



SPIRIT 2013 Checklist: Recommended items to address in a clinical trial protocol and related documents\*

Section/item	Item No	Description
<b>Administrative information</b>		
Title	1	Descriptive title identifying the study design, population, interventions, and, if applicable, trial acronym ( <b>Page 1</b> )
Trial registration	2a	Trial identifier and registry name. If not yet registered, name of intended registry ( <b>Page 6</b> )
	2b	All items from the World Health Organization Trial Registration Data Set ( <b>Page 6</b> )
Protocol version	3	Date and version identifier ( <b>Suppl. File 1</b> )
Funding	4	Sources and types of financial, material, and other support ( <b>Page 18</b> )
Roles and responsibilities	5a	Names, affiliations, and roles of protocol contributors ( <b>Page 18</b> )
	5b	Name and contact information for the trial sponsor ( <b>Suppl. File 1</b> )
	5c	Role of study sponsor and funders, if any, in study design; collection, management, analysis, and interpretation of data; writing of the report; and the decision to submit the report for publication, including whether they have ultimate authority over any of these activities ( <b>Suppl. File 1</b> )
	5d	Composition, roles, and responsibilities of the coordinating centre, steering committee, endpoint adjudication committee, data management team, and other individuals overseeing trial, if applicable (see Item 21a for data monitoring committee) ( <b>Suppl. File 1</b> )
<b>Introduction</b>		
Background and rationale	6a	Description of research question and justification for undertaking the trial, including summary of relevant studies (published and unpublished) examining benefits and harms for each intervention ( <b>Page 4-5</b> )
	6b	Explanation for choice of comparators ( <b>Page 4-5</b> )
Objectives	7	Specific objectives or hypotheses ( <b>Page 6</b> )

Trial design 8 Description of trial design including type of trial (eg, parallel group, crossover, factorial, single group), allocation ratio, and framework (eg, superiority, equivalence, noninferiority, exploratory) (Page 6)

### Methods: Participants, interventions, and outcomes

Study setting 9 Description of study settings (eg, community clinic, academic hospital) and list of countries where data will be collected. Reference to where list of study sites can be obtained (Page 7)

Eligibility criteria 10 Inclusion and exclusion criteria for participants. If applicable, eligibility criteria for study centres and individuals who will perform the interventions (eg, surgeons, psychotherapists) (Page 7)

Interventions 11a Interventions for each group with sufficient detail to allow replication, including how and when they will be administered (Page 8)

11b Criteria for discontinuing or modifying allocated interventions for a given trial participant (eg, drug dose change in response to harms, participant request, or improving/worsening disease) (Page 8)

11c Strategies to improve adherence to intervention protocols, and any procedures for monitoring adherence (eg, drug tablet return, laboratory tests) (Page 10)

11d Relevant concomitant care and interventions that are permitted or prohibited during the trial (Page 8)

Outcomes 12 Primary, secondary, and other outcomes, including the specific measurement variable (eg, systolic blood pressure), analysis metric (eg, change from baseline, final value, time to event), method of aggregation (eg, median, proportion), and time point for each outcome. Explanation of the clinical relevance of chosen efficacy and harm outcomes is strongly recommended (Page 9)

Participant timeline 13 Time schedule of enrolment, interventions (including any run-ins and washouts), assessments, and visits for participants. A schematic diagram is highly recommended (see Figure) (Page 9-10)

Sample size 14 Estimated number of participants needed to achieve study objectives and how it was determined, including clinical and statistical assumptions supporting any sample size calculations (Page 10)

Recruitment 15 Strategies for achieving adequate participant enrolment to reach target sample size (Page 10)

**Methods: Assignment of interventions (for controlled trials)**

## Allocation:

Sequence generation	16a	Method of generating the allocation sequence (eg, computer-generated random numbers), and list of any factors for stratification. To reduce predictability of a random sequence, details of any planned restriction (eg, blocking) should be provided in a separate document that is unavailable to those who enrol participants or assign interventions <b>(Page 10)</b>
Allocation concealment mechanism	16b	Mechanism of implementing the allocation sequence (eg, central telephone; sequentially numbered, opaque, sealed envelopes), describing any steps to conceal the sequence until interventions are assigned <b>(Page 10)</b>
Implementation	16c	Who will generate the allocation sequence, who will enrol participants, and who will assign participants to interventions <b>(Page 10)</b>
Blinding (masking)	17a	Who will be blinded after assignment to interventions (eg, trial participants, care providers, outcome assessors, data analysts), and how <b>(Page 11)</b>
	17b	If blinded, circumstances under which unblinding is permissible, and procedure for revealing a participant's allocated intervention during the trial <b>(Page 11)</b>

