

Medical specialist fees in response to insurance reform

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Background – Medicare

- Universal health care introduced in 1984
- Covers out-of-hospital and private inpatient services
- Medicare provides a rebate for over 5700 health services on the Medical Benefits Schedule (MBS).
- Government provides Medicare Rebate for each service
- Patients pay difference between doctor's fee and rebate (Out of pocket cost)

The Extended Medicare Safety Net (EMSN)

- Doctor fees are essentially unregulated in Australia.
- EMSN introduced in 2004 to limit patient out-of-pocket (OOP) costs.
- Annual household threshold for OOP costs – general and concession
- Government pays 80% of OOP above threshold

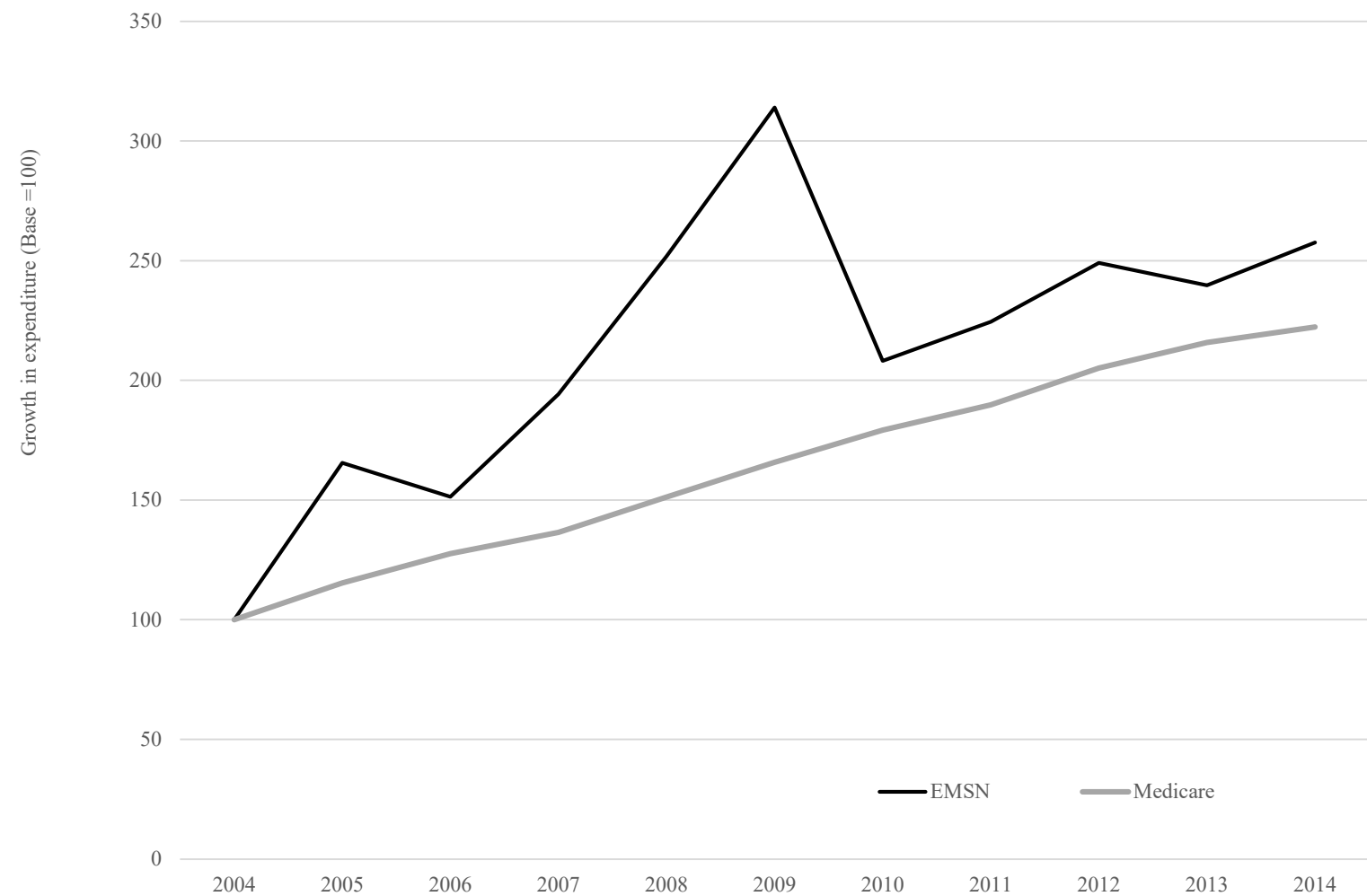
The Extended Medicare Safety Net (EMSN)

