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Introduction

- Regulatory approval grants market access, indeed, through coverage decisions, HTA-bodies rule about real patient access

- Despite their different objectives, HTA-bodies largely depend on evidence that was created for the market authorization
- Potentially causing that technologies are approved but not reimbursed

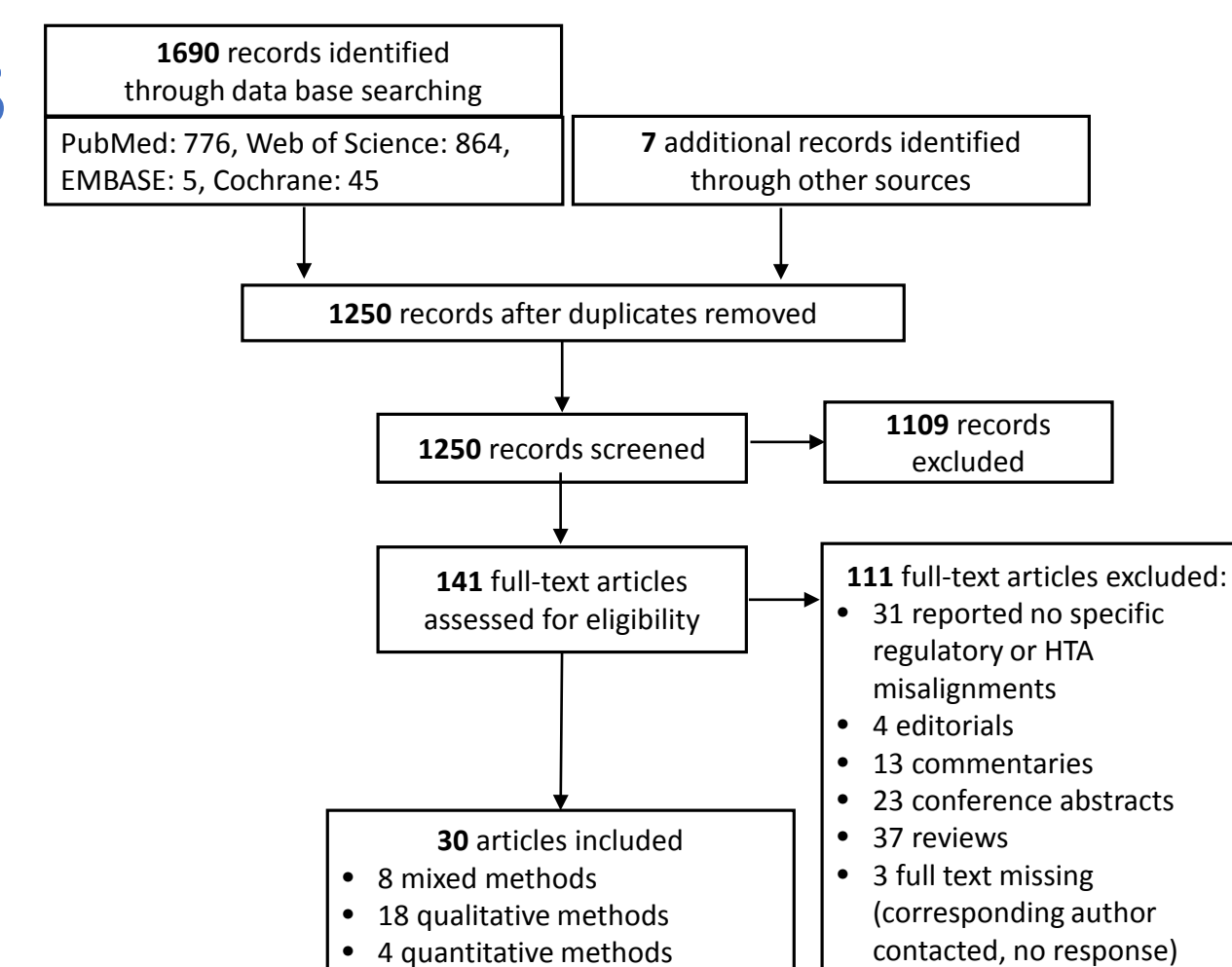
- Additionally there are discrepancies among HTA-bodies' evidence requirements
- Early dialogue meetings aim to align the different evidence requirements that pose a great challenge for manufacturers

Methods

- We systematically searched literature that was published until 07.02.2018
- The search term built around the three main blocks 1) regulator; 2) HTA and 3) alignment or misalignment
- Articles that cover properties that influence regulatory or reimbursement processes; regulators' or HTA-bodies' evidence

