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Catastrophic insurance: impact of the Australian Medicare Safety Net on fees, service use and out-of-pocket costs

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Abstract

Objectives: The Medicare Safety Net Policy was introduced in March 2004 to provide financial relief for those Australians who face high out-of-pocket (OOP) costs for outpatient medical services. This study evaluates the extent to which out-of-pocket costs have fallen since the introduction of the Safety Net and examines the impact of the policy on the level of service use, the amount of benefits paid by government and fees charged by medical providers.

Methods: Regression modelling of time series data was used to examine whether there have been significant changes in levels of service use, fees charged and benefits paid for services provided by specialists in the two-year period following the introduction of the Safety Net. Four speciality fields were examined in this analysis: general specialists' consultations, obstetrics, pathology and diagnostic imaging.

Results: The analysis indicates that the introduction of the Safety Net coincided with a substantial rise in public funding for Medicare services and a much smaller reduction in OOP costs. The policy has coincided with a small but significant change in the number of pathology and diagnostic imaging services used and in some specialty areas a substantial increase in the fees charged by providers. The net impact shows that for specialists' consultations every dollar spent on the Medicare Safety Net, $0.68 went towards higher fees and $0.32 went towards reducing OOP costs. The corresponding figures for diagnostic imaging were $0.74 and $0.26 respectively.

Conclusions: The Safety Net was heralded by the government as a fundamental reform in Australia's Medicare program. Whilst the Safety Net was introduced to help reduce out-of-pocket medical costs, this analysis shows that in its first two years of operation, there has been significant leakage of public funding towards higher provider fees. More research is needed using longer term data to assess the impact of the policy on patient and provider behaviour more widely, including examining the policy's impact on those who did qualify for Safety Net and those who did not, as well as more disaggregated analysis of different Medicare services.

1.   Introduction

The Medicare Safety Net was introduced in early 2004 to provide additional financial relief for families with high out-of-pocket (OOP) expenses for Medicare funded outpatient services. It is similar to catastrophic insurance in the sense that it only provides protection once a household has faced substantial OOP costs in any calendar year. This paper examines what effect the introduction of the Safety Net has had on out-of-pocket costs and its impact on health care use, public funding and fees charged by providers. The first section of the paper provides some background of Australia's health care financing arrangements, and provides some empirical context concerning OOP costs in Australia. The paper then sets out the mechanisms of the Safety Net policy, before describing the methods, results and conclusions of the analysis.

1.1 Australia's health care financing: Medicare

Since its introduction in 1984, Medicare has been a fundamental component of Australia's public health care funding arrangements. The outpatient services subsidised by Medicare include consultations with general practitioners (GPs), psychiatrists, obstetricians and other specialists as well as diagnostic and therapeutic services. These services are largely privately provided (i.e. by independent, self-employed medical professionals) and providers are reimbursed on a fee-for-service basis.

Under the Medicare program, patients receive a subsidy worth 85% of the Medicare Schedule Fee for all eligible outpatient services (75% if the service is provided in an inpatient setting). There are Schedule Fees for a wide range of medical services and these are nationally set by government. However, providers are not bound by nationally set Schedule Fees and can set fees at their own discretion and their right to set fees is widely regarded as constitutionally guaranteed [1]. Providers can even charge different patients different fees.

Prior to the introduction of the Safety Net, Medicare could be defined as a "rear-end deductible" insurance program - where the public subsidy for each type of medical service was fixed and any fee charged above this level could only be met by patients directly through OOP costs. Thus, patients have historically faced the burden of directly paying any charges above the Medicare subsidy and providers face market pressures to contain their fees. These pressures are seen as a major factor in keeping medical fee inflation – and therefore OOP costs - in check [1].

In 2005, Australia's federal government spent around AUD430 per capita on subsidies for Medicare-related services [2].

1.2   Out-of-pocket costs in Australia

By international standards Australia's overall OOP costs are relatively high. In 2002, Australia ranked fourth (behind Switzerland, Greece and the United States) in terms of highest per-capita OOP expenditures out of 27 OECD countries for which comparable data was available. Australia's per-capita OOP costs rose by 170%, in real terms, between 1985 and 2002 [3].

OOP costs for Medicare outpatient services account for only ten percent of the overall OOP costs faced by patients directly – or around $1.43 billion in the 2002-03 financial year. Other big cost items faced by patients include pharmaceuticals (33%) followed by health professionals such as dentists and allied-health (29%) [4].

In recent years there have been substantial rises in Medicare-related OOP costs. Table 1 shows that between 1986 and 1995 OOP costs for Medicare outpatient services overall fell by 0.5% (in real terms), but grew at a rate equivalent to 7.1% per annum between 1995 and 2004 [4].

INSERT TABLE 1

Following this period of rapidly rising OOP expenses, the Australian Government introduced a package of measures, labelled *Medicare Plus*, designed to reduce OOP costs. The package contained a number of initiatives directed mostly at the primary care market. For more details on these measures see Jones et al [5]. As part of the *Medicare Plus* package, the Federal Government also implemented the Medicare Safety Net in March 2004 which encompassed all Medicare subsidised outpatient services, not just primary care services [6].

