International Experience: Real World Case of Innovative Pharmaceuticals/HTA Applications In Selected Countries

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Outline

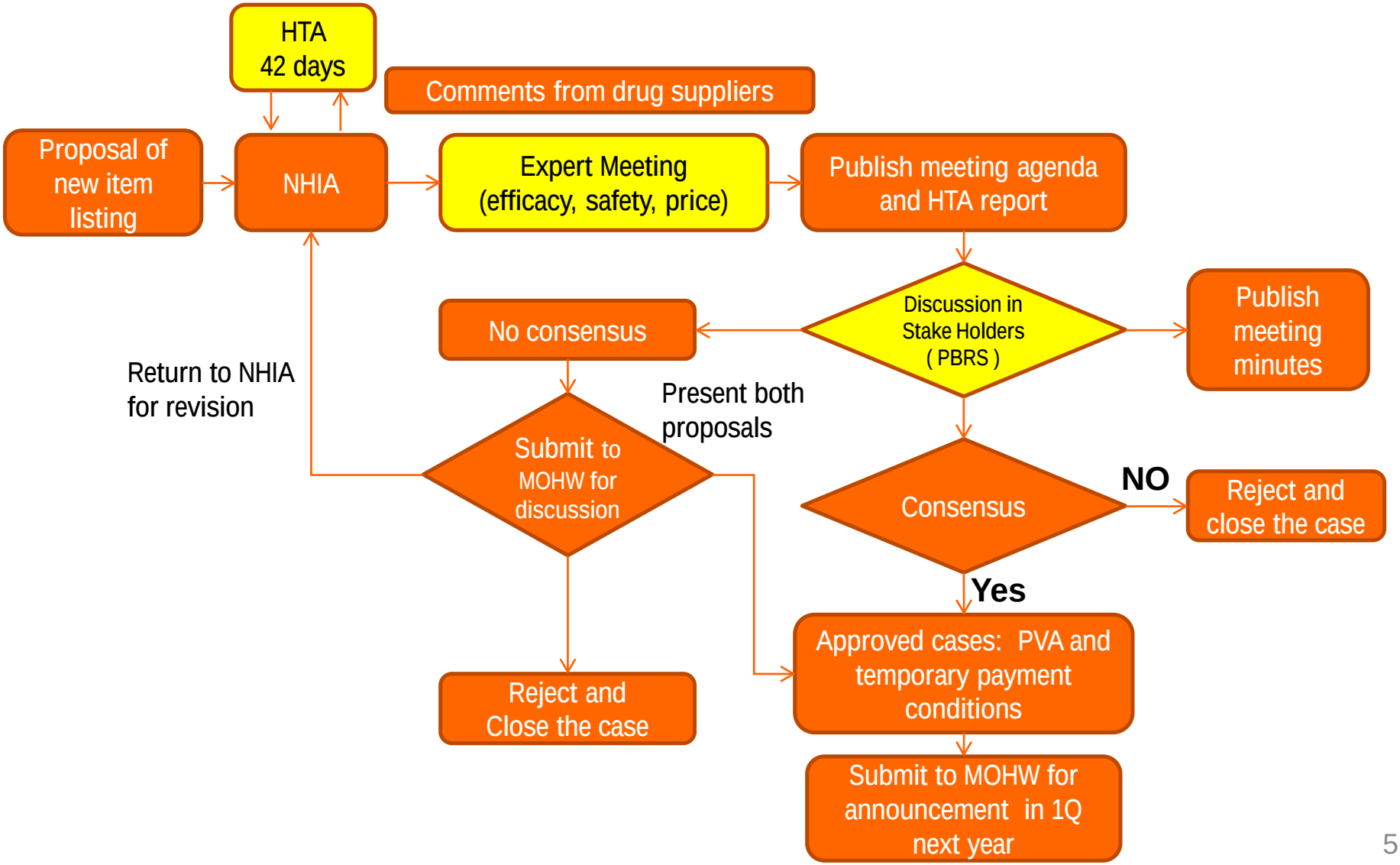
- HTA system overview (TW, SK, AUS)
- HTA dossier - overview
- Study Examples
- Value of RWE

Objective

- To build on concepts learned and understanding of the use of data and information beyond the HTA dossier

Evidence may be necessary, but it is certainly not sufficient. The findings of research need to be translated into information that is useful for each health care decision maker.

