Primary care for non-communicable diseases in the Philippines

Val Ulep, Jhanna Uy, and Lyle Casas

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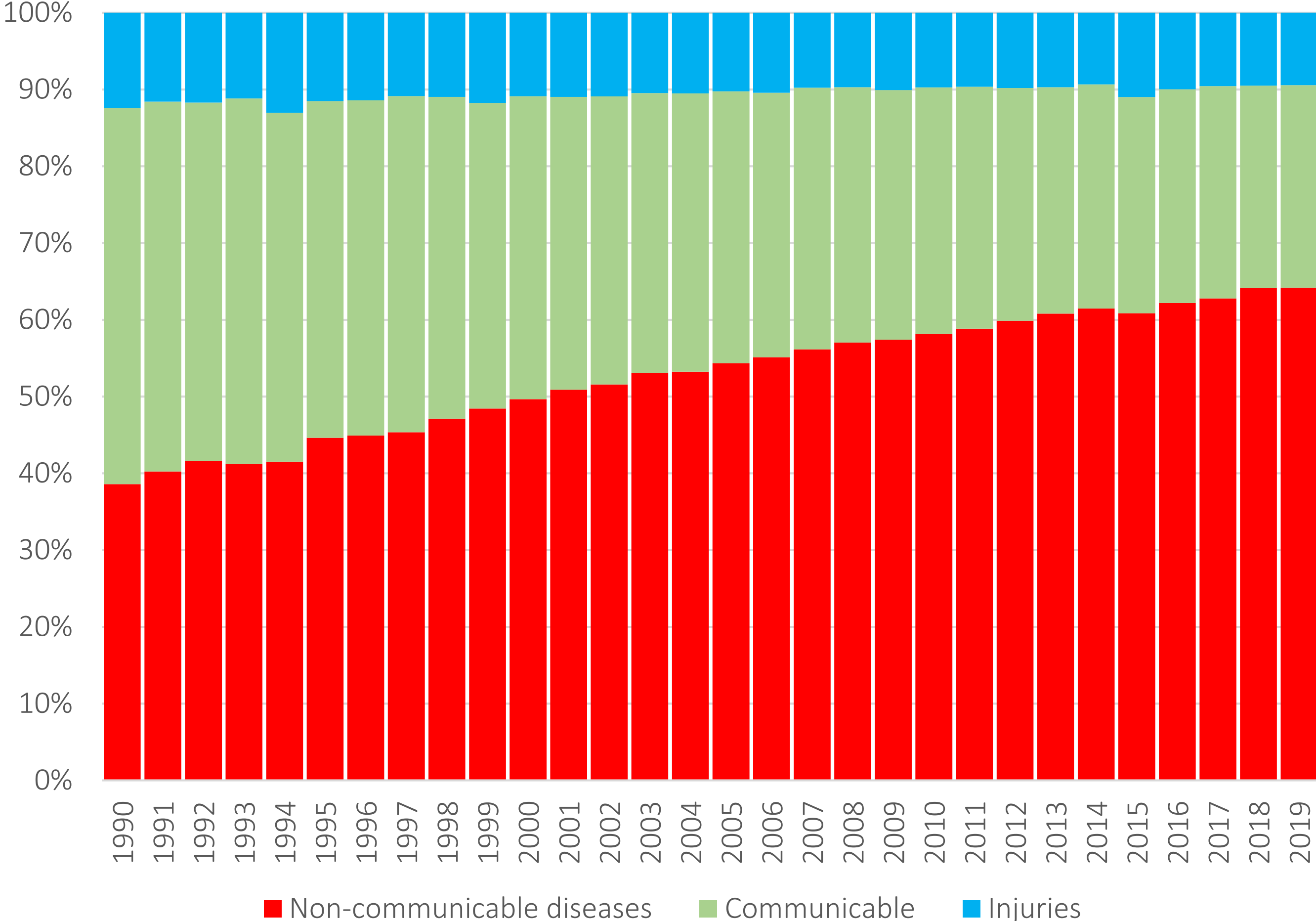
What are Non-Communicable Diseases or NCDs?

- Chronic diseases –with long duration and are the result of a combination of genetic, physiological, environmental and behavioral factors.

- Main types: cardiovascular diseases (such as heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma) and diabetes.

Non-Communicable Diseases(NCDs) are the main causes of morbidity and mortality in the Philippines