It should be noted that we excluded general practice consultations from this analysis. There are two reasons for doing so. Firstly, the *Medicare Plus* package contained a raft of measures directed at reducing OOP costs for primary care. These measures were implemented around the same time as the Safety Net. It therefore becomes difficult to isolate the impact of the Safety Net on this sector of the health care market. This is not an issue for the speciality fields included in this analysis where the only major policy reform in 2004 and 2005 was the introduction of the Safety Net. Secondly, previous research has shown that only 10% of Safety Net benefits are directed to the general practice market, with the remaining 90% directed to specialty fields [7].

1.3   The Medicare Safety Net

The objective of the Medicare Safety Net policy is to provide catastrophic insurance for those individuals and households with high OOP costs [8]. Once annual OOP expenses exceed a certain threshold, the Safety Net reimburses patients 80% of all OOP costs for Medicare eligible outpatient services. Each family member's OOP expenditure is counted towards the family's Safety Net threshold and the count starts afresh on the 1 January of each year. See Box 1 for an example of how the Safety Net works. It should be noted that whilst Medicare provides subsidies for outpatient and private inpatient service, the Medicare Safety Net only covers OOP payments incurred for outpatient services. Hence, the focus of this paper is on outpatient services.

When the policy commenced, the threshold for low to middle income households was AUD300, and AUD700 for all other households. A family with two children under the age of 13 will be eligible for the lower threshold if their pre-tax annual household income is less than AUD101,495 (USD71,490). The government estimated that around 12 million (out of 20 million) Australians would be covered under the lower threshold [6].

Box 1: The Medicare Safety Net – an example

The Smith family is a low income household and are therefore eligible for the $300 Medicare Safety Net threshold.

Let's say Mr Smith sees a specialist and is charged $150 for the consultation. The Medicare Schedule Fee for that service is $74 and therefore Mr Smith receives a rebate of $63 (85% of $74). Mr Smith's out-of-pocket payment is $87 ($150 fee minus $63 rebate). That $87 will count towards the family's Safety Net threshold.

Once the family reaches the $300 threshold through their collective out-of-pocket expenses, the Medicare Safety Net will cover 80% of all subsequent out-of-pocket costs incurred through the use of Medicare outpatient services.

Let's say the Smiths have reached their threshold and Mr Smith has another specialist consultation. Once again he is charged $150. The Medicare rebate is still $63, but now the Safety Net will cover 80% of the remaining $87. Therefore Mr Smith's OOP will be $17.40 and the government will pay $59.60 in Safety Net benefits in addition to the Medicare benefit of $63.

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threshold has been reached, and patients may utilise more services, or more expensive services knowing that once the threshold has been reached, 80% of subsequent costs are covered by the Safety Net. The Safety Net may also affect where services are delivered. For example, it would be feasible for some procedures that were conducted as an inpatient service may be shifted to an outpatient setting. This could result in better insurance coverage to the patient because the Safety Net covers fees charged above the Medicare Schedule. Providers may also change their billing practice and 'load' some of their fees (such as administrative charges) onto Medicare, so that patients can claim these via the Safety Net.

When the Safety Net was introduced, it was estimated that approximately 450,000 individuals and families would benefit in the first year at a cost to the Australian Government of $440 million over the four financial years between 2003 and 2007. However, more than 600,000 individuals and families actually qualified for benefits in the first year and that OOP costs were significantly higher than first expected, leading the Government to revise its Safety Net commitments, bringing the total cost to overAUD1 billion over the four years to June 2007 [9].

In response to the larger than expected growth of Safety Net expenditure, the Federal Government announced changes to the qualifying thresholds in the May 2005 budget. As of 1 January 2006, the thresholds rose to $500 (up from $300) for low and middle income households and $1,000 (up from $700) for everyone else [8].

This study examines the impact of the Safety Net during the 2004 and 2005 calendar years. This period saw the introduction of the policy and finishes just prior to the raising of the thresholds on 1 January 2006. The study examines temporal changes in fees, benefits and OOP costs following the introduction of the Safety Net. It focuses on whether the trends in the number of services and fees charged are consistent with the notion of greater moral hazard following the introduction of the Safety Net.

The analysis examines trends in four specialty areas; specialist consultations, obstetric services, diagnostic imaging and pathology services.

2.   Methods

We examine whether the introduction of the Safety Net coincided with any significant changes in the number of medical services used, the level of fees charged, government benefits paid or amount of OOP costs incurred, using national Medicare data.

2.1   Data

Data used in this analysis are reported quarterly by the Department of Health and Ageing (see [2]). The Department reports the quarterly amount of benefits paid by the government for Medicare related services, the number of services utilised, the fees charged and the OOP costs. Furthermore, the Department categorises and reports the data by eight broad professional groups: general practice consultations, specialists' attendances, obstetrics, pathology, diagnostic imaging, anaesthetics, operations and 'other'.

We used quarterly data dating back to 1993 to ensure that we accounted for long term trends in the Medicare data. This data was obtained from the National Social Health Statistical Database, Healthwiz [10]. The Safety Net policy came into effect during the first quarter of 2004, resulting in eight quarters' worth data and enabled us to examine the impact of the Safety Net against the long term trends. All dollar values were adjusted to 2005 price levels, using the Australian Bureau of Statistics' Consumer Price Index (CPI) time series data [11].

The Safety Net policy only covers outpatient services and we therefore excluded operations and anaesthetics from the analysis because these services are predominantly provided on an inpatient basis. We excluded the 'other' category because of our inability to make an assessment on whether these services are provided on an inpatient or outpatient basis. As mentioned earlier we also excluded general practice consultations.

