Trends in outpatient service use among Filipinos with usual care providers

Analysis of the National Health Expenditure Survey Round 1 (2018)

PIDS Public Webinar

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Context

- Primary health care (PHC) approach towards universal health care
  - Primary care (PC) within PHC: *point of contact*

- Primary care
  - serves entire population, both the healthy and ill
  - PC provider serves as gatekeeper
  - more cost-effective than hospital care

- Primary care financing
  - Spending for preventive care at 11.5% of Total Health Expenditure in 2022 *(PNHA)*
  - Konsulta benefits only at 0.3% of total PhilHealth benefit expenses in 2023 *(Stats & Charts 2023)*

Primary health care means having the information and resources you need to take care of your health and the health of those you love.

World Health Organization

Image from https://www.who.int/teams/primary-health-care/conference/communications-materials

Context

When you are worried about your health, you should not have to wonder where to go or who to trust for help.

Let's ensure strong primary health care in every community.

unicef

World Health Organization

Image from https://www.who.int/teams/primary-health-care/conference/communications-materials

- There is no established primary care system in the Philippines, and some Filipinos **may have identified with a usual health provider**

- Based on literature, those with usual care providers:
  - Have increased odds of receiving preventive care/screening services [1,2]
  - Are strongly correlated with earlier receipt of preventive services [3]

- The effect of having a usual care provider on preventive services is of importance in low-resource settings

[1] L. Blewett, P. J. Johnson, B. Lee and P. Scal, "When a Usual Source of Care and Usual Provider Matter: Adult Prevention and Screening Services," Journal of General Internal Medicine, vol. 23, no. 1354, 2008.

[2] J. DeVoe, G. E. Fryer, R. Phillips and L. Green, "Receipt of Preventive Care Among Adults: Insurance Status and Usual Source of Care," American Journal of Public Health, vol. 93, no. 5, pp. 786-791, 2003.

[3] S. L. Ettner, "The timing of preventive services for women and children: the effect of having a usual source of care.," American Journal of Public Health, vol. 86, no. 12, pp. 1748-1754, 1996.

This study

Research question:
How does having usual care provider affect healthcare service use in the Philippines?

Objective

- To examine the differences in outpatient care use among those with and without usual care providers. Specifically, this study aims to:
  - i. analyze health service use trends in outpatient care services;
  - ii. explore the determinants of having a usual care provider, and;
  - iii. examine whether having a usual care provider affects outpatient care use, inpatient admissions, and emergency room visits.

Data Source

National Health Expenditure Survey 2018 (Round 1)
- Nationally-representative survey covering health care utilization and financing

Data Analysis
- Descriptive analysis for the trends in outpatient service use;
- Binary response model for measures of association

This study

Definition of terms

Usual care provider: a particular doctor's office, clinic, health center, or other place that the household member goes to when sick or needs advice about his/her health

