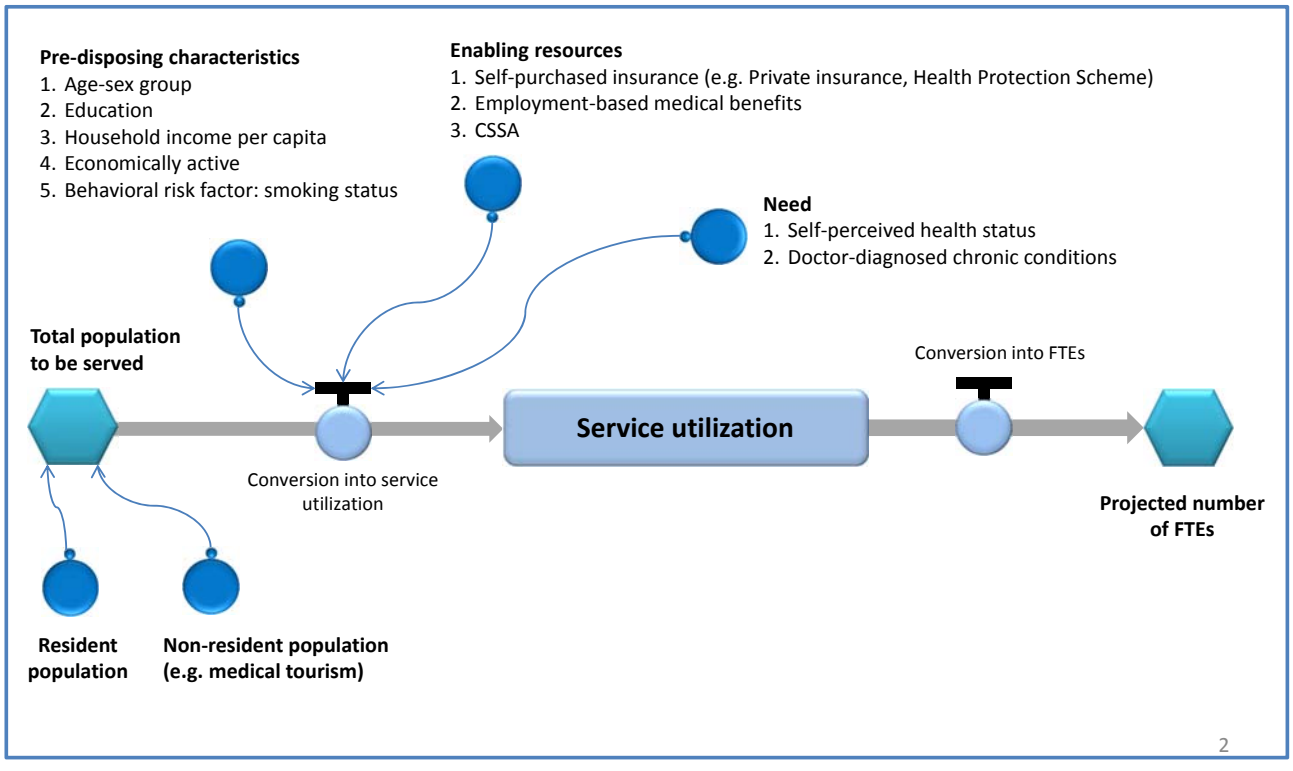
Healthcare Manpower Planning and Projection

