

## Specialty training as an incentive to retain doctors in Malawi: Discrete Choice Experiment

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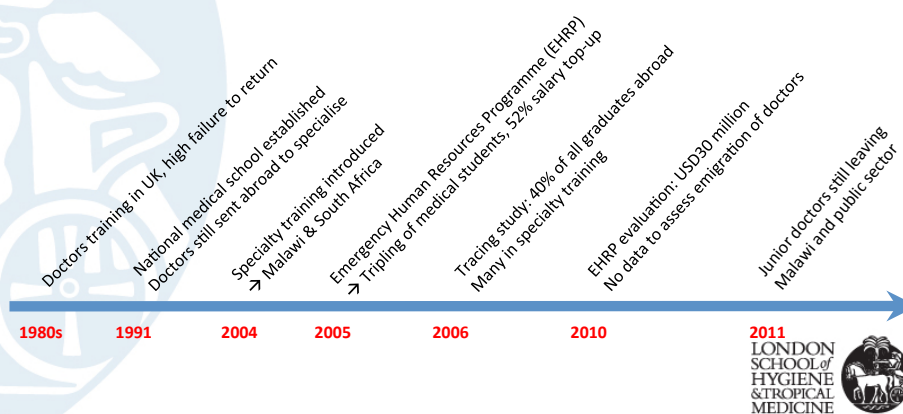
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## History



Zijlstra & Broadhead. Human Resources for Health. 2007;5:10



- Specialty training likely to be incentive
- Yet all types of training may not be valued equally
- Unpack value of specialty training in retention

Systematic literature review

- Importance of non-financial incentives
- Postgraduate training particularly valued by health workers

Mandeville et al. BMC Health Services Research 2014; 14:367

Semi-structured interviews with doctors

- Importance of specialising
- Low status of Malawian-based training
- Low uptake of training places in certain specialties

Semi-structured interviews with key informants

*I can tell you for a fact that we are still failing to fill a lot of the posts. So, there are some posts that, or places, that are fully funded and I can cite anaesthesia, we haven't had anybody for I think the past two years...another area is ophthalmology.*

*I don't think I would die a happy doctor if I don't become a specialist*

*I think our own registrars feel a sort of inferiority and they do want to get the South African exams as well. They somehow feel that that validates them. And I think it's a shame.*



## Discrete choice experiment (DCE)

- Quantitative methodology for eliciting preferences
- Services/goods/states can be described by essential characteristics  
→ Value to an individual is derived from combination of these attributes
- Participants are asked to choose between hypothetical descriptions made up of different combinations of attributes
- Choices reveal trade-offs between different attributes
- Preferences can inform development of health services or policy



## Choosing between jobs

You have seen two jobs advertised in the newspaper.

Postgraduate training is guaranteed if you accept one of these posts, but your future training differs in location and specialty. You will also need to work for some time before training, and this job differs in location, salary and duration. Please compare the following two job descriptions:

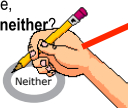
JOB A	WORK BEFORE TRAINING	JOB B
Central hospital	JOB LOCATION	Remote district hospital
MK 200,000	MONTHLY SALARY	MK 110,000
2 years	TIME BEFORE TRAINING	5 years
	SPECIALIST TRAINING	
All in South Africa	TRAINING LOCATION	All in Malawi
1 <sup>st</sup> choice core specialty	SPECIALTY	Ophthalmology

Considering the job as a whole, would you choose **Job A**, **Job B**, or **neither**?

A

B

Neither



Survey included social demographic characteristics

A	B	NEITHER
X		
	X	
	X	
		X
	X	
X		
X		
		X
		X
X		
	X	
	X	
X		
		X



## Sample

- Recent graduates who had not yet started (i.e. made a choice over) postgraduate training.
- Excluded
  - Non-Malawian citizens
  - Undergraduate training outside Malawi
- Eligible = 153/279
- August 2012 – March 2013
- Response rate 96.7% (149/153)

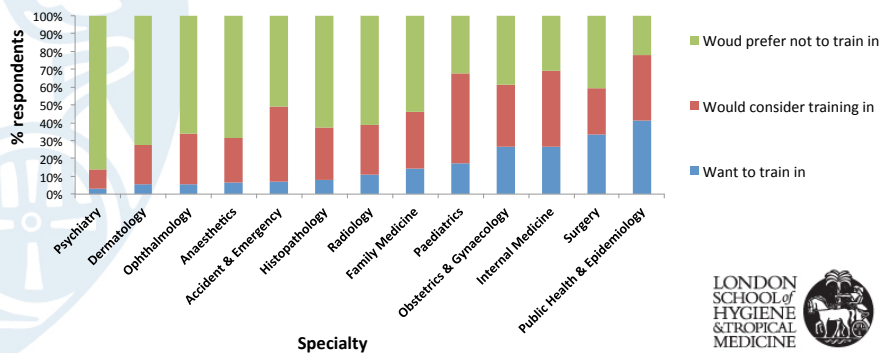


## DCE analysis

- Choices form dependent variable in a “choice model”
- Levels of attributes form independent variables
- **Latent class model**
  - Underlying classes of participants with similar preferences
  - Membership characterised by unobserved (latent) variables
  - Latent variables inferred through observed variables
  - Observed variables incorporated into model