- Increase in DALYs has primarily come from NCDs



In **2019**

65%

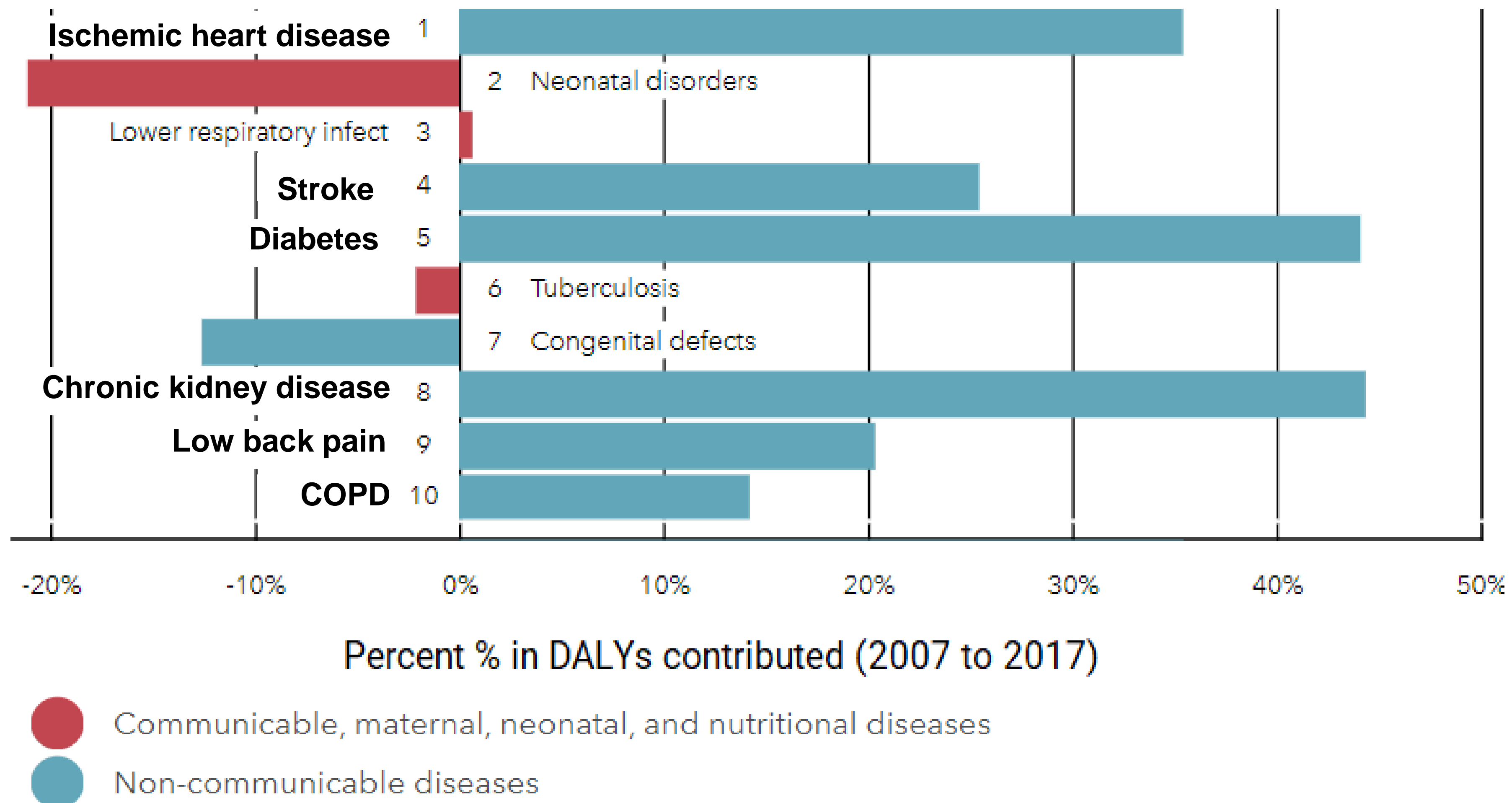
Percentage of ***DALYs*** due to NCDs

68%

Percentage of ***Deaths*** due to NCDs

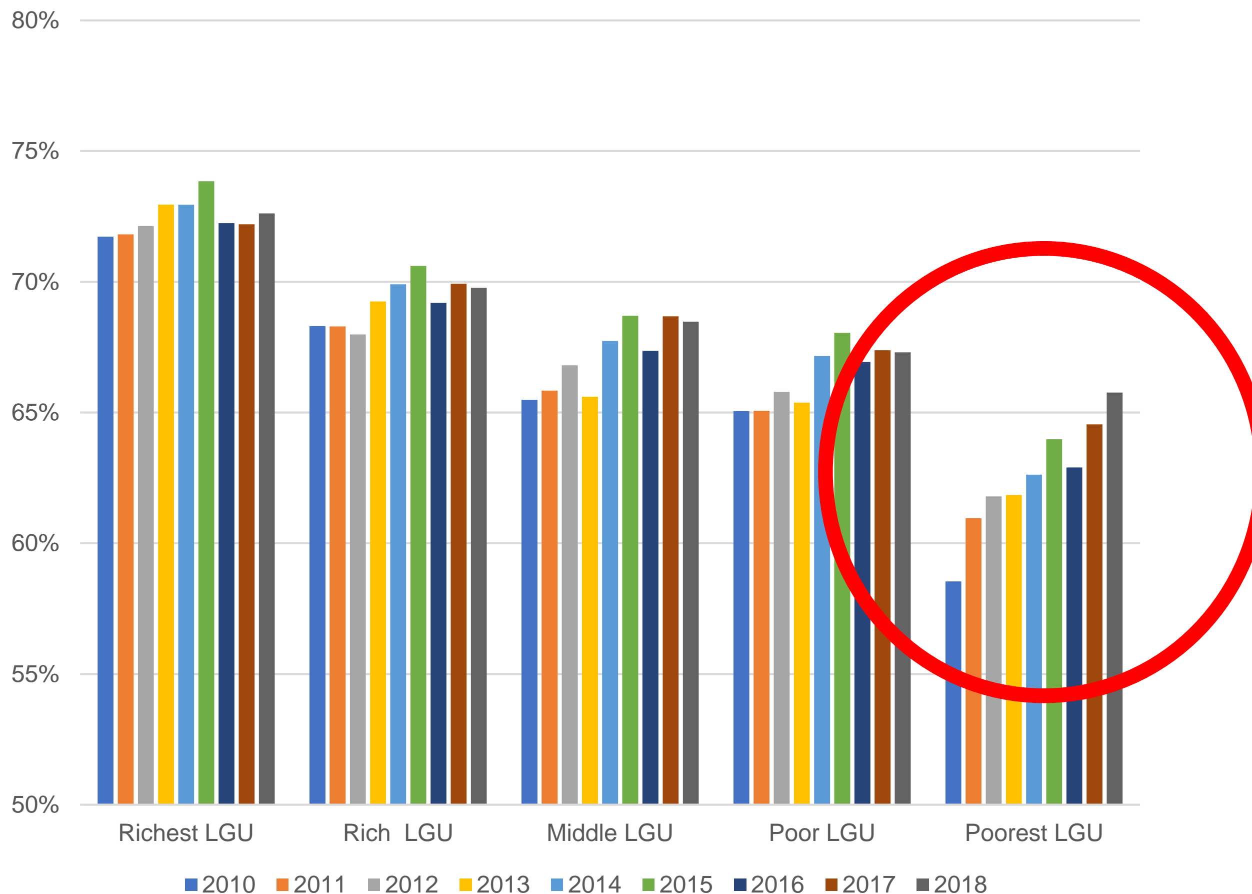
Reference: IHME, GBD 2019

The Philippines is suffering from double burden of disease



Reference: IHME, GBD 2019

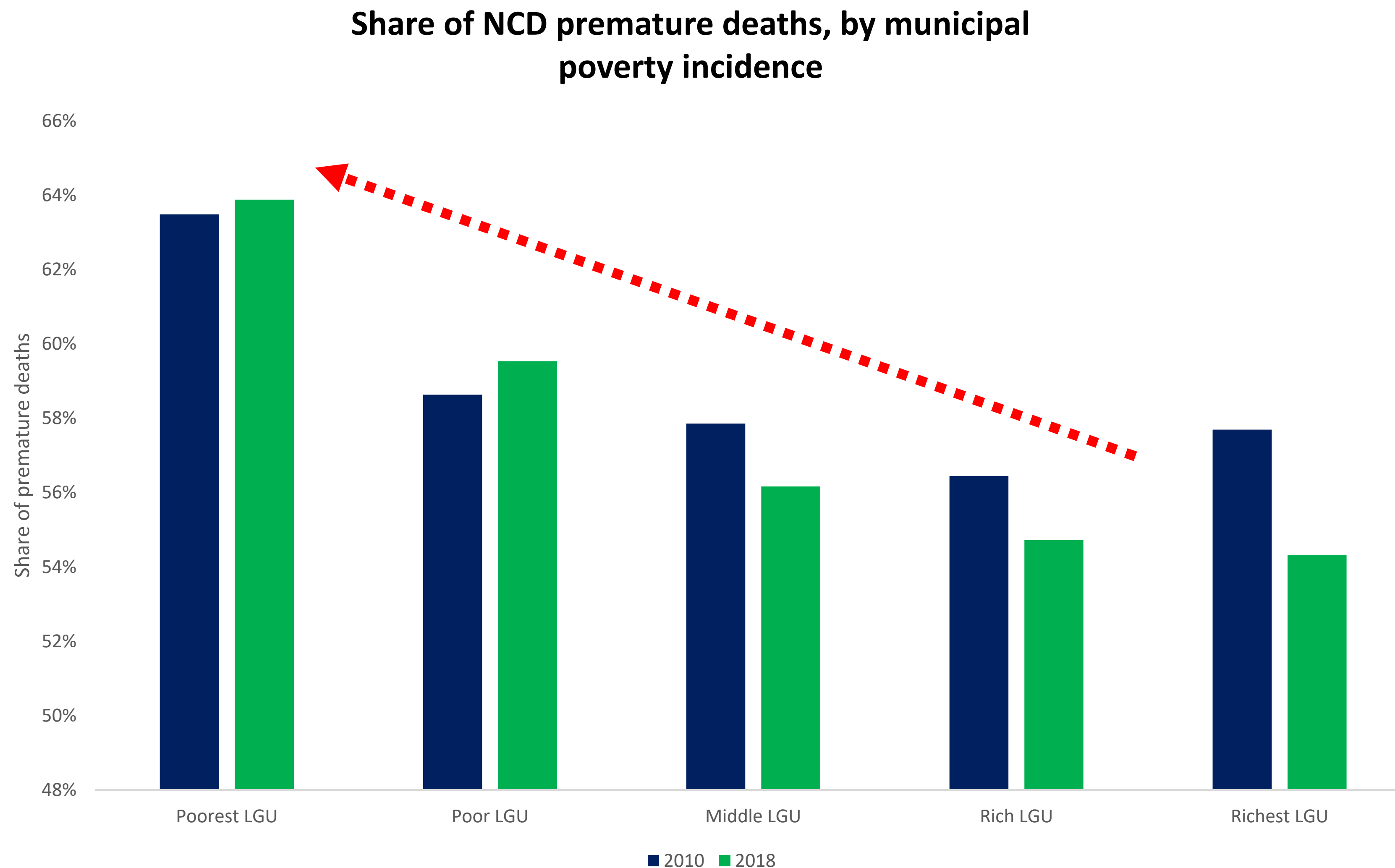
NCDs are now afflicting even poor communities in the Philippines



Increasing among the poorest municipalities in the Philippines

Authors' analysis of PSA mortality data

NCDs are now afflicting even poor communities in the Philippines



Authors' analysis of PSA mortality data

Metabolic and behavioral factors linked to NCDs are the major risk factors in the Philippines

Rank (2019)	Causes	Share of total DALYs			
		1990	2000	2010	2019
1	High systolic blood pressure	3.2%	6.1%	9.0%	10.3%
2	Smoking	5.2%	7.5%	9.0%	9.0%
3	High fasting blood glucose	3.3%	4.7%	5.9%	7.5%
4	High BMI	1.5%	3.2%	4.0%	7.1%
5	Low birthweight	11%	10.3%	8.1%	6.0%
6	Kidney dysfunction	1.9%	2.8%	4.5%	5.3%
7	Alcohol use	4.0%	4.3%	4.5%	5.0%
8	Short gestation	8.4%	8.0%	6.4%	4.8%
9	High LDL	1.1%	2.6%	4.0%	4.6%
10	Household air pollutant	5.7%	2.9%	3.0%	4.3%

Source: Authors' analysis of IHME data

What is primary care?

*"level of a health care system that provides **entry** into the system for all new needs and problems, provides **person-focused** (not disease oriented) care over time, provides for all but very uncommon or unusual conditions, and **coordinates or integrates** care provided elsewhere by others"*

Accessibility	Comprehensiveness	Continuity	Coordination

Primary care process

Primary care process

Access to PC services

- Availability
- Geographic Accessibility
- Affordability
- Acceptability

Comprehensiveness

- Medical equipment
- First contact care and triage
- Diagnostic services, treatment and follow-up care
- Medical procedures
- Preventive care
- Meternal and Child Health services
- Health promotion
- Disaster risk reduction & mgt