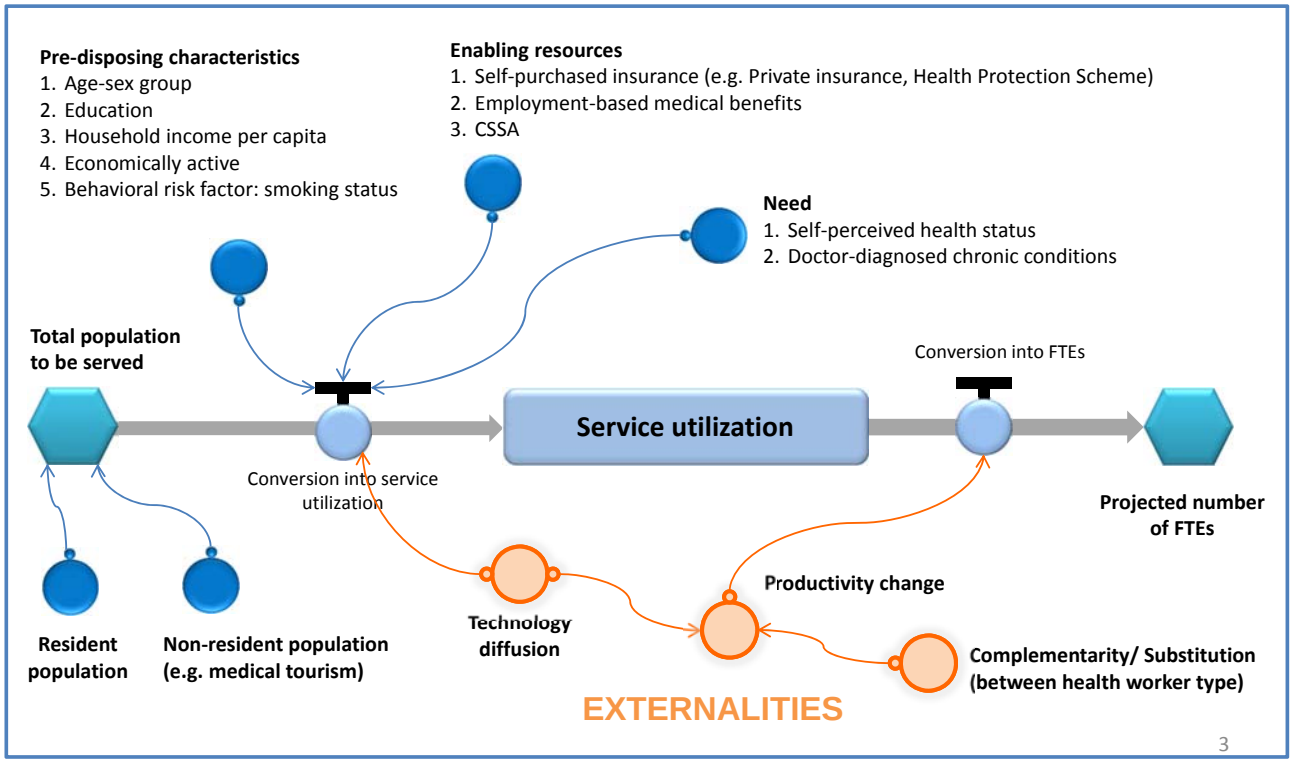
November 11th 2013

SCHOOL OF PUBLIC HEALTH
THE UNIVERSITY OF HONG KONG
香 港 大 學 公 共 衞 生 學 院