## Results

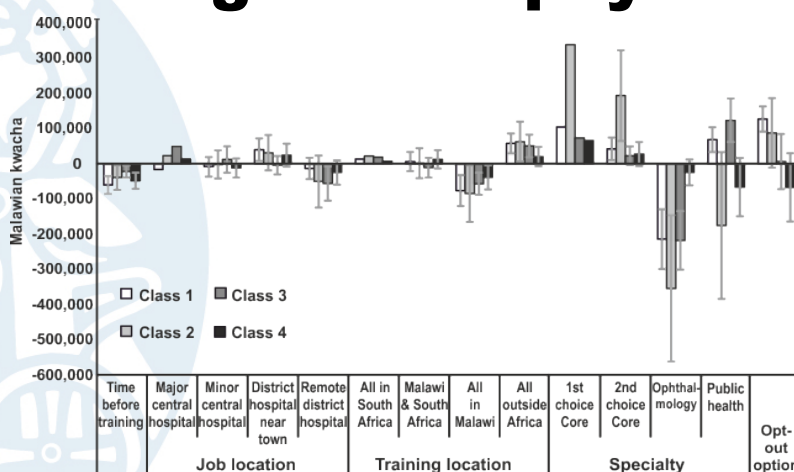
- All participants except one planned to specialise in the future
- **Three in four were looking for funding at that time**
- Best fitting model included 4 classes and 3 observed variables
  - age, specialty flexibility index, and current salary



## Results

- Four groups of participants with distinct preferences
- Characterised as:
  - **“Rich rejecters”** (frequently rejected jobs, higher mean salary)
  - **“Stubborn specialists”** (strongest specialty preferences, most dissatisfaction with training all in Malawi or longer time before training)
  - **“Money motivated”** (largest preference for salary increases, more dependents)
  - **“Pliant patriots”** (scored higher on specialty flexibility index, only group for which training all outside Africa or in ophthalmology did not influence choices)
- Preferences can be leveraged by policymakers to maximise public sector retention

## Willingness to pay



Class 1 = Rich rejecters

Class 2 = Stubborn specialists

Class 3 = Money motivated

Class 4 = Pliant patriots

# Results

Junior doctors would need to be paid an extra....

...MWK 39,000 - 85,000 (\$146 to \$318) per month to train all in Malawi

...MWK 215,000 - 355,000 (\$803 to \$1,326) per month to do ophthalmology

Junior doctors would work an extra...

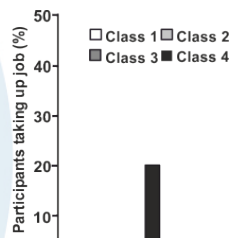
...2 to 5 months for an additional MWK10,000 (\$37) in monthly salary

...1.3 to 8.5 years to train in a 1<sup>st</sup> choice core specialty



## Policy simulation 1: Improving uptake of unpopular specialties

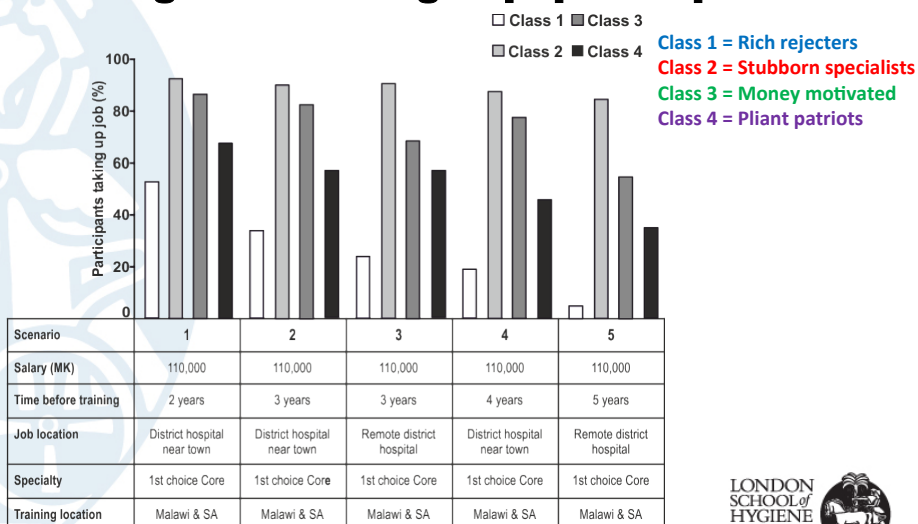
Class 1 = Rich rejecters  
 Class 2 = Stubborn specialists  
 Class 3 = Money motivated  
 Class 4 = Pliant patriots



Scenario	Baseline	1	2	3	4
Salary (MWK)	110,000	110,000	110,000	160,000	160,000
Time before training	2 years	2 years	1 year	1 year	1 year
Job location	District hospital near town	District hospital near town	District hospital near town	District hospital near town	District hospital near town
Specialty	1st choice Core	Ophthalmology	Ophthalmology	Ophthalmology	Ophthalmology
Training location	Malawi & SA	All in Malawi	All in Malawi	All in Malawi	Malawi & SA



## Policy simulation 2: Maximising service in exchange for training in popular specialties



## Conclusions

- Specialty training can be effective at retaining doctors
- But not all training is valued equally
- Health workers have distinct preferences that can be leveraged by policymakers for public sector retention

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