After these exclusions, four specialty fields for which data are routinely reported remain; specialists' consultations, obstetrics, pathology and diagnostic imaging services. The vast majority of these services are provided in the outpatient (i.e. for patients who have not been admitted to hospital) setting and therefore are eligible for Safety Net benefits. However, it should be noted that data on the number of services provided, fees charged and benefits paid can potentially include those that are provided in an inpatient setting. Obstetrics is where we would expect a sizeable number of services provided on an inpatient basis.   This should not have a significant bearing on the interpretation of the results unless there has been a substantial shift between the number of outpatient and inpatient billed services since the introduction of the Medicare Safety Net. Whilst we have no evidence that this is the case, it too could be seen as an impact of the Safety Net.

The data reported by the Department does separate the OOP costs for outpatient services only, enabling us to observe these changes directly.

2.2 Estimation

For each of the four speciality areas, regression models were used to assess whether the introduction of Safety Net coincided with significant changes in (1) number of services per capita, (2) average fee per service, (3) average government benefit paid per service and (4) average OOP costs per outpatient service over time and (5) average OOP cost per

service over time (outpatient and inpatient combined). Separate regressions of the form shown in equation 1 were run for each of these five dependent variables. Hence, there are 20 regression models in all (4 speciality areas * 5 dependent variables).

$$(1) \quad V_{qs} = \phi_1 + \phi_2 T_q + \phi_3 Q + \phi_4 SND_{04} + \phi_5 SND_{05} + \phi_6 SNQ_{04} + \phi_7 SNQ_{05} + \phi_8 D_{96} + \phi_9 T_{95} + \phi_{10} T_{00} + \varepsilon_t$$

The dependent variable V_q denotes quarterly data on each of the five indicators of interest listed above and s denotes the speciality area. T_q takes the value of 1 to 52 for each quarter between 1993 and 2005; Q indicates the quarter of the calendar year, taking the values of 1 to 4. Two dummy variables (SND_{04} and SND_{05}) indicate the start of the Safety Net policy and the start of the calendar year where a person's OOP cost threshold count goes back to zero. SNQ_{04} and SNQ_{05} take the value of 1 to 4 to indicate the quarter in 2004 and 2005 respectively.   Coefficients on the Safety Net quarter variables estimate the impact of the Safety Net as the calendar year progresses and more people qualify for Safety Net benefits. The model also includes up to three time variables to account for significant changes in fees and OOP costs in 1995 and 2000. These variables were included to ensure the models accurately reflect past trends and ensure that these past changes were not wrongly attributed to the Safety Net policy.

The intention of the Safety Net policy was to reduce the OOP costs of patients through increased public spending. Hence, if the Safety Net policy was operating as intended, we would expect at least one positive Safety Net coefficient for models of government benefits, at least one negative coefficient for models of OOP costs, but no significant impact Safety Net coefficients for the models that examine fees and services.

3.   Results

We report the results for the number of services used per capita, fees charged by providers, government benefits, OOP costs for Medicare outpatient services and OOP costs for Medicare outpatient and inpatient services combined in Tables 2 to 6 respectively. We then estimated the difference between the long term trend and change following the introduction of the Safety Net for the fees charged by providers, government benefits paid and OOP costs. The results of these estimations are shown in Figures 1 to 3 for each of the specialty areas for which we found statistically significant results in our models.

3.1   Number of Services used

The results in Table 2 indicate that the introduction of the Safety Net in 2004 did not appear to have had an impact on the number of services used. Collectively, the Safety Net variable coefficients suggest that that service use has increased since the introduction of the Safety net, however most are not significantly different from zero. Only in the area of pathology and diagnostic imaging did 2005 quarter variable (SNQ_{05}) reach some significance (p<0.10), indicating that the introduction of the Safety Net coincided with a gradual increase in use over the course of the 2005 calendar year.

INSERT TABLE 2

3.2 Fees charged by providers

Table 3 shows the regression results for fees charged by providers. Specialists appear to have introduced small but statistically insignificant fee rises as the 2004 calendar year progressed. Put together, however, these small rises were significant as indicated by the SND_{05} dummy variable (p=0.097). The obstetric area witnessed the most dramatic increases, with large and significant fee rises recorded in 2004 and smaller, but still significant, rises during 2005. There were also small but significant rises in the fees charged for diagnostic imaging throughout 2004 – but fees appear to have stabilised in 2005. There were no significant changes in the pathology fees.

INSERT TABLE 3

3.3 Government benefits paid

Table 4 provides evidence that following the introduction of Safety Net, the amount of public funding through government benefits rose significantly for three out of four speciality fields. The results in Table 4 provide strong evidence of the cumulative impact that the Safety Net has on government benefits as the year progresses. That is, as the year progresses and more people qualify for the Safety Net, government benefits per service rise (as indicated by the positive coefficients for the SNQ_{04} and SNQ_{05} variables). It should be noted that this quarterly trend was not present prior to the introduction of the Safety Net (as indicated by the statistically insignificant result for the "Quarter", Q, variable).

