

The effect of HTA on reimbursed pharmaceutical prices – preliminary results from an international empirical analysis

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Background

- Limited research on relationship between broad range of policies being used around the world and pharmaceutical prices
- Price is important driver of health care costs
- Pilot study of simvastatin (off-patent medicine) and rituximab (on-patent medicine)
- Fuller study to examine the relationship between policies and pharmaceutical prices
 - Off-patent medicines
 - On-patent medicines



Methods

- Multivariate regression analysis
- Model on and off-patent medicines separately
- Government reimbursed prices
- All prices adjusted to US\$ per mg
- Dependent variables
 - 21 countries - simvastatin 1,023 prices
 - 15 countries - rituximab 54 prices
- Independent variables in the model
 - HTA status
 - Mandatory HTA
 - Encouraged HTA
 - No HTA
 - Public health expenditure as % total health expenditure
 - Health expenditure as % of GDP
 - Strength of tablet/vial



Results –

Off-patent medicine simvastatin

Background

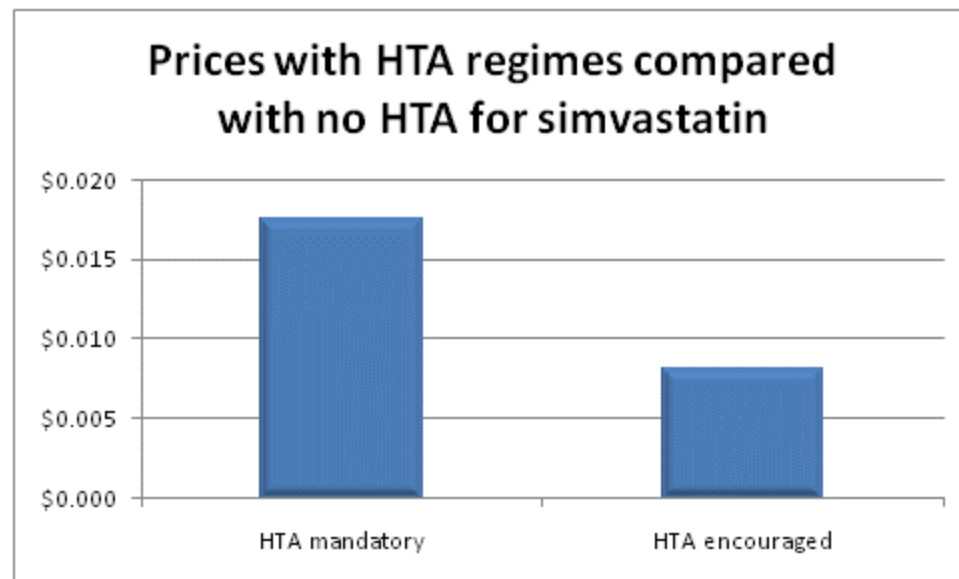
Methods

Results

Conclusions

Full study

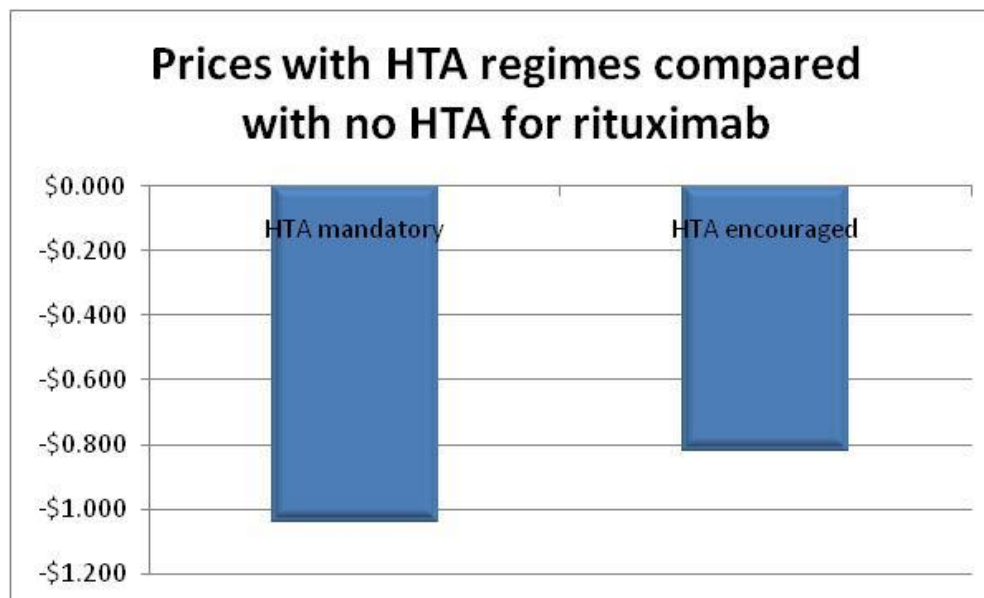
- Average cost per mg US3c at a dose of 20mg per day = US60c per patient/day
- “HTA Mandatory” significantly more expensive than “no HTA” - extra US2c per mg or = extra US40c per patient/day ($t=7.34$ and $p<0.0001$)
- “HTA encouraged” significantly more expensive than “no HTA” - extra US1c per mg or = extra US20c per patient/day ($t=3.27$ and $p=0.001$)
- Other results
 - Higher public spending as % of total health care spending resulted in lower prices
 - Higher health expenditure as % of GDP lead to higher prices
 - Higher strength tablets were associated with lower prices per mg



Results –

On-patent medicine rituximab

- Average cost per mg US\$4.36 at a dose of 640mg per week = US\$2,800 per patient/week
- HTA Mandatory significantly less expensive than no HTA – lower price by US\$1.04 per mg or = US\$666 per patient/week ($t=-3.32$ and $p=0.002$)