Taiwan HTA:
Two Steps Decision Making Process



Taiwan hta:
Pricing Policy/Price Premium

Category	Definition	Pricing formula
1	Major improvement in efficacy as shown in head-to-head comparison or indirect comparison with the most commonly used treatment	A10 median
2A	A new drug with moderate improvement in clinical efficacy compared with the most commonly used treatment	(capped at A10 median) **A10 lowest** **International price comparison** **Treatment course comparison** **Price in country manufactured**
2B	The clinical efficacy of the new drug is similar to that of an NHI-listed drug	

Price Premium:

- 10% mark-up with local R&D and clinical trials reaching up to a certain scale
- Up to 10% mark-up with local pharrmaco-economics research
- Up to 15% mark-up of superior safety than the comparator
- Up to 15% mark-up of superior efficacy than the comparator
- Up to 15% mark-up of more convenient (kit) than the comparator

South Korea: HTA System Overview

- **Positive List System (PLS)**
  - Introduced in 2007 as a part of the DERP (Drug Expenditure Rationalization Plan)
  - Listing of drugs with higher therapeutic & economic value by using cost-effectiveness analysis
- **Pricing and Reimbursement Decision Making Process**
  - Two Step Process: HTA Process (HIRA, HTA Agency)→ Price Negotiation (NHIS, Payer)

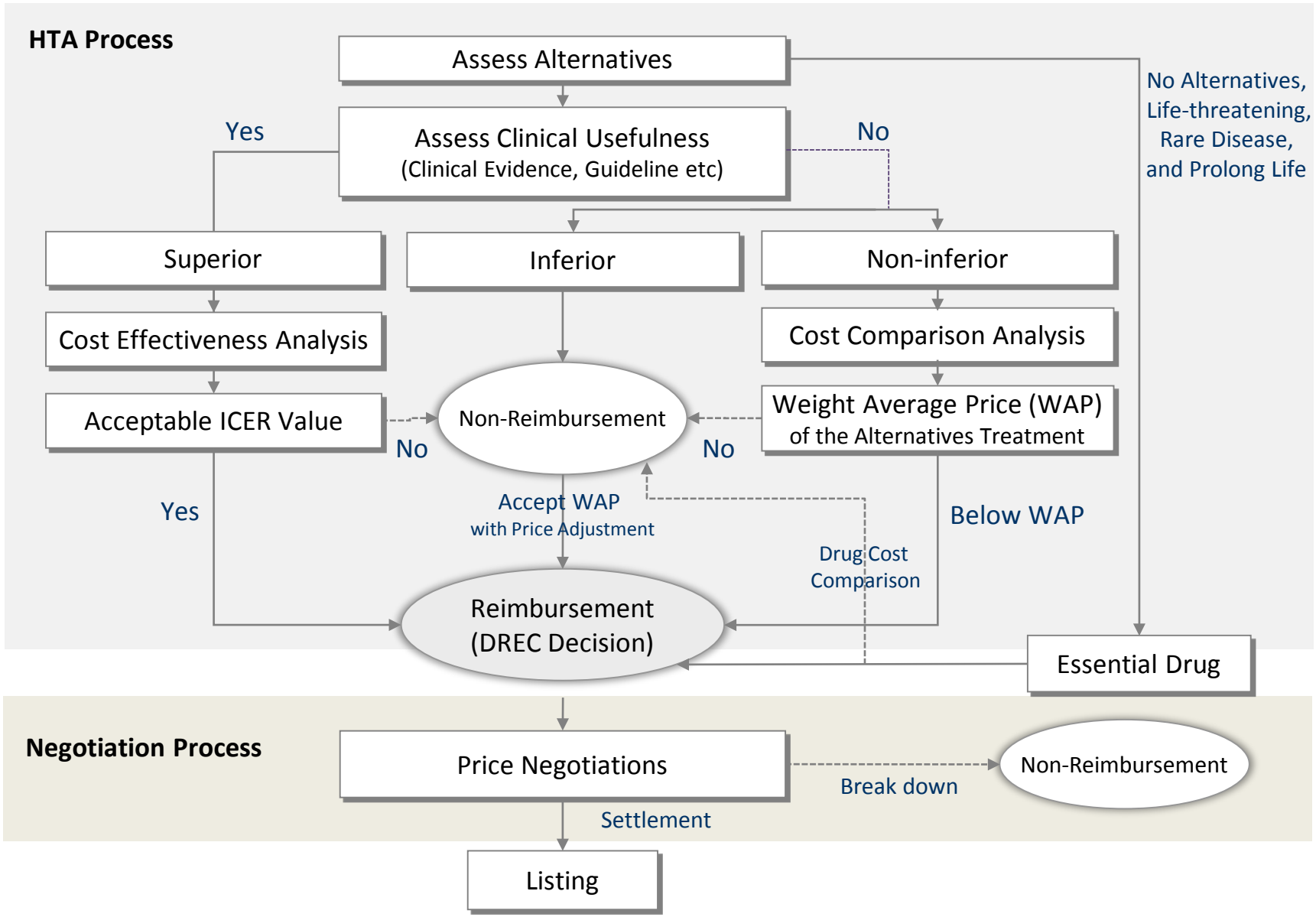
HIRA
(Health Insurance Review Agency)

