

**LINGUISTIC VALIDATION CERTIFICATE**  
**PAPER VERSION OF THE DROOLING IMPACT SCALE (DIS)**

This is to certify that MAPI Institute conducted the linguistic validation of the paper version of the **DROOLING IMPACT SCALE (DIS)** into the language listed below.

The aim of a linguistic validation is to obtain translations that are:

- conceptually equivalent to the original and comparable across languages;
- culturally relevant to the context of the target country;
- easily understood by the people to whom the translated instrument is administered.

This is achieved using a rigorous methodology<sup>1</sup> involving:

- a process which comprises several steps (see diagram on the last page of this document);
- the collaboration of the instrument's developer and a skilled team recruited by MAPI Institute in the target country which is headed by a consultant with knowledge of and experience in the field of Patient-Reported Outcomes;
- a centralized review process coordinated by MAPI Institute.

The specific methodology used to produce this version of the **DIS** is summarized in the table below. For each language, the linguistic validation process was coordinated and supervised by a consultant in the target country under the guidance of MAPI Institute who performed a quality control and discussed the translation decisions with the consultant at each step of the process.

LINGUISTIC VALIDATION STEPS		Forward Translation Step	Backward Translation Step	Adaptation Step	Cognitive Interview Step
		(2 translations by qualified translators → reconciliation)	(1 translation by a qualified translator)	(Review and adaptation of the mother language version to context of the target country)	(on 5 parents of patients with excessive salivation due to nervous system disorders)
COUNTRIES	LANGUAGES				
France	French	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	<input checked="" type="checkbox"/>
United Kingdom	English	Original instrument			

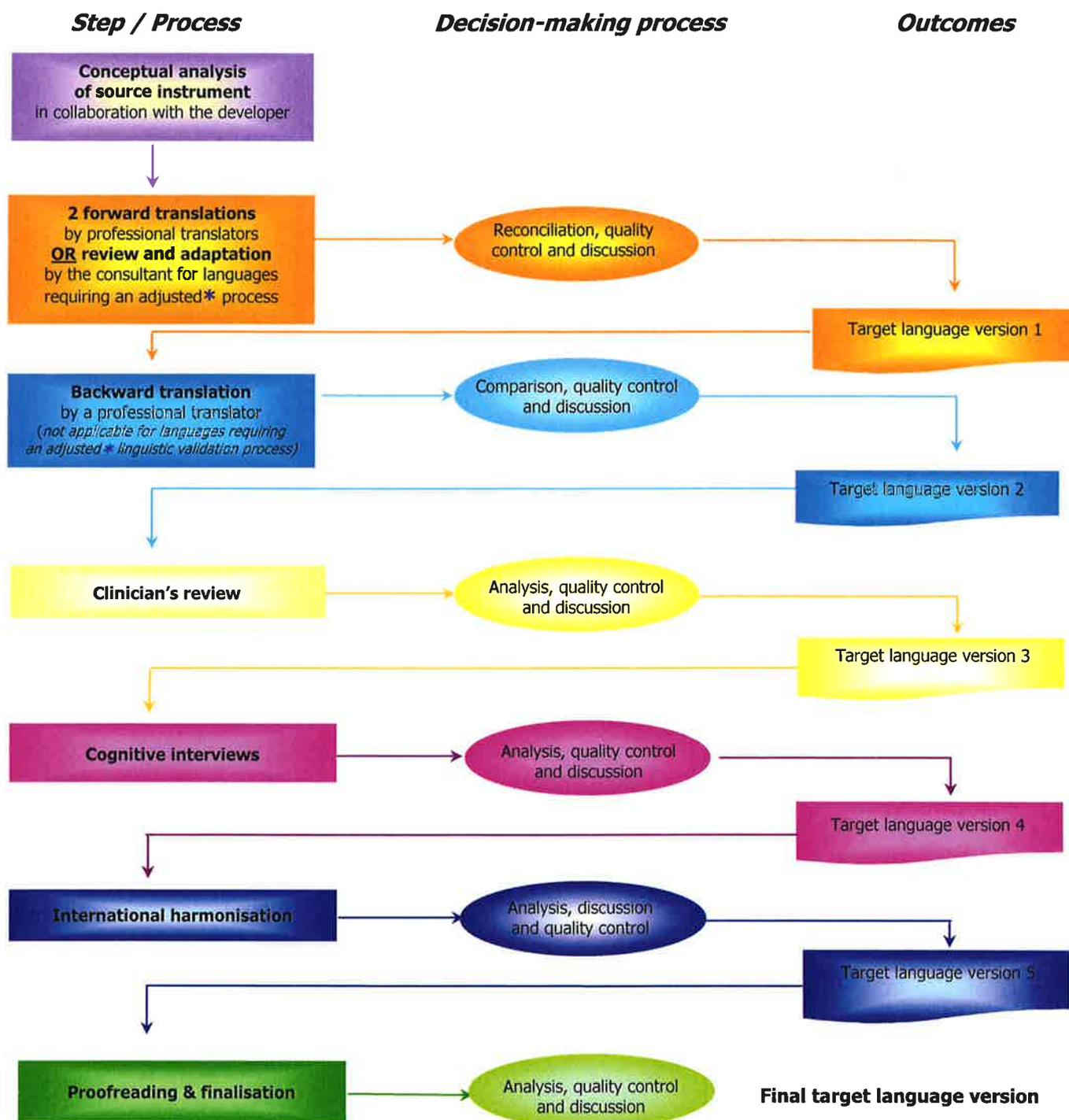
N/A: Not applicable      : Step performed      : Step not performed

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<sup>1</sup> **References:**

- Acquadro C., Jambon B., Ellis D. and Marquis P. Language and translation issues. In Spilker B, ed. Quality of Life and Pharmacoeconomics in Clinical Trials. Philadelphia: Lippincott-Raven Publishers, 1996: 575-585.
- Linguistic Validation Manual for Health Outcomes Assessments. Acquadro C, Conway K, Giroudet C, Mear I. Second Edition - MAPI Institute, Lyon, France, January 2012 - ISBN: 2-9522021-0-9

**The linguistic validation process**



\* For some languages that are close to one another (e.g. British and American English; French for France and Belgium), the complete standard linguistic validation process outlined above with *forward* and *backward* translation steps may not be appropriate. For such cases, an **adjusted** linguistic validation process has been established. The *forward* and *backward* translation steps are replaced by a review and adaptation step, where the work is based on a version considered as the "mother language" version. The subsequent steps are identical to those used in the standard linguistic validation process.