Research Proposal Writing Workshop
Q&A

We thank the professionals Maria Elena Penaranda, Maria Patricia Arbelaez Montoya and Lucelly Lopez, for answering all the questions of the participants.

Day 1

Structure of a Scientific proposal. Identifying the problem, objectives and hypothesis.

1. Highlight the difference between outcomes and outputs in a proposal.

They are almost the same and depends on the requirements of the particular financial organization requesting the grant.

Outputs are more measurable; they are the specific result of an activity or experiment done inanswering the objectives.

Outcomes are more generable and pertains to the objectives in general

2. If I have a new idea for the research proposal, how can I identify the methods for making this research as no one has worked on it before?

To propose a new idea, you have to have some experience in the general field or find someonewho does. You need to have credibility before the agency gives you the funds, they have to have some evidence and reassurance that you or can actually do what you are proposing.

3. Is it a must to have a supervisor in a research project?

Not really but looks good if you have some collaborators.

4. Could there be a logic connection between the problem statement/justification and project objectives? Kindly demonstrate if any.

Yes, they are almost the same even if there is some repetition. We will send some examplesof grant proposal

5. Lots of things are listed to be fulfilled that are clearly presented from Maria, how we are going to be competitive for grant application. One of the challenges for me even for others isfinding an experienced collaborator for application of grants for a particular project call especially for junior researchers? What is your recommendation in this point?

You could apply for a small local grant, if possible, a “training grant” or “seed grant” to do a pilot and develop the techniques needed to do what you want to do and expand the study laterwith a bigger grant.

6. Can justification be included in introduction or is a separate subsection?

Generally, is a separate section or it could also go at the end of the introduction. It depends onthe requirements of the particular financial organization requesting the grant.

7. Should the research hypotheses be provided as well as the research questions or not?

There is no need to have a hypothesis, the most important are clear research questions andobjectives.

8. What format can you recommend for a conceptual framework?
It depends of what it is in the literature. I recommend doing it chronological if possible.

9. What if someone publishes study similar to my ongoing study? Should I continue and compare the results?
Yes, you must continue with your research and compare the results. If the same it corroboratesyour study with others, if different then is important to note if there are differences in methodology, population, location of the study etc.

10. Should the hypothesis we have be developed preferably in the general objective or in the specific objectives?
In studies with only one hypothesis, this may remain in the general objective, but in studies with more than one hypothesis, these could be in the specific objectives.

11. How can the cognitive bias and beliefs of the researcher not affect the formulation of the hypothesis?
By doing a good literature review and basing hypotheses on the evidence found.

12. If I have two main outcomes, do I also have to present two hypotheses in my protocol?
Ideally, there should be one hypothesis per response variable, even if there are two main exposures, one hypothesis per exposure could be presented.

13. Is there any guidance on which organisations fund which thematic areas?
I don't know of a guide for thematic areas, depending on the topic of your project you have to look specifically. For example, organisations that fund studies in diabetes, or tuberculosis, etc. Each topic has to be searched for individually.

14. Do the justifications include bibliographical references?
The justification and problem statement should be referenced to support the data.

15. In qualitative or semi-qualitative research such as pedagogical research where indicators are relative, how can a coherent line of enquiry be established? How can justification, objectives and methodology be correctly related if the parameters are relative?
The coherence between the different elements of the project does not depend on the methods. If the problem is clear and justified, the objectives should aim to answer the problem and the methodology shows how each objective will be achieved.

16. How can one effectively find a research gap? I am asking because on opening the internet, one gets millions of confusing information. How can one then know the research gap?
In cases where there is a lot of information available the recommendation is to take a few years, the most current ones, in many articles they add some aspects of research perspectives, there you can review according to the authors what they believe has not been addressed, carefully review the discussion and conclusions is a strategy that allows you to get an idea of what things have not been addressed. The search terms should be used with all their synonyms.

17. For a Proposal, is the use of Abstract appropriate? Rather should it be "Summary of the Proposal"?
In principle it does not matter, but you should always look at the recommendations of the institution to which the proposal will be submitted.

