



ProID ASST 1

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Background Information on FDQ

How can we ensure that **all low-income elderly** in Singapore have access to **affordable and quality healthcare**?

Healthcare's Relationship to DQ



Necessity

Basic need for everyone
regardless of income



Costs

One of the highest
expenses for low-income
elderly



Benefits

Their livelihood can
improve and they can
contribute more to
society.

Why Address Healthcare?

- ❖ Our group was originally targeting both healthcare and education
- However, we found that healthcare is currently more prevalent than education

"Health and Social Support" was ranked 2nd

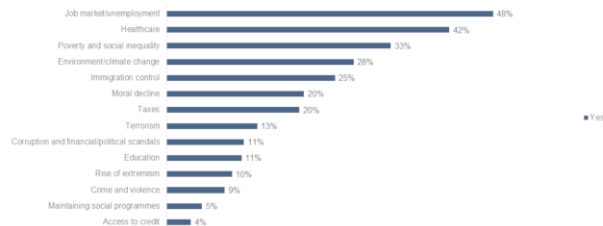
- Prioritising healthcare can create a stronger foundation and better education for Singaporeans.

Top on minds of Singaporeans

	OVERALL	AGE 16-24	25-34	35-44	45-54	≥55
Economy and jobs	79%	86	82	81	80	68
Health and social support	74	62	67	77	78	84
Home and living environment	66	65	69	70	61	62
Environmental and fiscal sustainability	45	49	49	44	37	48
Education and lifelong learning	43	57	50	43	36	31
Singapore identity	32	27	32	31	35	36
None of the above	2	3	2	2	2	2

Source: MILIEU INSIGHT STRAITS TIMES GRAPHICS

WHAT WORRIES SINGAPOREANS



On Which three of the following topics do you find the most worrying in Singapore?
n=913, Singapore Citizens
Fieldwork period 5 – 10 Feb 2020

1 – © Ipsos | What Worries Singaporeans 2020

Ipsos

Stakeholders

Government, NGOs, Healthcare Providers, Low-income elderly



Stakeholders Involved

Government

Give financial aid



NGOs

Some help
subsidise medical bills

Healthcare Providers

Give medical care and
control the cost of
medical care



Low-income Elderly

Difficulties accessing
affordable and quality
healthcare

Research Goals and Methods



Primary Research

Research Goals

- Gain information of the experiences of those in the industry
- Understand the challenges faced by the elderly in affording healthcare services

Stakeholders

- Government agencies
- Healthcare providers
- NGOs
 - Lion Befrienders
- Low-income elderly
 - Currently having health issues



Methods

- Interviews
- Survey

Secondary Research

Research Goals

- Relevant background information
- Causes and Effects
- Existing solutions and their effectiveness
- Statistics

Sources

- News websites (CNA, Straits Times, Today)
- Academic research (PDFs)
- Government websites

Associated Keywords

- Healthcare, elderly, affordable, quality, schemes, assistance



Research on Elderly of Singapore

Singapore is an aging population

- The elderly are more prone to illnesses than others
- They may not be well-educated or trained
- Most of them are retired, unemployed, no experience working
- Unable to afford necessities or have difficulties paying bills due to inflation

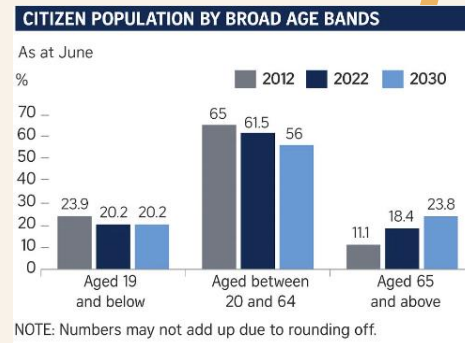


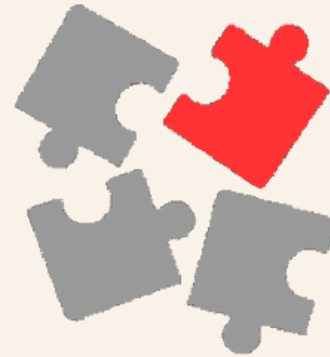
Table 7A: Employment Status, 2009 (PHASE – I) and 2016-2017 (THE SIGNS Study – I)				
Distribution of employment status, overall, weighted %				
	2009	2016-2017	Absolute Difference	Relative Difference
N	4990	4549		
Working full-time	17.6	24.3	6.8	38.4
Working part-time	8.9	12.5	3.5	39.4
Retired and not working	47.0	54.8	7.8	16.6
Homemaker/never worked*	26.5	8.3	-18.2	-68.6

