[Table/Fig-1]: Informed Consent Forms (ICF): Essential and additional elements. (The term 'publication plan' was used in handbook of ICMR 2018 guidelines for biomedical and health research and the same data was provided in point: future use in the present study and hence, the term publication plan was removed as it was not cited in reference)

ICFs (100%); the identity of the principal investigator/research team present in 57 ICFs (81.42%); information about freedom to participate/withdraw from the study present in 55 ICFs (78.57%); information about maintenance of the confidentiality of records present in 54 ICFs (77.14%); and information on foreseeable risks, discomfort, and inconvenience to participants of the study present in 35 ICFs (50%) [Table/Fig-2].

S. No.	Essential elements of ICF	Total number of ICF; n (%)
1.	Statement of research	09 (12.85%)
2.	Study purpose, methods	70 (100%)
3.	Duration and frequency	12 (17.14%)
4.	Benefits to participants, community	28 (40%)
5.	Foreseeable risks, discomfort, inconvenience	35 (50%)
6.	Confidentiality of records	54 (77.14%)
7.	Payment/reimbursement for participation	28 (40%)
8.	Treatment/compensation for injury	04 (5.71%)
9.	Freedom to participate, withdraw from study	55 (78.57%)
10.	Identity of research team/principal investigator	57 (81.42%)

[Table/Fig-2]: Essential elements of Informed Consent Forms (ICF) (N=70).

However, other necessary elements of the ICF were only partially documented in many ICFs, such as benefits to participants/community present in 28 ICFs (40%); payment/reimbursement for participation present in 28 ICFs (40%); duration, frequency, and methods in the research process present in 12 ICFs (17.14%); treatment/compensation for injury present in 4 ICFs (5.71%); and a statement that the study is research present in 9 ICFs (12.85%) [Table/Fig-2].

Regarding the use of biological samples in the research process, a total of 19 studies were documented to be using biological samples (blood samples and biological tissues) for research. Among these, information about the sharing of data and biological materials was present in 15 ICFs (78.94%), information regarding the provision to safeguard the confidentiality of the biological materials was present in 12 ICFs (63.15%), and information about future use of biological materials was documented in 16 ICFs (84.21%). However, none of the ICFs submitted for the use of biological samples contained information on the period of storage of biological samples. Information on the right to prevent the use of biological samples was present in 3 ICFs (15.78%), and information on postresearch plan/benefit sharing with the participants was present in 15 ICFs (78.95%) [Table/Fig-3].

None of the informed consents of the studies included in the present study/analysis had the intent of commercialisation, as the studies

S. No.	Additional elements of ICF	Number n (%)
1	Period of storage	0
2	Sharing of data and biological materials	15 (78.94)
3	Right to prevent use of biological sample	03 (15.78)
4	Provisions to safeguard confidentiality	12 (63.15)
5	Postresearch plan/benefit sharing	15 (78.95)
6	Current and future use information	16 (84.21)

[Table/Fig-3]: Additional elements of ICF for biological samples (blood, tissue samples) (N=19).

reviewed were academic studies conducted as part of dissertations and individual research, and none of the studies were regulatory clinical trials.

DISCUSSION

The informed consent process extends beyond participants signing the consent forms. Research requires that participants be fully informed about the studies in which they participate. According to the report [21], research participants should be provided information about the anticipated risks, benefits, and alternative treatment options before participating in research.

The term "informed" in informed consent means that all the required information by the participant is provided to them in order to participate in the research study [3]. Five key requirements need to be fulfilled for consent to be valid or for a participant to be truly informed. These include: Information disclosure, competence, voluntariness, comprehension, and consent [22].

Preparing a valid informed consent is one of the fundamental duties of the medical researcher to ensure ethics are followed during the scientific research process. This helps to maintain autonomy, justice, beneficence, and non maleficence for the study participants in the research study. Consent has been described as patients and doctors making informed decisions together [23].

A valid Informed Consent Form (ICF) should mention all required information as per regulatory guidelines to ensure the completeness of the ICF process. In the present study, it is encouraging to note that all the ICFs subjected to analysis contained information about the study purpose and methods (100%). The results of the present study are similar to a study by Anandabaskar N et al., which showed that all the analysed ICFs had information about the nature and purpose of the study [24]. Additionally, information about freedom to participate/withdraw from the study was present in 78.57%, which is similar to the results of a study by Anandbaskar N et al., where nearly 87.8% of analysed ICFs had information about the voluntary nature of participation [24]. Providing information on the ability to participate/withdraw from the study is crucial because without this information, participants may be unaware of their rights, and their autonomy may be overlooked and neglected [20].

Other aspects of the ICF, such as providing information about the identity of the principal investigator, are also important. In the present study, this information was present in 81.42%, which is slightly better compared to the results of a study by Abeysena C et al., where only 54% of analysed ICFs had this information [18]. Providing this information helps the research participant to know about the principal investigator and the team involved in conducting the research. This is especially useful if the research participant faces an emergency situation and needs to contact the principal investigator [20].

