



DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA-2018-N-0049]

Complex Innovative Designs Pilot Meeting Program

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The sixth iteration of the Prescription Drug User Fee Act (PDUFA VI), incorporated as part of the FDA Reauthorization Act of 2017 (FDARA), highlights the goal of facilitating and advancing the use of complex adaptive, Bayesian, and other novel clinical trial designs. The Food and Drug Administration (FDA or Agency) is announcing a pilot meeting program that affords sponsors who are selected the opportunity to meet with Agency staff to discuss the use of complex innovative trial design (CID) approaches in medical product development. Meetings under the pilot program will be conducted by FDA's Center for Drug Evaluation and Research (CDER) or Center for Biologics Evaluation and Research (CBER) during fiscal years 2018 to 2022. This pilot meeting program fulfills FDA's commitment under PDUFA VI. For each sponsor whose meeting request is granted as part of the pilot, FDA will grant two meetings between the sponsor and CDER or CBER that will provide an opportunity for medical product developers and FDA to discuss regulatory approaches for CID. To promote innovation in this area, trial designs developed through the pilot meeting program may be presented by FDA (e.g., in a guidance or public workshop) as case studies, including trial designs for drugs that have not yet been approved by FDA.

DATES: The CID pilot meeting program will proceed from the date of this notice through September 30, 2022. Sponsors may submit meeting requests for the pilot program through June

30, 2022. Comments about this pilot meeting program can be submitted until [INSERT DATE 30 DAYS AFTER PUBLICATION IN THE *FEDERAL REGISTER*]. Please note that late, untimely filed comments will not be considered.

ADDRESSES: You may submit comments about the CID pilot meetings program as follows:

Electronic Submissions

Submit electronic comments in the following way:

- Federal eRulemaking Portal: <https://www.regulations.gov>. Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to <https://www.regulations.gov> will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on <https://www.regulations.gov>.
- If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see "Written/Paper Submissions" and "Instructions").

Written/Paper Submissions

Submit written/paper submissions as follows:

- Mail/Hand delivery/Courier (for written/paper submissions): Dockets Management Staff (HFA-305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.
- For written/paper comments submitted to the Dockets Management Staff, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in "Instructions."

Instructions: All submissions received must include the Docket No. FDA-2018-N-0049 for "Complex Innovative Designs Pilot Meeting Program." Received comments will be placed in the docket and, except for those submitted as "Confidential Submissions," publicly viewable at <https://www.regulations.gov> or at the Dockets Management Staff between 9 a.m. and 4 p.m., Monday through Friday.

- Confidential Submissions--To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states "THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION." The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on <https://www.regulations.gov>. Submit both copies to the Dockets Management Staff. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as "confidential."

Any information marked as "confidential" will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: <https://www.gpo.gov/fdsys/pkg/FR-2015-09-18/pdf/2015-23389.pdf>.

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to <https://www.regulations.gov> and insert the docket number, found in brackets in the heading of this document, into the "Search" box and follow the prompts and/or go to the Dockets Management Staff, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

FOR FURTHER INFORMATION CONTACT: *CDER:* Scott Goldie, Center for Drug Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 21, Rm 3557, Silver Spring, MD 20993-0002, 301-796-2055, Scott.Goldie@fda.hhs.gov, with the subject line "CID Pilot Meeting Program for CDER."

CBER: Christopher Egelebo, Center for Biologics Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 71, Rm 1043, Silver Spring, MD 20993-0002, 240-402-8625, Christopher.Egelebo@fda.hhs.gov, with the subject line "CID Pilot Meeting Program for CBER."

SUPPLEMENTARY INFORMATION:

I. Background

In connection with the sixth iteration of PDUFA, FDA committed to conduct a pilot program for highly innovative trial designs for which analytically derived properties (e.g., Type I error) may not be feasible, and simulations are necessary to determine trial operating

characteristics. The Agency also committed to issue a *Federal Register* Notice announcing the pilot program, clarifying pilot program eligibility, and describing the proposal submission and selection process (see PDUFA Reauthorization Performance Goals and Procedures Fiscal Years 2018 Through 2022, section I.J.4.b.

(<https://www.fda.gov/downloads/ForIndustry/UserFees/PrescriptionDrugUserFee/UCM511438.pdf>)).