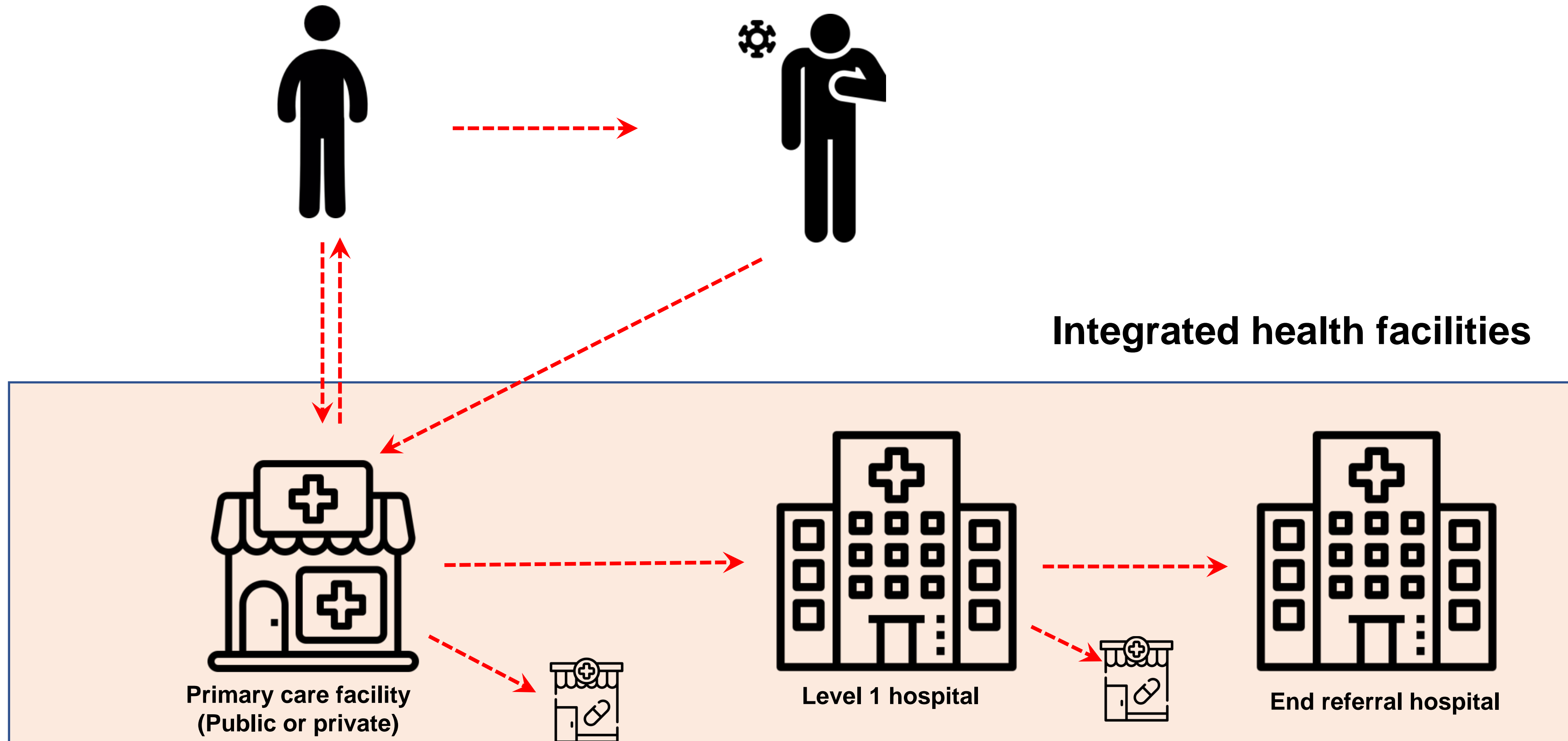
Continuity

- Longitudinal continuity of care
- Informational continuity of care
- Relational continuity of care

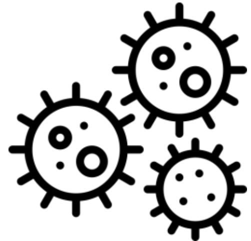
Coordination

- Gatekeeping
- Skill-mix of primary care providers
- Collaboration of PC with specialist / secondary care
- Integration of public health in PC

Patient journey in a primary care system



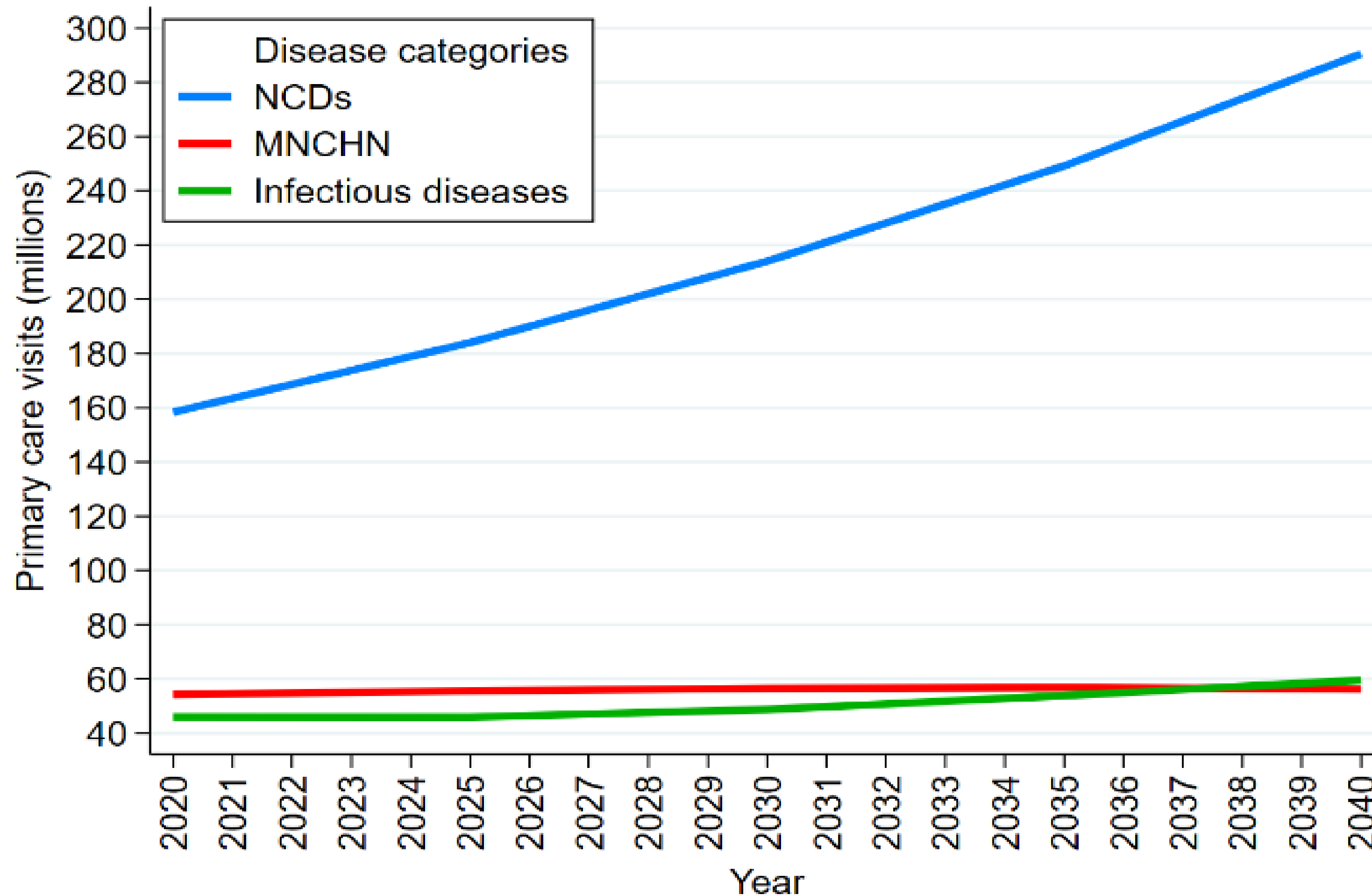
Primary care is the optimal channel for the health system response to NCDs

		Goal	Relationship
	Infectious diseases	remove the infectious agent	Episodic
	Non-Communicable Diseases	reduce symptoms, pain; increase quality of life	Continuous; long-term

Primary care is the optimal channel for the health system response to NCDs

Primordial	Primary prevention	Secondary prevention	Tertiary prevention
Intervention before risk factor: • Promotion of physical activity • Population based anti-smoking campaigns • Promotion of healthy diet	**Control of risk factor:** • Smoke cessation interventions • Weight control	**Screening:** • PAP's smear (for possible cervical cancer) • Colonoscopy (for possible colon cancer) • Risk screening for cardio-vascular diseases • Clinical breast exam (for possible breast cancer)	**Control the disease/minimize the disability:** • Control blood glucose of diabetic patients • BP control or providing maintenance drugs for hypertension

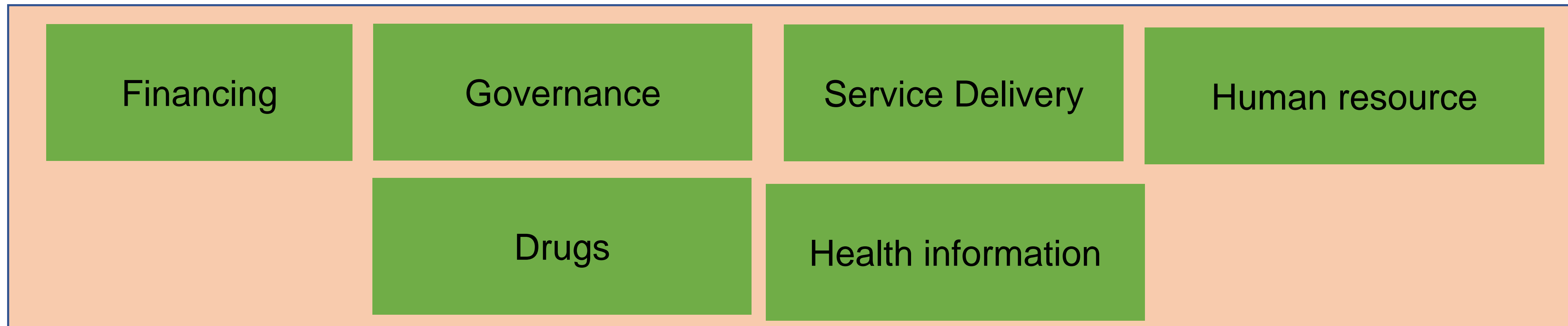
Primary care is the optimal channel for the health system response to NCDs

