MINISTRY OF HEALTH
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Impact of Primary Care Subsidies on Healthcare Utilisation: Evidence from Singapore's Merdeka Generation Package

Geraldine Lim, Jeanette Pang, Benjamin Toh & Kevin Low, Ministry of Health, Singapore

1. Introduction

- As Singapore faces an ageing population and rising chronic disease burden, good chronic care management is important as it facilitates early intervention through frequent screening and monitoring, thereby potentially reducing the need for expensive acute care in the future.
- A recent initiative that encouraged better chronic care management was the Merdeka Generation Package (MGP). It was rolled out in 2019 to all eligible Singaporean seniors born between 1950 and 1959, and **provided additional subsidies for outpatient care, especially for private primary care visits pertaining to chronic conditions**. Eligible MGP seniors benefitted to varying extents, depending on the existing means-tested subsidies they were entitled to through the Community Health Assist Scheme (CHAS)^, before the introduction of MGP.
- Using administrative records, we investigate **(1) whether the MGP subsidies were effective as financial incentives in increasing primary care utilisation for chronic care management** and **(2) if greater primary care utilisation translated to lower acute utilisation** in the three years following the introduction of MGP.

Note: ^ Prior to MGP, CHAS subsidies were based on household income (i.e., Orange vs. Blue tier, if eligible) and complexity of chronic conditions (i.e., Simple vs. Complex). With MGP, existing CHAS seniors under Orange Complex received the largest subsidy increase, followed by Orange Simple and Blue Simple/Complex. In this study, MGP seniors are categorised into four groups and examined separately: (i) Orange Simple, (ii) Orange Complex, (iii) Blue Simple and (iv) Blue Complex.

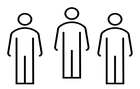
2. Methods

- As eligibility for the MGP was strictly based on birth year and independent of health state and income level, we used a difference-in-differences approach for this quasi-experimental study and compared healthcare bills of approximately 66,000 seniors who were born just above and below the 1959 birth year cut-off.

Treatment

MGP Seniors with DHL* born 1957–1959

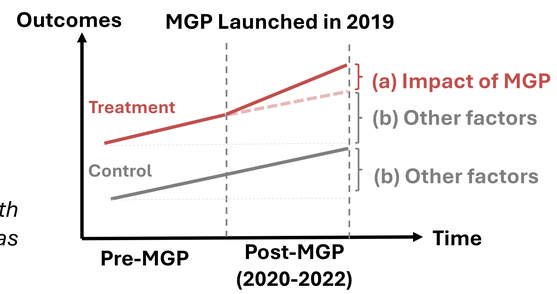
Control



Individuals with DHL* born 1960–1962

** The study focused on existing CHAS patients with diabetes, hypertension or hyperlipidemia (i.e., DHL) as these are the 3 top chronic conditions in Singapore.*

Stylised DiD Illustration



- Our regression specification estimated the impact on MGP seniors' annual healthcare bills across the care settings for each CHAS sub-sample^ as follows, with the impact estimates (β_3) reported in Tables 1-3:

$$Y_{i,t} = \beta_0 + \beta_1 MG_i + \beta_2 T_t + \boldsymbol{\beta_3} MG_i \times T_t + \delta X + \varepsilon_{i,t}$$

$Y_{i,t}$	Annual bills for patient *i* in year *t* across various settings
MG_i	= 1 if patient *i* was eligible for the MGP
T_t	2017- 2022 year dummies, with the base year of 2019
X	Patient-level control variables

3. Results

1 Providing more primary care subsidies resulted in a **3% to 12% increase in primary care expenditure**, on average, in the first year following the introduction of MGP. This was driven by increases in the number of visits, and the effect was higher amongst seniors who received larger subsidy increases.

Table 1: Annual Pre-subsidy Bills (S$) for overall DHL-related Primary Care (Private + Public) Visits

	Orange Simple	Orange Complex	Blue Simple	Blue Complex
2020 – 1st yr post MGP	31.86**	54.98***	29.73**	15.11*
2021 – 2nd yr post MGP	8.82	18.44	-4.84	-0.34
2022 – 3rd yr post MGP	14.50	27.00**	-6.54	7.93
Average annual pre-MGP bill	286.6	459.5	298.3	473.8

2 In the second and third year of MGP, subsidies led to **a substitution from public to private primary care providers** as the decline in expenditures in the former was offset by an increase in expenditures in the latter. This suggested that the subsidies had improved affordability of private clinics and therefore, allowed more flexibility in patients' choice of providers, as private clinics were generally more expensive but provided greater convenience.

Table 2: Annual Pre-subsidy Bills (S$) for DHL-related Private vs. Public Primary Care Visits

	Private Primary Care				Public Primary Care			
	Orange Simple	Orange Complex	Blue Simple	Blue Complex	Orange Simple	Orange Complex	Blue Simple	Blue Complex
2020	24.01***	53.13***	9.99**	13.63**	7.85	1.85	19.74*	1.48
2021	23.59***	34.40***	1.04	4.00	-14.77	-16.00	-5.88	-4.34
2022	47.03***	31.50***	7.83	16.22**	-32.53**	-4.50	-14.37	-8.29
Average annual pre-MGP bill	47.3	120.1	61.5	156.7	239.3	339.4	236.8	317.1

3 Across the three years following MGP, there was **no conclusive# evidence that the increase in primary care utilisation reduced acute utilisation** in the inpatient care, day surgery or emergency department settings.

Table 3: Annual Pre-subsidy Bills (S$) for Inpatient, Day Surgery and Emergency Department Visits

	Inpatient (IN)				Day Surgery (DY)				Emergency Department (ED)			
	Orange Simple	Orange Complex	Blue Simple	Blue Complex	Orange Simple	Orange Complex	Blue Simple	Blue Complex	Orange Simple	Orange Complex	Blue Simple	Blue Complex
2020	-307.3	52.43	-74.74	34.83	-13.09	-4.74	-31.85	-4.18	-18.26	-8.58	-0.05	6.89
2021	-903.5	-261.7	-470.7	-278.2	47.92	-53.09*	27.78	-0.02	-2.08	-24.92**	4.74	-4.59
2022	-991.9	-341.0	-780.4	-280.5	46.39	-45.82	22.54	-15.86	-16.01	-9.37	-5.70	-10.43
Average annual pre-MGP bill	2,807	2,712	2,932	3,790	204.7	225.5	194.3	203.8	99.44	123.8	128.5	160.9

#We are cautious to conclude that MGP reduced DY and ED for Orange Complex because Orange Simple did not see a reduction in DY and ED despite having a similar increase in primary care utilisation.

Notes for Tables 1-3:
1. *, **, *** refers to statistical significance at the 10%, 5% and 1% level respectively.
2. Pre-treatment parallel trends held across sub-groups, except for the Private Primary Care regression for Blue Complex.

4. Conclusion

- We found that financial subsidies can be an effective tool to increase primary care utilisation and expenditure amongst seniors.
- However, our study did not find evidence of its downstream impact on acute expenditure in the immediate years. Therefore, there is scope for future studies to focus on the effects of increased primary care expenditure on acute expenditure over the longer term.

Contact: Geraldine Lim (geraldine_ya_lim@moh.gov.sg) & Jeanette Pang (jeanette_pang@moh.gov.sg)