



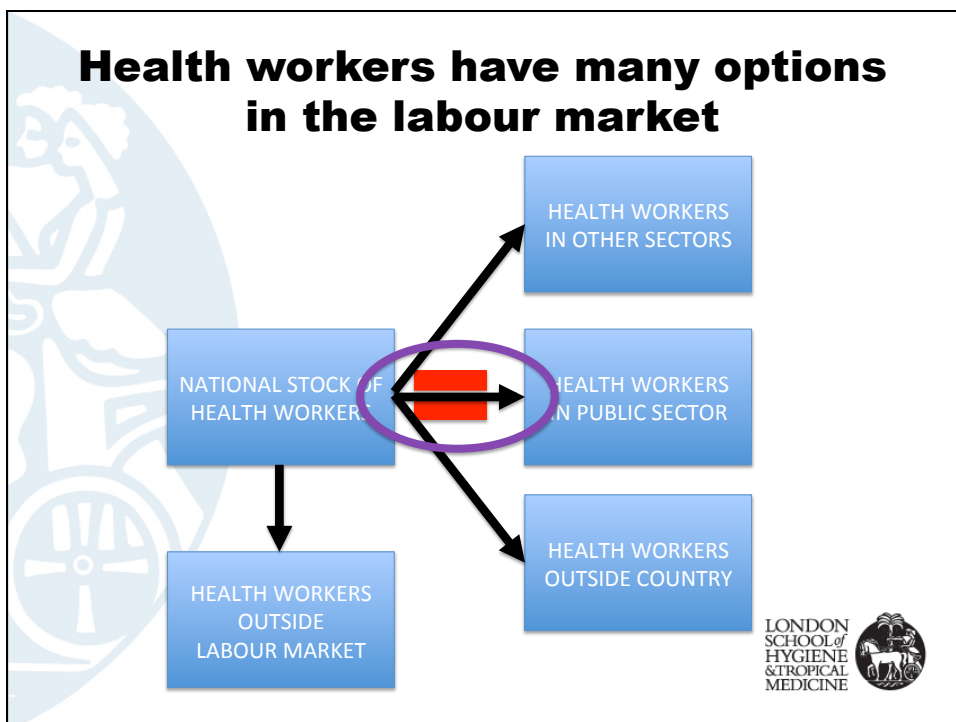
The use of specialty training to retain doctors in Malawi: a cost-effectiveness analysis

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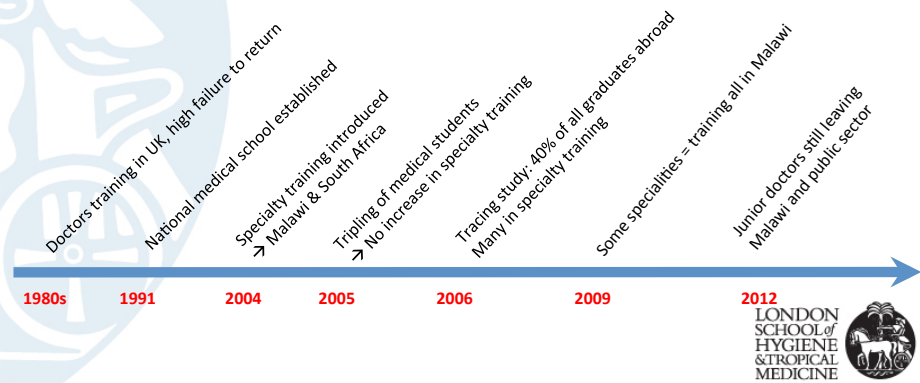
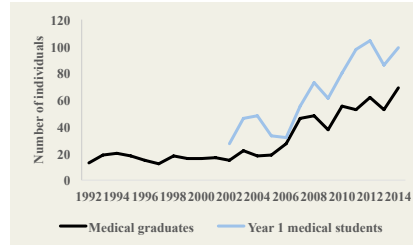


Specialty training

- Particularly valued incentive for doctors
 - Small specialist workforces in sub-Saharan Africa often necessitate training in another country
 - Domestic training less valued
- May augment retention in short-term
 - But increase emigration in long-term
- Mandatory service before training
 - May not be accepted
 - Delay production of specialists