INSERT TABLE 4

3.4 OOP costs – Medicare outpatient services

Table 5 presents the results for OOP payments for outpatient services only. The average OOP payment per outpatient service fell significantly for specialists' consultations and diagnostic imaging services as the calendar year progresses (as indicated by negative coefficients for the SNQ_{04} and SNQ_{05} variables). The results also show that OOP costs increased significantly throughout 2004 but the trend in 2005 shows a small and significant fall as the calendar year progressed. The rise in OOP costs for obstetric services can at least be partially explained by a change in billing practices rather than a real increase in OOP costs. This is discussed more fully below. There were no significant changes in OOP payments for pathology services. Again, the model shows evidence of the expected Safety Net pattern with OOP payments falling as the calendar year progresses. The pattern in OOP payments shows an inverse relationship with the government benefits paid, providing evidence of the shift from private OOP finance to public financing.

INSERT TABLE 5

3.5 OOP costs – Medicare outpatient and inpatient services combined

Table 6 shows the trends in OOP costs for the four medical speciality areas but for outpatient and inpatient services combined. The sign and significance of the coefficients are similar to the results found in Table 5. The size of the coefficients in Tables 5 and 6

are also similar for three of the four speciality areas, confirming the dominance of services provided on an outpatient basis in these fields. Only in obstetrics is there a significant deviation between OOP costs provided on an outpatient basis and an inpatient basis. OOP costs for obstetric outpatient services have risen whereas costs for inpatient appear to have fallen. Possible reasons for this phenomenon will be discussed below.

INSERT TABLE 6

The results in Tables 2 to 6 suggest that the Safety Net policy has increased government spending through higher benefits paid per service – as would be expected. This increased spending appears to have reduced out-of-pocket costs but it has also coincided with increases in the level of fees charged by some medical providers. The question that arises from this for the Safety Net policy is how much of the increase in government spending has translated into reduced OOP costs for patients and how much of it has gone towards higher fees? That is, how efficient has the Safety Net policy has been in reducing OOP costs for patients, or has there been significant "leakage" in the form of higher fees?

3.6   Estimated monetary impact of the Safety Net on fees, government benefit and OOP costs

Figures 1 to 3 estimate changes in the fees charged, benefits paid and out-of-pocket costs post 2004. They show the difference between the models' predicted value following the introduction of the Safety Net and the predicted values had the Safety Net not been introduced using the trends established prior to its introduction. This estimate was derived by estimating the predicted value with the full time series models (as per equation 1) for the 2004 and 2005 calendar years and then subtracting the predicted value of the same model but without the Safety Net variables. This procedure was repeated to estimate changes in the average government benefit paid, fee charged and OOP cost per service after the introduction of the Safety Net.   Out-of-pocket cost per service was estimated twice: once based on outpatient data only and once on outpatient and inpatient data combined. Figures 1 to 3 illustrate the quarterly impact for each of the three medical fields for which significant results were found (hence excluding pathology).

Figure 1 shows the changes in fees charged, government benefits and OOP costs for specialists' consultations in each quarter following the introduction of the Medicare Safety Net.   It shows that the average government benefit per service increased and continues to rise as the calendar year progresses. Fees rose steadily during the 2004 calendar year but have remained steady throughout 2005. In the final quarter of 2005, government benefits had increased by $7.59 per service, fees increased by $4.13 which meant that OOP costs fell by $3.46. In general, the rise in government benefits were generally larger than the rise in fees, meaning that OOP costs fell. When calculating this over the entire period, the model estimates that for every dollar spent on the Medicare Safety Net during 2004 and 2005, $0.68 effectively went towards higher medical specialists fees and $0.32 went towards reducing OOP costs. Figure 1 also shows that OOP costs actually rose in the first quarter of 2005. This corresponds with the Safety Net policy, where the threshold counts starts afresh on the 1 January 2006 and fewer people are eligible for Safety Net benefits.

INSERT FIGURE 1

Figure 2 illustrates changes for obstetric services. The model estimated that government benefits rose significantly in 2004 and 2005 and these rises were almost matched by increased fees. This resulted in only very small reductions in OOP costs overall and even significant increases for outpatient OOP costs. The fact that the two OOP curves deviate from each other provides some indication of changes in billing practices. This makes it more difficult to offer any firm conclusions on the impact of the Safety Net on OOP costs in obstetrics (to be discussed below).

INSERT FIGURE 2

Figure 3 reveals the estimated changes for diagnostic imaging services. This medical field witnessed significant rises in government benefits in 2004 and 2005. Fees rose significantly in 2004 and kept rising in 2005 albeit at a slower pace. The rise in government benefits were slightly greater than the fee increases meaning that OOP costs fell but only marginally. For the diagnostic imaging sector, we estimated that for every dollar spent on the Safety Net, $0.74 went towards higher fees and $0.26 went towards reducing OOP costs.

INSERT FIGURE 3

4.   Conclusions

The results presented in Table 2 indicate that there has been a small rise in the number of services used since the introduction of the Safety Net. In particular, the number of per capita services appear to be increasing in 2005 for each of the four medical fields studied here, but were only significant for pathology and diagnostic imaging services. This finding provides some evidence of the Safety Net's seasonal effect; as the calendar year progresses more people qualify for the Safety Net, face fewer OOP costs and therefore use more services. The impact of the Safety Net on the number of services used is therefore consistent with moral hazard expectations although its impact, thus far, appears to be low. It will be important to monitor this over the longer term, and in less aggregate form by examining more specific medical services.