18. Is it always important to include indicators in the objectives?
Objectives should be verifiable, so they should start with a measurable target.

19. How can you get collaboration especially external ones if you're new in your area of interest?
Ask around, write to people in the field, or do a small project without collaborators and send it to other investigators in the field. Keep asking and generate interest in the field.

20. What is the difference between study aims and study objectives?
None, some call aims to the main objective and objectives the specific objectives.

21. In a research work of an instrument validation... If there is no background or the previous background of the instrument has been poorly conducted, what is placed in the background?
In the background information you should put whatever information you have, even if it is of poor quality, the source of information should be verifiable. Keep in mind that the background information is also related to the problem that the validation is expected to address.

22. It is advisable to use two verbs in a single objective, for example, "to identify and characterise the species morphologically".
It is not advisable, each objective should have only one verb, for example the verb to characterise can have the verb to identify immersed in it, because when you characterise you also identify, the ideal is to look for an objective that encompasses what you want to do.

23. Is it valid to conduct a study that has already been conducted but now in a region where there is no data on this topic? For example, I want to evaluate the complications of a procedure but I already have a study on this topic in one hospital and now I want to evaluate it in another hospital in a distant region with a different population with different socio-cultural characteristics.
It is totally valid, as it generates local information, which is a necessity in many areas.

Literature Research

1. How the unpublished data can be used to justify your research?
As preliminary results, very important to demonstrate you have worked in the field. If is notyour research or your group, then mention it as personal communication.

2. For literature review within how many years of study can be included.
It is not determined because you could be studying a subject discovered or described many years ago. But always make a literature search of the latest published in the field, even rightbefore you send the proposal. The reviewers want to see the latest articles published in the field of study and that you are also updated in the published knowledge.

3. Regarding introduction section, can we cite a review article as a reference for information orwe should cite the primary source of the information?
Please cite the primary source, is difficult for the editor or reviewer to find the real referenceif it is in a review article, not recommended.

4. Can someone come up with the abstract without carrying out research but rather by reviewingthe literature?
Yes, if this is a review article, NOT a research proposal. Reviews are usually requested by some journals when you become known in the field.

5. What alternatives do you know for access to full bibliographies for non-academic institutions with low membership fees?
In google academic you can find many full articles, in pub med and science direct you can also find open access articles. In some cases there is only access to the abstract, there is always the possibility to write to the authors.

6. What is the balance between paid and free open Science bibliography and information sources?
In the different search engines you can have access to complete documents of free access, the percentage depends on the areas and topics, for example using www.pubmed.gov searching the term tuberculosis about 40% of what is published is of free access and in the case of COVD-19 the access to complete documents is about 80%.

7. Taking into account the areas of vacancy or lack of priority for formal research, could the grey literature provide more clarification than scientific knowledge can provide?
In cases where there is little information published in journals, grey literature will always be the best option, as it is useful to understand the context, there is a type of research called operational research. In this type of research institutional reports and reports are the source to identify and support research problems.

8. When we find a useful piece of information in an article that is referenced by another author in another article, which reference do we use: that of the article in which we found the information or that of the other article that is cited in the article we found?
Ideally, you should go to the primary source, so as to verify the complete data and not take someone else's interpretation, and if you do not have access, you should cite the source from which it was taken.

9. What is the recommendation of published articles vs. Theses?
Although theses have reviews, ideally published articles should be used. If the proposed research is a thesis it is important to search all available sources, including theses.

10. What can we justify with references for a topic/project that is new/demonstration project?
In projects that are new it is possible that technical reports or institutional reports may be useful to take figures to justify doing the project, for development projects you can also use statistical data to justify approaching the development and also use data related to similar developments.

11. If the proposal is in present tense, should the literature tense be changed too to present or left in past tense!?
The proposal is written in the present tense, except for the methodology, which is written in the future tense.