- Previous reviews found:
 - Doctor revenues were higher, and OOP costs not much lower.
 - EMSN expenditures were concentrated in certain services, and in wealthier areas
 - Overall, EMSN expenditures were much higher than expected

The Extended Medicare Safety Net (EMSN)

Government response:

- Introduction of caps on specific items
- Raising the EMSN threshold

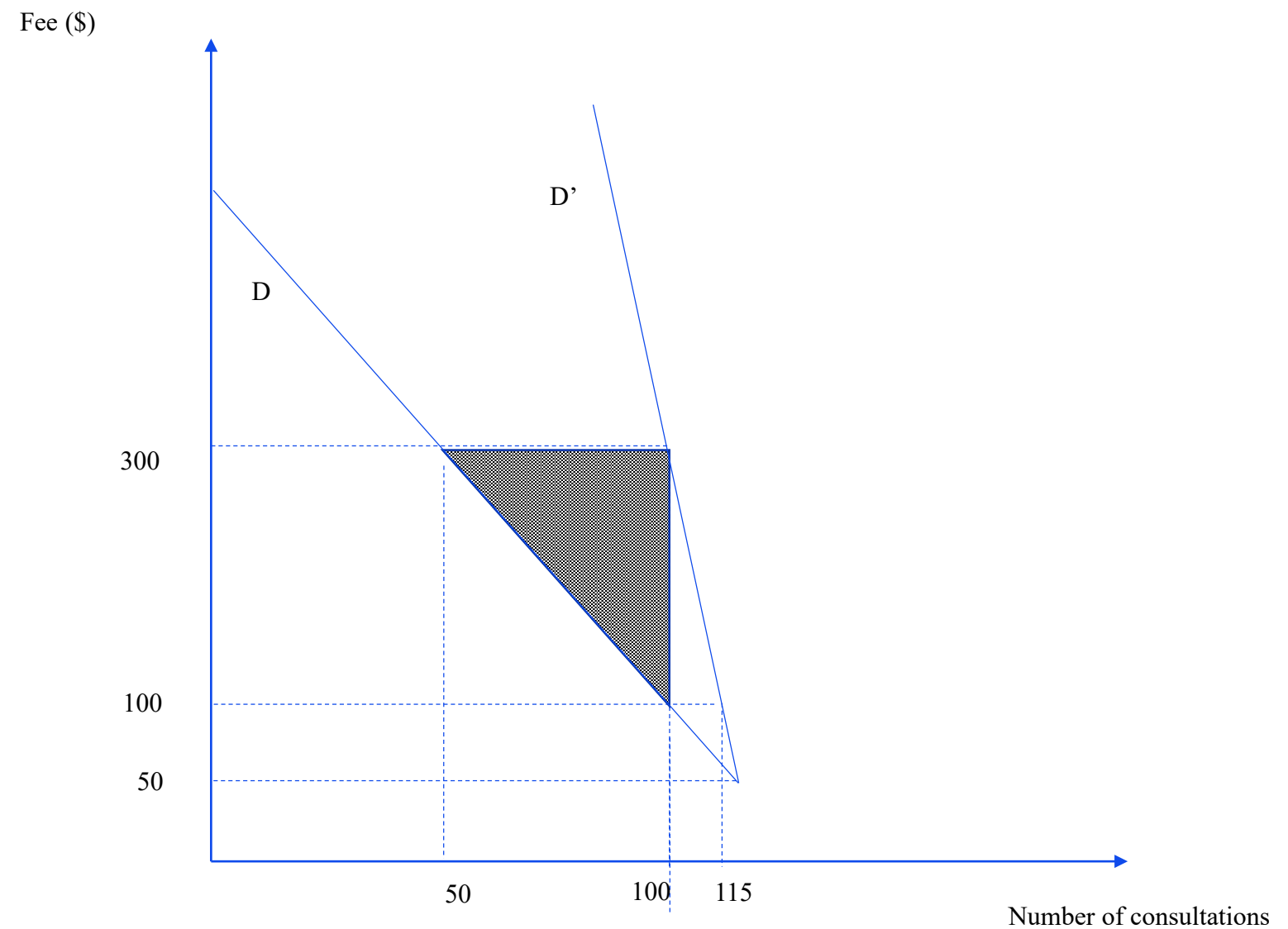


The Extended Medicare Safety Net (EMSN)

Year	Policy context
2004	EMSN Introduced. Thresholds of \$300 for low and middle income earners; and \$700 for all other (general) households.
2006	Increase in EMSN threshold levels to \$500 for low and middle income and \$1000 for all other (general) households.
2010	Introduce caps to the amount of EMSN benefits for 71 Medicare items.
2012	All Medicare consultation items also receive caps (caps extended to 500 Medicare items).
2015	Increase of threshold to \$2000 for all general households.

Motivation

- Does a patient's eligibility for EMSN benefits cause their doctor to raise their fees?
- Studies suggest that doctors do indeed influence the quantity demanded and price of their services



Research design

- Key features:
 - Policy experiment: government raised the annual threshold for general, but not concession, patients.
 - Unregulated doctor's fees
 - Rich patient-doctor level data and imperfect knowledge of patient eligibility for EMSN benefits

Data

- Sax Institute's 45 and Up Survey:
 - 260,000 people residing in NSW Australia
 - Aged 45 and over
 - Linked to administrative Medicare data
 - De-identified patient and doctor information
 - Fees charged by providers, Medicare rebate, OOP costs
 - Types of services used by patients

Method

- Difference-in-difference regression model:

$$y_{iht} = \alpha_0 + \alpha_1 T_i + \alpha_2 D_t + \beta T_i \cdot D_t + \delta X_{it} + \varepsilon_{iht}$$