Time series analysis shows that the introduction of the Safety Net policy led to substantial rises in the average government benefit paid per service. This rise in government spending has been partially matched by higher fees. This trend was statistically significant for three of the four professional groups studied here (pathology services being the exception). The results provide important evidence on the inflationary impact of the Safety Net and are certainly consistent with the presence of provider moral hazard.

Whilst obstetrics witnessed the most dramatic changes, the results need to be interpreted with care. One suggested explanation for the dramatic rise in fees charged is that the 'booking fee' associated with obstetric services (which was previously paid directly by patients) has now been loaded onto Medicare items, thereby transferring this cost from the patient to Medicare [12] and hence making it eligible for Safety Net benefits. The effect of this practice is that, for the first time, the 'booking fee' appears in the Medicare data and this may artificially inflate the fee charged data. To the extent that this happened it means that the 'booking fee' is now substantially paid for by the Medicare

Safety Net and, as a result, public funding for privately provided obstetric services has increased substantially.

One other distinguishing feature in the field of obstetrics is that OOP costs for outpatient services differed markedly from the OOP costs for inpatient and outpatient services combined. This observation could again be explained by changes in the fees charged between the two service settings. It may be the case that some of the fees that were previously charged on an inpatient basis are now being charged as outpatient services. That is, fees for outpatient services have risen but these may have been partly offset by the reduction in fees for inpatient services and therefore OOP costs.

This phenomenon may be occurring in other medical fields also. Indeed, one of limitations of this study is our inability to disaggregate data for services provided both on an inpatient and outpatient basis – although we do have data on the OOP costs for outpatient services only. This means that some of our other findings may be attributable to changes in doctors' billing practices. For example, it is feasible that some services may have been shifted from an inpatient setting to an outpatient setting. This would mean that the service attracts a higher Medicare subsidy; instead of paying 75% of the Medicare Schedule fee for inpatient services, the government will pay 85% for the same service if it is provided in an outpatient setting. Importantly, this change from inpatient to outpatient setting means that the service becomes eligible for Safety Net benefits. To the extent that this practice is occurring, it could still be considered to be a Safety Net effect – albeit an indirect effect.

Due to data limitations, we can only report on average changes in fees, government benefits and OOP costs per service but we can not say anything about the distribution of these changes. Hence, we do not know to what extent the Safety Net has had an impact on the general population (or indeed particular sub-group of patients) versus those that have qualified for the Safety Net. Due to the way the policy operates it is likely that for those who qualified, the Safety Net provided substantial protection for OOP costs. One possible implication of this is that for those who did not qualify, OOP costs may have increased by a greater amount than is indicated in this analysis. This would indeed be the case, unless providers were able to discriminate and increase their fees to only those patients who qualified for the Safety Net. This may be plausible for some speciality areas where the provider is aware of the OOP costs a patient may accrue during the year (e.g. in obstetrics), but is unlikely to be the case in other areas such as diagnostic imaging or specialists' consultations.

As noted previously, the Australian Government has initiated several measures to try and counter some of the unintended effects of the Safety Net. Most significantly, the government has raised the annual Safety Net thresholds. Whilst this change may reduce the fiscal burden on the government it is also likely that services with high OOP costs such as obstetrics may take even greater proportions of Safety Net spending. Furthermore, there remains the important question over the permanency of the observed fee rises. If they are permanent, then OOP costs will now be even higher for more people who never qualified (or now no longer qualify) for the Safety Net.

Another measure initiated by the government is to exclude 59 Medicare items from Safety Net eligibility. These items were chosen on the basis that they should be provided to hospital inpatients and not outpatients. This last initiative confirms that the government was concerned about the potential changes in provider billing practice where

patients were still being treated in hospital but no longer being admitted to hospital – therefore making them technically outpatients and eligible for Safety Net benefits.

Despite its fairly modest expenditure, adding only 1.5% to the overall Medicare budget, the Safety Net represents an important structural change to Australia's health care financing arrangements. For the first time, public funds are used to subsidise patients' medical care costs beyond the nationally set Medicare Schedule Fee. Providers have also maintained their right to set fees at their own discretion. In this context, the Safety Net has had a significant affect on the financial incentives faced by both patients and providers. This paper provides the first preliminary evidence of the impact that these incentive changes has had on the use of services and the fees charged for those services. The results suggest that the Safety Net has had an inflationary impact on the fees charged by medical providers. This has caused significant 'policy leakage', where substantial amounts of Safety Net benefits have effectively flowed to providers rather than patients. The results in this paper indicate that the Safety Net can be regarded as catastrophic insurance in more sense than one.