Day 2

Justification and Impact

1. What is the difference between impact and justification?

Justification explains the reasons why it is important to carry out the research at the current time and place defined for the study. Impact is the future benefits and goes beyond the location where the research is conducted. It should consider the negative impacts the research may have and how to mitigate them.

2. Based on what criteria do we state the impact?

Impact is established on the basis of the consequences of the research problem on the environment and on the capacity building and knowledge production that the research process can bring about.

3. Can you please elaborate more about negative impacts in order to mitigate them?

Negative impacts should consider how communities will be involved in the research process. It is suggested to see the CIOMS Standards, 2016 on research. Review existing environmental regulations at the research sites and consider intellectual property regulations. Establish framework and confidentiality agreements between the parties involved, including academia, health personnel training and decision-makers.

4. Community problem indicators can help measure the impact?

I suggest reviewing the conceptual framework related to Implementation Research, promoted by TDR.

5. How is "social value" (in research ethics) different/similar to impact?

Social value is similar to impact, but may consider additional processes such as capacity building and social appropriation of knowledge. It is also clarified that many non-impact research studies have social value insofar as they contribute to the generation of knowledge that improves society's understanding of a health problem. In epidemiology, impact research considers demonstrating changes in the epidemiological situation of the problem on which a prevention or control measure is developed.

6. When we talk about impact, do we mean exactly the impact of the research problem or the impact of conducting the research to solve this problem? Or do we mean both conditions?

All research has an impact, understood as future benefits that go beyond the research site. It must consider the negative impacts that the research may have and how to mitigate them. But not all research evaluates the impact of an action; impact evaluations must comply with specific methodological aspects in their design.

7. How would we scale up our impacts from a specific context research project to a more global usability of study results?

The impacts of research can be scaled up if it is published in different media, if it contributes to capacity building, if it develops actions for social appropriation of knowledge and if it provides policy briefs for decision-making.

8. Is intellectual contribution considered as tangible impact?

Intellectual contribution is intangible, but it is protected by law like any tangible asset.

9. I would like you to expand on the impact or contribution to knowledge, what is new and why is it not undergraduate research?

Any research, even undergraduate research, can contribute to knowledge.

The impact is established on the basis of the consequences of the research problem on the environment and on the capacity building and knowledge production that the research process can bring about.

10. Is there a good/recommended way of developing or conceptualizing research impacts or outcomes from justification? How congruent do these two elements of your proposal have to be?
Justification explains the reasons why it is important to carry out the research at the current time and place defined for the study. Impact is the future benefits and goes beyond the location where the research is conducted. It should consider the negative impacts the research may have and how to mitigate them.

Methodology and Structure. Experimental Design

1. Can one substitute conceptual frame world for theoretical frame work?
Yes, sometimes the conceptual approach can be considered synonymous with the theoretical framework.

2. How can you develop a proposal based on systematic review or Meta analyses?
Yes, systematic literature reviews and statistical pooling of the results of different studies are increasingly being carried out as research processes in themselves, which require compliance with all stages of the scientific process such as planning, execution and dissemination, as well as the principles of validity and reproducibility. There are international guidelines for assessing the quality of this type of study.

3. What are the specific differences between pilot and pre-test?
The pilot study includes the testing of all the stages set out in the proposed research methodology, while the pre-test tests only some of them, such as testing the study instrument.

4. I would require further explanation on the difference between a control group in a cross sectional study and a case control study.
The control group in a cross-sectional study is established with those who are negative to the screening test performed at the time of the study. In case-control studies, the control group is independently selected, with defined inclusion and exclusion criteria and explicit bias control.

5. What is the best sampling method that can be used to quasi experimental study?
It should aim to be representative of the population to which the conclusions are to be addressed. If this is not possible, the sample should be comparable before and after the intervention or between the intervention and non-intervention groups.

6. In terms of analysis, where does longitudinal history analysis or event history analysis fit in?
No, historical analyses differ from longitudinal analyses. The former refers to qualitative research, the latter to quantitative epidemiological studies with repeated measurements over time.