- where h tracks multiple visits of patient i within a year; D_t is a time dummy (2015) and X_{it} a vector of patient-level control variables.
- Treatment group: General patients whose doctors know they are eligible for EMSN benefits.
- Control group: Concessional patients whose doctors know they are eligible for EMSN benefits
- Outcome of interest: Consultation fees charged by specialists in 2015 compared to 2014.

Limitations

- Data available for NSW only.
- Limited data available for high EMSN expenditure categories. Eg assisted reproductive therapies (ART) and private obstetrics.
- Models specialist consultations only.

Challenge 1

- When do doctors change their pricing behaviour, if at all?

	n	Proportion with zero costs	Distribution of non-zero out-of-pocket costs (percentile)						
			5th	25th	50th	75th	95th	99th	Maximum
General patients	57,029	28.9	26.7	77.3	160.4	311.0	649.6	1,008.5	10,015.8
Concession patients	130,729	16.0	33.0	106.9	235.5	472.5	1,066.9	1,489.0	11,914.7

- Strategy:
 - Consider patients between the old and new thresholds
 - Consider patients within 25, 50 and 75 percent bounds of their threshold

Challenge 2

- Are our treatment and control groups comparable?
- Strategy:
 - Control variables
 - Multiple control groups
 - Placebo test

Changes in specialist fees

Specialty	General patient			Concession patient			Difference
	2014 mean	2015 mean	% change	2014 mean	2015 mean	% change	
Dermatology	97.5	102.9	5.60%	72.5	77.4	6.80%	-1.20%
Ophthalmology	91.6	94.4	3.10%	72.9	74.9	2.80%	0.30%
Cardiology	98.9	101.4	2.50%	83.7	85.4	2.00%	0.50%
Endocrinology	108.7	110.2	1.40%	85.9	88.4	3.00%	-1.60%
Gastroenterology	96.4	100.8	4.50%	82	83.6	2.00%	2.50%
Geriatric medicine	71.4	75.2	5.30%	74.1	73.6	-0.70%	6.00%
Medical oncology	83.6	85.4	2.10%	75.4	76.3	1.20%	0.90%
Rheumatology	121.1	124	2.30%	99.6	102.7	3.10%	-0.80%
Psychiatry	233.4	239.4	2.60%	170.9	175.9	3.00%	-0.40%
Radiation oncology	47.4	50.1	5.90%	43.6	43.8	0.50%	5.40%