Outpatient services:
- General check-up
- Immunization/vaccination
- Pregnancy-related
- Diagnosis and treatment
- Follow-up check-up post treatment
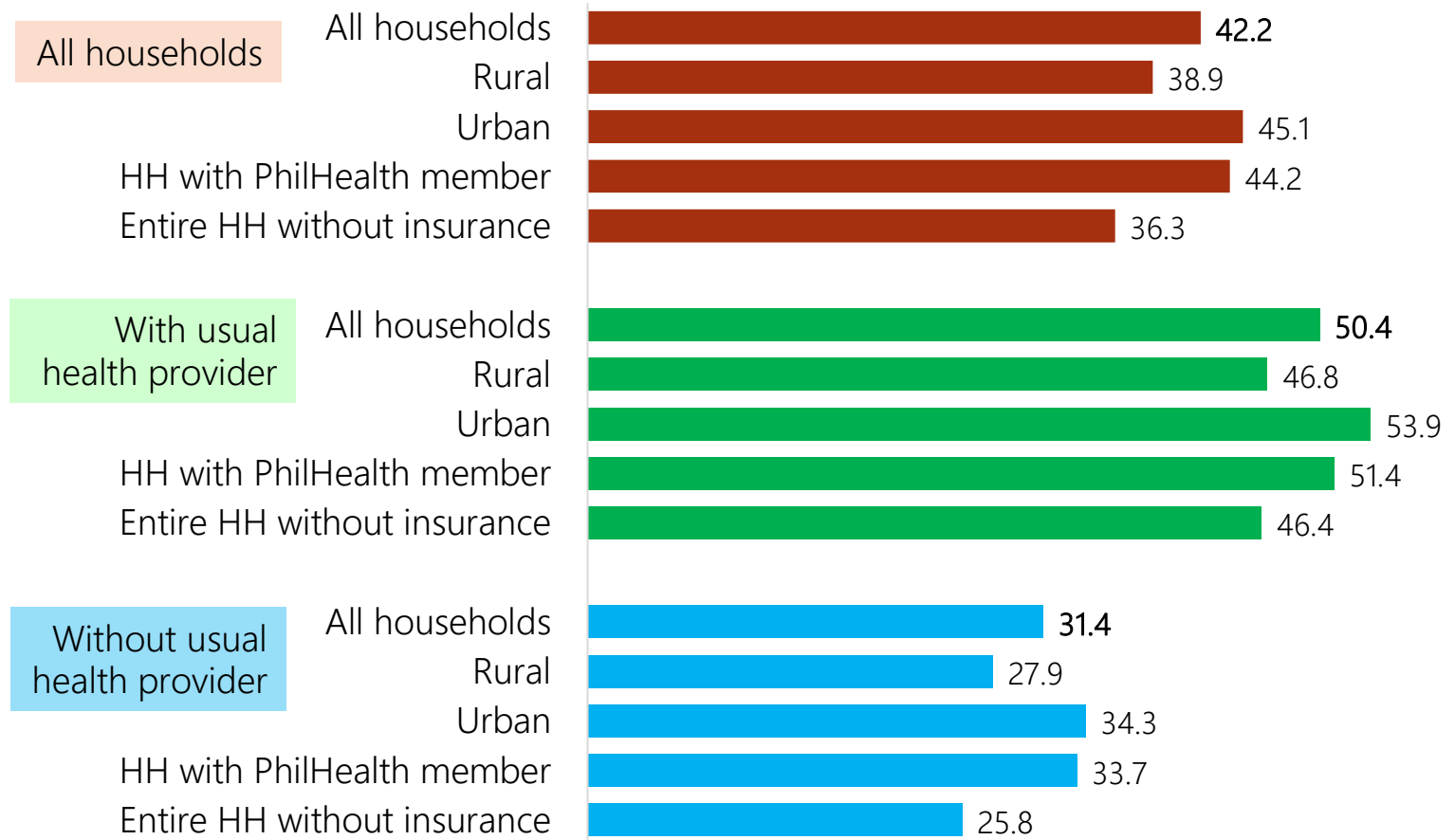- Follow-up check-up post surgery

National Health Expenditure Survey (NHES) Round 1, 2018

Results

Trends in health service use

- Around 42% of households utilized some form of outpatient care in the past six months
  - More for households in **urban areas**, **with PhilHealth member**, **richer households** and among those with heads with **more education**

- In general, more households utilized outpatient care among those **with usual care provider (50.4%)** compared to those without (31.4%)

Share of households that utilized outpatient services (%)

All households
- All households: 42.2
- Rural: 38.9
- Urban: 45.1
- HH with PhilHealth member: 44.2
- Entire HH without insurance: 36.3

With usual health provider
- All households: 50.4
- Rural: 46.8
- Urban: 53.9
- HH with PhilHealth member: 51.4
- Entire HH without insurance: 46.4

Without usual health provider
- All households: 31.4
- Rural: 27.9
- Urban: 34.3
- HH with PhilHealth member: 33.7
- Entire HH without insurance: 25.8

Source: Authors' calculations using data from the National Health Expenditure Survey (NHES) (Round 1)

Trends in health service use

- Reason for outpatient visits:
  - General check-up
  - Immunization/vaccination

- No distinction between type of facilities visited except for **immunization** and **follow-up post treatment**

Type of outpatient service availed by households that visited a facility in the past six months (%)

Outpatient Service	TOTAL*	Public	Private	Other**
General checkup	79.79	39.03	40.12	0.65
Immunization/vaccination	14.42	9.81	4.53	0.076
Pregnancy-related	9.07	4.55	4.50	0.019
Diagnosis and treatment	4.09	1.71	2.25	0.13
Follow-up check-up post treatment	7.42	2.99	4.37	0.061
Follow-up check-up post-surgery	0.6	0.21	0.36	0.021
Others	5.69	2.68	2.83	0.18

*Column may not equal 100 as some households may have different members that visited a facility more than once in the past six months for several types of outpatient services.