Table 5A: Highest Educational Attainment, 2009 (PHASE – I) and 2016-2017 (THE SIGNS Study – I)				
Distribution overall, weighted %				
	2009	2016-2017	Absolute Difference	Relative Difference
N	4990	4549		
No formal education	30.8	27.5	-3.3	-10.8
Primary	36.4	30.6	-5.8	-15.9
Secondary / Vocational / ITE	23.6	29.2	5.5	23.4
JC / Poly	5.5	7.7	2.2	40.6
University and above	3.4	4.9	1.5	45.7

Summary of Goals and Methods

Key Questions	Methods
Is healthcare affordable?	Interviews
Are existing schemes effective?	Surveys
What are the problems faced by the elderly when accessing healthcare?	Online Research
What are the causes of low-income and how does it affect getting healthcare	All Combined

Cause-and-Effect Analysis



Cause

Effect



Causes and Effects



High Cost of
Living

Loneliness



Existing
Health Issues

Poor Health
Outcomes



Lack of technology
know-how

Missed opportunities
and services



Cause 1: High Cost of Living

The **bottom 20%** of households have a **deficit of \$335**.

The **average wage** a single elderly household needs to meet;

- basic living standards (afford housing, food, clothing, healthcare,
- education, and employment opportunities) is **\$1,421 per month**.

Workers aged 60 and above earn a **median monthly income of \$2,330** from a combination of wages, CPF payouts, and financial schemes.



Cause 1: High Cost of Living

This is barely enough, and CPF payouts may run out in their later years.

From the ATE interview;

- Jiancheng shared that **food** is one of the **highest expenditures** for low-income households
- The additional money given from Social Service Offices (SSOs) can only **last 2-3 weeks** instead of a month due to inflation.



Effect 1: Loneliness



Due to the high cost of living and financial issues, elderly may:

- **go out less**
- **live alone**
- **might be homeless**

Based on MOH, in 2020, about 10% or 88,000 Singaporeans aged 60 years and above live alone.

According to a study, individuals in their **60s** who believe they are frequently or always alone might **live 3 to 5 years fewer** on average than others who believe they are not. Similarly, lonely elderly in their **70s** might **live 3 to 4 years fewer** and those in their **80s** might live **2 to 3 years fewer** than others.

This leads to **social isolation, loneliness, poor mental health** such as depression, and a shorten lifespan.



Cause 2: Existing Health Issues

80% of elderly have at least **1 chronic disease** such as diabetes, high blood pressure, high cholesterol, and stroke.

Apart from chronic diseases, there are also other health concerns such as **musculoskeletal problems** (joint pain, muscle sprains, arthritis, and osteoporosis)

This limits their ability to work which leads to **low income**



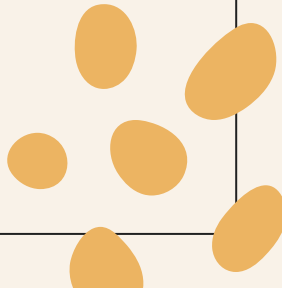
Effect 2: Poor Health Outcomes

A study by NUS found that low-income elderly individuals are more likely to have **chronic health conditions** such as

- Hypertension
- diabetes

These lead to higher healthcare costs.

Health issues limit the elderly's ability to **earn money** to support themselves in addition of increasing expenses needed to **support their own healthcare**



Cause 3: Lack of Technology Know-how

42% of Singaporeans **above 60** years old **do not use** the internet.

27% of Singaporeans **aged 60 to 74** have **never used smartphones**, and **31 %** have **never used a computer**.

Low-income elderly individuals may have **limited financial resources to afford** smart devices. There is also a **lack of training and support** in using smart devices. Thus, they may be digitally illiterate.