NHIS
(National Health Insurance Service)

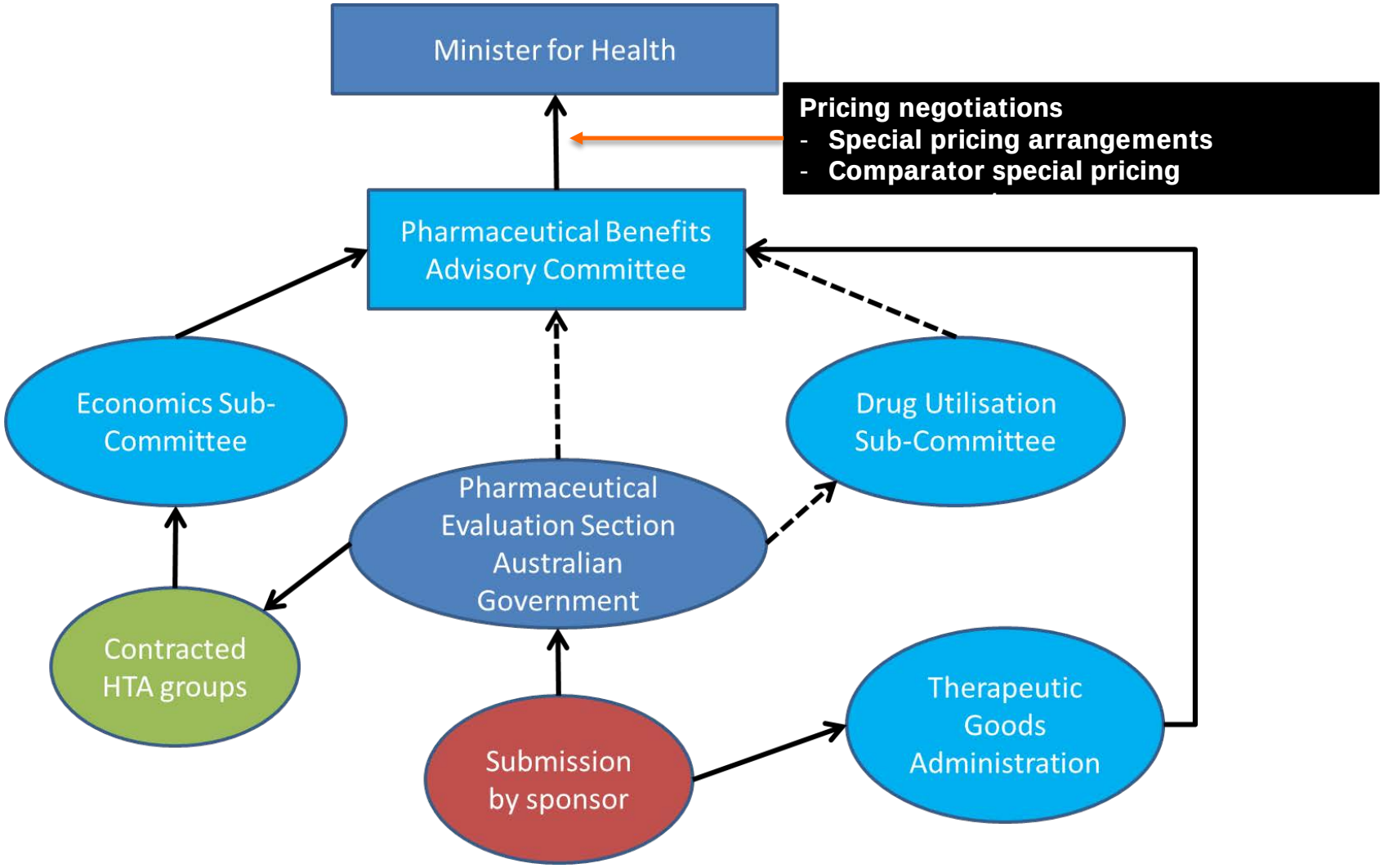
MoHW
(Ministry of Health and Welfare)