FDA is announcing this pilot meeting program to satisfy the above-mentioned commitments. The goal of the early meeting discussions granted under this pilot program is to provide advice on how a proposed CID approach can be used in a specific drug development program and to promote innovation by allowing FDA to publicly present the trial designs considered through the pilot program, including trial designs for drugs that have not yet been approved by FDA. FDA has committed to accepting up to two meeting requests quarterly each fiscal year.

Meeting requests may be submitted on a rolling basis; however, only those requests received by the quarterly closing date, which will be the last day of each quarter of the fiscal year (i.e., December 31, March 31, June 30, September 30), will be considered for selection in the following quarter. Within 45 days after the quarterly closing date, FDA will review the submissions, select up to four meeting requests each quarter, two primary and two alternates to proceed to disclosure discussions, and notify sponsors of their status. If FDA and the sponsor of a meeting request selected as primary are unable to reach an agreement on the elements for public disclosure, the Agency will proceed with an alternate submission. When disclosure discussions are complete, FDA will grant up to two meetings per quarter under the pilot.

The meetings granted will include an initial and followup meeting on the same CID and medical product within the span of approximately 120 days. Being granted a meeting as part of the pilot meeting program does not mean that the proposed CID is appropriate for regulatory decision making. Likewise, being denied a meeting as part of the pilot meeting program does not mean that the proposed CID is unacceptable for regulatory decision making. Sponsors who do not participate in the pilot program may seek Agency interaction on their clinical development plan through existing channels (e.g., Type C meeting requests, Critical Path Innovation Meetings).

The listed eligibility factors and procedures outlined in this *Federal Register* notice reflect the current thinking at the time of publication. Processes may be revised as this pilot program evolves and will be communicated on the CID Pilot Meeting Program Website: <https://www.fda.gov/Drugs/DevelopmentApprovalProcess/DevelopmentResources/UCM617212.htm>.

II. Eligibility and Selection for Participation in the CID Pilot Meeting Program

To be eligible for the CID Pilot Meeting Program:

- The sponsor must have a pre-IND or IND number for the medical product(s) included in the CID proposal with the intent of implementing the CID in the pilot program application.
- The proposed CID is intended to provide substantial evidence of effectiveness to support regulatory approval of the medical product.
- The trial is not a first in human study, and there is sufficient clinical information available to inform the proposed CID.

- The sponsor and FDA are able to reach agreement on the trial design information to be publicly disclosed.

Recognizing that the FDA will learn both from the number and types of submissions received, FDA welcomes submissions related to any eligible CID. However, given that the Agency expects to grant up to two meeting requests per quarter as part of the pilot program, the Agency currently intends to select requests based on the following:

- Innovative features of the trial design, particularly if the innovation may provide advantages over alternative approaches. Initial priority will be given to trial designs for which analytically derived properties (e.g., type I error) may not be feasible and simulations are necessary to determine operating characteristics.
- Therapeutic need (i.e., therapies being developed for use in disease areas where there are no or limited treatments).

III. Procedures and Submission Information

A. General Information

The CID pilot meeting program will be jointly administered by the following centers:

- CDER: CDER's Office of Biostatistics, in the Office of Translational Sciences, which is the point of contact for all communications for CDER products.
- CBER: CBER's Office of Biostatistics and Epidemiology, which is the point of contact for all communications for CBER products.

B. How to Submit a Meeting Request and Meeting Package

Meeting requests should be submitted electronically to the relevant application (i.e., pre-IND, IND) with "CID Pilot Program Meeting Request for CDER" (CDER applications) or "CID Pilot Program Meeting Request for CBER" (CBER applications) in the subject line. Information

about providing regulatory submissions in electronic format is available at:

<https://www.fda.gov/Drugs/DevelopmentApprovalProcess/FormsSubmissionRequirements/%20ElectronicSubmissions/ucm153574.htm>.

C. Content and Format of the Meeting Request

Include the following information in the meeting request (25 pages or less):

1. Product name.
2. Application number.
3. Proposed indication(s) or context of product development.
4. A background section that includes a brief history of the development program and the status of product development.
5. Trial objectives.
6. Brief rationale for the choice of the proposed CID.
7. Description of study design, including study schema with treatment arms, randomization strategy, and endpoints.
8. Key features of the statistical analysis plan including, but not limited to, the analyses, models, analysis population, approach to handle missing data, and decision criteria.

These should include aspects of the design that may be modified and the corresponding rules for decisions, if adaptive.
9. Simulation plan, including the set of parameter configurations that will be used for the scenarios to be simulated and preliminary evaluation and discussion of design operating characteristics. Preliminary simulation results of the operating characteristics (e.g., type 1 error, power, etc.) should include several hypothetical, plausible scenarios.