Effect 3: Missed Opportunities and Services

Having **limited access** to and knowledge of technology hinders their ability to access:

- **Online resources**
- **Essential services** (job portals and assistance schemes)

This leads to **loss in job opportunities** and **lower income** for the elderly

For example, if there was an online programme about affordable healthcare for the elderly, they would be unaware of it. Thus, they may **feel helpless** unless others actively reach out to them such as door-to-door visits and outreach programmes

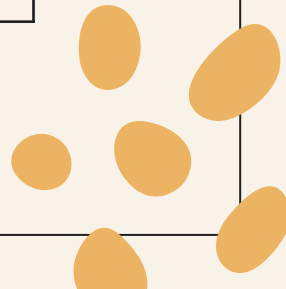


Summary of Causes and Effects

Causes	Effects
High Costs of Living	Loneliness
Existing Health Issues	Poor Health Outcomes
Lack of Technology Know-How	Missed Opportunities and Services



How can we ensure that **all low-income elderly** in Singapore have access to **affordable and quality healthcare?**



Key Learning Points from Existing Solutions



Existing Solution 1: Subsidies

Intermediate and Long-Term Care (ILTC) Subsidies

- This includes services that require day-to-day assistance for those who are discharged and frail


Home-Based Services	Centre-Based Services	Residential ILTC Services	Inpatient Hospice Care
Home Medical Care, Home Nursing Care, Palliative Home Care, Meals-On-Wheel, Escort/Transport Services, Home Personal Care	Community Rehabilitation Service, Dementia Day Care Services, Social Day Care Services	Community Hospitals, Chronic Sick Hospitals, Nursing Homes	Sheltered Home For Ex-Mentally ill, Respite Care

Existing Solution 1: Subsidies

- Such health and social care can be **expensive over the long term** hence services such as nursing homes are subsidised up to **80% for home care** and **75% for residential** service.
- Subsidies are tiered according to the person's monthly household income per capita, and type of care required
- To qualify...
 - 1) Singapore Citizen/ Permanent Resident
 - 2) Meet admission criteria of ILTC services provided
 - 3) Receive care from MOH-funded service provider

Key Learning Points

- ❑ Beneficial for helping the elderly cover most of their expenses but this process could be complicated
- ❑ The elderly might be unaware that this is subsidy does not cover the patients themselves

Monthly Per Capita Household Income (PCHI) ¹	SCs	PRs
No PCHI	Annual Value ² ≤ \$13,000: 75% Annual Value > \$13,000: 0%	Annual Value ≤ \$13,000: 50% Annual Value > \$13,000: 0%
\$800 and below	75%	50%
\$801 to \$1,200	60%	40%
\$1,201 to \$1,900	50%	30%
\$1,901 to \$2,000	40%	20%
\$2,001 to \$2,800	20%	10%
 \$2,801 and above	0%	0%

(MOH Singapore, 2023)

Existing Solution 2: Government Aid

Community Health Assist Scheme (CHAS)

Existing solutions:

- All pioneers at least 65 years old are eligible for financial assistance for medical and dental care
- Tiered subsidy scheme:
 - Pioneers with lower incomes will receive additional assistance

Key learning point:

- Importance of accessibility and simplicity:
- Elderly people might be greatly empowered to make informed choices by receiving financial education specifically designed to meet their requirements

COMMUNITY HEALTH ASSISTANT SCHEME (CHAS)

	 CHAS BLUE	 CHAS ORANGE	 CHAS GREEN
Common Illnesses	Up to \$18.50/visit	Up to \$10/visit	N/A
Chronic Condition (Simple) Only 1 condition	Up to \$80/visit (capped at \$320/year)	Up to \$50/visit (capped at \$200/year)	Up to \$28/visit (capped at \$112/year)
Chronic Condition (Complex) Multiple conditions or condition with complications	Up to \$125/visit (capped at \$500/year)	Up to \$80/visit (capped at \$320/year)	Up to \$40/visit (capped at \$160/year)
Selected Dental Services	\$11 - \$256.50 per procedure	\$50 - \$170.50 per procedure (for crown, denture & root canal treatment only)	N/A

 Homage

(Grey, 2023)

Existing Solution 3: Non-profit and Voluntary Organizations

❖ Lions Befrienders

Medical Escort Services:

- Assist low-income elderly attend:
 - medical appointments
 - Dental visits
- Trained volunteers
 - accompany pioneers to medical visits ensuring their safety
- Provide guidance as the elderly navigate the healthcare system

Senior Activity Centers (SACs):