- HIRA Evaluation Result
- NHIS Negotiation Result

South Korea: Decision Making Process



Australia reimbursement process



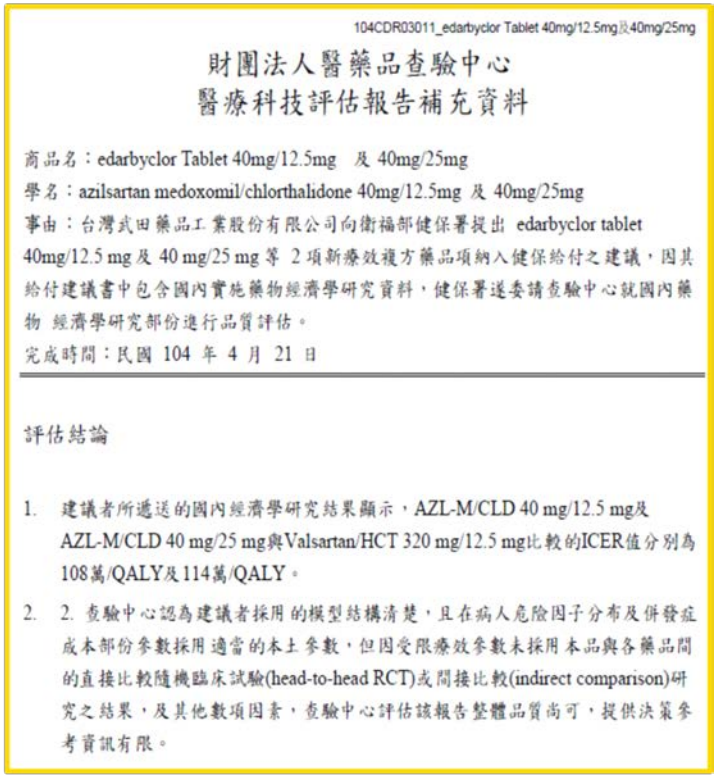
https://www.ispor.org/HTARoadMaps/Australia_Pharm.asp, accessed 1-4-2017

Taiwan: HTA Reports will be on the web before PBRS meeting

HTA report is one of the reference to help Expert members to make **recommendation** toward the new drug, and **how many % of PE study mark up** should be.

