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

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History

Zijlstra & Broadhead. Human Resources for Health. 2007:5:10
Semi-structured interviews with key informants

Systematic literature review

Semi-structured interviews with doctors

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

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

Preferences of Malawian junior doctors for public sector jobs

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

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.
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: Central hospital
- MONTHLY SALARY: MK 200,000
- TIME BEFORE TRAINING: 2 years
- SPECIALIST TRAINING LOCATION: All in South Africa
- SPECIALTY: Ophthalmology
- 1st choice core specialty: A

**JOB B**
- JOB LOCATION: Remote district hospital
- MONTHLY SALARY: MK 110,000
- TIME BEFORE TRAINING: 5 years
- SPECIALIST TRAINING: All in Malawi
- SPECIALTY: X

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

<table>
<thead>
<tr>
<th>Jobs</th>
<th>Core Specialty</th>
<th>Ophthalmology</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>B</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>NEITHER</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

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 1st 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
Policy simulation 2: Maximising service in exchange for training in popular specialties

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

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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