7. Is it ethical to use in undergraduate research to say that the sample was taken or selected for convenience?
Yes, it is ethical in that it is not always possible to have representative samples, the important thing is to make it explicit in the formulation of the proposal and in the presentation of the results that the sample was for convenience.

8. What would be the characteristics of a pre-experimental study?

A pre-experimental study could be considered as studies that take place prior to or in the preliminary stages of an experimental study.

9. Differences between protocol, proposal or grant proposal.

They may be synonymous depending on the agency to which they are submitted.

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10. In your experience, do you think there is any predilection for a particular type of study by funding bodies?

It depends on the level of knowledge of the problem, ranging from descriptive to association to intervention.

11. Can a cohort study be retrospective and what recommendations should be taken into account?

Yes, there are retrospective cohort studies, it is required to have exposure information prior to the occurrence of the study outcome.

12. Did you say you can have an interventional study of minors without informed consent?

All studies with minors require informed consent from parents or guardians, and if they are older than 7 years of age, they require the minor's consent.

13. What is the difference between translational and mixed studies?

Translational studies allow evidence from basic research to be translated into clinical practice. Mixed research combines qualitative and quantitative methods.

14. Is it possible to do a mixed study in which it is a descriptive-correlational study, i.e. it answers what happens and why it happens? Or are mixed studies only those that are qualitative + quantitative?

Both study alternatives are possible.

15. When a cluster survey is conducted within an existing demographic surveillance system, is this design explorative or could it be case-control?

A cluster study from surveillance systems is generally an exploratory study that is known as a cross-sectional or analytical study and can also be the basis for capturing cases and controls in an analytical study.

16. Do health ethics committees require the pilot test to have ethical endorsement? Or is it possible to advance the pilot test before requesting health ethics endorsements?

Not every study conducts a pilot test, but if participants are put at risk during its development, it must have prior ethical endorsement.

17. Could you clarify repletion and replicates concepts considering an entire experiment, and treatments?

The number of repetitions of an experiment depends on the margin of random error that is expected to be controlled.

18. Can you explain the difference between a social research project, a social experiment and an intervention project?

Social research is a broad category that encompasses different types of studies. A social experiment is a community intervention that is expected to produce a collective benefit. An intervention project includes different actions that are not always community-based, such as medicines or vaccines.

19. In correlation analyses that do not imply definitive evidence, but do imply a trend or a strong suspicion of a link between events and their consequences (example of the case you presented: obesity and cardiac effects), what could be the indicators that reveal these trends, allowing preventive action to be taken and not waiting for certainty or definitive evidence which can take many years?
Systematic reviews of the literature help to draw conclusions on preventive measures by rating the quality of the evidence, without the need to advance primary studies.

20. In the previous presentation you mentioned that "we have been very weak in bringing scientific knowledge closer to society". It is noted that many practices are far from the scientific evidence already known and require changes in belief systems. How could this picture be improved through research and academia?
Yes, it was answered live, but the conclusion is that any research process must contemplate concrete actions that foster the social appropriation of knowledge, through multiple strategies, including social communication, policy briefs for decision-makers, among others.

21. For the challenge of studying vulnerability and resilience factors, exposure or governance in events such as malaria or tuberculosis, in order to propose policies, which methodological approach would be the most appropriate?
Participatory research involving different social actors, with mixed methods and triangulation of information.

22. If I have 20 or more sampling points in an investigation, how many samples should be taken from the same sampling point to be representative or is one sample from that point sufficient?
The number depends on the condition to be measured and the scale on which it is measured, continuous quantitative measurement variables demand a smaller sample size.

Day 3

Population selection and sample calculation

1. Could you advise on RCTs sample size estimation using effects size from a meta-analysis? Kindly elaborate how we go about it.

It is not appropriate to calculate sample sizes based on the overall effect of the meta-analysis, ideally based on one of the individual studies, if you want to ensure you have a sufficient sample size, my recommendation is to take the RR closest to 1, this will ensure you have a large enough sample size.