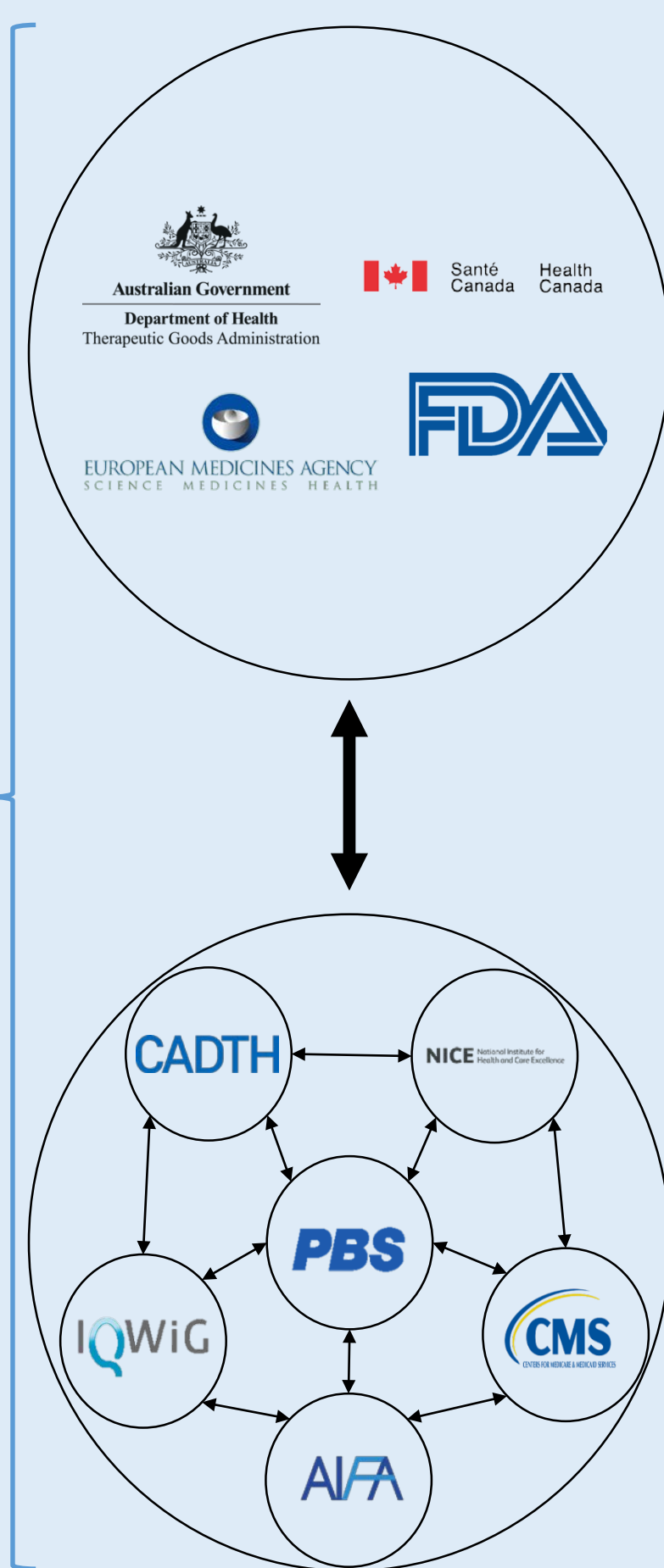
- requirements; third and fourth hurdle pathways were included
- Further articles were classified in qualitative, quantitative or mix-methods research according to Starr
- Findings were categorized in 1) discrepancies between regulators and HTA bodies; and 2) misalignments among HTA-bodies evidence requirements

Results



Regulators & HTA bodies

Misalignment	Regulator	HTA bodies
Objective	Quality, safety, efficacy Non-inferiority Does the technology offer more benefit than harm compared to placebo?	Relative-/ cost-effectiveness, Superiority Does the technology offer more benefit than harm compared to alternatives under consideration of price for the population.
Evidence sources	RCT	RCTs, partially RWD (registries, EHRs, claims data)
Validity	Internal validity	External validity, generalizability
Study design	Study length	Relatively short trials to demonstrate efficacy
	Study population	Relatively small, homogenous, comorbidity free population
	Study setting	Controlled ideal conditions
	Comparator	Active (non-inferiority) or placebo (superiority)
	Endpoints	Broader acceptance of surrogate, intermediate, mechanistic endpoints
		Longer lasting trials to assess true effectiveness Larger, heterogeneous general population Actual health care practice Active (superiority) "Hard" patient relevant endpoints, validated surrogate endpoints (show correlation with patient relevant endpoints)



Among HTA bodies

Misalignment	Characteristic
Methods	Relative- /comparative- effectiveness The effect of the new therapy in comparison to the standard of care Cost-effectiveness The effect of the new therapy in relation to its price
Source of evidence	Mostly RCT data Also RWD (non-RCT data) e.g., observational studies, electronic health records, claims data
Assessment	Clinical effectiveness
	Comparators
Appraisal	Cost and economic evaluation
	Endpoints
	Methods
	Criteria
	comparator corresponding to health systems standard of care , used indication and dosage (narrowly defined) various comparators use in practice (broadly defined)
	Broader acceptance surrogates. Generally reject surrogate, possibly accept validated surrogates in certain conditions or if validated (correlation with patient relevant endpoint)
	No economic methods (rely on relative effectiveness) Various economic methods e.g. costs/QALY, Budget impact analysis, economic modeling, multi-criteria decision analysis
	Patient population size, willingness to pay thresholds

Discussion

- Regulators' and HTA bodies' aims implicate different or even mutually exclusive evidence requirements
- HTA bodies share similar goals but adopted different methodologies and consult different data
- Early dialogues between regulators, HTA bodies and manufacturers offer possibilities to create synergies in the evidence generation
- Alignment in the evidence requirements should respect professional or national priorities

Conclusion

- There are limits to the alignment of regulatory and HTA evidence requirements
- HTA bodies should strive for a stronger alignment of clinical evidence requirements
- In non-clinical evidence requirements there are limits to an alignment