**Methods: Data collection, management, and analysis**

Data collection methods	18a	Plans for assessment and collection of outcome, baseline, and other trial data, including any related processes to promote data quality (eg, duplicate measurements, training of assessors) and a description of study instruments (eg, questionnaires, laboratory tests) along with their reliability and validity, if known. Reference to where data collection forms can be found, if not in the protocol <b>(Page 11)</b>
	18b	Plans to promote participant retention and complete follow-up, including list of any outcome data to be collected for participants who discontinue or deviate from intervention protocols <b>(Page 11)</b>
Data management	19	Plans for data entry, coding, security, and storage, including any related processes to promote data quality (eg, double data entry; range checks for data values). Reference to where details of data management procedures can be found, if not in protocol <b>(Page 11)</b>
Statistical methods	20a	Statistical methods for analysing primary and secondary outcomes. Reference to where other details of the statistical analysis plan can be found, if not in the protocol <b>(Page 11)</b>
	20b	Methods for any additional analyses (eg, subgroup and adjusted analyses) <b>(Page 11)</b>

- 20c Definition of analysis population relating to protocol non-adherence (eg, as randomised analysis), and any statistical methods to handle missing data (eg, multiple imputation) **(Page 11-12)**

### Methods: Monitoring

- Data monitoring 21a Composition of data monitoring committee (DMC); summary of its role and reporting structure; statement of whether it is independent from the sponsor and competing interests; and reference to where further details about its charter can be found, if not in the protocol. Alternatively, explanation of why a DMC is not needed **(Suppl. File 1)**
- 21b Description of any interim analyses and stopping guidelines, including who will have access to these interim results and make the final decision to terminate the trial **(Suppl. File 1)**
- Harms 22 Plans for collecting, assessing, reporting, and managing solicited and spontaneously reported adverse events and other unintended effects of trial interventions or trial conduct **(Suppl. File 1)**
- Auditing 23 Frequency and procedures for auditing trial conduct, if any, and whether the process will be independent from investigators and the sponsor **(Suppl. File 1)**

### Ethics and dissemination

- Research ethics approval 24 Plans for seeking research ethics committee/institutional review board (REC/IRB) approval **(Page 18)**
- Protocol amendments 25 Plans for communicating important protocol modifications (eg, changes to eligibility criteria, outcomes, analyses) to relevant parties (eg, investigators, REC/IRBs, trial participants, trial registries, journals, regulators) **(Suppl. File 1)**
- Consent or assent 26a Who will obtain informed consent or assent from potential trial participants or authorised surrogates, and how (Item 32) **(Page 10)**
- 26b Additional consent provisions for collection and use of participant data and biological specimens in ancillary studies **(Page 18)**
- Confidentiality 27 How personal information about potential and enrolled participants will be collected, shared, and maintained in order to protect confidentiality before, during, and after the trial **(Page 11)**
- Declaration of interests 28 Financial and other competing interests for principal investigators for the overall trial and each study site **(Page 18)**
- Access to data 29 Statement of who will have access to the final trial dataset, and disclosure of contractual agreements that limit such access for investigators **(Page 18)**
- Ancillary and post-trial care 30 Provisions, if any, for ancillary and post-trial care, and for compensation to those who suffer harm from trial participation **(N/A)**

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|----------------------|-----|--|
| Dissemination policy | 31a | Plans for investigators and sponsor to communicate trial results to participants, healthcare professionals, the public, and other relevant groups (eg, via publication, reporting in results databases, or other data sharing arrangements), including any publication restrictions <b>(Page 12)</b> |
|                      | 31b | Authorship eligibility guidelines and any intended use of professional writers <b>(Suppl. File 1)</b>  |
|                      | 31c | Plans, if any, for granting public access to the full protocol, participant-level dataset, and statistical code <b>(Suppl. File 1)</b>   |

### Appendices

- |                            |    |   |
|----------------------------|----|---|
| Informed consent materials | 32 | Model consent form and other related documentation given to participants and authorised surrogates <b>(Suppl. File 1)</b>   |
| Biological specimens       | 33 | Plans for collection, laboratory evaluation, and storage of biological specimens for genetic or molecular analysis in the current trial and for future use in ancillary studies, if applicable <b>(Pages 12-14)</b> |

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\*It is strongly recommended that this checklist be read in conjunction with the SPIRIT 2013 Explanation & Elaboration for important clarification on the items. Amendments to the protocol should be tracked and dated. The SPIRIT checklist is copyrighted by the SPIRIT Group under the Creative Commons "[Attribution-NonCommercial-NoDerivs 3.0 Unported](https://creativecommons.org/licenses/by-nc-nd/3.0/)" license.