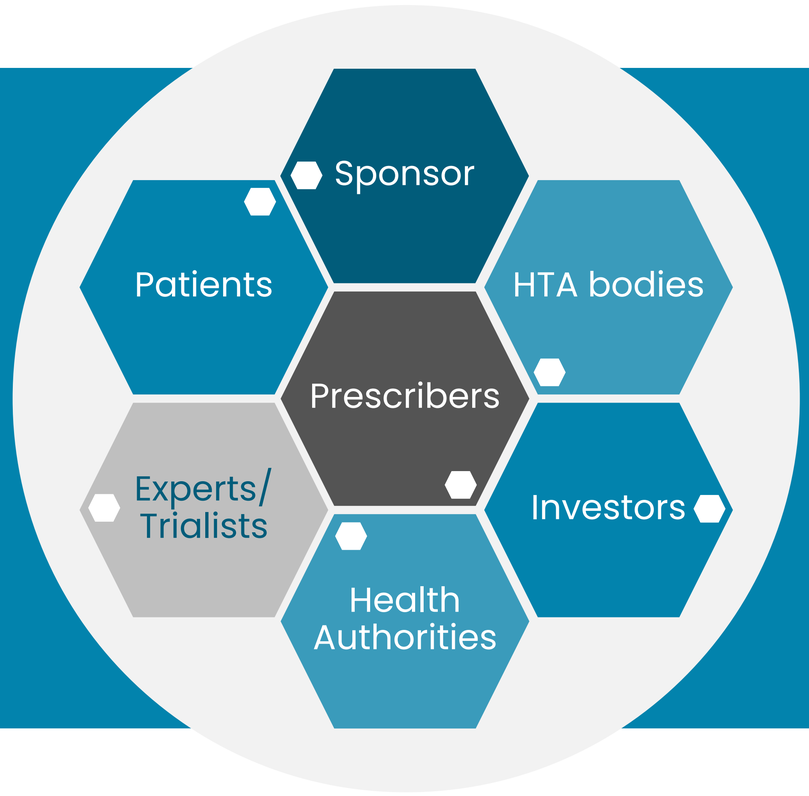
Realizing the benefits of estimands when reporting and communicating study results – some recommendations

- Report treatment effects transparently in a language well understood by a range of different stakeholders
- Summarize and discuss impact of intercurrent events (IEs)



Link results to estimands via 'labels'

There is no universally applicable labelling system for estimands

Context dependent estimand identifiers or 'labels' should be

- Traceable – to enable readers to link the estimand to any given result
- Descriptive – to provide essential information about treatment effects being estimated
- Concise – to provide the essential information with good readability

Estimand **Primary 1.A: Treatment policy effect, non-CV death as competing risk**

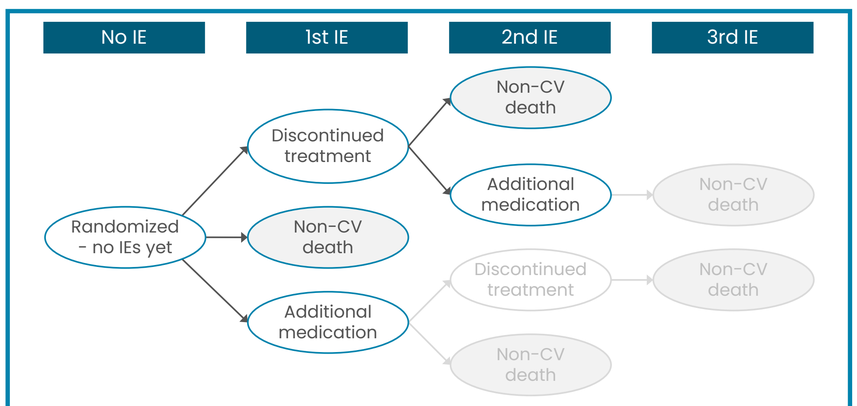
Compared to CONTROL, how much does DRUG decrease the probability for MACE events up to 18 months after treatment assignment in adults with type 2 diabetes at high risk of CV events? We compare

- treatment regimens which capture the effect of assigning the intervention including any subsequent treatment discontinuation or intake of any type of other additional medication (treatment policy strategy)
- in a setting where it is explicitly recognized that patients can die for non-CV causes precluding MACE events (competing risk; 'while alive' strategy – *for discussion*)

Summarize number and timing of IEs

- To recognize how different treatment effects are affected by IEs
- To facilitate the interpretation of treatment effects
- To judge the external validity and transferability of results to another clinical setting

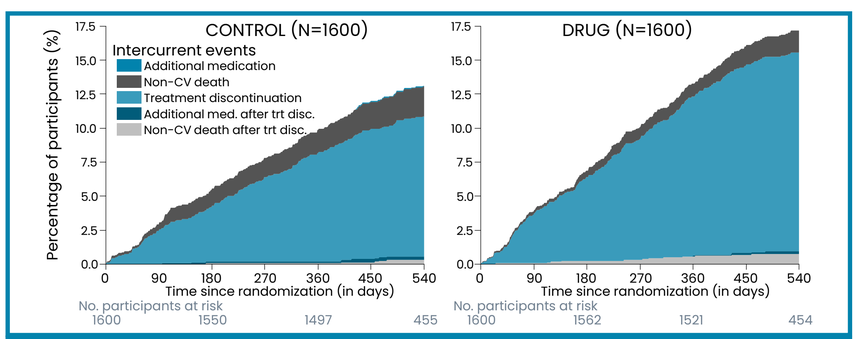
→ Adequate summaries (tables and figures) are driven by what is clinically relevant and supportive for the interpretation of the treatment effects



Discuss what is important to know about the frequency, timing and ordering of IEs for each estimand

Discuss the impact of IEs on the results

- Treatment policy – What treatment conditions are being compared (*eg*, discontinuations, conmeds)?
  How do outcomes change (if observed) after the IE?
- Hypothetical – Describe the data used for analysis as observed and as predicted under the hypothetical scenario
- Composite – Describe the contribution of each component of the composite endpoint, *eg*, frequencies and timing
- While on treatment – Report total "exposure" time for individuals with(out) an IE



Display proportion of participants in each IE state across time and discuss impact on results

Report results along with key assumptions

- To increase the credibility of results by being clear about the key assumptions underpinning the statistical estimators
- To provide clarity about which assumptions
  - have been altered for sensitivity analyses compared to the main analysis
  - are required but are not assessed through sensitivity analyses

Use trial objectives to structure the report

- To follow this to the full extent, an update of ICH E3 might be needed
- Present results with the purpose of providing answers to key questions
- For each trial objective, distinguish and clearly label results that
  - explore the robustness of results from main analyses (→ sensitivity analyses)
  - provide additional insights into the understanding of the treatment effect (→ supplementary analyses; *eg*, via additional estimands)

Primary objective		
Estimand	**Analysis**	**Key assumptions**
Primary 1.A <label>	Main	…
	Sensitivity 1	…
	Sensitivity 2	…
Additional 1.B <label>	Main	…
	Sensitivity 1	…
	Sensitivity 2	…
Additional 1.C <label>	…	…
Secondary Objective		
Secondary 2.A <label>	Main	…
	Sensitivity …	…

EFSPI European Federation of Statisticians in the Pharmaceutical Industry
Promoting Professional Standards in Europe

efpia European Federation of Pharmaceutical Industries and Associations

ESTIMAND IMPLEMENTATION WORKING GROUP (EIWG) – Reporting Subteam

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