Malawi



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



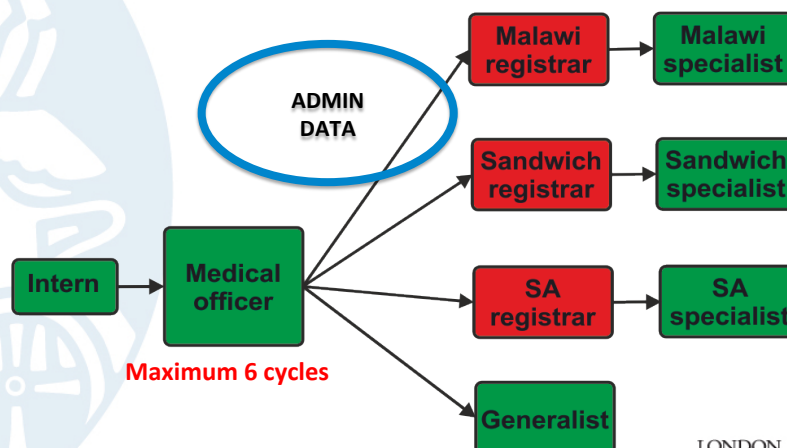
Cost-effectiveness analysis

- Normally used to compare clinical interventions or medications
 - 2nd analysis comparing different workforce policies
- Discrete-time inhomogeneous Markov process
 - Models movement of doctors over their working lifetime
- Outcome measures
 - Cost per doctor-year
 - Cost per specialist-year
- Baseline scenario
 - Cumulative impact on outcome measures under current workforce policies
- Interventions expanding specialty training
 - Different locations for training
 - Mandatory service period of 1 to 5 years
- Time horizon = working life of a Malawian doctor = 40 years
- Government perspective
- 3% discount applied to both costs and effects
- Probability sensitivity analysis using 2000 Monte Carlo simulations to calculate ICERs
- CEACs and CEAFs over range of thresholds (zero to MWK50 million (£60,000) in increments of MWK100,000)



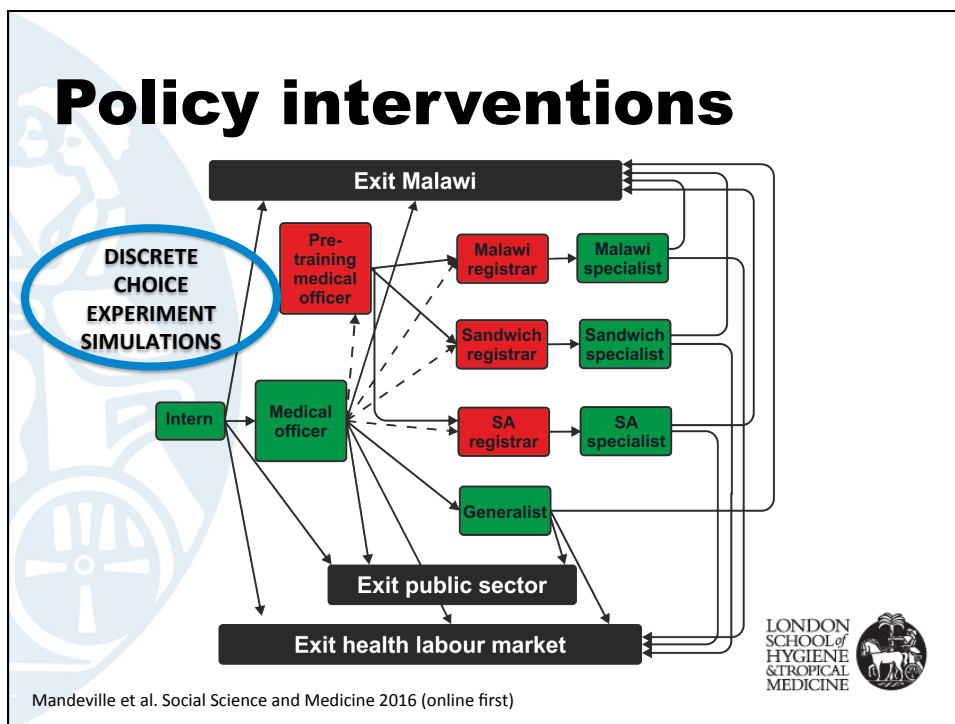
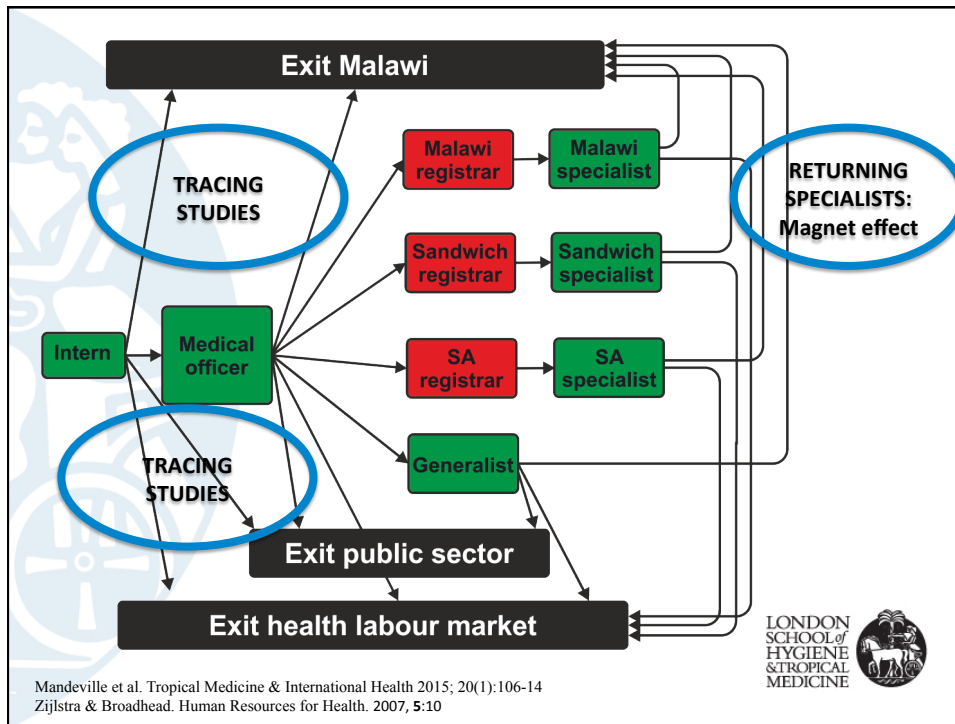
Lagarde et al. Social Science and Medicine (2012), doi: 10.1016/j.socscimed.2012.05.005