**Other facilities include eye clinics, TB dispensary/chest clinics, independent laboratory or testing facilities, alternative care provider, special therapy provider, and medical missions or outreach program providers.

Source: Author's calculations using data from NHES Round 1.

Trends in health service use

- Average distance between home and facility is 8.7 km; travel time is 41 minutes

- Nearest facilities are for immunization visits; farthest for follow-ups post surgery

Average distance and travel time to the facility visited by households that utilized outpatient care services in the past six months

Outpatient Service	Distance (in kilometers)	Travel Time (in minutes)
General checkup	9.2	42.6
Immunization/vaccination	5.2	26.4
Pregnancy-related	4.9	33.6
Diagnosis and treatment	9.7	43.2
Follow-up check-up post treatment	8.8	44.4
Follow-up check-up post-surgery	16.7	52.8
Others	8.1	39.0
AVERAGE	**8.7**	**41.4**

Source: Author's calculations using data from NHES Round 1.

Predictors of having a usual care provider

- Determinants: urbanity, age, older females (*female x age*), household head's education and age, insurance coverage, wealth quintile

- Urban dwellers have almost 20% lower odds of having a usual healthcare provider compared to their rural counterparts, holding all other variables fixed

- Individuals with no insurance coverage have 35% lower odds of having a usual health provider compared to PhilHealth paying members and dependents. Same trend for PhilHealth SP/Indigent (13% lower odds)

/a Reference group for categorical variables. City/municipality dummies are included as controls. Goodness-of-fit test: Hosmer-Lemeshow chi2 = 8.64 (p = 0.3740)
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Authors' calculations using data from NHES Round 1.

	(1) Odds Ratio	(2) Adj. S.E.
Individual reports having a usual healthcare provider (=1)		
Urban	0.809*	(0.0798)
Household Size	1.012	(0.0223)
Age	0.996**	(0.00138)
Female	0.969	(0.0524)
Female x Age	1.003*	(0.00150)
Years of education	1.001	(0.00214)
Pantawid member	0.973	(0.0547)
Household head:		
No grade completed /a		
Elementary	1.402*	(0.196)
High school and vocational	1.632***	(0.230)
College level and up	1.578**	(0.229)
Household head:		
Age less than 21 /a		
Age 22-30	1.310	(0.241)
Age 31-40	1.477*	(0.267)
Age 41-50	1.230	(0.222)
Age 51-60	1.598**	(0.290)
Age 60 up	1.724**	(0.317)
Health Insurance Coverage		
PhilHealth – Paying /a		
PhilHealth - SP/Indigent	0.871**	(0.0431)
Private HI/HMO/SSS/GSIS	1.124	(0.167)
No Insurance Coverage	0.651***	(0.0268)
Wealth Quintile		
Quintile 1		
Quintile 2	1.253***	(0.0651)
Quintile 3	1.417***	(0.0735)
Quintile 4	1.528***	(0.0803)
Quintile 5	2.023***	(0.112)
Observations	21856	
Pseudo R²	0.1460	

Usual care provider and health service use

- Those with **usual care providers** are ***more likely to have visited an outpatient facility*** compared to those without, but not for outpatient visits for treatment and diagnosis.

- **Inpatient admission** is also ***more likely*** for those with usual care providers than those without; same for **ER visits**

Table: Marginal effects (dy/dx) on health service use of outpatient, inpatient and emergency room services
Source: Authors' calculations using data from NHES Round 1.