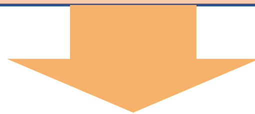


Source: Ulep and Uy, 2020

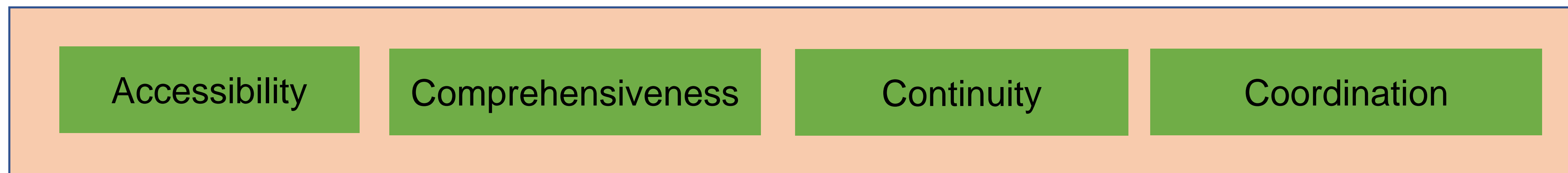
Primary care is the optimal channel for the health system response to NCDs

Primary care framework





Primary care process

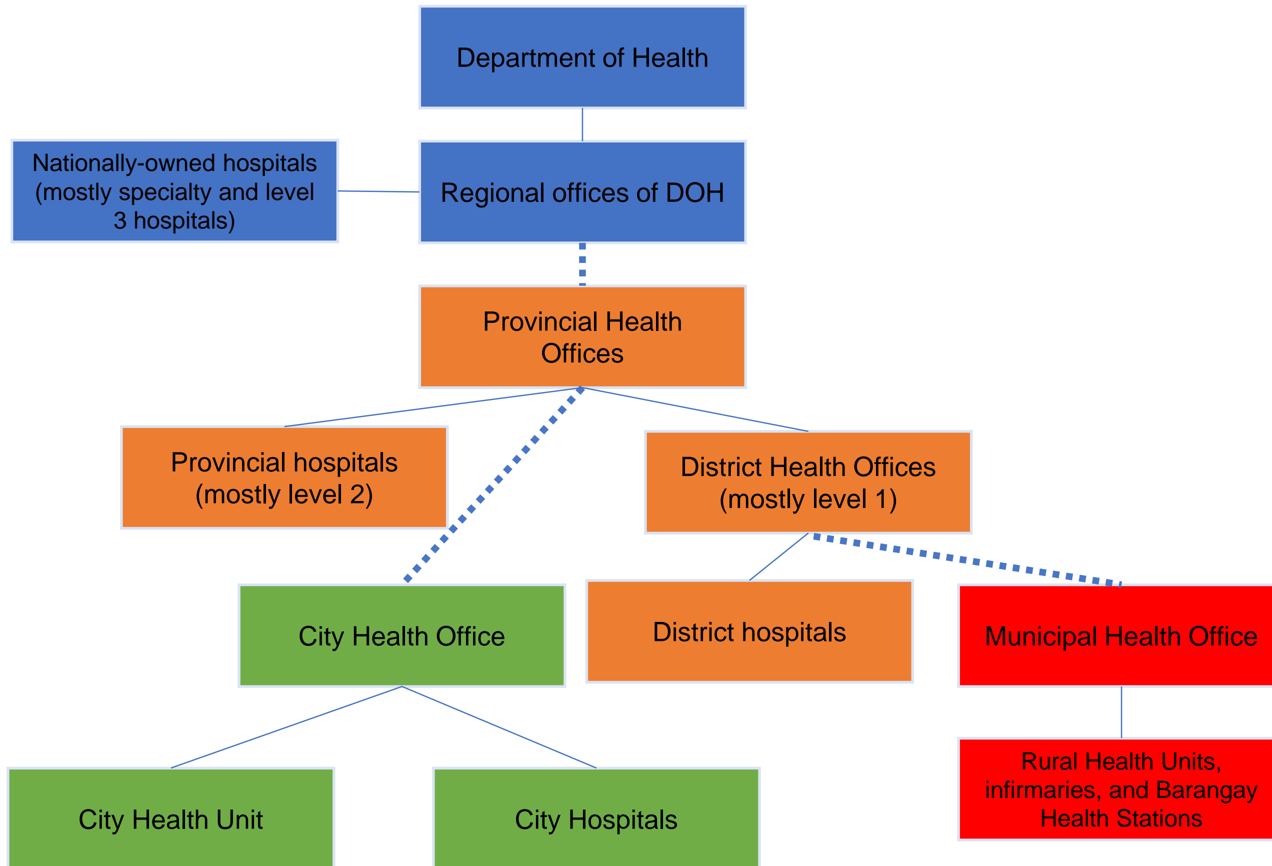


Service delivery points of NCD interventions

Facility providing primary care	Owner	Catchment	NCD functions
Barangay health stations (BHS)	Barangay or village; executive head: barangay captain	Barangay	• Primordial • Primary and secondary prevention (but limited)

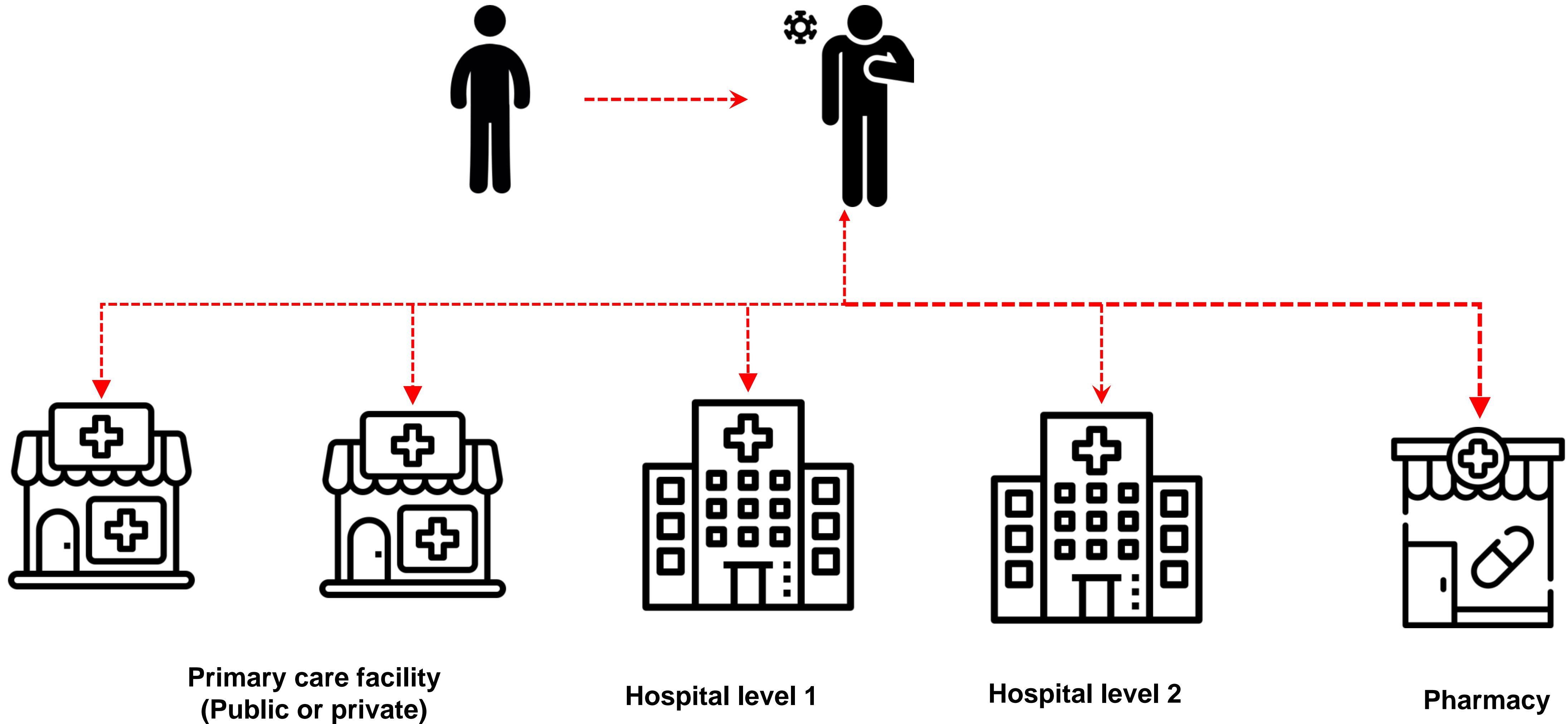
Rural Health Units or City Health Units	Municipality or city	Municipality/city	• Primordial (e.g. anti-smoking campaign, healthy lifestyle)
			
