

Project Title

Assessing The Financial Impact of Cancer Drug List (CDL) Implementation On Patients
Receiving Chemotherapy in Singapore

Project Lead and Members

Project members: LEOW Jo Lene, LIM Li Qing, LEE Lin Hong, CHEW Lita

Organisation(s) Involved

Singapore Health Services, National University of Singapore, National Cancer Centre
Singapore

Healthcare Family Group(s) Involved in this Project

Pharmacy

Applicable Specialty or Discipline

Oncology

Project Period

Start date: 01 August 2024

Completed date: 30 September 2024

Aims*

- Assess impact of CDL on patients' out - of - pocket expenses (OOPE)
- Measure patients' acceptability and financial toxicity (FT) score post - implementation of CDL

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Conclusion

See poster appended/ below

Project Category* *(refer file attached for more info)*

Applied/ Translational Research

Quantitative Research

Keywords*

Financial impact; cancer drug list; patients; chemotherapy

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Assessing the financial impact of Cancer Drug List (CDL) implementation on patients receiving chemotherapy in Singapore

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INTRODUCTION

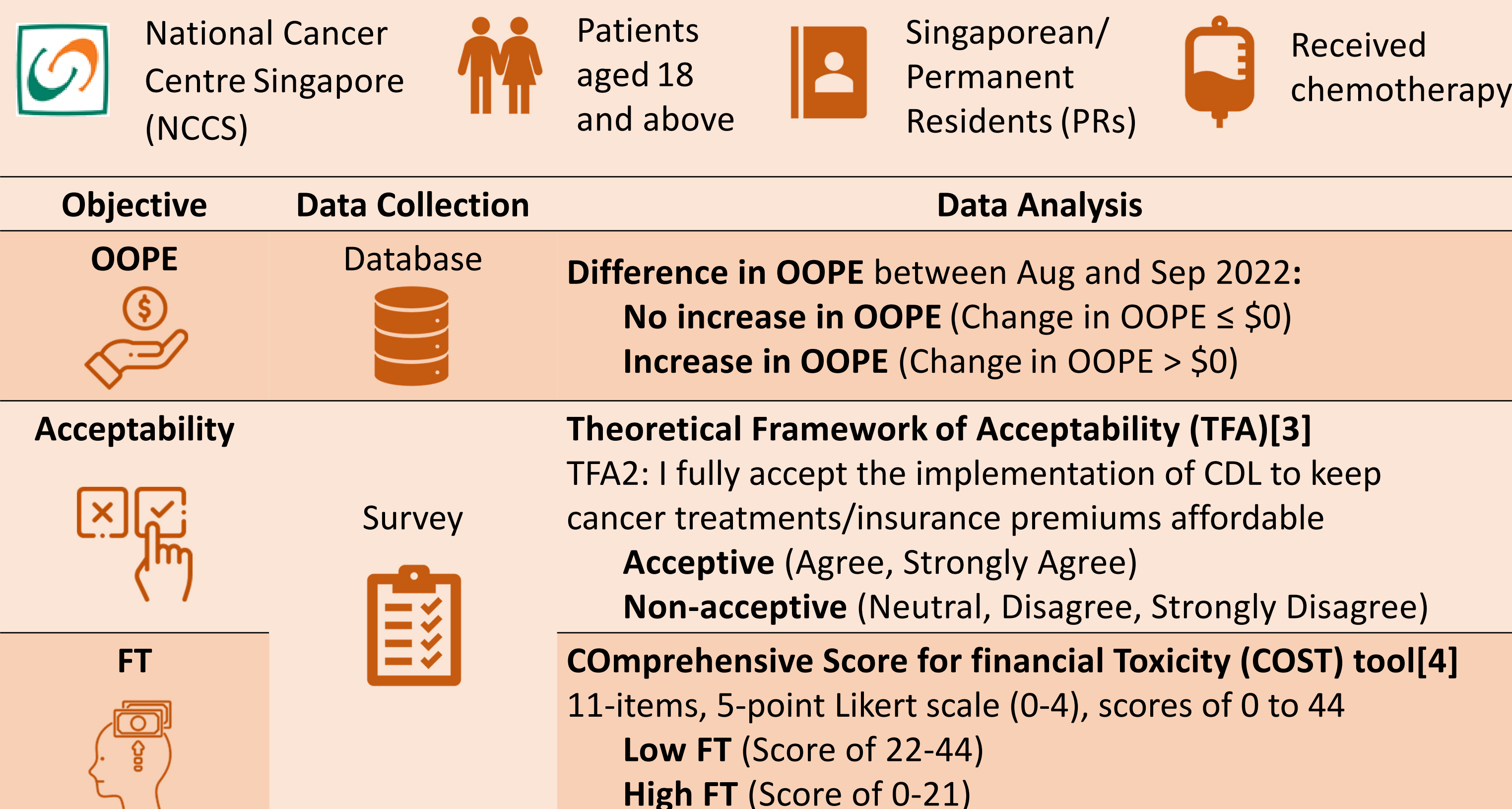
Cancer is a major burden of disease globally, with estimated global spending of USD\$218 billion by 2023[1]
Since 1 September 2022, CDL was implemented to ensure long-term affordability of chemotherapy[2]