HTA Report includes:

1. Disease/Products Overview
2. Relative effectiveness
3. Economic evaluation
4. Cost-Effectiveness
5. Budget Impact Analysis



104CDR03011_edarbyclor Tablet 40mg/12.5mg及40mg/25mg

財團法人醫藥品查驗中心
醫療科技評估報告補充資料

商品名：edarbyclor Tablet 40mg/12.5mg 及 40mg/25mg
學名：azilsartan medoxomil/chlorthalidone 40mg/12.5mg 及 40mg/25mg
事由：台灣武田藥品工業股份有限公司向衛福部健保署提出 edarbyclor tablet 40mg/12.5 mg 及 40 mg/25 mg 等 2 項新療效複方藥品項納入健保給付之建議，因其給付建議書中包含國內實施藥物經濟學研究資料，健保署遂委請查驗中心就國內藥物 經濟學研究部份進行品質評估。
完成時間：民國 104 年 4 月 21 日

評估結論

1. 建議者所遞送的國內經濟學研究結果顯示，AZL-M/CLD 40 mg/12.5 mg及AZL-M/CLD 40 mg/25 mg與Valsartan/HCT 320 mg/12.5 mg比較的ICER值分別為108萬/QALY及114萬/QALY。
2. 2. 查驗中心認為建議者採用的模型結構清楚，且在病人危險因子分布及併發症成本部份參數採用適當的本土參數，但因受限療效參數未採用本品與各藥品間的直接比較隨機臨床試驗(head-to-head RCT)或間接比較(indirect comparison)研究之結果，及其他數項因素，查驗中心評估該報告整體品質尚可，提供決策參考資訊有限。

South Korea: HTA Dossier And Process Overview

HIRA
(Health Insurance Review Agency)

- Label: Efficacy & Safety
- Clinical Usefulness
- Economic Model
- Reimbursement Status in Other Countries
- Global Treatment Guideline
- Budget Impact
  - Epidemiology
  - Alternatives
  - Estimated Sales

Reimbursement Decision (by DREC*)

NHIS
(National Health Insurance Service)

- HTA Price (DREC Result)
- Total Cost of Alternative Treatment
- Reference Price
  - OECD Countries
    + Taiwan & Singapore
- Price Ratio (Relative Price)
- Actual R&D Cost (Local Only)
- Listed in less than 3 Countries: below 80% of Alternative Treatment or Relative Price

Price & Volume Negotiation

MoHW
(Ministry of Health and Welfare)

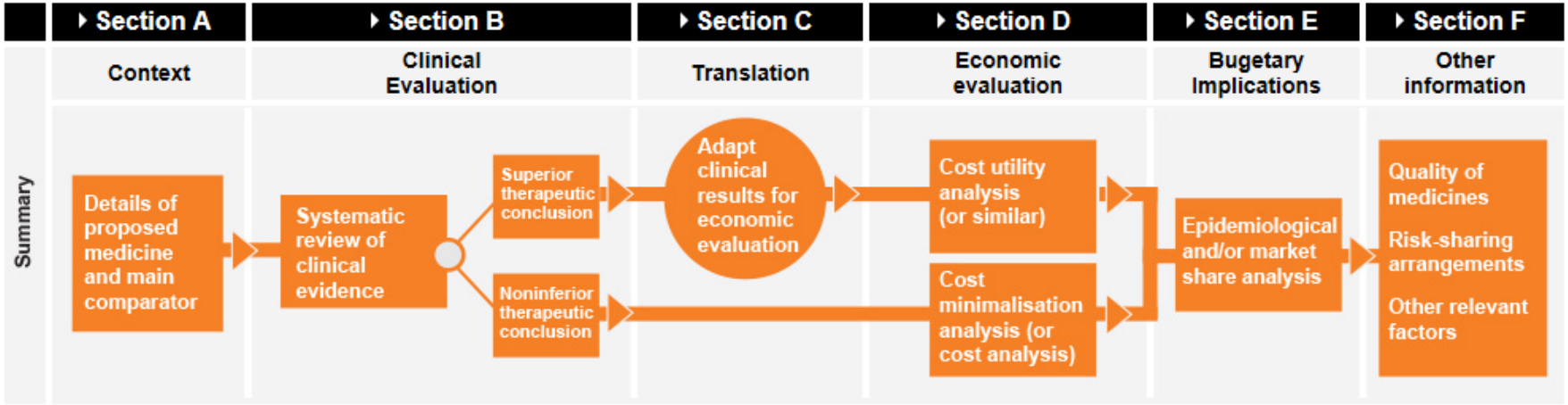
- HIRA Evaluation Result
- NHIS Negotiation Result