Table 1: Average growth in out-of-pocket cost per Medicare outpatient services by broad professional group – per annum, constant dollars

	GP	Specialists	Obstetrics	Pathology	Diagnostic Imaging	Total
1986-1995	-3.2%	3.1%	-4.2%	-0.5%	2.5%	-0.5%
1995-2004	13.4%	8.0%	12.1%	-6.5%	6.3%	7.1%

Table 2: Trends in the number of per capita Medicare services

	Specialist (SE)	Obstetrics (SE)	Pathology (SE)	Diagnostic imaging (SE)
Time 1993 (T_q)	0.00221** (0.00090)	-0.00001 (0.00016)	0.0068*** (0.00045)	0.0008*** (0.00013)
Quarter (Q)	0.00452*** (0.00109)	-0.00026 (0.00018)	-0.0050* (0.00300)	0.0005 (0.00089)
SN dummy '04 (SND_{04})	-0.00495 (0.01080)	-0.00047 (0.00183)	-0.0366 (0.02990)	-0.0119 (0.00887)
SN dummy '05 (SND_{05})	-0.01171 (0.01387)	0.00017 (0.00235)	-0.0261 (0.03849)	-0.0051 (0.01141)
SN Quarter '04 (SNQ_{04})	0.00205 (0.00374)	0.00030 (0.00063)	0.0128 (0.01037)	0.0022 (0.00307)
SN Quarter '05 (SNQ_{05})	0.00505 (0.00374)	0.00030 (0.00063)	0.0198* (0.01037)	0.0052* (0.00307)
Dummy 1996 (D_{96})		0.00762*** (0.00094)		
Time 1995 (T_{95})	-0.00198* (0.00104)	0.00016 (0.00018)		
Time 2000 (T_{00})	0.00020 (0.00048)	-0.00019 (0.00010)	0.0035 (0.00116)	0.0005 (0.00034)
Constant (ϕ)	0.21582*** (0.00602)	0.01059*** (0.00104)	0.5882 (0.01084)	0.1300*** (0.00322)
Adjusted R2	0.5449	0.8988	0.9695	0.8472

Note: * P<0.10; **P<0.05; ***P<0.001

Table 3: Trends in provider fees

	Specialist (SE)	Obstetrics (SE)	Pathology (SE)	Diagnostic imaging (SE)
Time 1993 (T_q)	-0.361*** (0.101)	-4.939*** (0.828)	-0.053*** (0.0091)	0.369*** (0.0430)
Quarter (Q)	-0.156 (0.122)	1.290 (0.928)	-0.050 (0.0606)	-0.035 (0.2858)
SN dummy '04 (SND_{04})	1.558 (1.215)	-27.548*** (9.227)	0.611 (0.6048)	0.389 (2.8513)
SN dummy '05 (SND_{05})	2.645* (1.561)	55.544*** (11.844)	0.676 (0.7784)	8.485** (3.6700)
SN Quarter '04 (SNQ_{04})	0.447 (0.420)	18.971*** (3.189)	0.231 (0.2097)	1.878* (0.9885)
SN Quarter '05 (SNQ_{05})	-0.017 (0.420)	7.318** (3.189)	0.119 (0.2097)	0.363 (0.9885)
Dummy 1996 (D_{96})		-98.523*** (4.730)		
Time 1995 (T_{95})	0.347** (0.117)	4.630*** (0.893)		
Time 2000 (T_{00})	0.157** (0.054)	3.254*** (0.496)	-0.094*** (0.0234)	-0.629*** (0.1104)
Constant (ϕ)	77.781*** (0.677)	217.384*** (5.225)	24.303*** (0.2193)	112.198*** (1.0340)
Adjusted R2	0.855	0.981	0.888	0.765

Note: * P<0.10; **P<0.05; ***P<0.001

Table 4: Trends in government benefits

	Specialist (SE)	Obstetrics (SE)	Pathology (SE)	Diagnostic imaging (SE)
Time 1993 (T_q)	-0.292***	-3.147***	-0.002	0.359***
	(0.068)	(0.523)	(0.007)	(0.043)
Quarter (Q)	0.041	0.715	-0.057	0.082
	(0.083)	(0.586)	(0.047)	(0.289)
SN dummy '04 (SND_{04})	-0.457	-25.671***	0.508	-0.219
	(0.820)	(5.833)	(0.470)	(2.882)
SN dummy '05 (SND_{05})	3.292**	46.234***	0.793	9.784**
	(1.054)	(7.487)	(0.604)	(3.709)
SN Quarter '04 (SNQ_{04})	1.669***	19.367***	0.262	2.855**
	(0.284)	(2.016)	(0.163)	(0.999)
SN Quarter '05 (SNQ_{05})	1.189***	12.315***	0.156	1.408
	(0.284)	(2.016)	(0.163)	(0.999)
Dummy 1996 (D_{96})		-57.388***		
		(2.990)		
Time 1995 (T_{95})	0.158*	2.904***		
	(0.079)	(0.565)		
Time 2000 (T_{00})	-0.135**	0.923**	-0.144***	-1.055***
	(0.037)	(0.313)	(0.018)	(0.112)
Constant (ϕ)	63.643***	128.921***	21.291***	98.133***
	(0.457)	(3.303)	(0.170)	(1.045)
Adjusted R2	0.938	0.981	0.839	0.654

Note: * P<0.10; **P<0.05; ***P<0.001

Table 5: Trends in OOP costs (outpatient services only)

