Quality and consistency of costing in the economic evaluation of harm reduction programmes for injecting drug users

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Background

- Economic evaluation has been used as a strategic tool in the justification of harm reduction programmes in a politically difficult environment.

- Many studies indicate that broad societal benefits outweigh low implementation costs even when more expensive AIDS and hepatitis C treatments are considered.

- We carried out a systematic review to assess international evidence generated from these studies and the underlying quality in reporting and methods. This paper reports on the findings of the review of the costing methodologies.

Map 1.1: Global availability of needle and syringe programmes

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of needle and syringe programmes

Available

Not Available

Source: IHRA, 2010

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Map 1.2: Global availability of opioid substitution therapy

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of opioid substitution therapy

Available
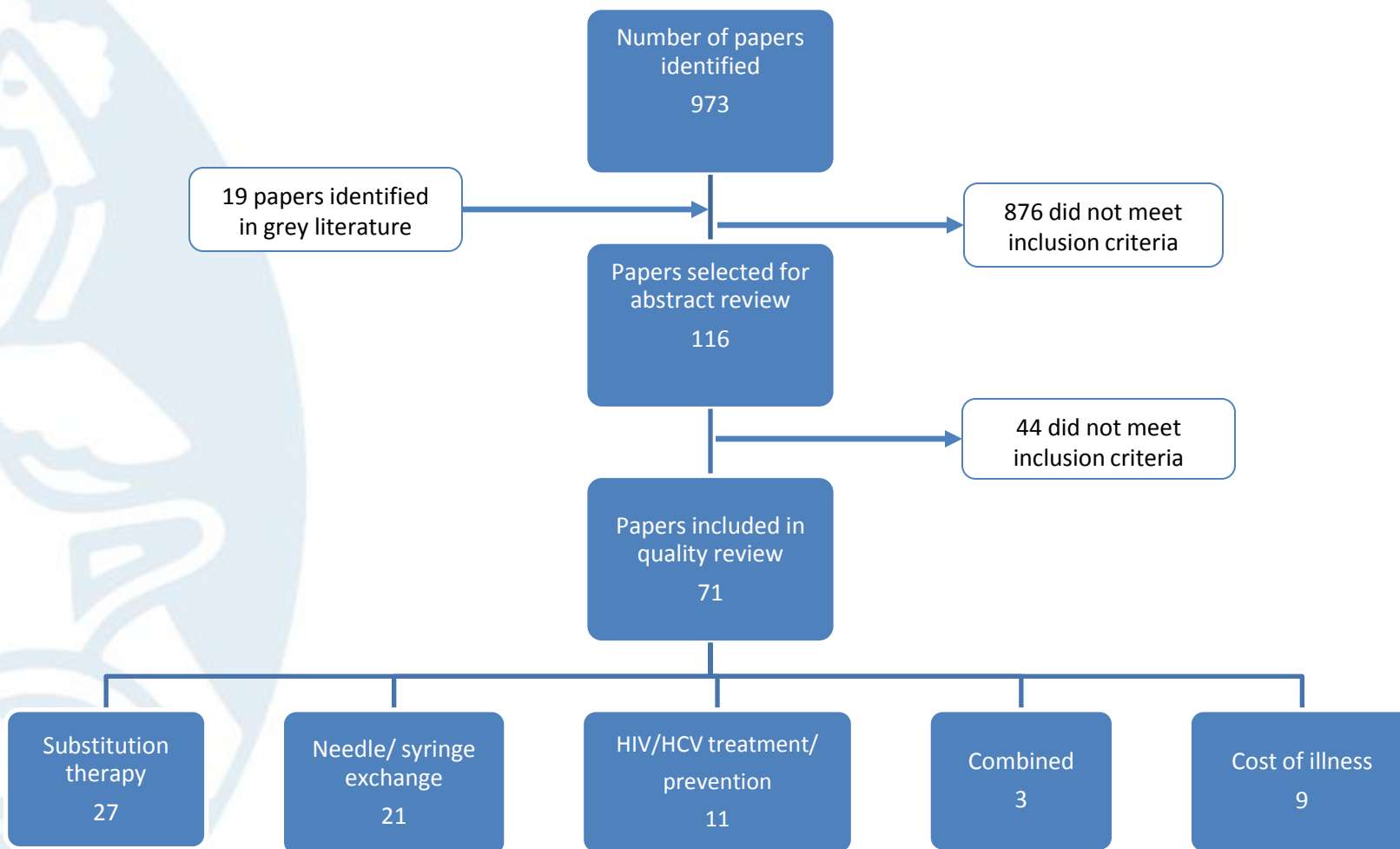
Not Available

Source: IHRA, 2010

Methods

- Peer reviewed and grey literature was searched for studies published in English from 1990 until 2011.