Final Decision

*Drug Reimbursement Evaluation Committee

AUSTRALIA-PBAC major submission

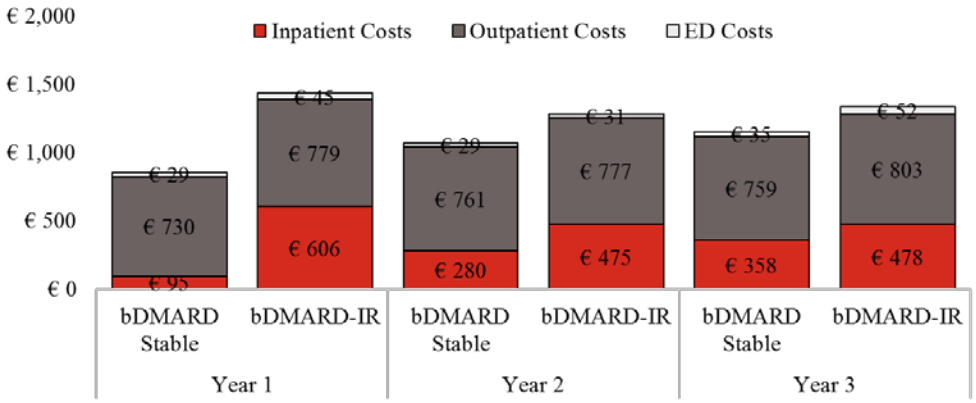
Submission structure for a major submission

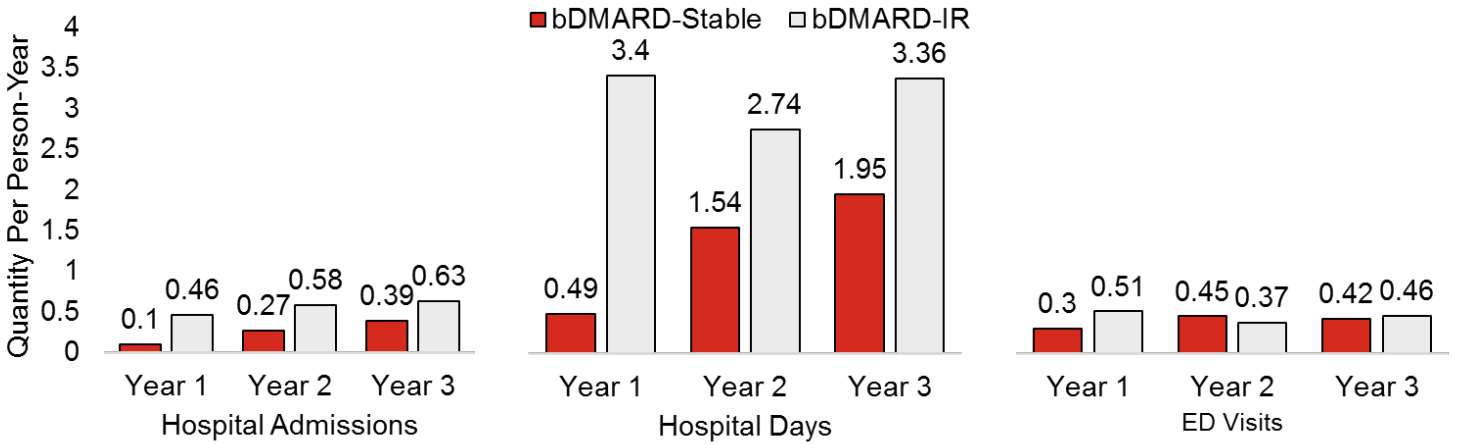


Source: Guidelines for preparing submissions to the Pharmaceutical Benefits Advisory Committee
http://www.pbac.pbs.gov.au/

Taiwan Rheumatoid Arthritis Treatment Pattern Study

- **Objectives:** The objective of this study was to use the NHIRD to estimate the percentage of newly treated patients with inadequate response (IR) to biologic disease-modifying antirheumatic drugs (bDMARDs) as well as the costs and resources.