Markov model

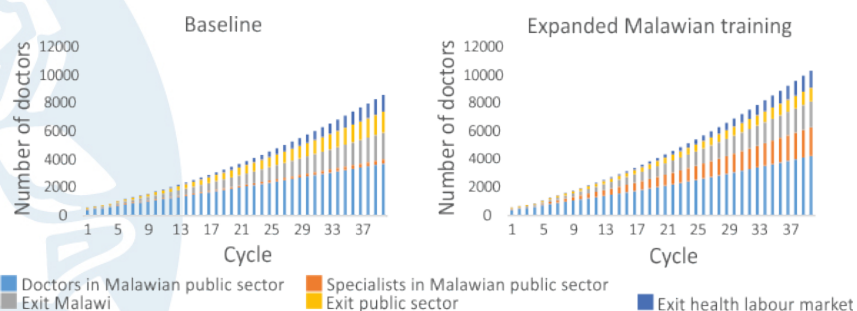


40 cohorts of doctors + existing stock





Distribution over 40 years



- Expanded Malawian training would lead to a medical workforce over 50% greater than baseline by the end of 40 years
- Six times more specialists

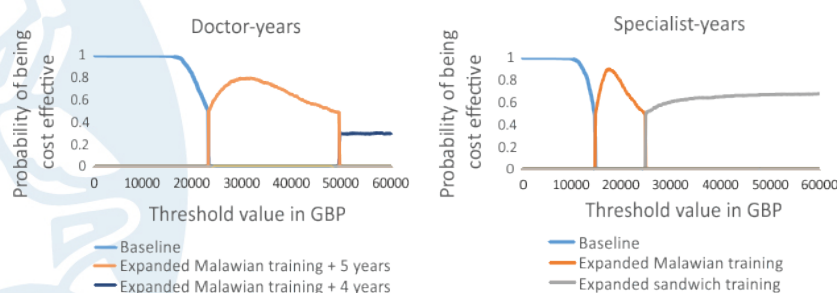


Costing policy options

- In-service costs
 - Salary
 - Accommodation
 - Transport
 - Specialist perks
- Training costs
 - Tuition fees
 - Allowances
- Exclude increased service costs due to more specialist care
- Exclude administrative burden of policy implementation



Cost-effective acceptability frontiers



Current government thresholds =

- £6,536 per doctor-year
- £9,486 per specialist-year

Policy lessons

- Specialty training as an incentive to retain doctors would be cost-effective but more expensive than current expenditure
- More cost-effectiveness analysis of health workforce decisions
 - Malawi spent 4% of budget in 2014/15 on training and 36% on salaries
 - Costs and effects best evaluated over long-term
- Health workforce policies should take “whole-career” perspective to maximise investment



Questions?