- HTA Encouraged significantly less expensive than no HTA – lower price by US\$0.82 per mg or = US\$525 per patient/week ($t=-2.57$ and $p=0.013$)
- Other results
 - No significant findings



Conclusions

- Background
- Methods
- Results
- Conclusions
- Full study

	Old Off-patent drug	Innovative On-patent drug
HTA mandatory	↑ Higher (Highest) prices	↓ Lower (lowest) prices
HTA encouraged	↑ Higher prices	↓ Lower prices
HTA none	↓ Lowest prices	↑ Highest prices

- Preliminary pilot results.
- Findings intuitive
 - HTA acts as another mechanism to restrict prices for innovative/monopoly products as they enter the market
 - HTA is not used for older off patent medicines – HTA countries may lack market mechanisms to take advantage of patent lapse and multiple sellers

Full study

- We are undertaking survey for a full study to profile pricing policies in each country
 - Appreciate your support in completing the survey
 - At least assist with our contacting relevant people in each country
 - This will allow more extensive modelling of a wide range of policies against a broader set of pharmaceutical prices to determine the relationship
- I will be available each break and would really, really, really... like to talk to you

Simvastatin results

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- Price exfact USD | Coef. Std. Err. t P>|t| [95% Conf. Interval]
- +-----
- HTA mandatory | .0175579 .0023932 7.34 0.000 .0128617 .0222541
- HTA encouraged | .0081266 .0024845 3.27 0.001 .0032512 .0130019
- publicspending | -.08351 .012895 -6.48 0.000 -.1088139 -.0582061
- health spend/GDP| .3715777 .0645891 5.75 0.000 .2448346 .4983207
- Strength | -.0003708 .0000445 -8.32 0.000 -.0004582 -.0002834
- cons | .0581266 .0120756 4.81 0.000 .0344307 .0818226
-

- ***Relapsed or refractory Low Grade or Follicular non-Hodgkin's lymphoma***

- The recommended dosage of MABTHERA when used in monotherapy is 375 mg/m² administered as an intravenous infusion once weekly for four weeks. 1.7 m² (ie 640mg)