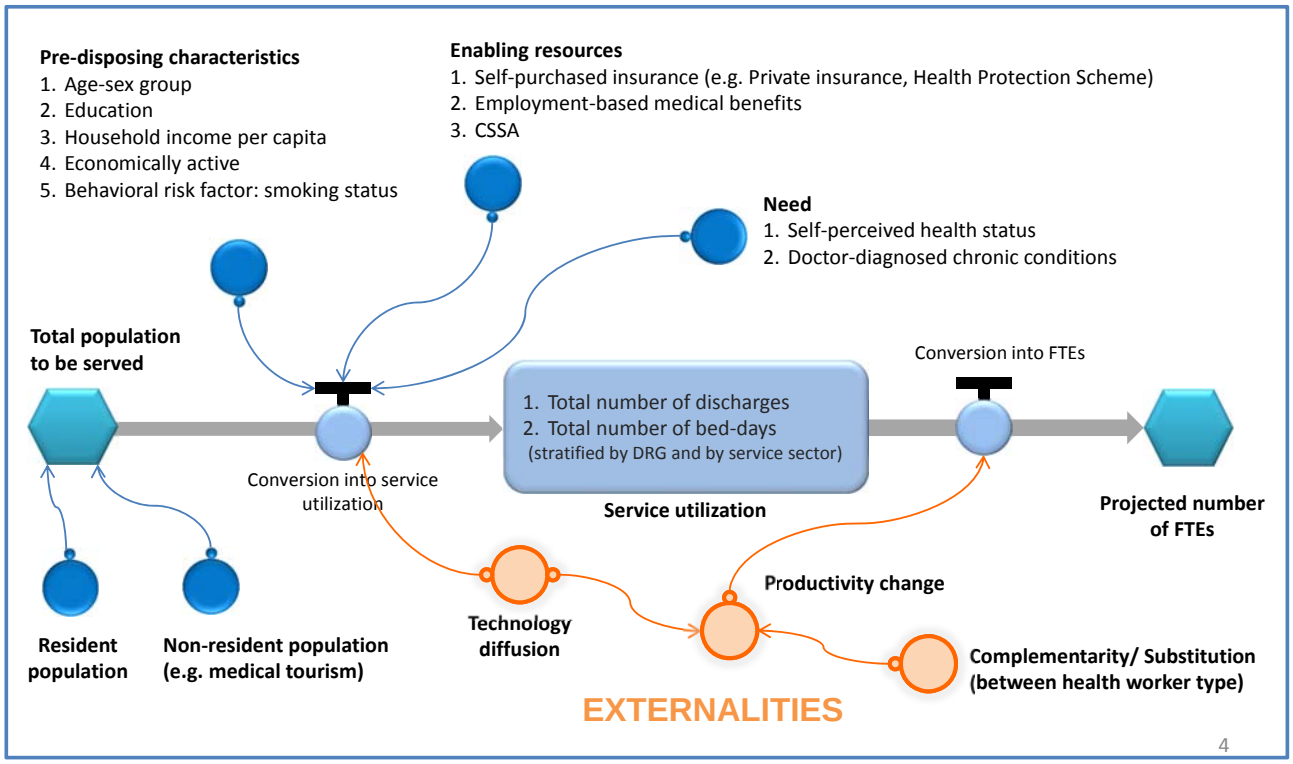
Conceptual demand model for doctors



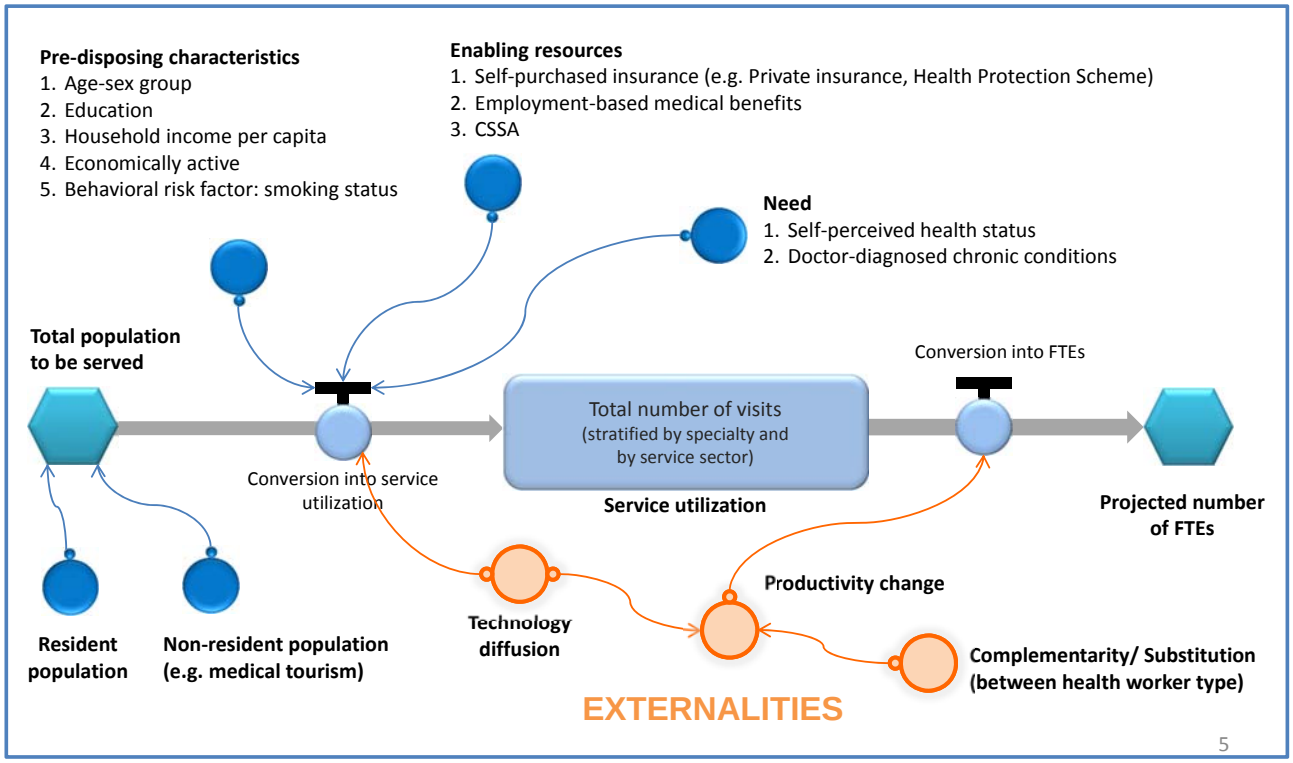
