

CHI Learning & Development (CHILD) System

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



CHI Learning & Development (CHILD) System

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 Singapore Healthcare Management 2023

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chemotherapy in Singapore







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]



MOH ACE evaluates and recommends cost-effective cancer drugs into CDL



The government can better negotiate for lower prices from pharma companies



Reduce patients' costs, keep insurance premiums affordable in the long term

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 Patients National Cancer Singaporean/ Received aged 18 Centre Singapore Permanent chemotherapy and above Residents (PRs) (NCCS) **Data Collection** Objective **Data Analysis** OOPE Database Difference in OOPE between Aug and Sep 2022: **No increase in OOPE** (Change in OOPE ≤ \$0) **Increase in OOPE** (Change in OOPE > \$0) Acceptability Theoretical Framework of Acceptability (TFA)[3] TFA2: I fully accept the implementation of CDL to keep cancer treatments/insurance premiums affordable Survey Acceptive (Agree, Strongly Agree) Non-acceptive (Neutral, Disagree, Strongly Disagree) **COmprehensive Score for financial Toxicity (COST) tool[4]** FT 11-items, 5-point Likert scale (0-4), scores of 0 to 44

Low FT (Score of 22-44)

High FT (Score of 0-21)

RESULTS & DISCUSSION

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%)
- -\$4540.64 -\$0.11
- Increase in OOPE: 65 (20.7%) +\$0.01 +\$3663.49

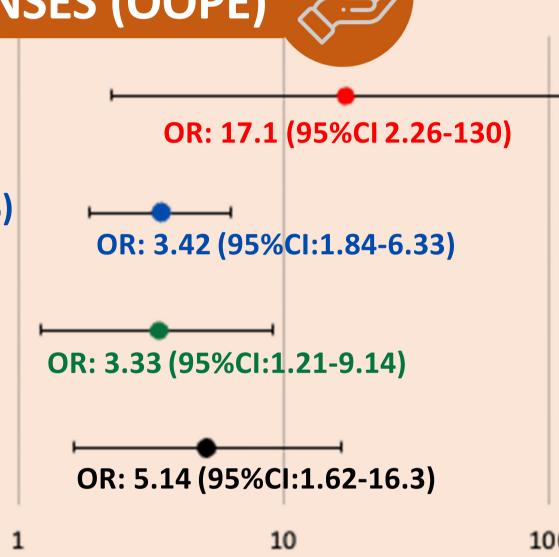
OUT-OF-POCKET EXPENSES (OOPE)

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%)



Non-listed drugs are not subsidised, nor reimbursed by MediShield Life and MediSave[2] MSHL and MSV claims limited to the drug with

highest claim when patient on multiple drugs[2] Subsidised patients more affected by alterations in

public reimbursement (MSHL and MSV claim limits) Unlike private patients who are more likely insured with IP with additional coverage

PRs receive lower subsidies for CDL claims (compared to Singaporeans)[5,6]



AWARENESS OF CDL



Reference: high FT (61.9%)

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%)

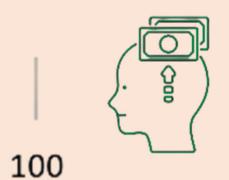
Third party reimbursement: integrated shield plans (IP), company insurance or, medical claims pro-ration system (MCPS)

ACCEPTABILIT

Acceptive: 39 (61.9%)

Non-acceptive: 24 (38.1%)

Patient FT category: low FT (38.1%) 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

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CONCLUSION

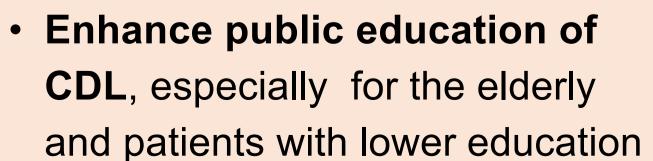
This study has provided some headway for us to understand our population and may serve as a reference for policymakers to grasp patients' needs and aptly channel resources to ensure affordable treatment, acceptability and low FT

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 anticancer agents)







Improve patient's health literacy, to know where/when to seek financial assistance

