# Comparative Use Human Factor Studies for Drug-Device Combination Products

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The US Food and Drug Administration (FDA) recently issued a draft guidance: Comparative analyses and related comparative use human factor studies for a drug-device combination product submitted in an ANDA, January 2017. This guidance is intended to assist potential applicants who plan to develop and submit an abbreviated new drug application (ANDA) to seek approval of a proposed combination product, that include a drug and a delivery device intended to administer a drug product.

A generic combination product classified as therapeutically equivalent to the reference listed drug (RLD) can be expected to produce the same clinical effect and safety profile as the RLD under the conditions specified in labeling. FDA recognizes that an identical device design may not always be feasible and, FDA may accept such design differences if they are adequately analyzed, scientifically justified, and do not preclude approval in an ANDA. In general, FDA expects that end-users of generic combination products, including but not limited to lay-persons, such as patients, and/or caregivers, can use the generic combination product when it is substituted for the RLD without the intervention of the health care provider and/or ***without additional training prior to use of the generic combination product.***

**Analysis of the User Interface of a Generic Combination Product**

The following three types of analyses are recommended as part of the threshold analyses to compare the user interface of the proposed generic combination product to the user interface of its RLD:

**Labeling comparison**: a side-by-side, line-by-line comparison of the full prescribing information, instructions for use, and descriptions of the delivery device constituent parts of the generic combination product and its RLD.

**Comparative task analysis**: potential applicants should conduct a comparative task analysis between the RLD and the proposed generic combination product.

**Physical comparison of the delivery device constituent part**: potential applicants should acquire the RLD to examine (e.g., visual and tactile examination) the physical features of the RLD and compare them to those of the delivery device constituent part for the proposed generic combination product.

If the threshold analyses determine that design differences may not be minor, the differences in the user interface of the proposed generic combination product, in comparison to the user interface of the RLD, do affect an external critical design attribute, potential applicants should first consider modifying the design of the user interface (e.g., delivery device constituent part) for the proposed generic combination product to minimize differences from the RLD. Alternatively, FDA may request data to support that the user interface design difference(s) will not preclude approval of the generic combination product in an ANDA. Such data may be gathered in a comparative use human factors study that evaluates user performance of the critical tasks related to the external critical design attributes that are found to be different.

**Comparative Use Human Factors Studies**

A comparative use human factors study should be designed to provide sufficient data to confirm that the use error rate, for the critical task(s) as impacted by the differing external critical design attribute of the delivery device constituent part for the proposed generic combination product, is not worse than the corresponding use error rate for the RLD when used by patients and caregivers in representative use scenarios and use environments consistent with the labeled conditions of use.

A risk assessment should be done to identify the external critical design attributes and their impact to critical task performance for each end-user group, use scenario, and use environment consistent with the approved conditions of use for the RLD. The comparative use human factors studies would generally be simulated-use studies where the participants, who are representative of the intended patient and caregiver populations, are asked to simulate the use of the proposed generic combination product without actually administering the product.

FDA expects that data and information comparing the user interface of the proposed generic combination product to the RLD's user interface will be submitted to support an ANDA application.