For this you can go to www.openepi.com, there on the left hand side go to sample size and select cohort/Clinical Trial, you should have from the study you have chosen the percentage of people positive with the drug being tested (exposed) and with the comparator drug (not exposed). By entering these data you will be able to obtain the sample size.

2. For case-controlled studies (studying rare conditions), how do you decide whether to go with matched or unmatched case controls?

The decision depends on how many people you can control and how much control you want to have over the variables. If you need to have good control over some variables and you have a sufficient number of people to make the choice, you can pair to control for those variables.

3. Is there a recommended sampling procedure for case series or case studies?

There are no methods, these studies are done when there are few cases and usually in a case series all available cases are taken.

4. How do we determine our sample size so as to test the hypothesis intended for the study?

The sample size depends on the objectives, in all cases it is important to review the literature to obtain the values expected in the study to be carried out, for example, in a study in which a prevalence is expected to be estimated, according to previous studies, what percentage is expected to be the prevalence.

5. Is it essential to sample all studies?

It is not essential; it depends on the accessible population and the objectives of the study.

6. What is the difference between Epi Info and Epi-data?

In relation to sample size epi-data has options for more types of studies and in relation to analysis and data collection epi-info offers more alternatives.

7. For the COVID-19 infection, as we do not have previous results available in some areas, how can we do to calculate the sample size?

If this is an aspect that has not been explored anywhere, it is valid to consult experts, because even if there is no published evidence, people who have worked on the pandemic may have useful information and give values of what is expected according to what they have observed in care.

8. Are there studies which do not need to calculate the size? If yes, which ones?

In qualitative studies it is not always necessary to estimate sample size, in quantitative studies where the whole accessible population is to be taken, e.g. patients with a pathology treated in an institution.

9. Can I go to the field and collect samples to complete my sample size if I notice for example two months after that the calculation of my sample size was wrong? Or I should do the complete collection again?

This can be done as long as the same selection method is used, the problem is often that one part of the sample is taken at convenience and the other part randomly.

10. When doing questionnaire, can you make one if you can't find a similar one?

The questionnaire can be entirely researcher-made, as long as it is pilot-tested to verify that it is well-made and that the questions are clear.

11. What is the main difference between confounding variables and endogeneity variables?

Endogenous variables are a slightly broader category and are used in psychological and correlational studies. In epidemiological studies this classification is not used as such, the classifications of exposure, confounding, mediating, etc. depend on the relationship between the exposure variable and the outcome.

12. For the piloting process, is it necessary to meet population sample criteria?

Ideally, the people chosen should have the variability of the population.

13. Is there a standard way of calculating sample size in cross sectional studies?

It depends on the main variable, whether it is qualitative or quantitative, in both cases it is necessary to have an expected number for the study.

14. What percentage of the sample in a universe should be taken for my study to be significant?

It depends on the main variable, whether it is qualitative or quantitative, in both cases it is necessary to have an expected number for the study, the less frequent what is going to be studied the larger the sample size will be, it may even be possible that it is necessary to take all or almost all of the population.

15. In analytic research called cohort, what is the difference between prospective and retrospective cohort?

It has to do with the temporality of the information, i.e. whether the information was collected before the study was designed, e.g. from medical records, almost all retrospective cohort studies are secondary sources, prospective studies imply that the information is collected forward, i.e. after the project is approved.

16. I will like some clarifications on the issue on Sample size. Is this not controlled by various formulars? Is there a general template for the calculation of Sample size? This issue is pertinent in the world of research.

In quantitative research the sample size is calculated to achieve the objective of the study, for example, if you want to estimate a prevalence it is necessary to estimate the sample size that allows estimating that prevalence. It is possible that for example a sample of 200 people is taken and no one is found with the disease, because 2% have it, so it is likely that it would have been necessary to take a much larger sample. The same is true when you want to estimate an OR or RR.