Treatment group fees up 13.7% (\$175 to \$199)

Control group fees up 2.8% (\$106 to \$109)

Results

- On average, doctors raised consultation fees for EMSN-eligible general patients by 12%.
- The closer the patient to their EMSN threshold, the higher the fee increase.
- Results were robust to alternative definitions of the control group, the treatment group, and a placebo test. Sensitivity checks resulted in effects between 10 and 18 percent.
- Other effects: large group effect, small year effect, intuitive results on socioeconomic characteristics.

Results

	Fuzzy area model	Alternative control group	Within 50% bounds	Within 25% bounds	Placebo test
Effect of higher EMSN threshold	0.12**	0.12***	0.13***	0.18***	0.03
Treatment group	General patients; single-doctor OOP between old and new thresholds	General patients; single-doctor OOP between old and new thresholds	General patients; single-doctor OOP within 50% bound of threshold	General patients; single-doctor OOP within 25% bound of threshold	General patients; EMSN eligible, multiple doctors
Control group	Concession patients; single-doctor OOP between old and new thresholds	General patients; EMSN eligible, multiple doctors	Concession patients; single-doctor OOP within 50% bound of threshold	Concession patients; single-doctor OOP within 25% bound of threshold	Concession patients; single-doctor OOP between old and new thresholds
n	21,123	114,758	52,801	18,907	25,668

How do we explain these results?

If we assume:

- monopolistic competition so providers can exert some price control
- patients are risk adverse and obtain utility through insurance
- qualifying for the EMSN is like purchasing additional insurance
- imperfect information about who is likely to qualify
 - except when a patient has experienced high OOP costs through one provider

When these conditions hold:

- Ability-to-charge and willingness-to-pay higher fees after a threshold change

Implications

- The government increased the EMSN threshold to reduce EMSN expenditures by decreasing the number of claimants.
- The analysis shows that as a result, doctors increased their fees, and the overall distribution of OOP in our sample shifted higher.
- Likely that EMSN expenditures will reach previous levels far quicker than predicted.
- Could see more widespread inflationary effects if patients/providers have more information about entitlements.
- Behavioral responses around thresholds:
 - Australian response is reflected in price changes.
 - Could also be reflected in utilization.

Acknowledgements

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	Panel A.	Panel B.	Panel C.
Effect of higher EMSN threshold	0.12**	0.12**	0.03
	(0.05)	(0.06)	(0.02)
Year effect	0.03**	0.05***	0.03*
	(0.01)	(0.01)	(0.01)
Group effect	0.15***	0.39***	-0.17***
	(0.05)	(0.05)	(0.02)
Age	-0.02***	-0.01***	-0.01***
	(0.00)	(0.00)	(0.00)
Female	0.08***	0.02	0.04**
	(0.02)	(0.02)	(0.02)
Geographical location			
Inner regional	-0.07**	-0.05*	-0.05**
	(0.03)	(0.03)	(0.03)
Outer regional	-0.08***	-0.04	-0.06**
	(0.03)	(0.03)	(0.03)
Remote	-0.22***	-0.20***	-0.15**
	(0.07)	(0.07)	(0.06)
Very remote	0.17*	0.38***	-0.01
	(0.10)	(0.05)	(0.08)
Educational Attainment			
At least Year 12	0.05**	0.02	0.05**
	(0.02)	(0.02)	(0.02)
Bachelor degree and above	0.15***	0.03	0.09***
	(0.03)	(0.02)	(0.02)
Has private health insurance	0.12***	0.14***	0.12***
	(0.02)	(0.04)	(0.02)
Socioeconomic disadvantage			
Quintile 1 (Most disadvantaged)	-0.07*	-0.16***	-0.09***
	(0.04)	(0.04)	(0.04)
Quintile 2	-0.08**	-0.08**	-0.09***
	(0.03)	(0.04)	(0.03)
Quintile 3	-0.05	-0.10***	-0.06**
	(0.03)	(0.03)	(0.03)
Quintile 4	-0.05	-0.05**	-0.07**
	(0.03)	(0.02)	(0.03)
Number of annual GP visits	0.00**	0.00	0.00*
	(0.00)	(0.00)	(0.00)
No. Observations	21,123	16,559	25,668