- Search terms included 'cost' or 'economic' and 'substance abuse' or 'injecting drug use*' or 'methadone' or 'substitution therapy' or 'needle exchange'.

- Cost analyses or economic evaluations were selected.

- Information was collected on author, year of costing, currency, country, intervention, analysis type, perspective, outcomes, data sources, and main results.

- Study methods were critiqued using the BMJ check list for economic evaluations and a quality score was developed.
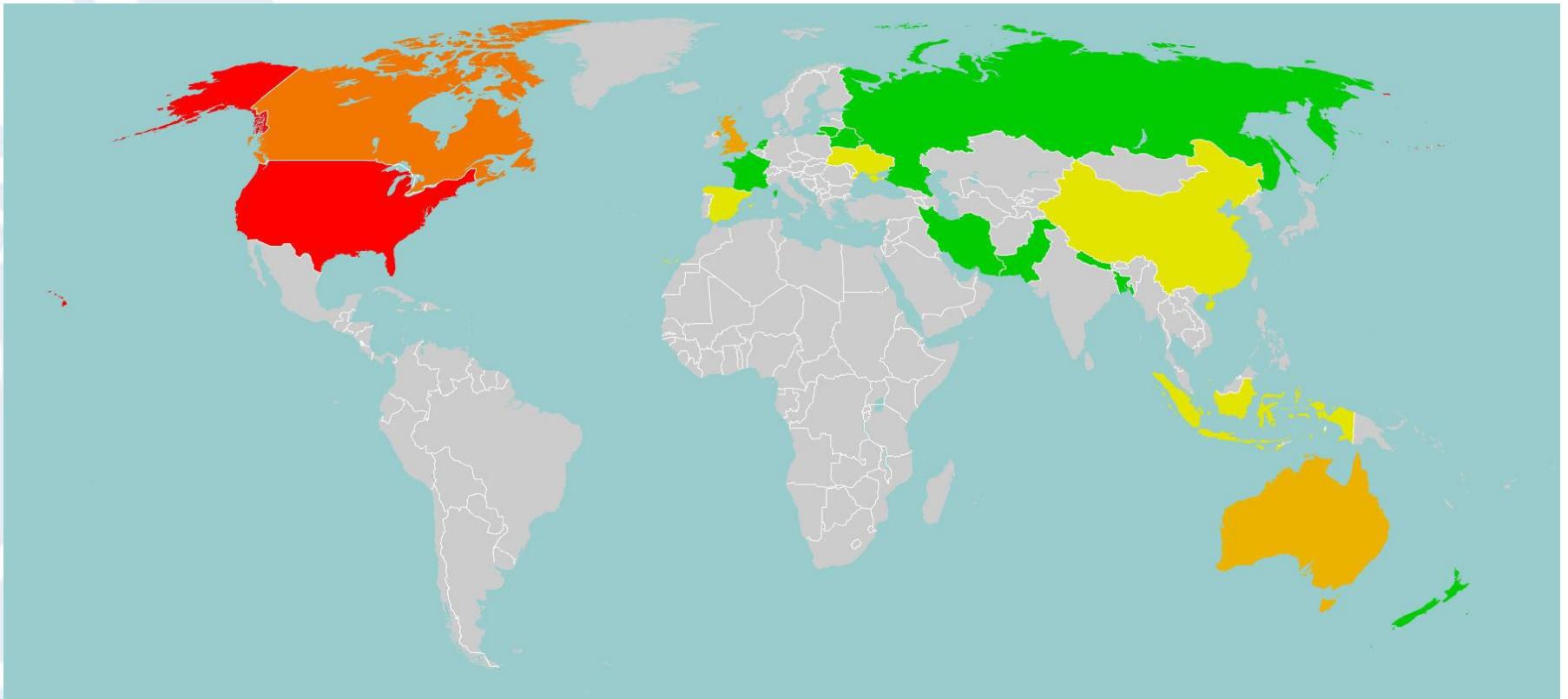
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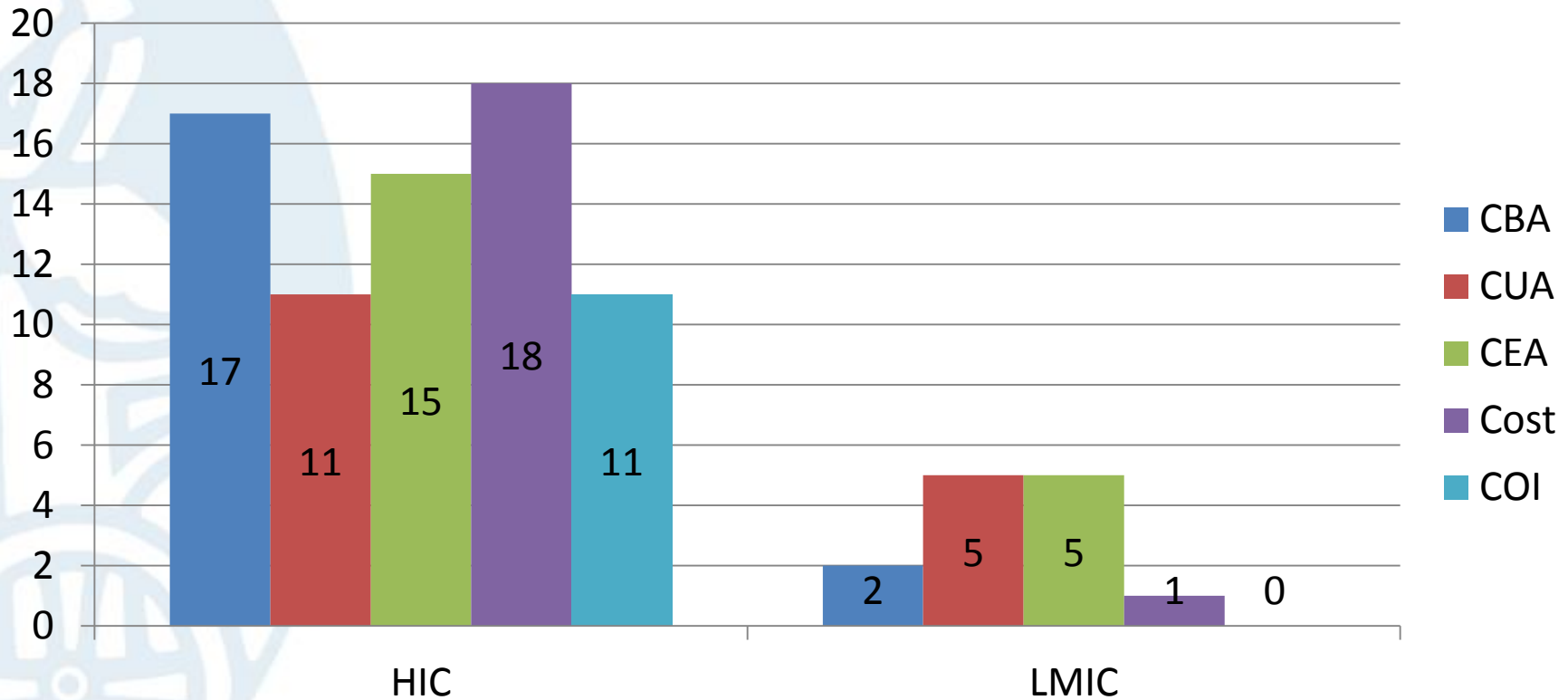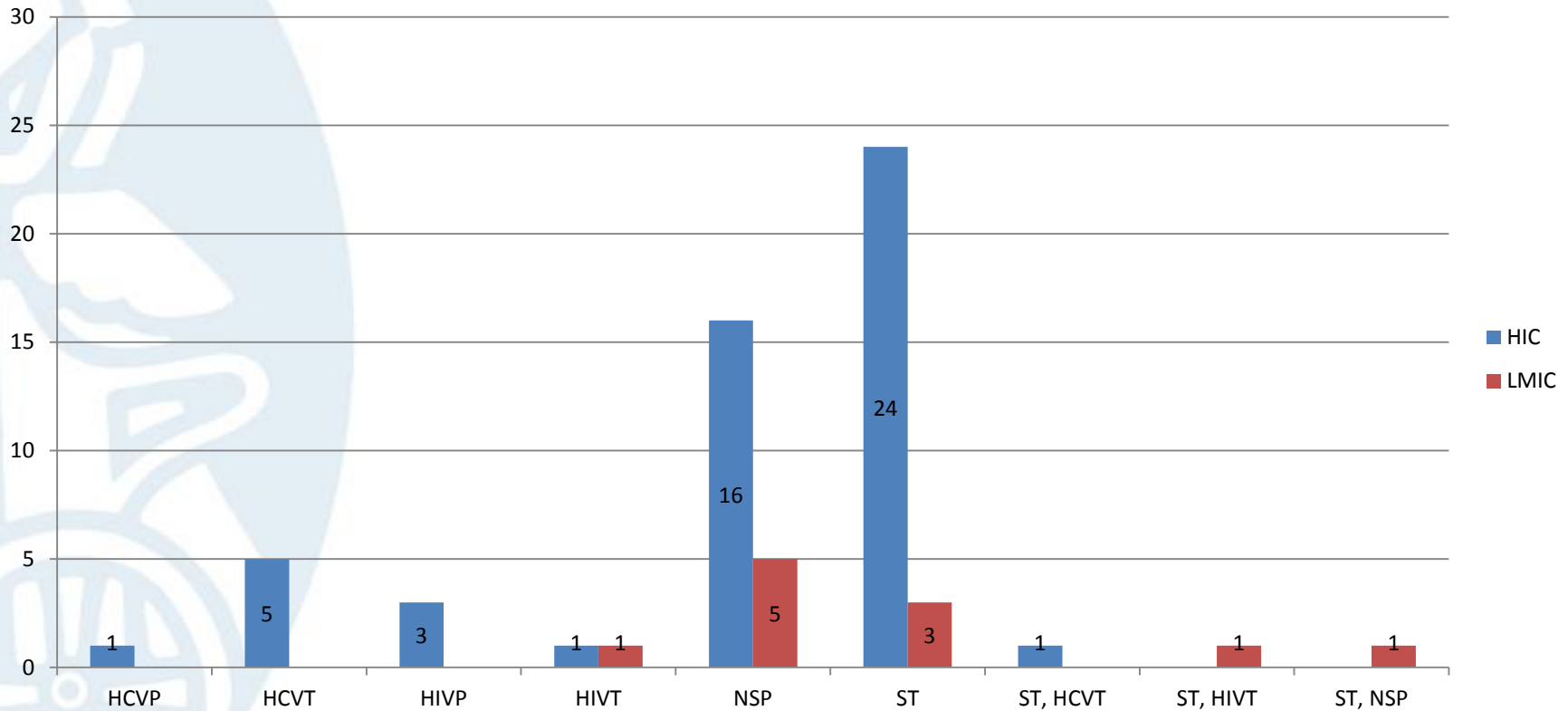HIV Modelling & Economics