17. How we calculate sample size for effluent and water sample for detection of microorganisms or resistance bacterial.

To estimate it is necessary to know how many microorganisms are expected to be found in the water samples, in addition to this it is necessary to list in the influent water what elements can make the amount of microorganisms change, for example, points of travel, type of influent, times of the day and for these elements that make it change to have an estimated value of microorganisms. To achieve this, the Gpower software available at https://www.psychologie.hhu.de/arbeitsgruppen/allgemeine-psychologie-und-arbeitspsychologie/gpower can be used.

18. In this COVID-19 period, for online data collection like sending the email for data collection. How do we do to master the sample for data collection?

The response rate for these surveys is low, one way to guarantee response is to do short, completely anonymous surveys with closed questions. Hopefully the mail is written to each person telling them about the survey.

19. Concerning sampling frame, it may not be possible to list all the members of a population on a document, what options are there for sampling in this situation? What is the smallest percentage that can be used as sample size?

If the sampling frame is not available from the beginning and random sampling is desired, it can be constructed. With respect to the percentage, there is no magic number, as the sample size depends on the objective and on how frequent is what you want to estimate.

20. For intervention studies, I would like to know if you could expand on the concept of the number needed to treat.

It refers to the number of people who must receive the intervention to prevent an adverse outcome.

21. What is the main way to minimize confounders in a study?

Confounding variables can be controlled for in the study design, creating clusters, in the analysis can be assessed with stratified analysis and can be adjusted for with multivariate analysis.

22. On Sample calculation, how can we calculate sample to fit for pilot study?

In the pilot study it is not necessary to calculate a sample size, people should be chosen who have the variability of the population.

23. How do I get target population and sample size for rare disease such as colon cancer, what is the formula for calculating sample size in this situation?

First you need to know how many patients you can access; it is likely that you will need to take them all.

24. How do you justify budget as your reason for small sample size?

Budget may be a reason for a small sample size especially in cases where very expensive procedures are to be performed, as cost limits the number of people that can be entered.

25. What determines the sample size in a qualitative study?

The design of the study and the way in which data will be collected.

26. Is there a preferred minimum sample size for quantitative studies in order to have significant statistical findings?

There is no minimum number, no magic number.

27. What recommendations would you give for sample calculation in a protocol fidelity study (e.g. HTA management in rural areas)?

If the study is going to be done at the level of the institution, first you should know how many institutions are available, often there are few, I have seen that there can be about 5, depending on the size of the territory, in these cases it is recommended to take them all, if it is not possible to take them all, it would be necessary to have the percentage of institutions that expect to have fidelity to the protocol, If in the study it is necessary to interview patients or review medical records, it is necessary to have an approximate number of patients or records, depending on this number it is decided whether it is necessary to calculate the sample size and to do so it is necessary to have the percentage of fidelity that is expected, the percentage that is expected can be taken from similar studies.

28. For an exploratory design where the estimates are not estimated, how can you establish prior criteria for sample sizes?

You can ask experts, or you can do a pilot test.

29. What specific recommendations can you give us for calculating the sample size for concordance (kappa) in paired samples (because they are paired bodies)?

In epi-dat there is an option for this sample size calculation (concordance studies), for this it is necessary to have an expected Kappa and the proportion of positive classifications of the first and second assessor from previous studies or expert consultation.

30. I have a question regarding correlational studies, can they be with qualitative variables, what is the statistical analysis to be performed?

Correlational studies can be with qualitative variables, initially the analysis is with chi-square test and then factor analysis or principal component analysis can be done.

31. I would like you to explain, in the procedure of estimating a sample size, what is meant by and how the study design effect affects the sample size estimation.

The design effect is used when sample sizes are to be calculated for stratified studies, its value depends on the variability between strata, a value of 1 is for random sampling, as this value increases so does the sample size.

32. Is it possible to use data collection instruments from other studies?

Yes, as long as they are acknowledged and permission is obtained if necessary.

33. In non-probability sampling, is the population important or not?

It is always important to define the population well, it may not be necessary to have the number.

34. Could you select and point to the statistical test in the variables operation table? At this point, sometimes I am a bit hesitant to choose the best statistical test, do you have any guidance for this?