	Specialist (SE)	Obstetrics (SE)	Pathology (SE)	Diagnostic imaging (SE)
Time 1993 (T_q)	-0.058 (0.053)	-0.218* (0.109)	-0.064*** (0.003)	-0.009 (0.015)
Quarter (Q)	0.103 (0.065)	0.098 (0.122)	-0.037* (0.020)	0.022 (0.097)
SN dummy '04 (SND_{04})	3.446*** (0.642)	-5.040*** (1.216)	0.077 (0.196)	1.029 (0.971)
SN dummy '05 (SND_{05})	-0.571 (0.824)	29.970*** (1.561)	-0.131 (0.252)	-1.349 (1.250)
SN Quarter '04 (SNQ_{04})	-1.786*** (0.222)	4.613*** (0.420)	-0.009 (0.068)	-1.187** (0.337)
SN Quarter '05 (SNQ_{05})	-1.765*** (0.222)	-2.655*** (0.420)	0.016 (0.068)	-1.246** (0.337)
Dummy 1996 (D_{96})		1.735** (0.623)		
Time 1995 (T_{95})	0.174** (0.062)	0.293** (0.118)		
Time 2000 (T_{00})	0.256*** (0.029)	0.211** (0.065)	0.042*** (0.008)	0.431*** (0.038)
Constant (ϕ)	12.022*** (0.357)	9.655*** (0.689)	3.135*** (0.071)	11.460*** (0.352)
Adjusted R2	0.983	0.984	0.964	0.935

Note: * $P<0.10$; **$P<0.05$; ***$P<0.001$

Table 6: Trends in OOP costs (all services)

	Specialist (SE)	Obstetrics (SE)	Pathology (SE)	Diagnostic imaging (SE)
Time 1993 (T_q)	-0.069* (0.040)	-1.791*** (0.339)	-0.050*** (0.003)	0.010 (0.014)
Quarter (Q)	-0.197*** (0.049)	0.575 (0.380)	0.005 (0.018)	-0.116 (0.096)
SN dummy '04 (SND_{04})	2.023*** (0.485)	-1.871 (3.779)	0.096 (0.177)	0.619 (0.955)
SN dummy '05 (SND_{05})	-0.658 (0.623)	9.314* (4.851)	-0.118 (0.227)	-1.302 (1.229)
SN Quarter '04 (SNQ_{04})	-1.226*** (0.168)	-0.400 (1.306)	-0.029 (0.061)	-0.981** (0.331)
SN Quarter '05 (SNQ_{05})	-1.206*** (0.168)	-5.002*** (1.306)	-0.035 (0.061)	-1.046** (0.331)
Dummy 1996 (D_{96})		-41.136*** (1.937)		
Time 1995 (T_{95})	0.189*** (0.047)	1.725*** (0.366)		
Time 2000 (T_{00})	0.292*** (0.022)	2.331*** (0.203)	0.050*** (0.007)	0.426*** (0.037)
Constant (ϕ)	14.138*** (0.270)	88.453*** (2.140)	3.018*** (0.064)	14.063*** (0.346)
Adjusted R2	0.990	0.981	0.926	0.939