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RESULTS

Location of studies

Red	>10
Dark orange	6 - 10
Orange	3 – 5
Yellow	2
Green	1

Studies by income region (WB classification)

Type of analysis by region

Bar chart showing type of analysis by region (HIC and LMIC) for categories CBA, CUA, CEA, Cost, and COI.

HIC: CBA 17, CUA 11, CEA 15, Cost 18, COI 11
LMIC: CBA 2, CUA 5, CEA 5, Cost 1, COI 0
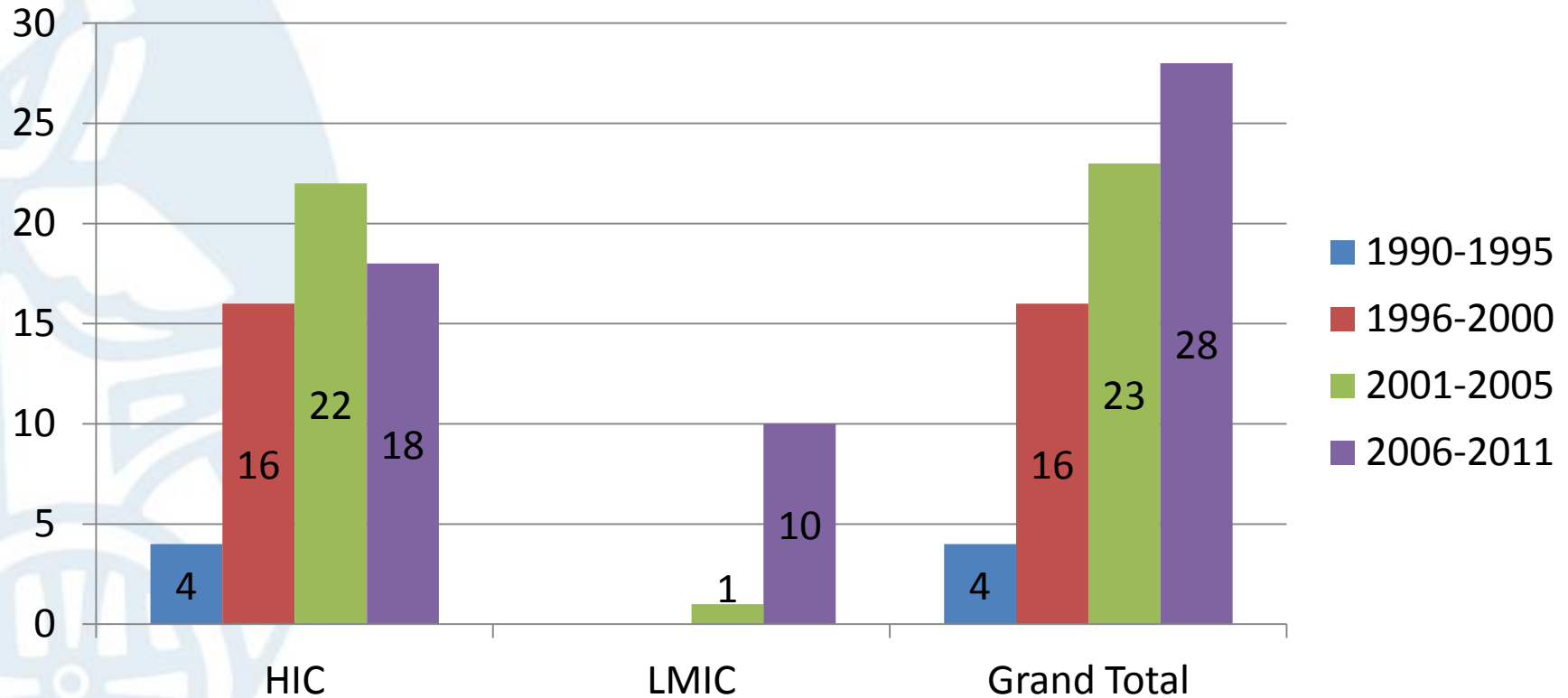
No. of analyses by intervention & region

BMJ check list review

- 13% (9/71) scored greater than 90% on the BMJ check list

- 32/71 scored greater than 80%

- Most frequent problems in reporting were:
  - Lack of details on price adjustments (34)
  - Resource quantities not reported separately (30)
  - Perspective not clearly stated (28) (or justified – 61)
  - No justification for discount rate (26)
  - Economic importance not stated (25)
  - No justification for form of evaluation (22)
  - Currency and price data not recorded (21)
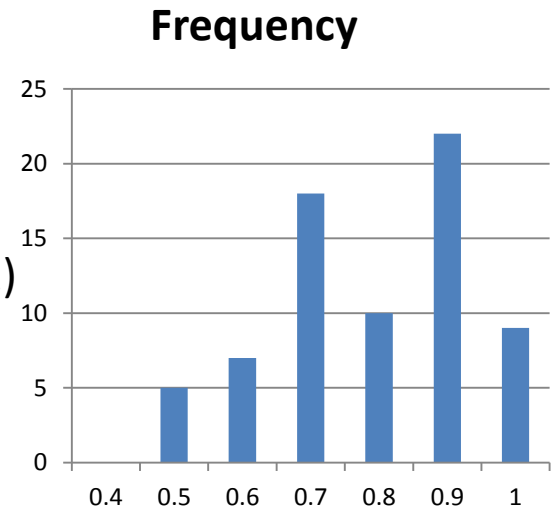
Frequency

