FDA-Industry PDUFA VI Reauthorization Meeting – Regulatory Decision Tools Subgroup
November 18, 2015, 12:30pm-2:30pm
FDA White Oak Campus, Silver Spring, MD
Building 51, Room 1215

Purpose

To discuss in detail FDA and Industry proposals on innovative clinical trial designs and model-informed drug development

Participants

FDA		Industry	
Sara Eggers	CDER	Beatrice Biebuyck	BIO (Alexion)
Joe Franklin	OC	Cartier Esham	BIO
Laura Lee Johnson	CDER	Jeffrey Francer	PhRMA
Chris Joneckis	CBER	Sandra Milligan	PhRMA (Merck)
Lisa LaVange	CDER	Paula Rinaldi	PhRMA (Novartis)
Diane Maloney	CBER	Michelle Rohrer	BIO (Roche Genentech)
Theresa Mullin	CDER	Mark Taisey	PhRMA (Amgen)
Mary Parks	CDER		
Mike Pacanowski	CDER		

Discussion of Innovative Clinical Trial Design and Model-Informed Drug Development (MIDD)

On November 18, 2015, FDA and Industry further discussed a set of FDA and Industry proposed enhancements in PDUFA VI related to innovative clinical trial designs and statistical approaches, which were initially discussed on October 14, 2015. FDA's proposed enhancements related to Model-Informed Drug Development were also presented and discussed.

Innovative Clinical Trial Design

FDA and Industry continued discussion of proposed enhancements intended to advance simulation approaches that can support innovation and regulatory evaluation of novel complex clinical trial designs and clarify for sponsors FDA expectations for simulations needed to adequately characterize the performance of these complex trials. FDA and Industry discussed the approaches proposed by both parties that included public workshop, guidance development, and development of internal FDA Manuals of Policy and Procedures (MAPPs) or Standard Operating Policies and Procedures (SOPPs). In response to Industry's stated desire for more explicit processes for FDA to review and discuss a sponsor's use of innovative clinical trial designs, FDA proposed conducting a pilot program for highly innovative trial designs for which simulations are necessary to determine trial operating characteristics. The pilot program would include a limited number of investigational new drug (IND) applications and involve dedicated meetings with the sponsor to discuss FDA expectations and review of simulations.

FDA also noted the need to develop the specialized staff capacity to enable processes to facilitate use of these complex innovative designs.

Model-Informed Drug Development

FDA and Industry next discussed proposed enhancements specific to the development and application of pharmaco-statistical models derived from preclinical and clinical data sources, which FDA termed "model-informed drug development" (MIDD) approaches. FDA noted that such approaches can be used to inform regulatory decision-making, for example, patient selection in clinical trials, individualized dosing for specific populations, or the need for post-marketing studies. FDA stated that the concept and proposals related to MIDD were incorporated into Industry's proposal on innovative clinical trial designs, but suggested that these areas of modeling and simulation be considered separately from the simulation approaches used to determine operating characteristics for complex clinical trials that were discussed in the innovative clinical trial design proposal.

FDA and Industry discussed the approaches proposed by both parties, which included public workshops and development of guidance for internal staff and industry on MIDD. Similar to the innovative clinical trial design proposal, FDA proposed conducting a pilot program for MIDD approaches. The pilot program would include a limited number of investigational new drug (IND) applications and involve dedicated meetings with the sponsor to discuss the development and application of models and simulations (e.g., for disease progression, concentration-response). FDA also discussed the need to strengthen its regulatory science and review capacity in the modeling and simulation disciplines to advance the application of MIDD.

Plan for Future Meetings

Industry and FDA agreed to plan for a follow-up discussion on patient-focused drug development and FDA's proposals for data analysis standards at the next meeting.