- Health monitoring
- Health Education
- Provide referrals to protect the welfare of the elderly



Key Learning points

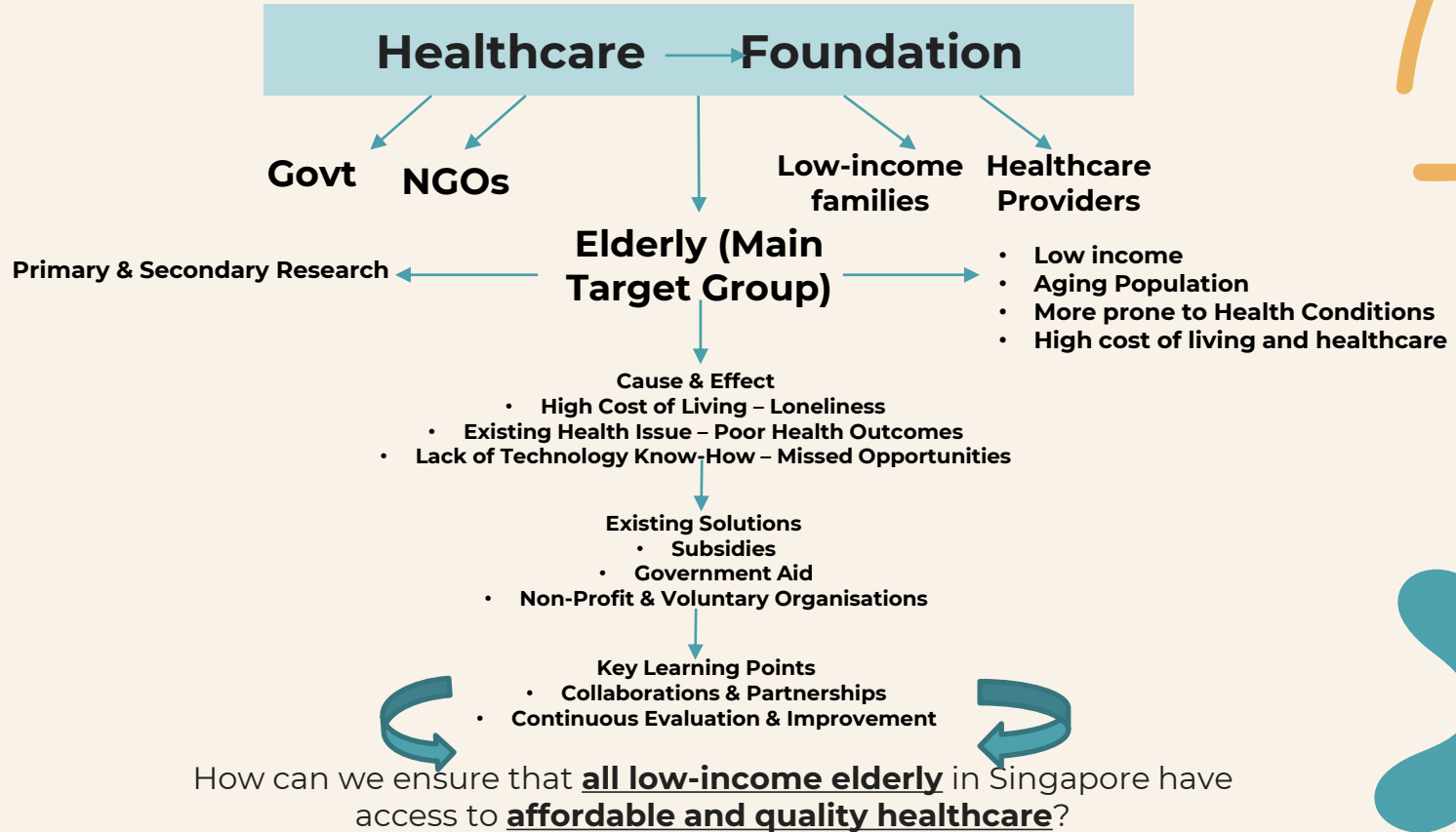
✓ Expansive Collaboration and Partnerships

- NGOs are mindful of the value of fostering trust and alliance with the other organizations as it **promotes increased involvement and engagement**

✓ Continuous Evaluation and Improvement

- Regular evaluations enable them to pinpoint areas of success and areas of improvements
- enhance programs and improve resource allocation
- Provide better needs of the elderly by getting input from the people they serve

Conclusion



Reflection on Disciplinary Perspectives







TAY GAO JUN | CSF | 85 Word Count

I used to think that the technological approaches to FDQ used by Data Science and Cybersecurity were similar, but I now see that Data Science students are quite analytical.