BMJ check list review – LMIC studies only

- 27% (3/11) scored greater than 90% on the BMJ check list
- 5/11 scored greater than 80%
- Most frequent problems in reporting were:
  - Resource quantities not reported separately (7)
  - No justification for discount rate (7)
  - Details of the meta analysis not given (5) *
  - Lack of details on price adjustments (5)
  - Major outcomes not presented in disaggregated and aggregated way (5)*
  - Economic importance not stated (4)
  - Unit cost estimation methods not clear (4) *
  - Currency and price data not recorded (4)
  - Perspective not clearly stated (3) (or justified – 9)

* Not identified as frequent problem in HIC studies

Studies by region (>80% score on check list) n=32 – where has our evidence gone?
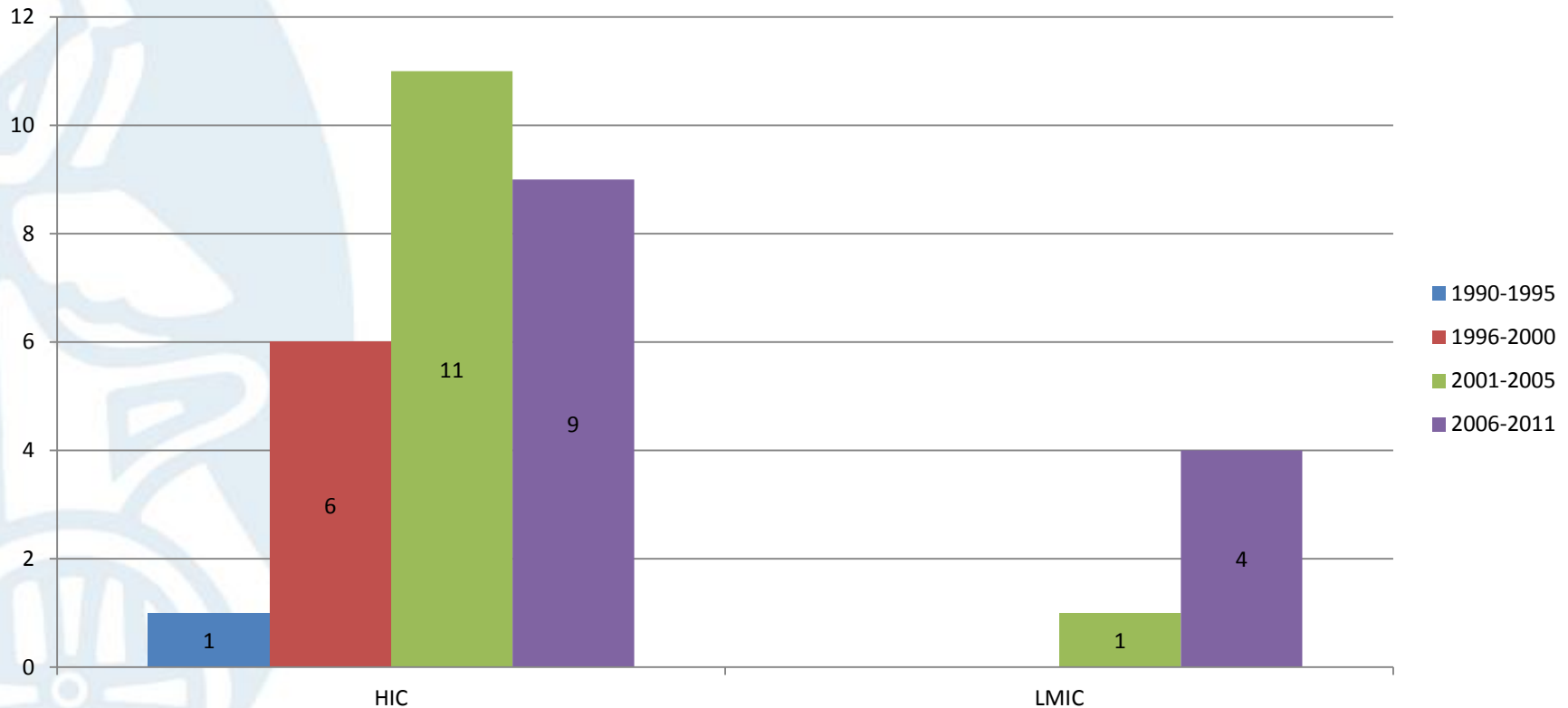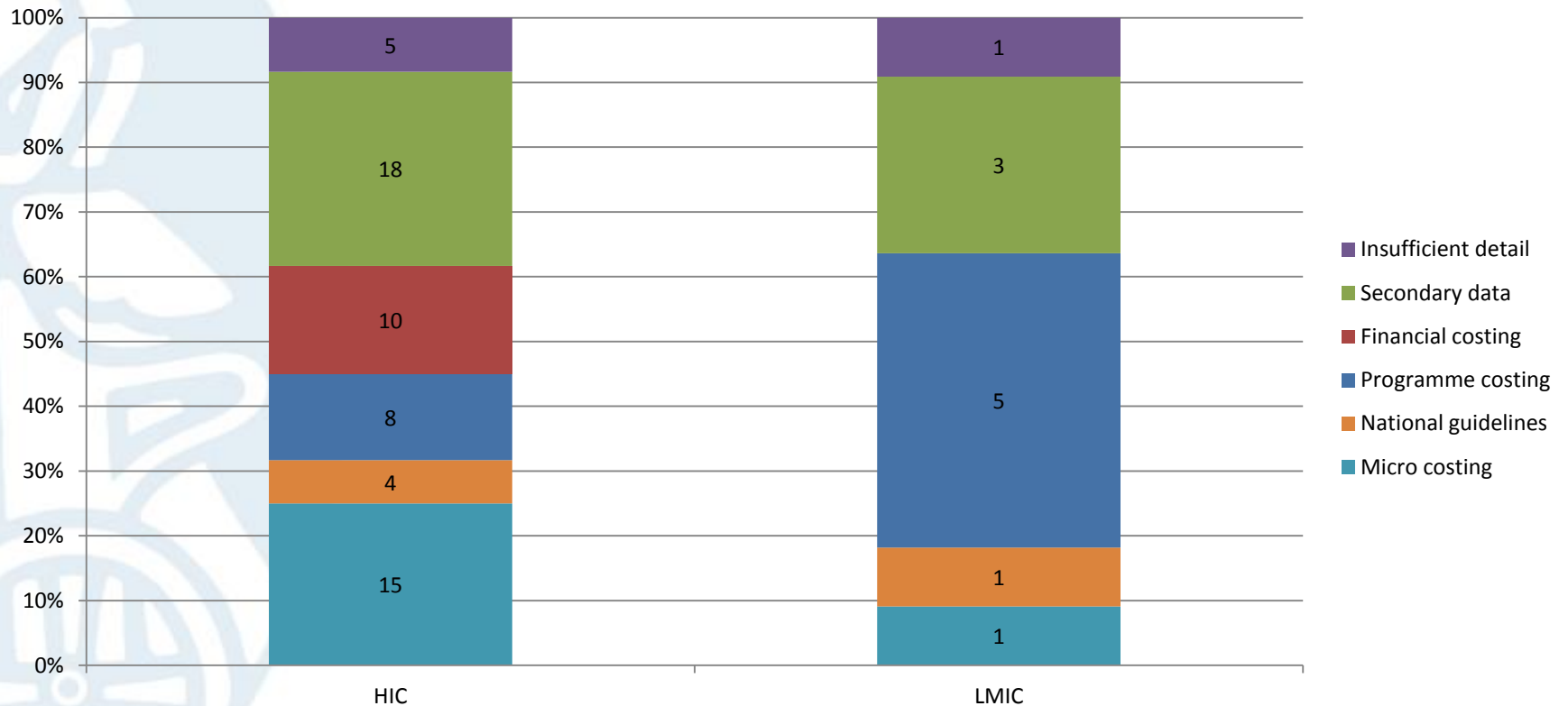
Costing methods – data

- Primary cost data collection was used in 54% of the studies.