10. Elements of the study design that the sponsor considers non-disclosable, along with a rationale for exclusion.
11. A list of issues for discussion with the Agency about the specific CID proposed approach for the applicable drug development program and a summarized list of next steps in the regulatory decision making process along with any supporting data relevant to the discussion.

D. Content and Format of the Meeting Information Package

Sponsors whose meeting requests are granted as part of the pilot program should submit a meeting information package electronically with "CID Pilot Program Meeting Package for CDER" (CDER applications) or "CID Pilot Program Meeting Package for CBER" (CBER applications) in the subject line no later than 30 days before the initial meeting and no later than 90 days before the followup meeting.

The initial meeting package should include the following information:

1. Product name.
2. Application number.
3. Proposed agenda, including estimated times needed for discussion of each agenda item.
4. List of questions for discussion along with a brief summary of each question that explains the need or context for the question.
5. Detailed description of the statistical methodology including, but not limited to, the analyses, models, analysis population, approach to handle missing data, and decision criteria.

6. Detailed simulation report that includes the following:
 - a. Example trials in which a small number of hypothetical trials are described with different conclusions.
 - b. Description of the set of parameter configurations used for the simulation scenarios, including a justification of the adequacy of the choices.
 - c. Simulation results detailing the simulated type I error probability and power under various scenarios.
 - d. Simulation code that is readable, adequately commented on, and includes the random seeds. The code should preferably be written in widely-used programming languages such as R or SAS to facilitate the simulation review.
7. Overall conclusions including a brief summary of the simulated operating characteristics based on design features and analyses and a discussion of the utility of the CID given the simulation results.

The followup meeting package should include the following information:

1. Product name.
2. Application number.
3. Updated background section that includes a brief history of the development program and the status of product development and clinical data to date, if applicable.
4. Proposed agenda, including estimated times needed for discussion of each agenda item.
5. List of questions for discussion with a brief summary of each question that explains the need or context for the question.
6. Updated programs/shells for simulations, if applicable.
7. Summary of new information that is available to support discussions.

E. Meeting Summaries

A meeting summary will be sent to the sponsor within 60 days of each meeting.

F. Disclosure

To promote innovation and to provide better clarity on the acceptance of different types of trial designs, trial designs developed through the pilot program may be presented by FDA (e.g., in a guidance or public workshop) as case studies, including while the drug studied in the trial has not yet been approved by FDA. Accordingly, before FDA grants the initial meeting under this pilot program, FDA and the sponsor must agree on the information that FDA may include in these public case studies. The specific information to be disclosed will depend on the content of each application, but FDA intends to focus on information that is beneficial to advancing the use of CIDs, and those elements relevant to the understanding of the CID and its potential use in a clinical trial intended to support regulatory approval. Generally, the Agency does not anticipate that the case studies will need to include information such as molecular structure, the sponsor's name, product name, subject-level data, recruitment strategies, adverse events, or a complete description of study eligibility criteria. FDA does anticipate that the following information will generally need to be disclosed to facilitate discussion of the proposed CID: study endpoints to the degree necessary to describe the design (e.g., overall survival in the context of a time to event analysis), target population, sample size and power determination, null and alternative hypotheses, key operating characteristics, assumed rates for dichotomous outcomes or mean and variance for continuous outcomes, simulation objectives, simulation scenarios, assumptions (e.g., dropout rate, rate of enrollment), modeling characteristics, critical study design characteristics including any adaptive elements (e.g., decision criteria to add/drop a

dose, etc.), and, if a Bayesian approach, how Bayesian methods are being used for design and/or analysis purposes.

It is important that sponsors wishing to participate in the pilot program identify aspects of the design and analysis that they consider non-disclosable and provide a rationale for withholding the information. Participation in the pilot program, including any agreement on information disclosure, will be voluntary and at the discretion of the sponsor. Sponsors that do not wish to make such disclosures may seek regulatory input through other existing channels.

IV. Paperwork Reduction Act of 1995

This notice refers to collections of information that are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501-3520). The collection of information resulting from formal meetings between sponsors or applicants and FDA has been approved under OMB control number 0910-0429. The collection of information in 21 CFR part 312 (investigational new drug applications) has been approved under OMB control number 0910-0014.

Dated: August 24, 2018.

Leslie Kux,

Associate Commissioner for Policy.

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