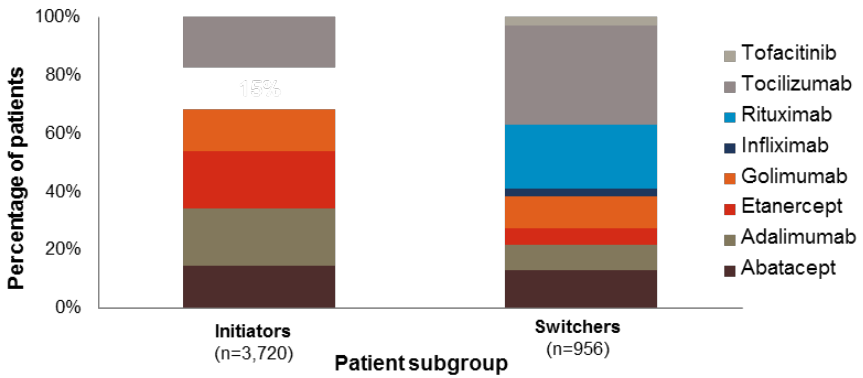


Shi Q, Treuer T, Wang B, et al. *Annals of the Rheumatic Diseases* 2017;76(Suppl 2):1511-11.

South Korea Rheumatoid Arthritis Treatment Pattern Study

- To characterize real-world patients, treatment patterns and costs among RA patients in South Korea receiving a bDMARD or tofacitinib since the major reimbursement guideline changes introduced in 2013.

Figure 1a. Index bDMARD/tofacitinib for all patients



Tofacitinib was only reimbursed in South Korea at the end of the study period, hence the low number of patients observed that were prescribed tofacitinib.

Table 1. Annual all-cause/RA-related per-patient costs for initiators, switchers and overall

Per-patient costs (All-cause / RA-related), mean [€]	Initiators (n=2,173)	Switchers (n=662)	Total (n=2,835)
Total direct costs	8,327 / 7,368	8,662 / 7,567	8,405 / 7,414
Hospitalizations	1,226 / 721	1,523 / 880	1,295 / 758
Joint replacements	164 / 98	164 / 138	164 / 108
Outpatient attendances	328 / 145	325 / 143	328 / 145
bDMARD infusions	10 / 10	14 / 14	11 / 11
bDMARD subcutaneous injections	4 / 4	1 / 1	3 / 3
Serious infections	405 / 258	430 / 323	411 / 273
Monitoring	183 / 166	207 / 182	188 / 170

A conversion rate of ₩1=€0.00078 was used.

ISPOR International Conference 2017
https://www.ispor.org/ScientificPresentationsDatabase/Presentation/71420?pdfid=49662