Note: * $P<0.10$; **$P<0.05$; ***$P<0.001$

Figure 1: Changes in the mean benefit paid, fee charged and OOP payment per specialist consultation
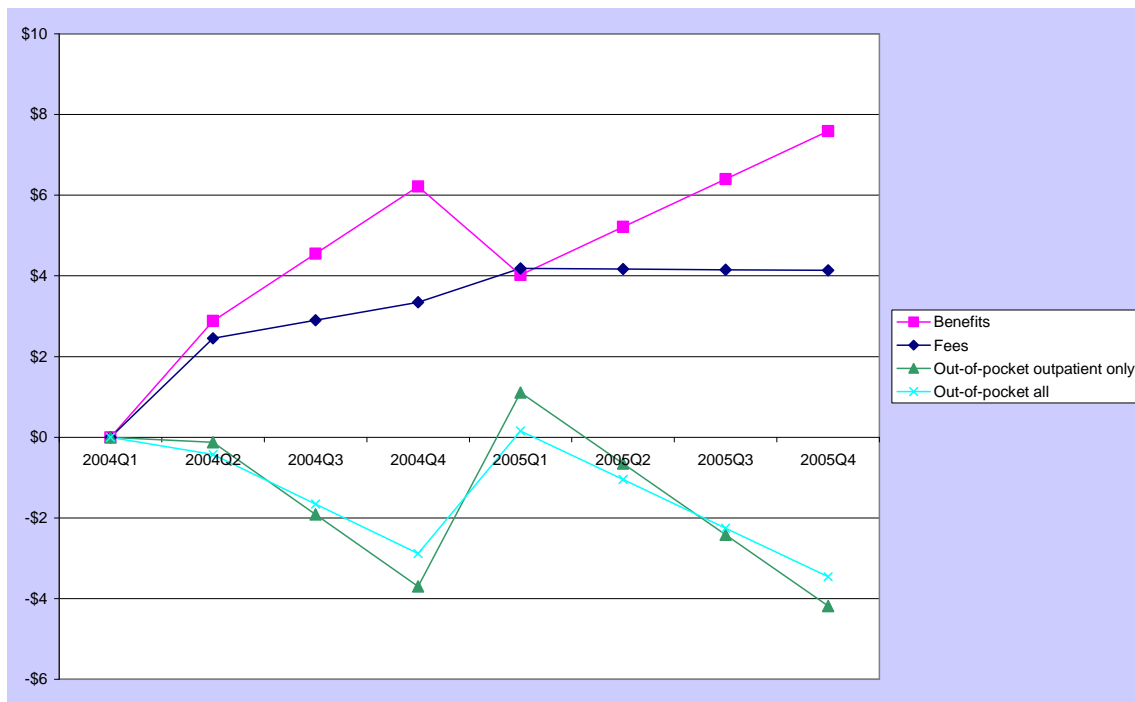
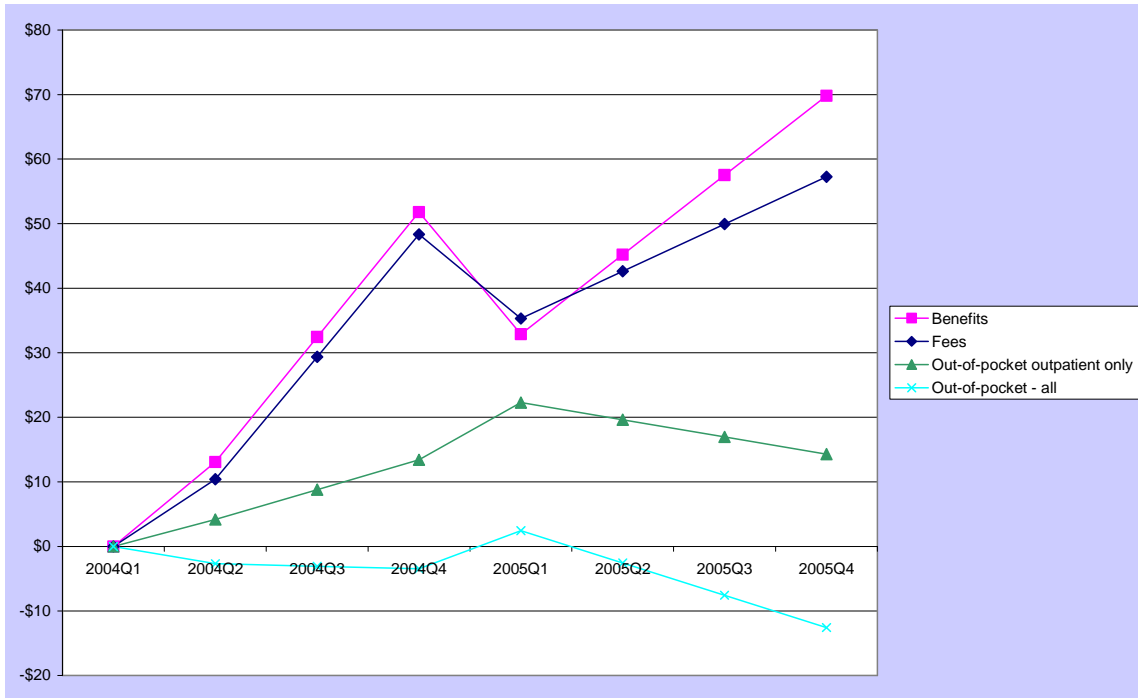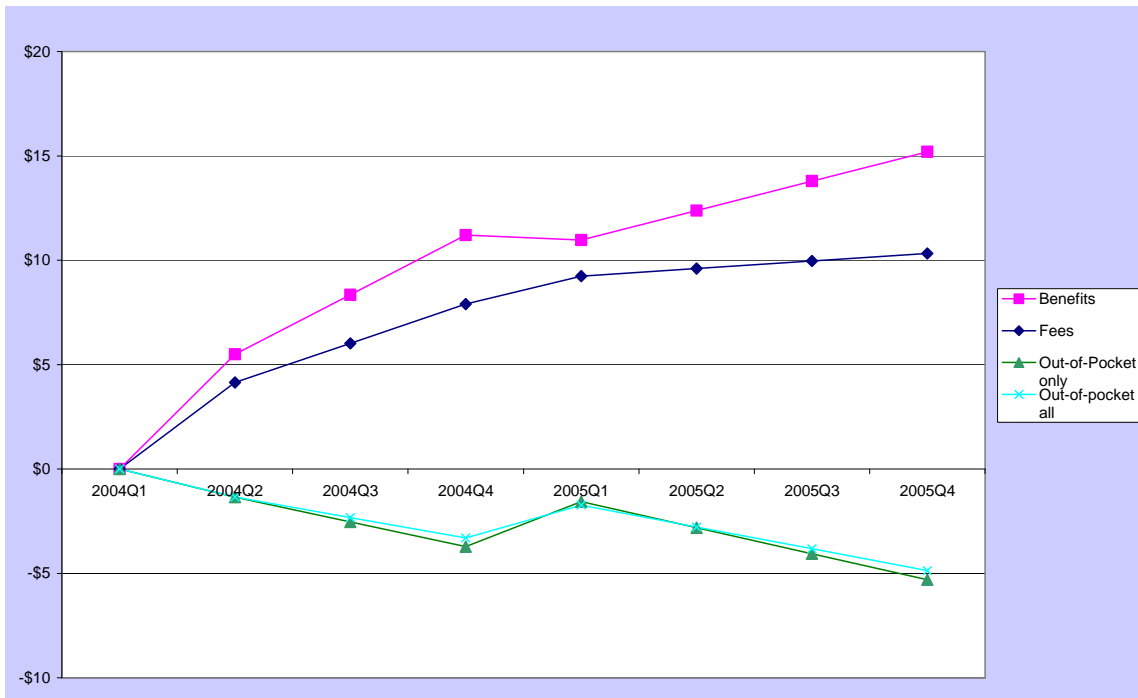**Figure 2: Changes in the mean benefit paid, fee charged and OOP payment per obstetric service**

Figure 3: Changes in the mean benefit paid, fee charged and OOP payment per diagnostic image service

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