			• Primary care prevention: screening and diagnosis
			    • *Cardio-vascular diseases*: cardio-vascular risk screening in adults/
			    • They have the following capacity: EKG, CBC, and urinalysis)
			    • *Cancer*: Annual Physical Check-up, clinical breast exam, cervix Acetic Acid Wash, Hep B/ HPV vaccinations, smoking cessation, counseling, education re
			
			• Tertiary prevention: Surveillance and monitoring of diagnosed patients (e.g., follow up and monitoring hypertension)

The governance structure is fragmented as the different level and types of care are under different political jurisdictions and leaderships

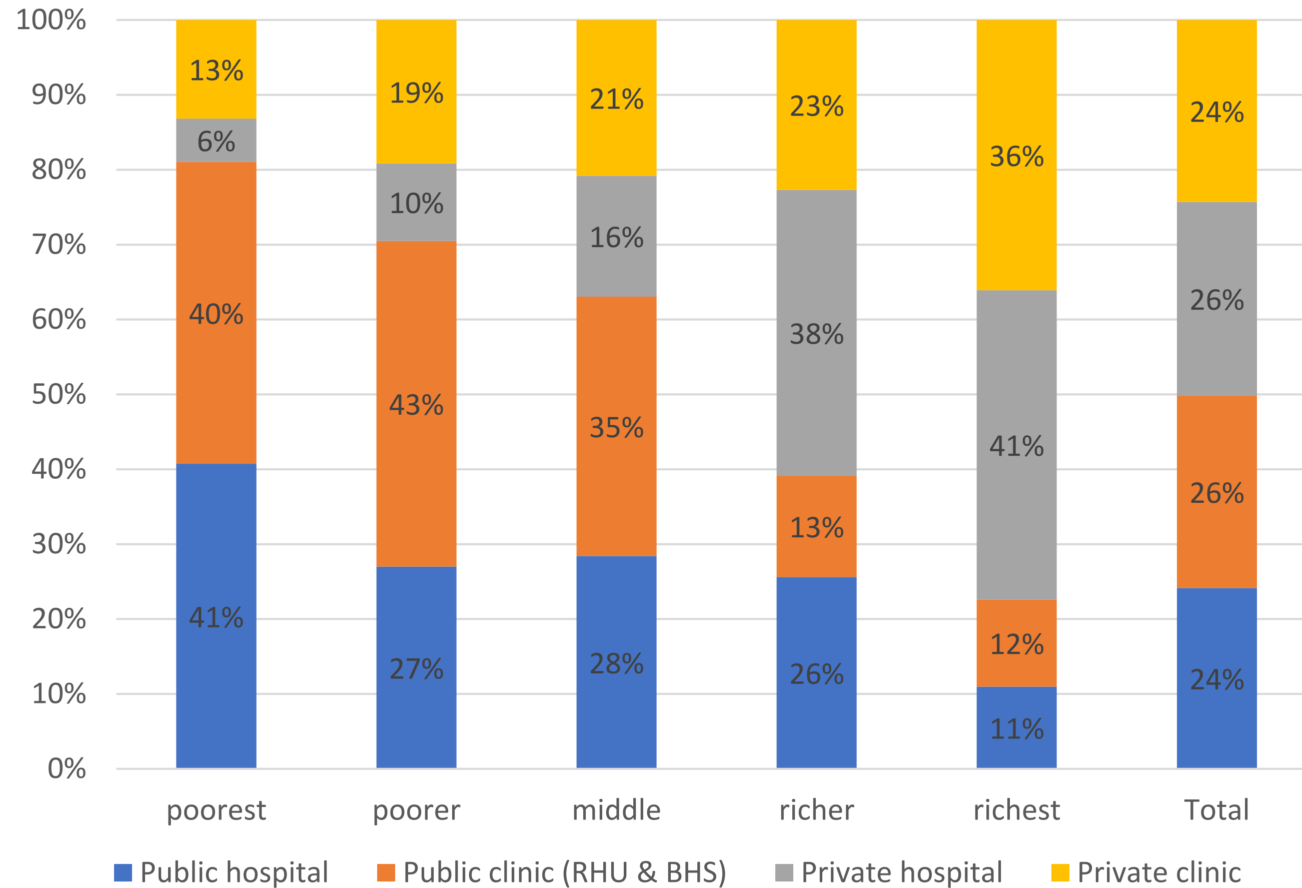


- Individual health facilities providing different levels of care, and operating in silos; they are not coordinated in any clinical, managerial and financing aspects.
- National and local goverments have overlapping functions
- The public sector delivers healthcare services in parallel with the private system, but again in a non-coordinated and fragmented fashion (no data on private sector).

Current patient journey



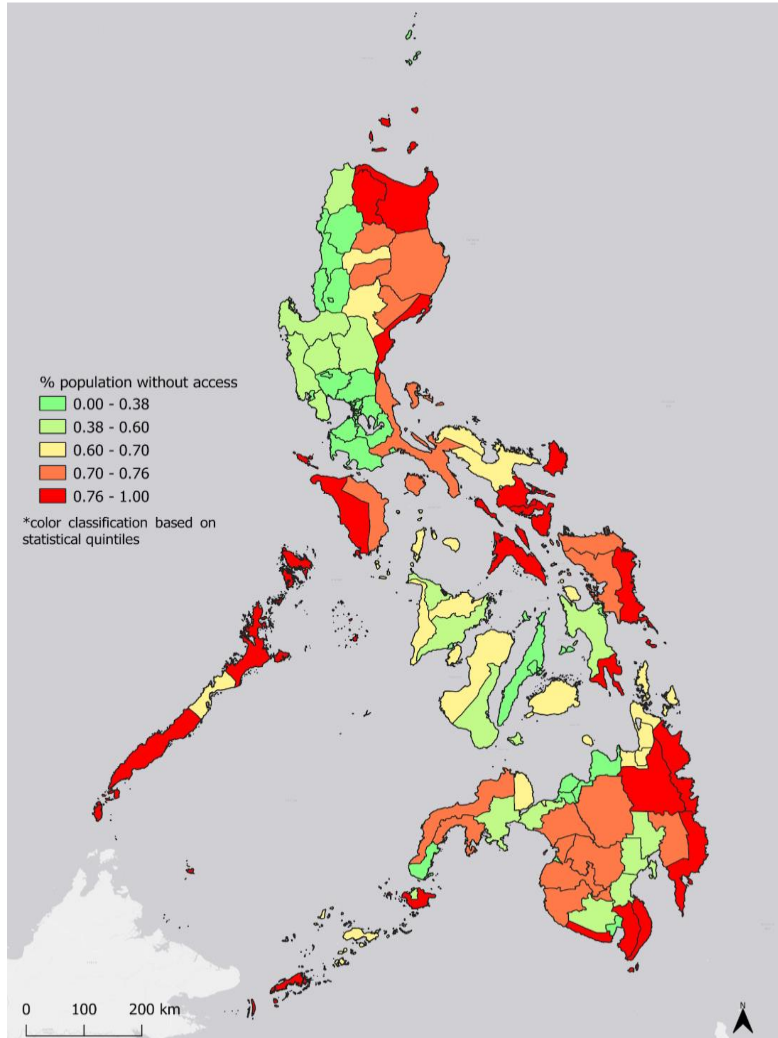
Bypassing primary care facilities?



Source: Authors' analysis of NDHS 2017

Financing
Governance
Service Delivery
Human resource
Drugs
Health information

Primary care facilities is scarce

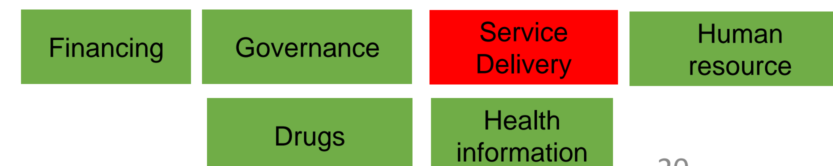


- **2,593 government PCF** (Rural Health Unit, Health Center)
- Private facilities approx ~ 1,500
- **50%** of the population do not have access to a PCF within 30 minutes (mostly in BARMM, Bicol and MIMAROPA)

Only half of the total barangays have at least one BHS

Region	BHS	Barangay	Share (BHS/barangay)	Estimated gap
Philippines	22,613	42,045	0.5	19,095
NCR	22	1,710	0.0	1,114
CAR	918	1,177	0.8	304
I - Ilocos	1,791	3,267	0.5	1,476
II - Cagayan	1,427	2,311	0.6	884
III – Central Luzon	2,063	3,102	0.7	1,039
IVA - CALABARZON	2,801	4,019	0.7	1,310
IVB – MIMAROPA	1,155	1,460	0.8	305
V - Bicol	1,497	3,471	0.4	1,974
VI - Western Visayas	1,971	4,051	0.5	2,109
VII - Central Visayas	2,254	3,003	0.8	758
VIII - Eastern Visayas	927	4,390	0.2	3,463
IX - Zamboanga Peninsula	753	1,859	0.4	1,106
X - Northern Mindanao	1,238	2,022	0.6	787
XI – Davao Region	1,190	1,162	1.0	8
XII – SOCCSKSARGEN	1,172	1,195	1.0	46
XIII – CARAGA	784	1,311	0.6	527
BARMM	650	2,535	0.3	1,885

Source: Authors' analysis DOH data



No mechanism to determine the capacity of primary care facilities to delivery basic NCD services

- Despite all facilities but one BHS having glucometers, not all are functional (4 BHS, 2 CHC/RHUs) or have test strips (4 BHS, 4 CHCs/RHUs).