Conceptual demand model for doctors



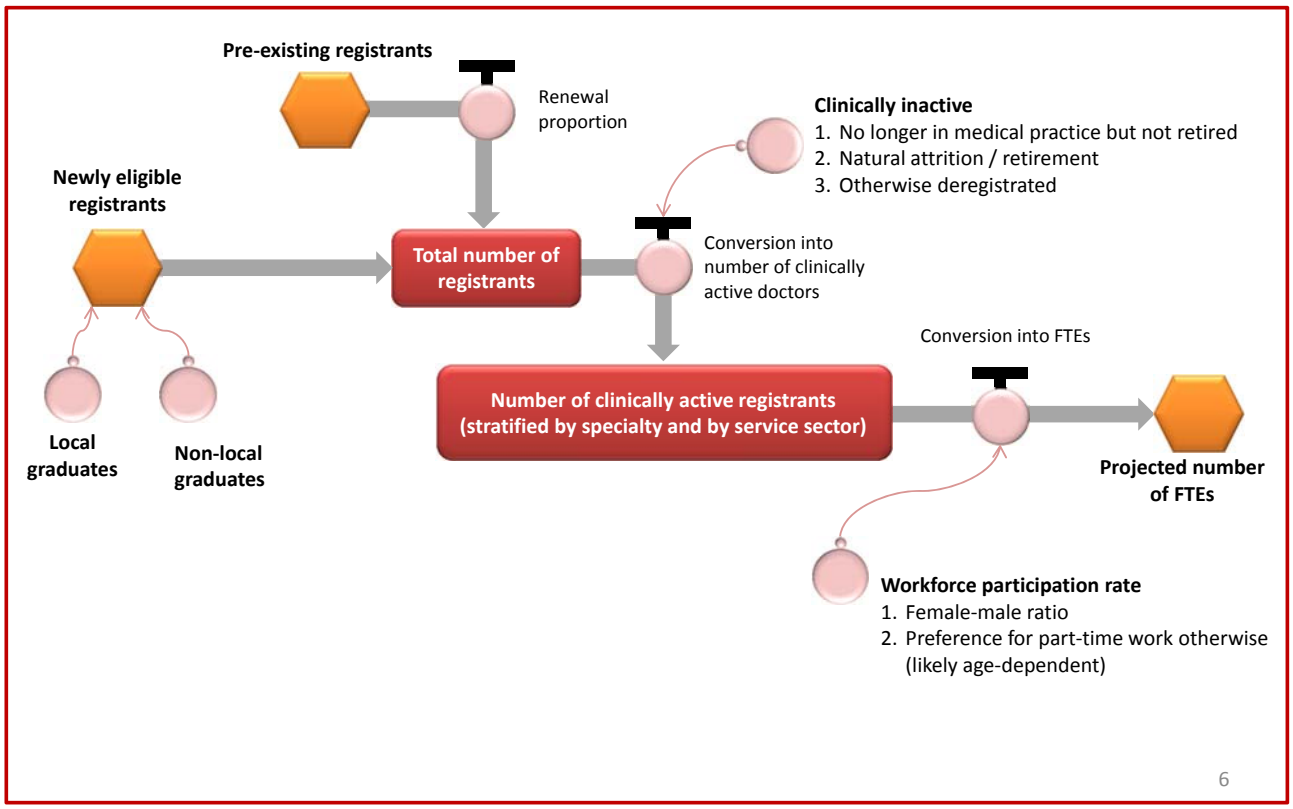
Conceptual demand model for doctors
(Inpatient)