By demonstrating to me how to use graphs and charts to summarize and evaluate data, they have assisted me in developing a better analytical understanding of FDQ.

I have developed a greater understanding of FDQ by embracing both discipline views because some graphs and charts may have hidden meaning that requires advanced analytical abilities for understanding.



ZENIX | BA | 100 Word Count

The data science course perspective focuses on leveraging technology, algorithms, and data analysis to address the FDQ, while the business perspective emphasizes economic factors, market dynamics, and organizational considerations. By adopting both disciplinary perspectives, a more holistic understanding of the FDQ emerges. Data science provides insights into data-driven solutions, optimization, and personalized care, while the business perspective considers financial feasibility, strategic planning, and substantial research. This interdisciplinary approach enables comprehensive problem-solving, ensuring that technical, economic, and organizational aspects are considered. It facilitates the development of effective and sustainable strategies to ensure affordable and quality healthcare for low-income elderly in Singapore.





Lim Wee Liang Kelven | Data Science | 86 Word Count

I used to think that nursing was a fully hands-on course and did not do much research. But when doing our secondary research, I was proven wrong.

My Nursing teammates were able to relate online information with what they were taught to create a comprehensive analysis of how existing solutions benefited the elderly.

I have developed a greater understanding of the FDQ by embracing both ICT and Nursing disciplines because it taught me how to empathise with the elderly in a new and different way.



SYNUL | NSG | 88 Word Count

I used to think BA students would think of solutions more financially related. Hence, for this project, I thought his suggestions would be related to financial help and sourcing more programmes to help lower income.

However, the suggestions he gave were more technological-based and improvements via gamification. He gave ideas that covered broader ideas and more innovative ways to tackle our FDQ.

Through his technological perspective and my nursing perspective, we were able to view the problem through a broad spectrum and hence come up with innovative solutions.

JONITA | NSG | 94 Words

Past:

- I used to think the business management approach to FDQ only involved analytical marketing via providing smart financing schemes for the lower income elderly


Current timeline:

- However, there is a depth of analysis and research required for the business principle to evaluate the understanding of the FDQ
- I now understand the FDQ more holistically by utilizing the perspectives of nursing and business disciplines. With my acquired background knowledge in healthcare field and the utilisation of systemic planning and research from the business field, we have come forward to advance to future possibilities of enhanced solutions.

More importantly, we saw light in a different angle

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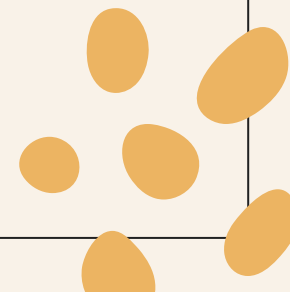





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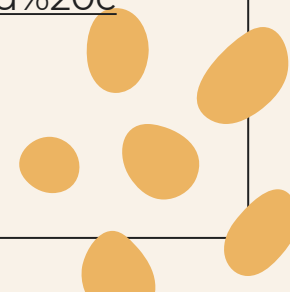



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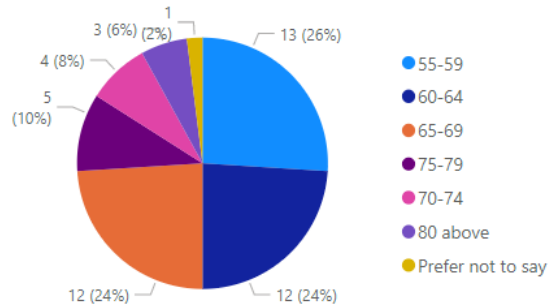
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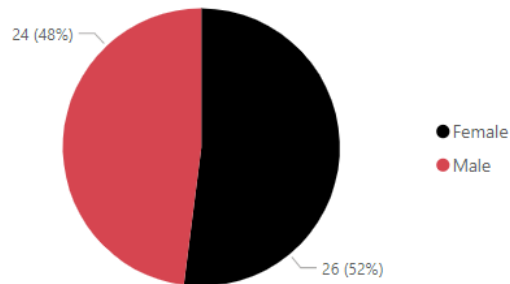
Appendices