- Urine protein test strips were available in two (2) BHS and six (6) CHC/RHUs while urine ketone test strips were present in two (2) BHS and eight (8) CHC/RHUs.

	BHS (N=10)		CHC/RHU (N=10)	
	Present	Functional	Present	Functional
Thermometer, stethoscope, height board	10	10	10	10
Blood pressure measurement device	10	9	10	10
Measurement tape	8	8	10	10
Weighing scale	9	9	10	10
Glucometer	9	5	10	8
Glucometer test strips	6	-	6	-
Urine protein test strips	2	-	8	-
Urine ketone test strips	2	-	6	-
Peak flow meter	0	-	1	1
All of the equipment above	1	1	4	4

The country spent about Php640 billion on health of which about 40% were accounted for NCDs.

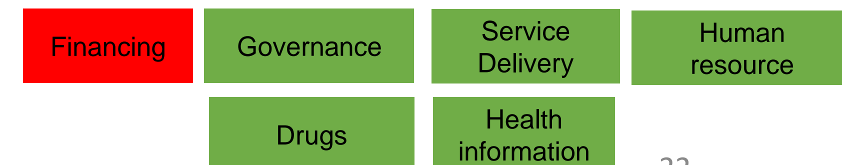
Health spending for NCDs

in billions (Php)

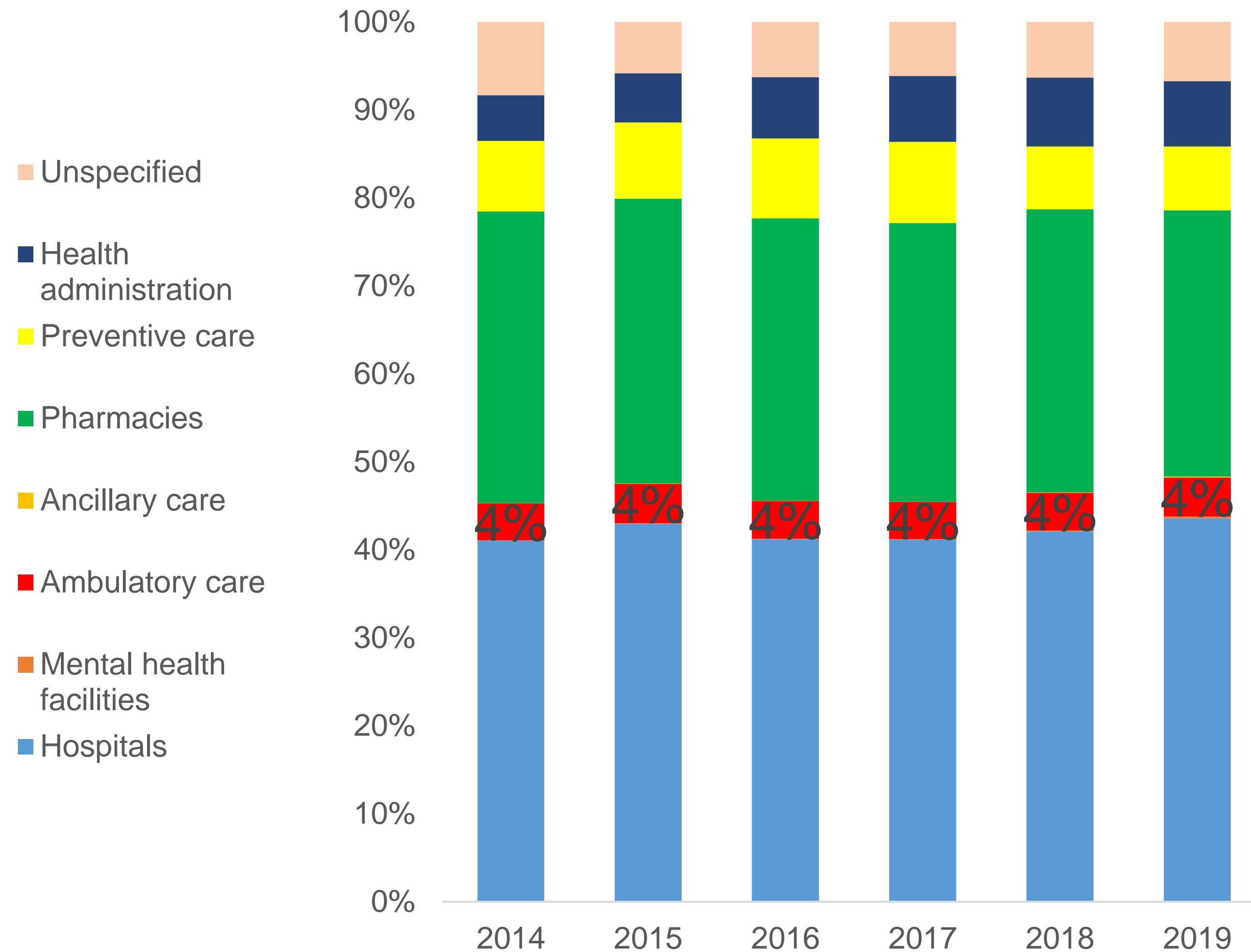
	2014	2015	2016	2017	2018
Infectious and parasitic diseases	110	120	134	200	167
Reproductive Health	67	73	80	81	111
Noncommunicable diseases	154	175	193	184	238
Injuries	24	26	29	31	37
Non-specified	47	52	64	62	75

Source: Authors analysis of Health Accounts, 2014-208

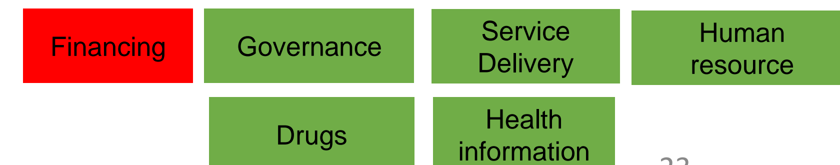
From 2014 to 2018, health spending on NCD has increased from Php154 billion to almost Php240 billion (in real terms using 2018 prices).



Only 4% of the country's health spending were accounted for primary care

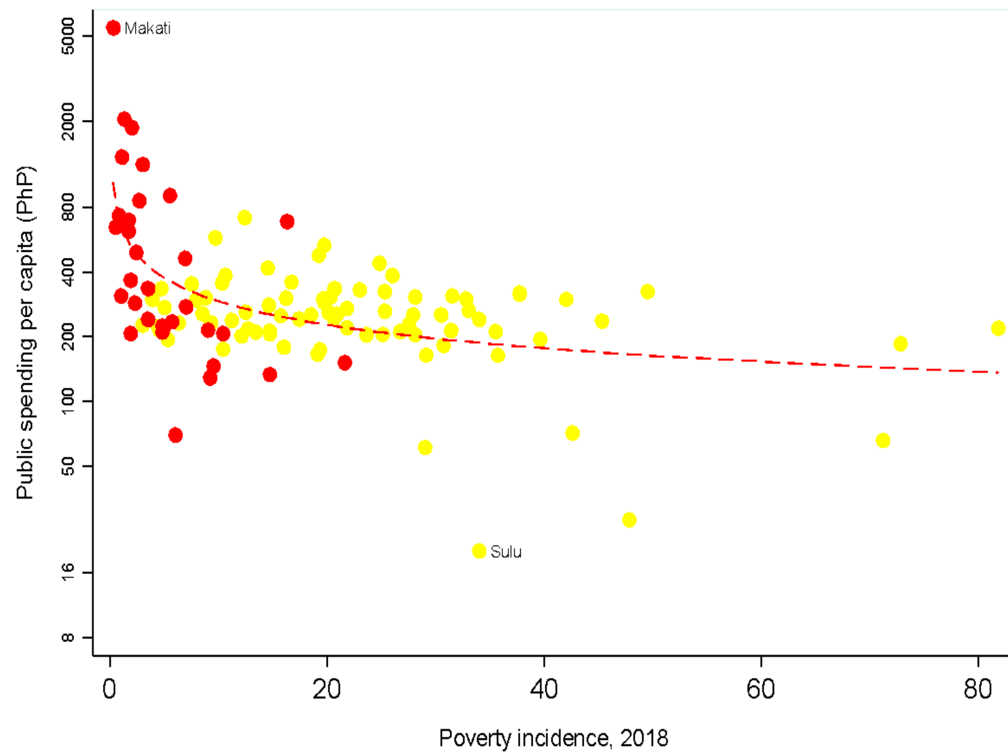


The Philippines only spends about USD 6 per person for PHC. In contrast, ASEAN countries spend around 8% of total health spending on PHC (about USD20 or more per person).



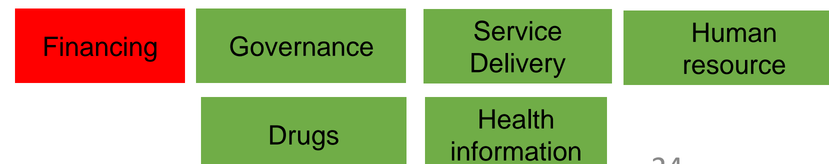
Source: Authors' analysis of NHA

Per capita spending on health across LGU is highly variable



- Local budgets for health is a challenge budget underlies the problems in HHR and medicines and technologies.
- Partly due to lack of priority by the LGU mayor; other times, the LGU cannot afford to allot more because it must fund other programs. The latter reason is prominent in the poorer LGUs.

