Results of the questionnaire on benefit-risk analysis with the ADDIS software

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Executive Summary

Structured Benefit Risk Analysis (SBRA) has been developed and implemented by the TI Pharma project Escher to facilitate and promote the use of science based methods in medicine evaluation. One of the results of the Escher project is the ADDIS software package for the execution of SBRA.

To evaluate the usability of SBRA and the ADDIS software, interviews have been conducted with experts in pharmaceutical industry. The interviews are based on a questionnaire and a demo of the ADDIS software (version 1.12). The interviews cover the general interest in SBRA, the availability of aggregated clinical data for analysis and the algorithms and methods used. The user experience with the ADDIS software is investigated by means of the demo.

SBRA is recognized as an important new step in the development and evaluation of medicines. All interviewees indicated that they are following current developments in the field of SBRA. Clinical data for structured analysis from own studies are normally available within companies but ownership and responsibility for a large database of aggregated clinical data is not clear in a number of companies. Data from competitor products are not easily obtained despite the availability of external websites publishing clinical data. This is mainly due to the lack of a standardised format for aggregated clinical data. The availability of a data standard for aggregated clinical data is seen as a driver for future growth. Also, the willingness in industry to contribute to public databases for aggregated clinical data is mixed.

The network meta analysis methodology implemented in the ADDIS software reflects the methods currently investigated in industry. Several companies indicate they have used network meta analysis as a pilot in one or more projects. It must be noted that EMA's decision to adopt the ProACT URL method for SBRA may have an effect on industry's focus.

User requirements for the future development of ADDIS were collected via a demo of the software. Interviewees reported to see much added value in the way the results of the SBRA are represented by the ADDIS software. The use of graphics for showing the results is well-received as is the interactive way of changing the view on the results. All interviewees indicated they had never seen SBRA made available in such an easy way. The main advantage quoted is the increased transparency of decision making.

Addendum: User Requirements

1. Allow ordering on size of effect (Studies screen)
2. (Removed)
3. Indication should not be a leading identifier in the datamodel as many compounds shift from indication to indication dependent on the effects seen in development and practical use
4. The impact factor of study (e.g. landmark study) was suggested as addition to the data-model but this seems to be somewhat contradictory to the concept of evidence based medicine
5. Study size was suggested to be added to the data model
6. A field on the use of a study in a submission was suggested to be added to the data model.
7. Effect size, preferably to be shown immediately in the startup screen can be added to the search criteria in Studies screen
8. Study age can be added to the search criteria in Studies screen
9. Secondary endpoint can be added to the search criteria in Studies screen
10. Show if results are based on intention to treat or not in Drugs screen
11. Additional fields to include in the general information in Drugs screen were suggested: INN, dosing, study phase
12. Additional fields were suggested in the Study Overview screen: Region, number of patients, dosing
13. Allow ordering on dosing in Network Meta-Analysis study selection screen
14. Effects should not be manipulated by users in the Network Meta-Analysis Results screen
15. Create an audit trail on all user actions
16. Implement strict guidance for study selection in Study Selection screen in Network Meta-Analysis
17. Add regional effects as a criterion for inclusion/exclusion. Would be nice if they can be shown
18. Add dosing information as a criterion for inclusion/exclusion
19. Include patient group info and study age info in Overview screen
20. Alternate order of pages in Overview screen
21. Ensure an audit trail is included in any export made
22. Potential endpoints to be compared could be added/seen in network of studies graph
23. Add info on region, number of patients, dosing on Select Studies screen

24. The Odds ratio of a deselected study to be shown in the results screen to warn the user that information was excluded from the analysis

25. Change color codes on BRAT screen to be more intuitive (green = good, red = bad)

26. Would it be possible to assign a percentage weight to the combined benefits and the combined risks upfront and then differentiate within the benefits group and the risks group

27. All calculations can be inspected as is common practice for statistical calculations

28. Information on software robustness (crashes etc) on Intro screen

29. Info on what is in and out of scope of the software and methods used could be added (e.g. the cross-over studies) on Intro screen

30. Drug safety evaluation may require different subgroup divisions than efficacy evaluation