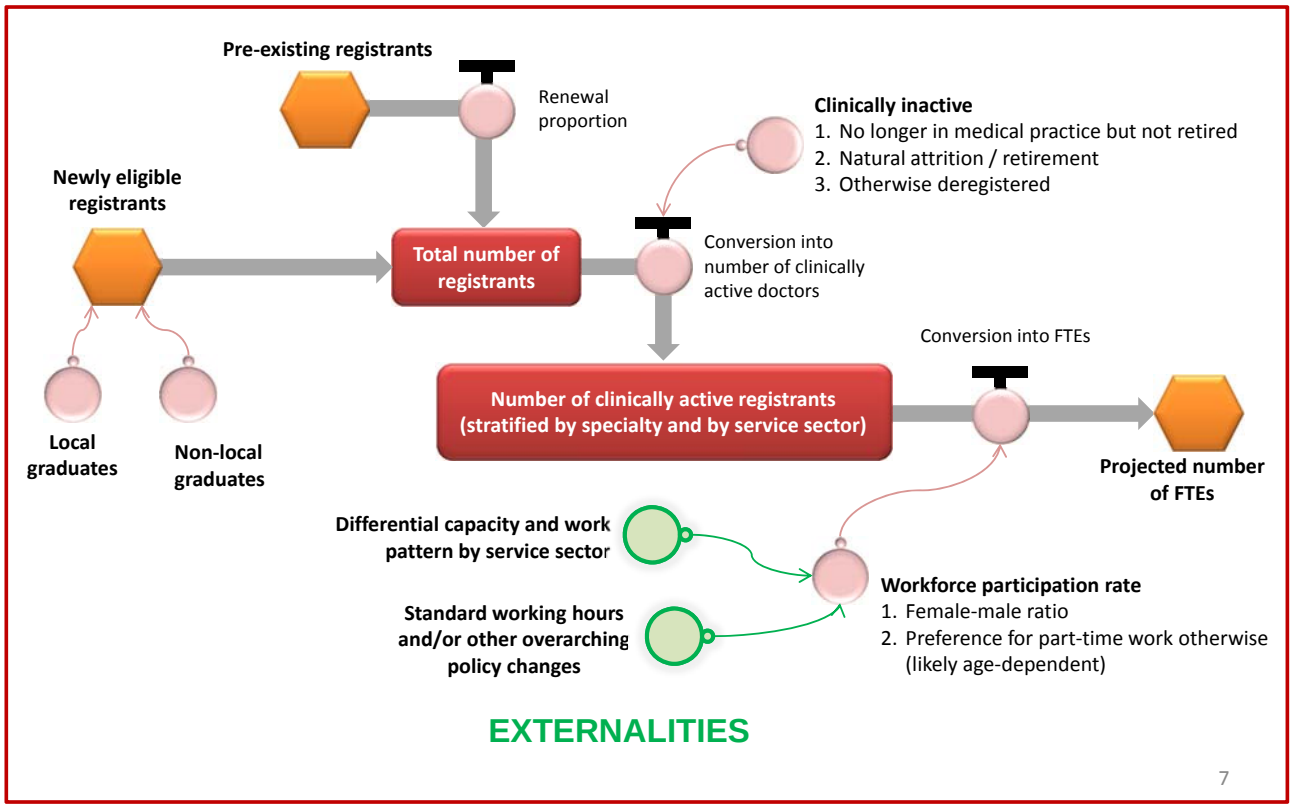
Conceptual demand model for doctors
(Outpatient)



Conceptual supply model for doctors



Conceptual supply model for doctors



2013

2014

Pre-existing registrants

Newly eligible registrants

Registered doctor

Clinically inactive

Clinically active

FTEs

2013

Pre-existing registrants

Newly eligible registrants

Registered doctor

Clinically inactive

Clinically active

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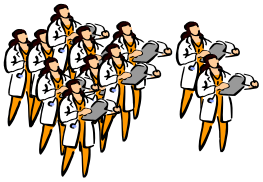
2014

Pre-existing registrants



Registered doctor

Clinically inactive

Clinically active

FTEs

2013

Pre-existing registrants

Newly eligible registrants

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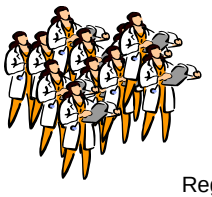
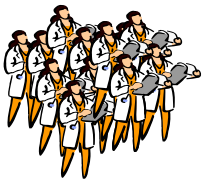
Pre-existing registrants