"In our LGU, because health is not a priority, we were only given ₱150,000 [$3,000] for medicines. But I was able to get from the Gender and Development fund ₱300,000 pesos [$6000] for NCDs… The mayor's priority is more on the modification of the community, infrastructure … he gives priority to health also. He wants to give all the services for free… but the budget he gives is small… I requested more than a million for medicines"



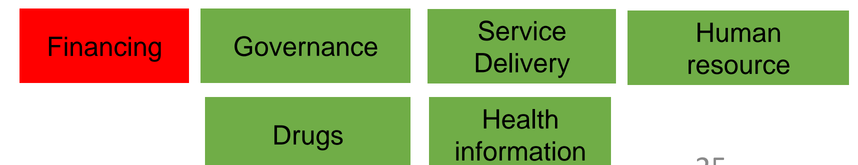
Multiple and fragmented financial streams

LGUs rely on other financing streams

- DOH subsidies (HFEP, human resources, drugs
- PhilHealth reimbursements for primary care benefits (PCB) are used to partly fund medicines, lab supplies, and HHR salaries.
- One LGU realized that many of their constituents had hypertension and diabetes because they started screening people under the PCB package.

"We discovered that there were many cases of lifestyle-related diseases when we conducted check-up services under PhilHealth. All members of PhilHealth were given check-ups. Then we saw they had diabetes, high blood. That is where it started. Then, every year, we started giving the community the services.

Our number one problem is because the primary care benefit package per family payment, we really haven't been reimbursed. If we were being paid, that's a significant sum of money to buy drugs and laboratory equipment…"

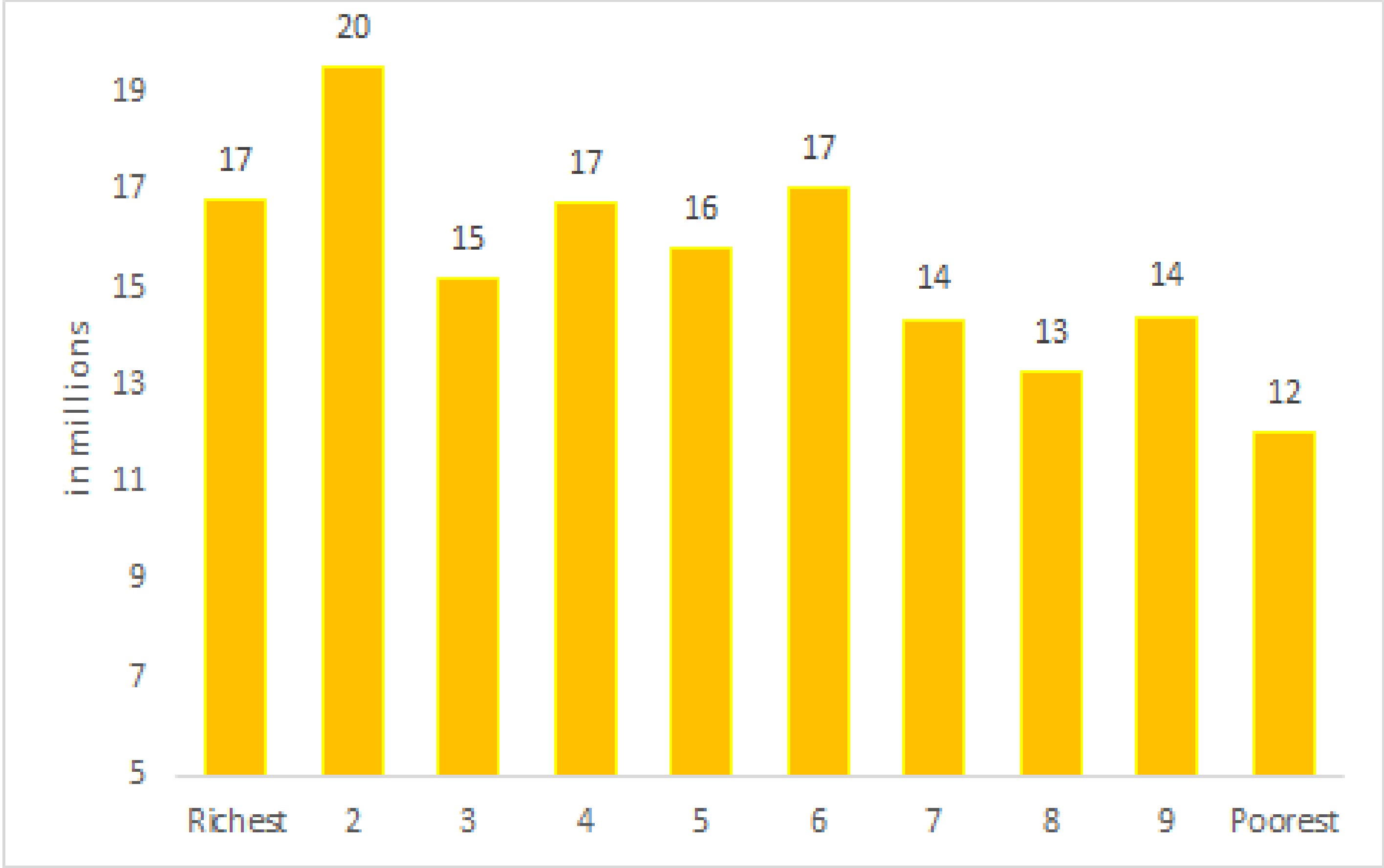


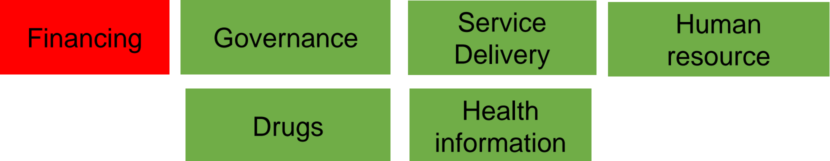
Allocation of resources based on requests; higher spending given to rich municipalities

From an equity perspective, resources should be allocated in areas with the greatest need and least capacity.

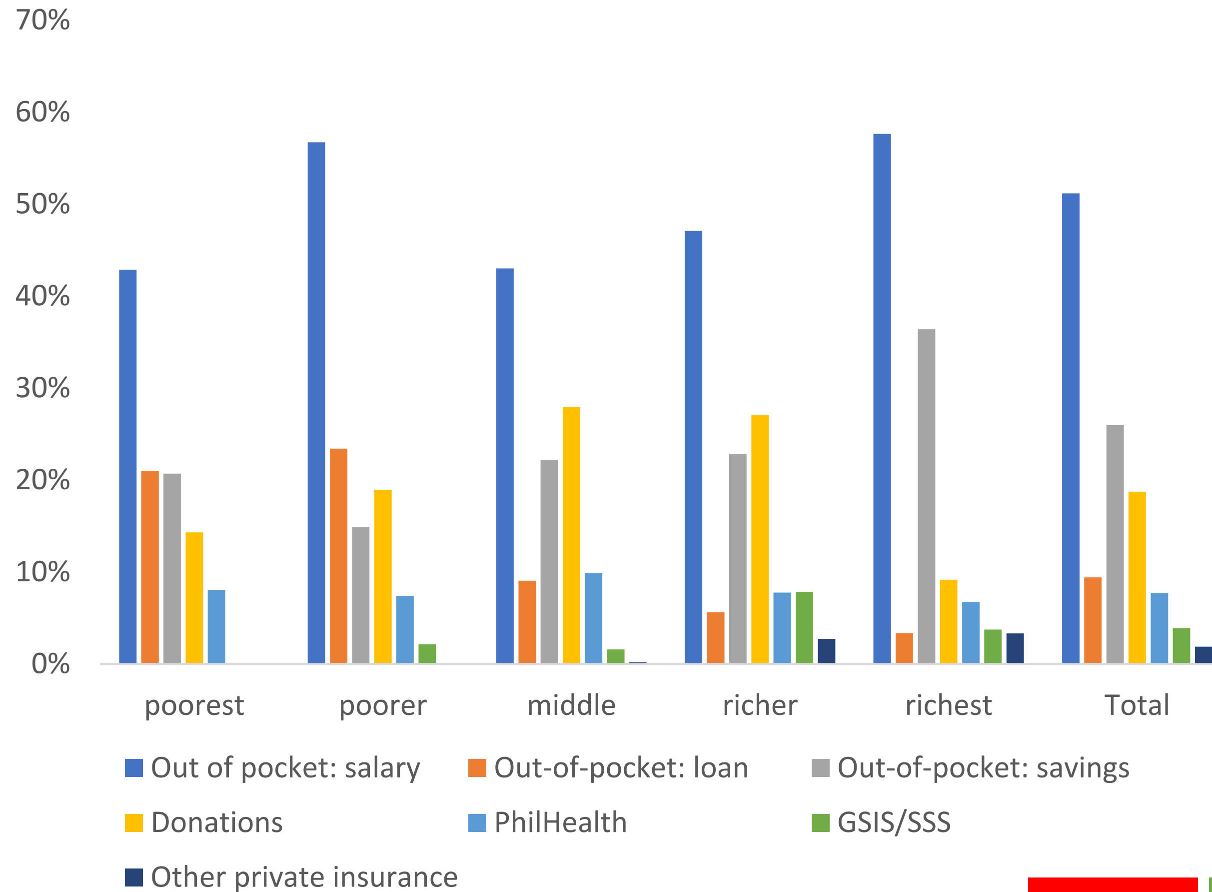
However, HFEP expenditures were **more likely to be allocated in relatively richer areas.**