OBJECTIVES

- 1) Assess impact of CDL on patients' out-of-pocket expenses (OOPE)
- 2) Measure patients' acceptability and financial toxicity (FT) score post-implementation of CDL

METHODOLOGY



RESULTS & DISCUSSION

OUT-OF-POCKET EXPENSES (OOPE)

Patients analyzed = 314

Change in OOPE:

- No increase in OOPE: 249 (79.3%)
 - No change in OOPE: 216 (68.8%)
 - Decrease in OOPE: 33 (10.5%)
- Increase in OOPE: 65 (20.7%)

CDL classification: Not on CDL (1.6%)
Reference: All drugs on CDL (98.4%)

No. of chemotherapy used: > 1 agent (45.5%)
Reference: 1 agent (54.5%)

Patient subsidy status: Subsidised (81.8%)
Reference: Private (18.2%)

Patient citizenship: PRs (4.5%)
Reference: Singaporean (95.5%)

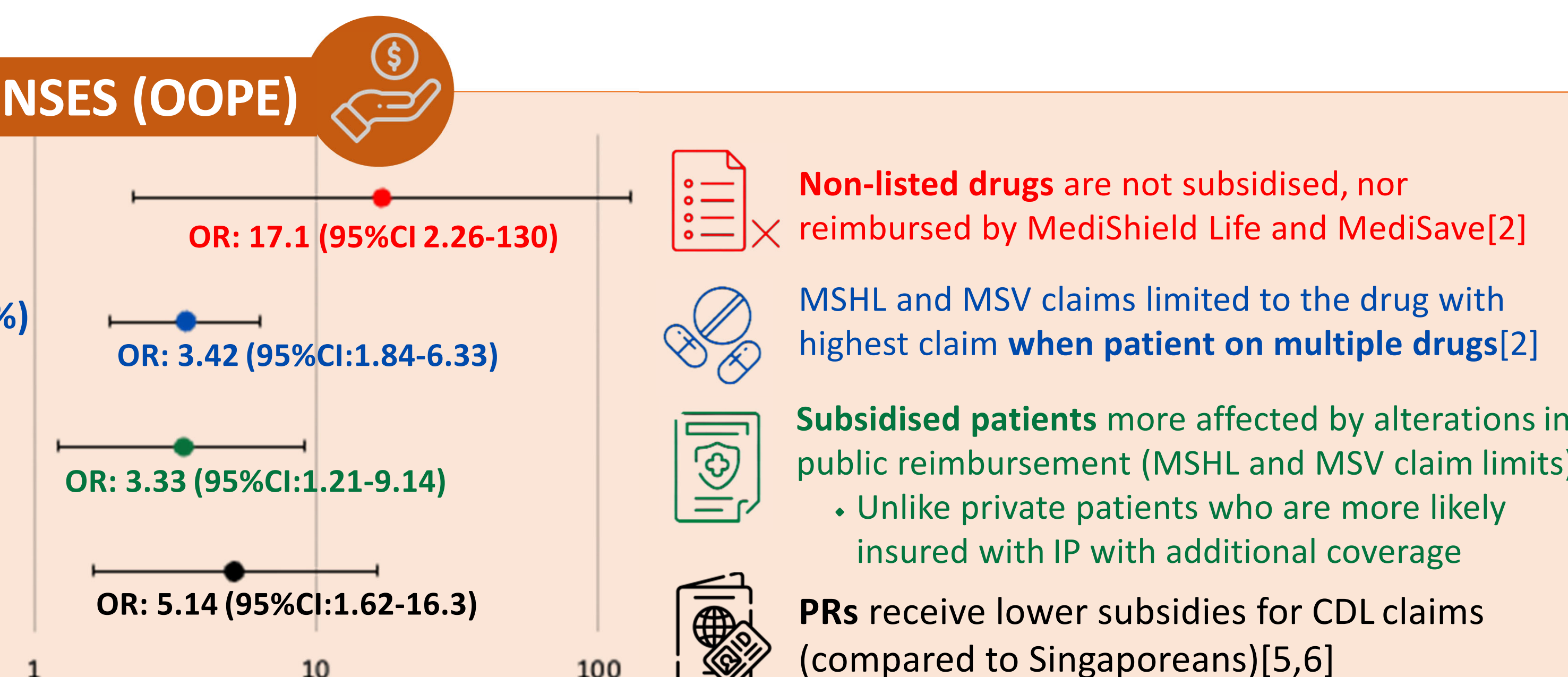
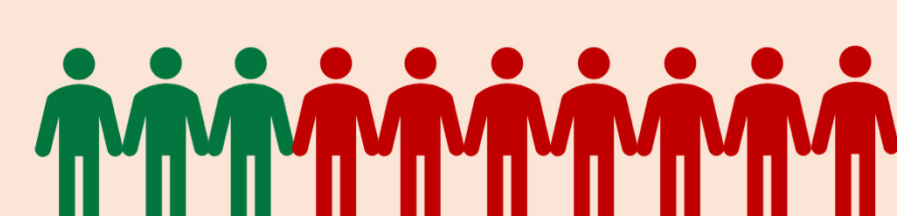