	DEPENDENT VARIABLE				
	(1)	(2)	(3)	(4)	(5)
	Outpatient visit	Outpatient visit: check-up	Outpatient visit: Treatment and diagnosis	Inpatient admission	Emergency room visit
Has usual provider (=1)	0.109*** (0.00497)	0.0786*** (0.00438)	0.000410 (0.000641)	0.0228*** (0.00249)	0.00344*** (0.000955)
"Good" health status (=1)	-0.0410*** (0.00456)	-0.0298*** (0.00387)	-0.00173** (0.000640)	-0.0115*** (0.00205)	-0.0000895 (0.000743)
Has any health insurance (=1)	0.0314*** (0.00471)	0.0127** (0.00402)	-0.000491 (0.000662)	0.0214*** (0.00236)	0.00124 (0.000791)
Pantawid member (=1)	0.0391*** (0.00864)	0.0191** (0.00728)	-0.00163 (0.000956)	0.0111** (0.00395)	0.000250 (0.00140)
Urban (=1)	0.0238*** (0.00458)	0.00992* (0.00387)	-0.000458 (0.000636)	-0.00153 (0.00207)	0.00377*** (0.000912)
HH member's age	-0.000424*** (0.000120)	0.000284** (0.000101)	0.0000142 (0.0000148)	0.000142** (0.0000534)	0.00000942 (0.0000213)
HH member is female	0.0302*** (0.00465)	0.0101* (0.00394)	-0.000266 (0.000635)	-0.00504* (0.00206)	0.000328 (0.000783)
Household size	-0.00695*** (0.00113)	-0.00538*** (0.000971)	-0.000126 (0.000139)	0.0000465 (0.000497)	0.000231 (0.000165)
Head: at least HS level	0.00155 (0.00453)	-0.00223 (0.00384)	0.00104 (0.000625)	-0.00129 (0.00203)	0.000812 (0.000743)
Quintile 2	0.00820 (0.00704)	0.00578 (0.00588)	-0.000161 (0.000837)	-0.00380 (0.00308)	0.00119 (0.00107)
Quintile 3	0.0110 (0.00708)	0.0144* (0.00599)	0.00114 (0.000967)	-0.0000810 (0.00318)	0.000599 (0.000994)
Quintile 4	0.0225** (0.00714)	0.0203*** (0.00603)	0.000148 (0.000896)	0.000867 (0.00316)	0.00167 (0.00107)
Quintile 5	0.0376*** (0.00728)	0.0281*** (0.00613)	0.00134 (0.00104)	0.0116*** (0.00341)	0.00332** (0.00115)
Observations	27658	27658	27658	27658	27658
Pseudo R^2	0.0340	0.0301	0.0211	0.0459	0.0466
HL chi square [a]	2.56	10.35	6.40	14.08	10.54
p-value	0.9588	0.2414	0.6031	0.0796	0.2291

Standard errors (in parentheses). Base category for quintile is Quintile 1.
a/ Hosmer and Lemeshow's goodness-of-fit test
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Summary

- More among those *with* usual healthcare provider sought care compared to those without—
  - **Positive health-seeking behavior** among the population
  - **Less cost-efficient?** Patients could be seeking care from specialists or at higher-level facilities given the unstructured PHC system in the country

- No distinction for preference on either public and private facilities: leverage on **integrating all public and private actors in primary care** (public health facilities, individual healthcare practitioners, polyclinics, community centers, diagnostics and labs)

- Those with **no insurance coverage**, **PhilHealth SP and Indigent membership** and **urban dwellers** have lower odds of having a usual care provider; recent efforts could be directed to these population groups

Summary

- While there is positive marginal effect of having usual care providers on outpatient visits, there is none for **treatment and diagnosis**—improving this could help unburden the hospital system with the management of illnesses that could instead be done at home (ex. COVID-19, hypertension)

- Positive marginal effect of having a usual care provider **on inpatient admission and ER visits** are worth exploring:
  - Lack of established primary care system and gatekeeping

- *Main limitation of the study*: Data quality (level of disaggregation; not explicitly "primary care provider")

Conclusion and Policy Recommendations

- There are still **differences in access to care** which affects not just health outcomes but the use of health resources for hospital and other services as well.

- Insights on usual care providers could aid in developing PhilHealth's primary care benefit package on the different services included as well as the different actors who will be involved:
  - Expanding the role of private sector in forming **Primary Care Provider Networks**
  - Optimizing outpatient facilities for **management of chronic illnesses** and eventually unburdening our hospitals

- Opportunity to expand the next rounds of the NHES:
  - Emphasis on primary care (with the UHC rollout)
  - Detailed preventive services being availed
  - Identifying different private actors and their specific roles in the health system
  - Household characteristics

Thank you.