In the following link you will find an article with a test guide according to the question and the variables, it is a bit old but still valid https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3116565/

35. What sources do you recommend for the prevalence query to be useful when calculating the sample?

Articles related to the topic, if possible from the same and similar populations.

Ethical consideration

1. About ethics considerations, can you please clarify what kind of issues we must always include?

Ethical considerations are important if you are studying people or animals as subjects to thestudy. There is an ethical review requested by the organization giving the funding. Most universities and governments have an ethical committee or the agency will indicate which one to use.

2. Should the "precautionary principle" be included in the ethical considerations?

This principle is ethical and it is very important to make it explicit in epidemiological research when there is no solid scientific evidence of harm when there is a presumed risk to the population.

3. Maria Elena said we should ask for ethical consent for any human specimen. Does a retrospective study using isolate (bacteria) from human sample need an ethical approval?

When working with data and samples that have already been collected, approval must be obtained from the ethics committee and the institution that holds the data and sample, but informed consent is not required.

4. What is the scope of ethics committees to authorise the use of samples or personal data in future studies?

Generally the proposal has to be reviewed again by the ethics committee. It may say that the database has already been approved by the ethics committee for another project, but it depends on the funding agency and the focus of the new study.

5. Are there different and/or particular ethical considerations according to different research study designs?
Yes, each study has different ethical considerations depending on the subjects. Human studies are more rigorous than animal studies. They even sometimes ask for consideration that they are not harming the environment. Generally, though, there is an ethics committee that considers all cases. The funding organisation will have their requirements and will let you know what is needed and whether they recommend a particular committee or whether you should use your institution's or country's committee.

6. What is the most common ethical issue when writing a research proposal?
Not sure, there are many different issues. Probably one of the main issues are the studies with human subjects.

7. What is the accepted percentage of concordance in the state of the art of an article or the whole paper?
I am not sure if I understand the question. Each article must be completely different from another, it must be written by the author from the beginning. If you are referring to the results, they may or may not coincide with what has already been published, as long as the data are reliable and support the results and conclusions.

8. Is it fraud if I have a database of a research work done, and I use that database for another work?
It is not fraud, you should indicate that the database to be used already exists and has been used for other studies.

9. Can you use similar tables or follow a similar structure from a previous article, but with your own data of course? Or is that also plagiarism? And how would you reference it?
Yes, you can use similar tables and figures as other articles, is actually recommended since the table format published were already accepted by that journal.

10. Is it ethical to give transport refunds to study participants because you fear they may not show up next and that may affect your sample size?
Yes, it is ethical to remunerate your students or people helping with the study. The amount of funds required can be added in the budget.

11. Many funders are encouraging researchers to share data. If the data is shared between 2 or 3 organizations, does that amount to plagiarism?
It is not plagiarism if the publications are different and not duplicated. Several organizations can use the same data base for different studies and publish different analysis and interpretations. What is not allowed is to repeat what is already published, it can be referenced and the results mentioned but it is plagiarism if the same interpretations are already published and you publish them again.

12. Ethics seems to have a temporal and cultural evolution. What is ethically unacceptable today was not in the past. What standards do you recommend reviewing for an updated ethical perspective?
We recommend reviewing the latest update of the Helsinki declaration on research ethics and the latest version of the CIOMS guidelines. PAHO has an ethics committee that supports the Americas region but I am not aware of an international committee.
There is free training on the NIH and CIDI network of ethics courses that can be taken.

13. A research study in which I participate publishes an article and I am listed as a co-author. If other journals ask me to submit it, do I have to seek permission from the company that owns the research?
No. You cannot publish the same article again, even if you do not appear as co-author. It is also never allowed to publish the same data twice.

14. Regarding self-plagiarism, what would happen if by analyzing the data in a different way, you get new knowledge?

Hay algunas investigaciones que permiten generar diferentes artículos, por lo que algunas veces se cita el artículo previo para definir la metodología, por lo que es válido en caso de que se tengan otros hallazgos publicarlos.

15. Can members from the funding organization be among the authors?

Not recommended, it represents a conflict of interest.