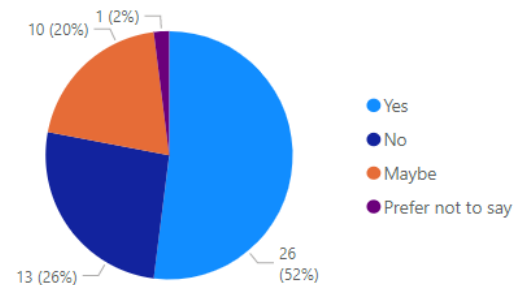
Number of Elderly People by Age Group



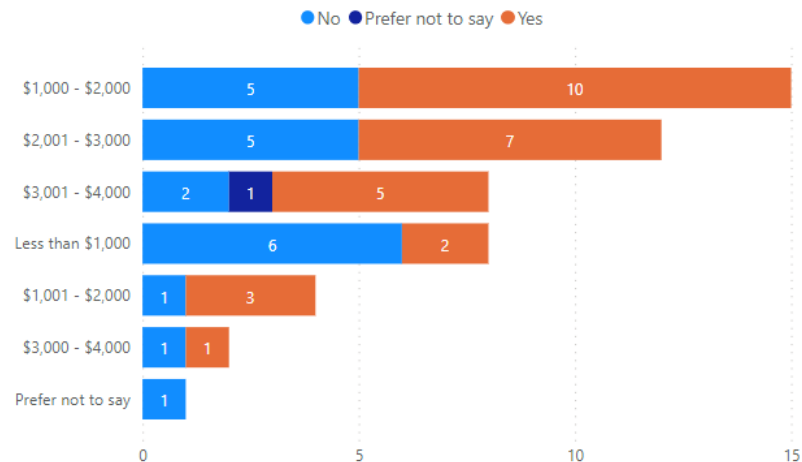
Gender Proportion



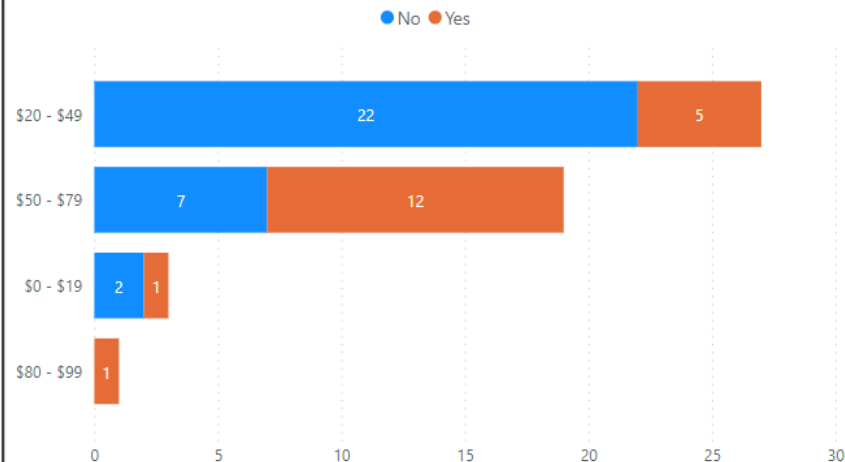
Number of Elderly People Who Applied for FAS