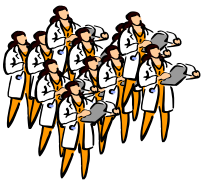
Newly eligible registrants

Registered doctor

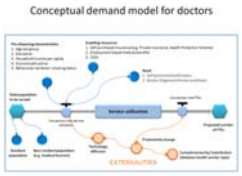


Clinically inactive

Clinically active

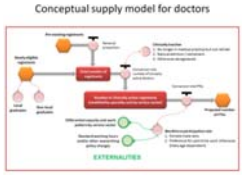


FTEs

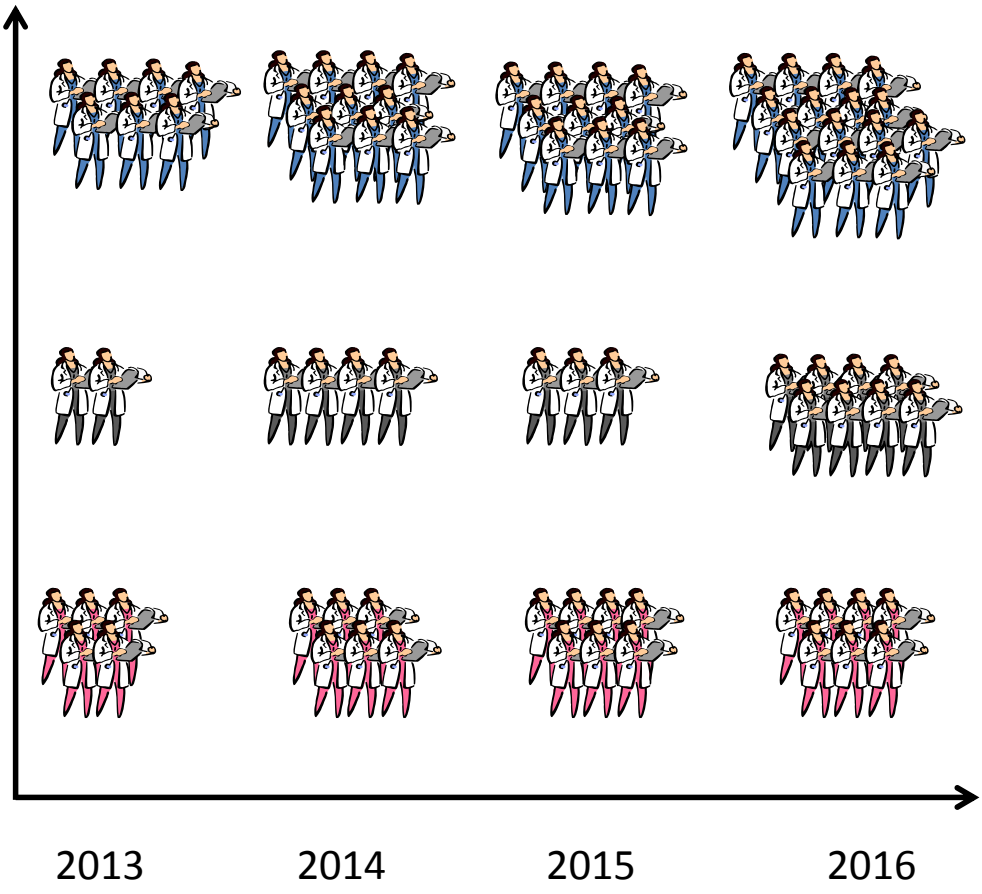


Demand

ΔFTE



Supply



Approach	Concept	Basis	Criticisms	Application
Need-based	Socially optimal number of doctors	• Disease incidence • Doctor encounters • Time/pat encounter • Time in patient care/year	• Lack efficacy and efficiency data • No technological change • Assumes resources by need	• RAND (Arch Opthalmol 1998) • GMENAC (1981)
Demand / utilisation-based	Number likely to employ	• Current utilisation patterns • Estimates of change in demographics and demand • Empirical analysis	• Current inequities carried forward • Assumes all care useful • No non-curative service • No change in care modality	• RAND (J B & Joint Surg 1998) • Health Workforce Australia (NHWT 2010)
Benchmarking	Defined standard of care	• Doctor/pop ratio	• Assumes efficient mix and number • Assumes no diff in health care sys • No diffs in roles (e.g. GP/FM)	• Weiner (1994) • Weiner (2004)
Trend analysis	Historical trends	• Aggregate-level, time-series data • Estimate doctor/pop/capita, GDP, pop growth and ageing	• Assume supply = demand • Assume more health care only limited by willingness to pay	• Cooper (Health Affairs 2002)

HRSA (2008)