Median HFEP (RHUs and BHS) spending by poverty incidence of municipalities

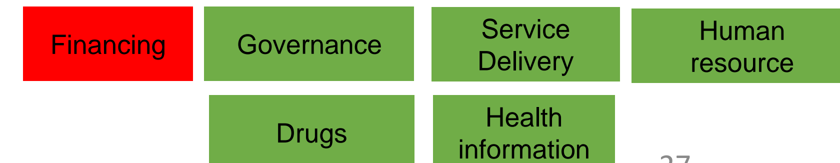




Out-of-pocket (OOP) is a major source of primary care spending



Source: Authors' analysis of NDHS 2017



About 10% of RHUs/CHUs in the country do not have doctors

Share of RHU with NO health workers Rural Health Unit (Gov't)

Region	MDs	Nurse	Midwife	Rad T	Lab T	Pharm	Dentist
CAR (CORDILLERA ADMINISTRATIVE REGION)	9%	2%	4%	98%	38%	94%	50%
MIMAROPA	20%	5%	7%	94%	54%	96%	42%
NCR (NATIONAL CAPITAL REGION)	1%	10%	13%	97%	62%	99%	10%
REGION I (ILOCOS REGION)	2%	57%	14%	99%	36%	94%	30%
REGION II (CAGAYAN VALLEY)	7%	10%	10%	99%	14%	86%	43%
REGION III (CENTRAL LUZON)	8%	7%	10%	97%	23%	96%	34%
REGION IV-A (CALABARZON)	14%	29%	16%	93%	44%	89%	32%
REGION IX (ZAMBOANGA PENINSULA)	13%	19%	38%	99%	40%	91%	55%
REGION V (BICOL)	10%	19%	13%	99%	17%	95%	37%
REGION VI (WESTERN VISAYAS)	3%	7%	15%	95%	19%	95%	36%
REGION VII (CENTRAL VISAYAS)	8%	12%	16%	99%	42%	91%	62%
REGION VIII (EASTERN VISAYAS)	13%	5%	14%	99%	29%	93%	45%
REGION X (NORTHERN MINDANAO)	18%	9%	11%	99%	33%	91%	53%
REGION XI (DAVAO)	5%	19%	0%	98%	14%	84%	25%
REGION XII (SOCCSKSARGEN)	5%	21%	36%	100%	19%	70%	41%
REGION XIII (CARAGA)	15%	16%	3%	100%	29%	95%	58%
Philippines	10%	15%	12%	98%	32%	92%	42%

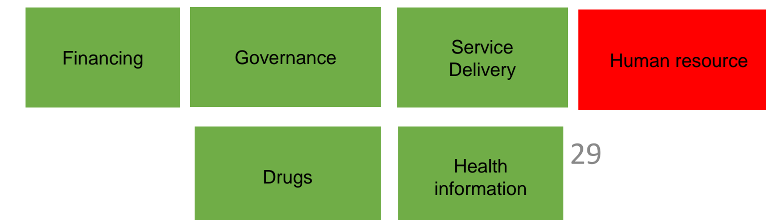
Source: DOH Primary Care Survey, 2019

Financing | Governance | Service Delivery | Human resource | Drugs | Health information

Limited capacity of health workers to conduct NCD programs; programmatic or disease-focused

- **Lack of staff relative to health programs and lack of training opportunities for NCDs.** LGUs rely on four cadres of health professionals: the median number of general physicians, nurses, midwives, and community health workers.
- Health care workers implement the NCD program and at least 10 other DOH programs.
- Physicians and nurses also serve as administrators who organize program implementation, budgets, and data.

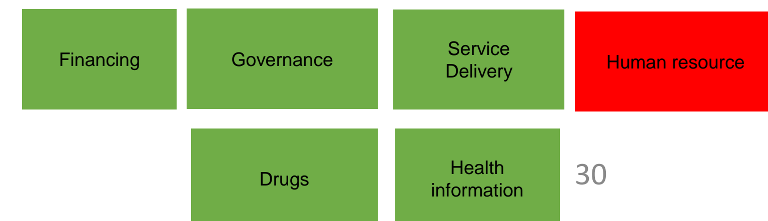
"There are so many programs that the DOH rolls out for implementation, monitoring, and improvement. But we have never had additional manpower since the time we started and had just a few programs. Imagine, one midwife catering to one barangay regardless of what population. For us doctors, the ideal ratio is 1 doctor to 20,000 population, but that has never been followed ever."



Limited capacity of health workers to conduct NCD programs; programmatic or disease-focused

- **Only few health workers are trained.**
- NCD training for HHR is often one-time for a topic and does not cover all staff.
- Training is directed to doctors and nurses who share what they learn to midwives and CHWs.
- The common request is regular refreshers on NCDs and that more staff and cadres be trained. Otherwise, respondents find it difficult to implement new programs with only a few trained HHR or if the trained personnel leaves.

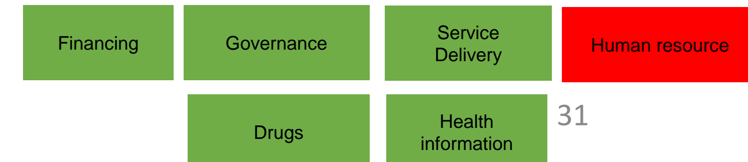
- *“I was trained in visual inspection of the cervix looking at acetic acid, but we could not implement it… I was the only one trained, so I really cannot implement it.”*



Stock-outs of NCD drugs remains common

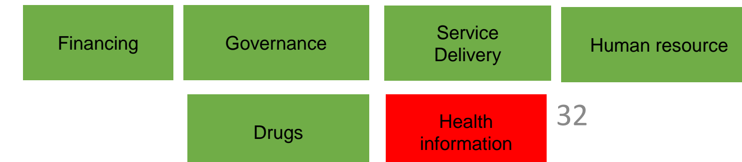
- Most BHS do not carry essential NCD drugs.
- Stock outs of essential NCD drugs have experienced by most health facilities in the previous year.

	BHS (N=10)		CHC/RHU (N=10)	
	Available	Any stockout in 2019	Available	Any stockout in 2019
Diabetes				
Metformin	6	1	10	7
Gliclazide	2	1	8	5
Insulin	0		6	5
Glibenclamide	0		2	0
Hypertension				
Amlodipine	4	1	10	6
Losartan	5	2	10	6
Simvastatin	4	1	9	4
Metoprolol	3	1	5	1
Aspirin	1	0	2	0
Enalapril	0		1	
Hydrochlorothiazide	0		0	
Chronic respiratory				
Salbutamol	4	2	9	4
Prednisone	1		5	2
Flucatisone + Salmeterol	0		3	2



Health information and ICT

- **Monitoring and evaluation for NCD services is weak.** LGUs primarily rely on counts of cases and deaths.
- **They do not often have patient management targets** (e.g. percent of patients with controlled blood pressure) or indicators to measure the effectiveness of NCD interventions.
- It is difficult to collect data for indicators that require blood chemistry (e.g. percent of patients with controlled blood sugar) or medications adherence because patients cannot afford them regularly.



Primary Care Structure

Health information of Primary Care

- Fragmented; lack of integration and coordination amongst health facilities (G-G; G-P; P-P; P-G)
- Lack of gatekeeping
- Overlapping functions of national and government

Financing Primary Care

- Limited public spending on primary care at the local level
- Multiple sources of financing
- OOP remains the major source of financing
- PhilHealth spending negligible
- Inequitable grants from national to local

Human Resources for Primary Care

- Scarcity of health workers
- Limited capacity to implement NCD services
- Disease-oriented; programmatic; vertical

Primary Care Structure

Service delivery of Primary Care	Drugs for Primary Care	ICT for Primary care
• Scarcity of primary care facility; with large gradient • Lack of private sector data	• Stock outs common	• Fragmented delivery means fragmented inter-facility EMR • Paper-based medical record system • Monitoring and evaluation of NCD services is weak.

Recommendations (1)

- **Health financing**
  - **Short-term to medium term – improve efficiency and coverage**
    - Advance primary care benefit package (including telemedicine)
    - Allow private sector to provide health services under PCB (e.g., LGUs to contract out private entity to delivery comprehensive primary care)
    - Explore the use of blended provider payments to drive optimal behavior. For example, the use of capitation for outpatient visits and fee for service for acetic acid screening for cervical cancer screening
    - Reduce fragmentation or “schizophrenia” in the financing sources; delineate the role of DOH and PhilHealth to improve purchasing power (e.g. transition of commodities)

Recommendations (2)

- **Health service delivery**
  - **Short-term to medium term – improve efficiency**
    - Advance the implementation of the UHC Act; integrate health facilities through the creation of HPCNs; provide financial and non-financial incentives for provinces to integrate
    - Comprehensive and smart technical assistance to local governments
    - Integrated care planning within DPCB (e.g. disease-oriented)