In the present study, information on maintaining the confidentiality of patient records was present in 77.14%, compared to 79% of analysed ICFs in the study by Abeysena C et al., [18]. The lack of information about the maintenance of confidentiality can interfere with a patient's confidence in the treating physician. Therefore, it is essential that information about confidentiality be provided to ensure the complete trust of participants in the research process. From an

ethical standpoint, ensuring confidentiality in the research process helps to maintain the basic principles of research ethics [25].

Information on benefits to the participants/community and information about payment/reimbursement for participation were present in only 40% of the submitted ICFs. This compares poorly with the study by Anandabaskar N et al., where 93.9% of ICFs had this information [24]. The absence of this key element in ICFs results in incomplete information being provided to research participants. This can lead to a erosion of trust in the doctor-patient relationship and withdrawal of participants from the research due to an incomplete understanding of research objectives. Additionally, this is important as it protects the rights of the research participant in cases of injury [20,24].

Information about foreseeable risks, discomfort, and inconvenience was present in only 50%, compared to the study by Anandabaskar N et al., where 93.4% of ICFs had information on this aspect [24]. Information on foreseeable risks must be provided to research participants, as in any research, there can be some risks, discomfort, and inconvenience to the participants. Providing incomplete/partial information can interfere with the autonomy of the research participants [20].

Another essential element of the ICFs analysed in the present study was the statement that the study is research. This statement was present in only 12.85% of the analysed ICFs. This is another important element of the ICF, as the Indian Council of Medical Research (ICMR) has clearly stated that the term "research" must be included in all ICFs involving human participants [20]. The present study findings are slightly better than another study by Anandabaskar N et al., where it was found that only 0.9% of the analysed ICFs contained information about the word "research" in the submitted forms [24]. The reason for the findings in the present study is probably because many of the ICFs submitted to the Institutional Ethics Committee had the word "study" instead of the word "research," which is the correct term according to ICMR guidelines.

Regarding information on treatment/compensation for participants, it was noted in only 5.71% of cases, which is a slight improvement compared to the study by Shetty YC et al., where only 1% of analysed ICFs included a statement regarding compensation for participants [26]. This is an area that needs improvement in the submitted ICFs. Failing to provide information on treatment in case of injury can lead to premature withdrawal and negatively impact research results. Therefore, it is crucial to provide information about treatment in case of injury to research participants [20,27].

In terms of additional elements in the ICF, it was observed that none of the studies provided information about the storage of biological samples in the ICF, which contradicts the ICMR guidelines. Furthermore, details about the right to prevent the use of biological samples were present in only 15.78% of the analysed ICFs. This additional element needs to be enhanced in the ICFs submitted to the IEC.

In summary, the main purpose of the present study was to evaluate and provide information about the essential requirements for the ICFs submitted for research studies. Most of the ICFs studied contained all the major information about the essential elements required for completeness, but a few essential elements were missing. Notably, only 12.85% of the ICFs mentioned that the study is research, and information regarding providing treatment compensation in cases of injury was present in only 5.71% of submitted ICFs. A valid and reliable ICF should provide all essential information written in clear and easy-to-read language [28,29].

Adhering to the essential elements of the ICF template provided by ICMR helps the researcher ensure completeness and prevent errors in preparing the ICFs. Following guidelines in the preparation of ICFs helps ensure that consent forms are not merely signed sheets of paper but also act as a multifaceted bridge between the

researcher and participant to ensure ethical principles are followed. This benefits the participant and ensures confidence, compliance, and ethical research standards for the researcher [27]. Informed consent is not just a form; it is an ongoing process that commences early during recruitment, continues throughout the research, and may extend until the research's completion [3].

Furthermore, consent necessitates sufficient participant understanding, which can be improved through measures such as simplifying the language used in consent forms [28,29], utilising audio-video clips and electronic informed consents. This enhances patients' confidence in the research process and guarantees the autonomy and protection of participants in medical research.

Limitation(s)

The limitations of the present study included the lack of analysis of the comprehension and content assessment of the ICFs, which are also important considerations in evaluating ICFs. Future research could focus on these aspects to provide further insights. Another limitation was that only ICFs submitted to a single IEC were analysed in the present study. Studies involving the evaluation of ICFs from multiple IECs would yield more comparable results.

CONCLUSION(S)

An ICF, in its true essence, should provide participants with all possible information related to the research in a clear and transparent manner, including anticipated risks and risks beyond anticipation, along with details about the benefits of enrolling in the research. Only then can the true purpose of the ICF be achieved. A positive aspect of the present study was that many of the ICFs submitted to the IEC contained nearly 50% of the essential elements. However, a few essential elements were still missing in the submitted ICFs. Researchers should keep this in mind while preparing the ICF to ensure the validity of the prepared ICFs.

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