	Panel A. 25% bounds	Panel B. 50%	Panel C. 75%
Effect of raising general EMSN	0.18***	0.13***	0.07***
	(0.05)	(0.03)	(0.01)
Year effect	0.02*	0.03***	0.03***
	(0.01)	(0.01)	(0.00)
Group effect	0.15***	0.15***	0.15***
	(0.04)	(0.02)	(0.01)
Age	-0.01***	-0.01***	-0.01***
	(0.00)	(0.00)	(0.00)
Female	0.05***	0.04***	0.02***
	(0.02)	(0.01)	(0.01)
Geographical location (relative to metro)			
Inner regional	-0.06***	-0.04***	-0.03***
	(0.02)	(0.01)	(0.01)
Outer regional	-0.08***	-0.05***	-0.03***
	(0.03)	(0.02)	(0.01)
Remote	-0.16**	-0.09**	-0.06***
	(0.06)	(0.04)	(0.02)
Very remote	-0.18***	0.25**	0.17
	(0.05)	(0.10)	(0.12)
Educational Attainment (relative to Year			
At least Year 12	0.03	0.04***	0.03***
	(0.02)	(0.01)	(0.01)
Bachelor degree and above	0.13***	0.12***	0.09***
	(0.02)	(0.01)	(0.01)
Has private health insurance	0.12***	0.08***	0.06***
	(0.02)	(0.01)	(0.01)
Socioeconomic disadvantage (relative to			
Quintile 1 (Most disadvantaged)	-0.07**	-0.09***	-0.08***
	(0.03)	(0.02)	(0.01)
Quintile 2	-0.03	-0.07***	-0.07***
	(0.03)	(0.02)	(0.01)
Quintile 3	-0.07***	-0.09***	-0.08***
	(0.03)	(0.02)	(0.01)
Quintile 4	-0.02	-0.03**	-0.05***
	(0.03)	(0.02)	(0.01)
Number of annual GP visits	0.00**	0.00***	0.00***
	(0.00)	(0.00)	(0.00)
No. Observations	18,907	52,801	150,686

	Panel A.		Panel B.	
	General patients		Concession patients	
	2014	2015	2014	2015
Age	66.0	65.8	77.4	78.1
Female	0.47	0.55	0.53	0.53
Married/partnered	0.71	0.71	0.72	0.71
Non-English speaking background	0.86	0.93	0.67	0.68
Level of education				
Year 11 or below	15.6	11.2	36.2	36.6
At least year 12	35.5	34.7	45.4	43.0
Degree or higher	48.9	54.2	18.5	20.4
Geographical location				
Major cities	74.7	73.9	52.0	53.1
Inner regional	18.0	17.9	29.6	30.1
Outer Regional	3.7	7.2	17.3	15.9
Remote	1.1	0.3	0.8	1.0
Very remote	2.5	0.7	0.3	0.0
Has private health insurance	0.12	0.06	0.06	0.07
Income bracket				
Less than \$30,000	5.3	2.8	39.2	39.9
\$30,000 to \$69,000	17.6	23.8	31.5	29.9
\$70,000 and above	66.3	65.8	9.9	11.6
Did not respond	10.8	7.7	19.3	18.4
Socioeconomic disadvantage				
Quintile 1 (Most disadvantaged)	0.0	3.7	10.5	11.5
2	7.8	6.8	19.8	18.7
3	22.9	19.4	25.6	23.9
4	18.3	21.2	19.6	19.8
Quintile 5 (Least disadvantaged)	51.1	49.1	24.6	26.2
Mean number of annual GP visits	8.8	8.4	12.7	12.7
Mean consultation fee	\$175	\$199	\$106	\$109