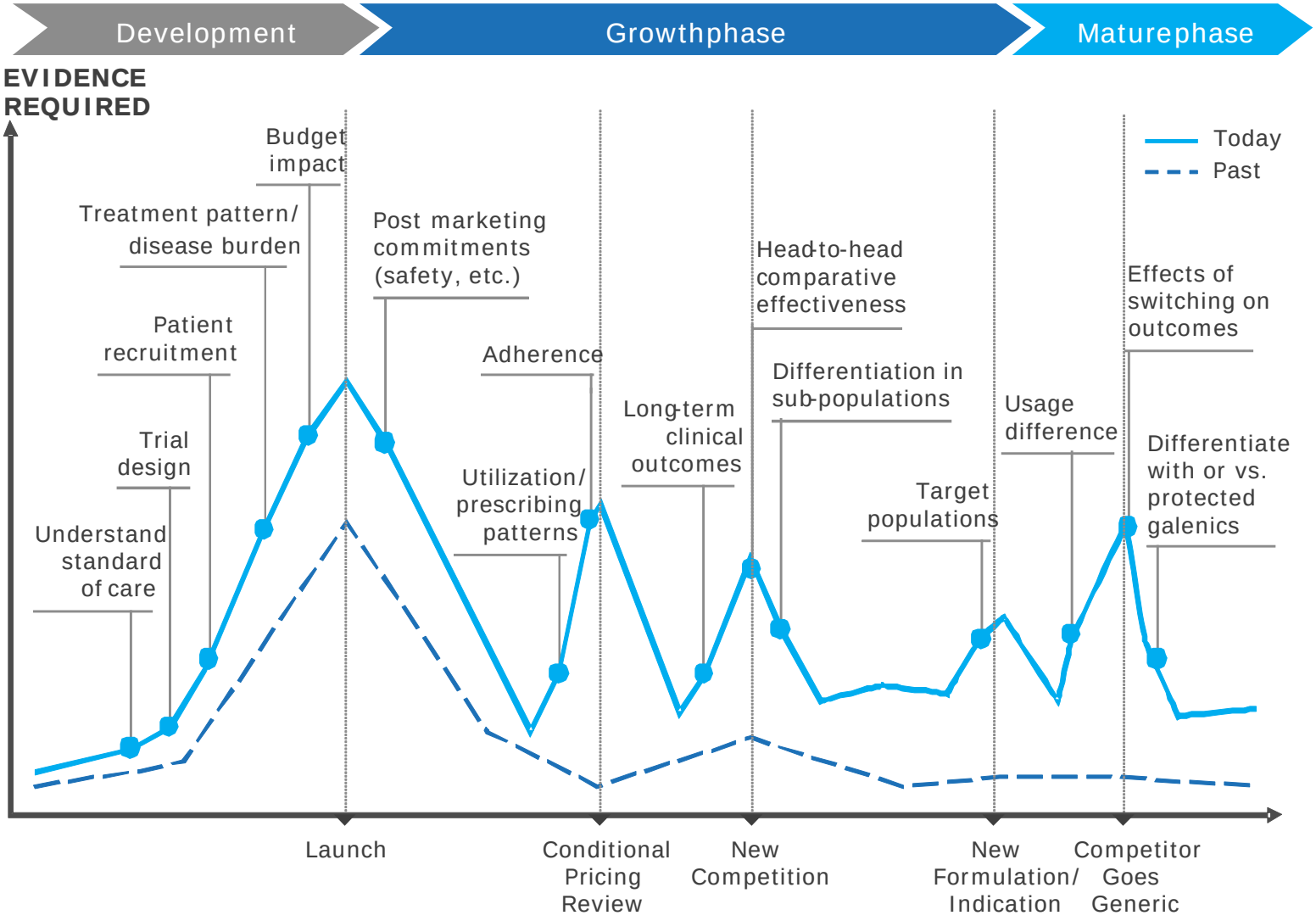
Stakeholder requirements in EU: HTA vs. Regulatory

Regulatory*	**HTA****
Exposure	Burden of target disease (mortality, morbidity prevalence, incidence, DALYs, QALYs)
Epidemiology of the indication(s)	
Prescribing conditions	Conditions of use
Characteristics of patients who actually receive the drug	Expected benefit of the technology - On burden of disease - On management of disease - Economical - Organisational - Social
New safety concerns, known ones, risk factors	
Efficacy in real life / in specific populations	Confirmation of the expected benefit
Effectiveness of risk minimization measures	Potential to cover unmet medical needs or to improve covered needs
Signal detection	

* European Medicines Agency (EMA)

** European Network of Health Technology Asessment Bodies (EUnetHTA)

There are increasing requirements on evidence across product life cycle



Studies Support In Mature Phase

- **NSCLC: 1st line treatment pattern and gene aberration test status**
  - ✓ BMC Cancer (2017) 17:462, CSCO 2016 podium poster, ESMO 2016 poster
- **Value of PAP (Patient Assistant Program)**
  - Economic model used trail data (ClinicoEconomics and Outcomes Research 2017:9 99–106)
  - Economic model with real world PAP data (ISPOR Int'l 2017, Journal of Medical Economics: DOI: 10.1080/13696998.2017.1373654)
- **Budget Impact Analysis**

  (ISPOR Asia 2016, poster)

Thank you!