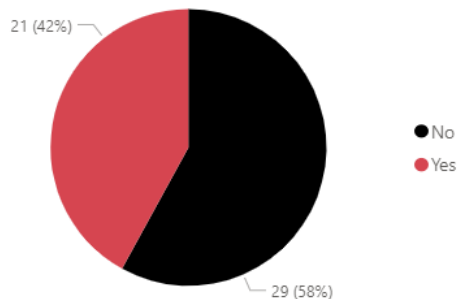
Gross Monthly Income by Work Status



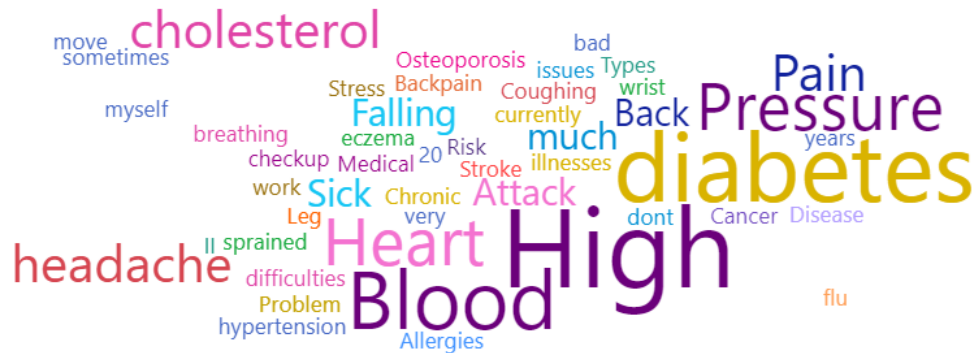
Medication Fee per Trip by Chronic Health Conditions



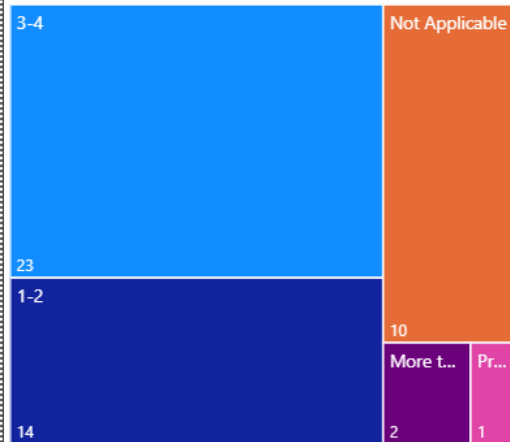
Proportion of Elderly People Taking Prescribed or Self-purchased Medication



Health Concerns



Number of Elderly People Living Together



Challenges Affording Healthcare Services



10:04 AM 4G 50%
Ms Tan
Online

Wed, 17 May

Today

你好Ms Tan, 感谢你同意今天的采访, 如果你准备好了, 我们现在可以开始采访了

10:12 am

你好, OK, 我准备好了

10:12 am

谢谢Ms Tan, 我可以知道你的年龄范围吗?

10:12 am

我今年67岁, 已经老了哈哈!

10:13 am

没关系, 所以您属于“超过 65 岁的范围”。我能知道您是否有收入来源吗? 如果您愿意分享, 您介意与我们分享范围吗?

10:13 am

没问题, 现在, 我没有真正的收入, 因为我因为年老和健康问题而没有工作。我依赖政府和社区服务提供的支出。我来自一个较低的家庭。

10:14 am

啊, 可以理解, 好的, Ms Tan, 我可以和你核实一下你有什么健康状况以及你正在接受的治疗吗?

10:14 am

我有高血压和糖尿病。所以我只是服用了综合医院提供的很多药物。我的肾脏也不能正常工作, 所以我需要每周去透析中心 2-3 次。老了就这样。

10:15 am

听到这个消息我很难过, Ms Tan, 请问您去诊所几次? 对您来说很麻烦吗? 你们的医疗费用很贵吗?

10:15 am

对。很麻烦。我一个人住, 所以经常一个人去诊所是很困难的。由于我不工作, 支付也有点贵。政府也有补贴, 但有时我很难付清余款。

10:16 am

啊, 好的, Ms Tan. 我可以检查您是否从任何其他服务获得任何其他帮助吗?

10:16 am

有时是的, 就像我们老年人在经济上从其他群体那里得到一些帮助, 尤其是在医疗费用方面, 但也有很多条件需要满足。而且必须自己申请所以很麻烦。有时会让人感到困惑, 因为有太多的服务和太多的标准无法满足。所以有时候, 我只是不申请因为太混乱了。

10:18 am

好的, Ms Tan. 您认为我们如何才能更好地帮助您获得这些服务?

10:19 am

如果我符合资格或至少该表格应包含有关标准的详细信息, 也许我可以将一些表格发送到我家。然后我可以看到并填写它, 然后可能将它交给离我最近的 CC/RC 以帮助我注册服务。

10:19 am

我明白了, 好的, 谢谢你抽出时间接受这次采访!

10:20 am

祝你一切顺利, 保持健康!

10:20 am

哈哈, 谢谢, 好好学习!

10:20 am

谢谢!

10:21 am