Day 4

Chronogram and Budget

1. Are failures in the formulation of the budget, due to over or under budgeting, judged as an error in the formulation of the project that leads to its rejection, even if there is consistency between problems, objectives and activities?
It depends on the reviewers, if the error in the budget is too big you can lose points or be rejected, it also depends on the agency. If you have a good project you may be asked to revise your costs and adjust your budget. Generally proposals accumulate points and the averages in each area are added up, a bad budget can take away points, but not be rejected altogether.

2. What do you do if you spend less than your budget or if you transfer savings from one item to another item?
Funds can me transfer from one item to another but is limited by the funding agency. Generally, you can transfer 20% of the funds from one to the other. If you have left over and finished your project, you have to return the funds to de agency.

3. How to search for institutions that invest in research worldwide, is there a search engine or programme to do so?
I am not aware of any way to search, I think that each institution should investigate separately, examples of international organisations are the Bill and Melinda Gates Foundation, Kellogg, Ford, Wellcome Trust, American Society for Microbiology (ASM), MacArthur Foundation, Rockefeller Foundation, the TDR on diseases of poverty, but you would have to look on the pages of these entities for the calls for proposals..

4. As the main researcher, should I also budget for my payment as it is done for the research assistants?
Yes, it is important to budget your salary and for any other assistants helping in the study. But each funding agency has its regulations, some do not accept a full salary for the principal investigator, only a partial supplement and some do no accept any salaries. You have to check with each agency and their guidelines.

5. Do funding agencies consider exchange rates and inflation rates especially in unstable economies?
Yes, they do and will allow it, but only a small percentage, since they already allocated their funds to different projects. It is better if you could anticipate the inflation and add it to your budget from the beginning.

6. Does the budget always have to be in dollars and can you consider a contingency percentage?
Generally the budget is in US dollars, but it can be in euros or pounds or the currency of the local country, depending on the agency's guidelines. It is always good to consider and include in the budget 10-15% for contingencies.

7. Is there a range for calculating expenses for hiring assistants in laboratories?
Assistants or any other person are generally paid according to what they earn at the moment or an equitable salary. You should not ask for figures higher than the reality of the country. Partial supplements to their salary or honoraria or per diems can also be requested.

8. Can we apply for funding using a small private company as the host institution?
Is possible, but funding agencies prefer if they are non-for-profit companies, many have that regulation.

9. When there are activities that are done in collaboration with another research group, but they are not going to generate an expense for my group because it would be covered by the collaborator, does that

also have to be listed as zero cost? I understood that they should be contemplated, but it is not clear to me how.
If they are put in the budget in a column parallel to your expenses and the cost is indicated, but as it goes in a separate column it does not add to your budget. It adds weight to your proposal if you show that you have funding from partners.

Abstract and a good title

1. Is it acceptable to use abbreviations in abstract or title?
No, unless they are well known and need no explanation such as DNA, RNA, PCR, WHO, Covid.

2. Is it compulsory to include keywords in the abstract, and are keywords counted as part of the 250 words of the abstract?
Yes, it is a good idea to include keywords in the abstract as it is read separately from the rest of the document and when an article is published the abstract is published separately and they are important for the literature search.

3. Abbreviation can only be use for known words?
Not necessarily, they don't have to be known, as long as you explain what they mean before the abbreviation it is acceptable.

4. What should be the acceptable word counts in the Title?
Not too long and not too short but should describe your main objective. One or two sentences, but I don't know if there are word limitations.

5. Can keywords be use for literature search? How can I choose the keywords?
Yes, key words are essential for literature search. They should have the topic you are studying: disease, agent, methods, object of the study, condition of patients, kind of epidemiological study, subjects, etc. When publishing your article, the journal will indicate which key words you should include but you can add more if needed

6. Is it acceptable to describe the place and the years of the study in the title?
Only if it is essential and unique to the study, if the findings are going to be unique to the place and generally in epidemiological studies you want to add the place and year in general terms, don't have to make it very long.