Fig 1. Forest plot of adjusted odds ratio for factors associated with an increase in OOPE

AWARENESS OF CDL

Patients surveyed = 230

63 (27.4%) aware of CDL



Patients aware of CDL are more likely to be

- < 65 years old (74.6%)
- have at least pre-university education (57.1%)
- Chinese (93.7%)
- use third-party reimbursement for their bills (69.8%)

Third party reimbursement: integrated shield plans (IP), company insurance or, medical claims pro-rata system (MCPS)

ACCEPTABILITY

Acceptive: 39 (61.9%) Non-acceptive: 24 (38.1%)

Patient FT category: low FT (38.1%)
Reference: high FT (61.9%)

OR: 9.42 (95%CI:2.16-41.0)



Patients experiencing low FT likely to accept CDL's implementation

- Patients acceptive of the scheme likely to have benefitted or find it beneficial

Fig 2. Plot of adjusted odds ratio for factors associated with acceptive of CDL
Adjusted for factors with p < 0.1: age, marital status, employment and third-party reimbursement

FINANCIAL TOXICITY (FT)

Low FT: 109 (47.4%) High FT: 121 (52.6%)

Education level: up to secondary (61.3%)
Reference: Pre-university and above (38.7%)

Patient age: < 65 years old (55.7%)
Reference: ≥ 65 years old (44.3%)

OR: 2.28 (95%CI:1.29-4.04)

OR: 2.03 (95%CI:1.16-3.55)



Lower education linked with poorer health and financial literacy → greater financial burden in cancer patients [7]

- Younger patients may receive more chemotherapies[8], increasing their OOPE
- Older patients enjoy more subsidies: Merdeka & Pioneer Generation [9,10]

Fig 3. Forest plot of adjusted odds ratio for factors associated with high FT
Adjusted for factors with p < 0.1: targeted therapy

CONCLUSION

This study has provided some headway for us to understand our population and may serve as a reference for policymakers to grasp patients' needs and aptly channel resources to ensure affordable treatment, acceptability and low FT

Targeted interventions can be considered to improve CDL's financial impact and awareness of CDL

- Revise claim limits and safety net schemes for patients at risk of high OOPE (e.g. patients who are younger, on multiple anti-cancer agents)
- Enhance public education of CDL, especially for the elderly and patients with lower education
- Improve patient's health literacy, to know where/when to seek financial assistance
 - Personalised financial counselling

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