- 18 studies used a bottom approach to costing – 2 of which used secondary cost data.

- Fifty-three studies used a provider perspective, 12 used a societal one.

- Ten studies used financial costing (including claims data and financial operating costs) and only 15 studies explicitly stated which type of costs were used

Costing methods - design

Costing method	Number of studies
Micro-costing	
Utilisation survey plus cost data	10 (14%)
Utilisation (best practice) plus national prices	1 (1%)
Utilisation survey plus national prices	3 (4%)
Utilisation survey plus secondary costs	2 (3%)
National costing scheme	5 (7%)
Programme costing	13 (18%)
Financial costing (accounts/ payer/ budget)	10 (14%)
Secondary cost data	21 (30%)
Insufficient information on sources	6 (8%)

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Type of costing by region

The role of modelling in cost estimation

- Significant role of modelling (1/3 studies model costs)

- 3 of which used primary data

- Modelling requires good data.....
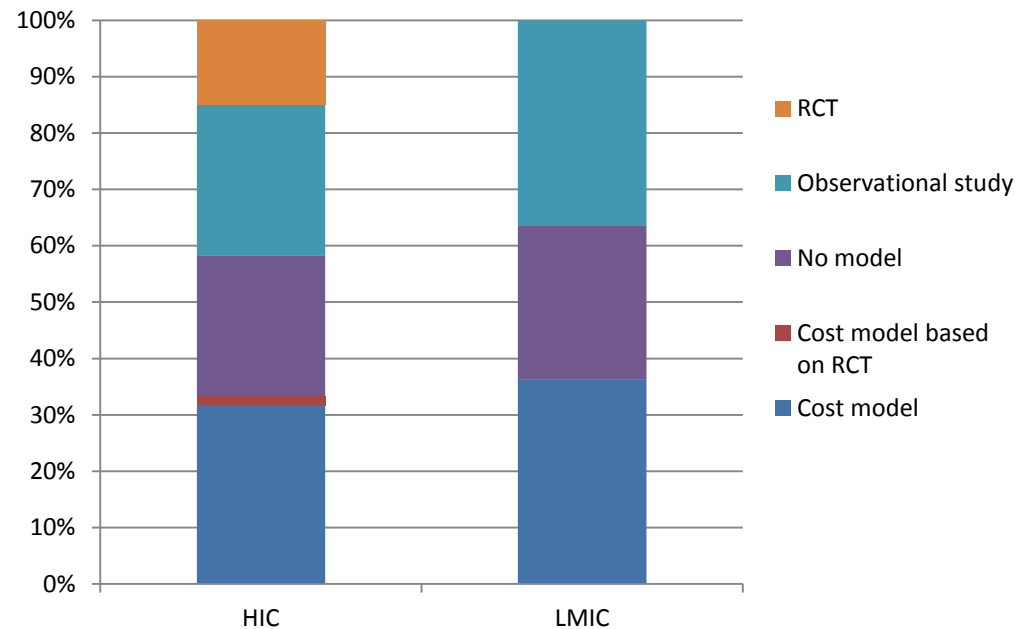
What role guidelines?

- U.S has been at forefront of developing costing tools – DATCAP, SASCAP
  - Not used extensively: overall - 5/71; for U.S. - 4/ 34
- UNAIDS and ADB have intervention specific guidelines
  - Not used in HICs
  - 4/11 studies in LMICs use UNAIDS or ADB guidelines
  - 1 uses U.S. tool
- Nor are generic tools such as BMJ checklist used extensively

Conclusions

- Harm reduction economic evaluations are focussed in U.S. – studies from Europe and LMICs are limited

- Economic evaluations are increasingly being published in LMICs (see e-poster: Harker and Guinness).

- BMJ check list provides information on the quality of reporting only but this is important if information to be used in further analyses

- It is possible to produce good quality evidence from LMICs

- Concern that guidelines are not being utilised

- As journal editors, peer reviewers, authors and researchers we have responsibility to improve the evidence base

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