

LTCovid Workshop

Does informal care compensate formal care as a consequence of COVID-19?

A cross-sectional study on service utilisation among community-dwelling people living with dementia in Hong Kong during the post-pandemic period

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1

Ageing Population & Dementia in Hong Kong

AGEING POPULATION 人口老化

Hong Kong is one of the most rapidly ageing societies in the world.
香港是世界上人口老化速度最快的城市之一。

Percentage of citizens aged 65 years or above^{1,2}
65歲及以上的人口比例：



2018 - 17.3%
2036 - 31.1%
2066 - 36.6%

DEMENTIA PREVALENCE 認知障礙症的患病率



Source: 資料來源: Hospital Authority.⁴

Source: TIP-CARD rapid situation analysis

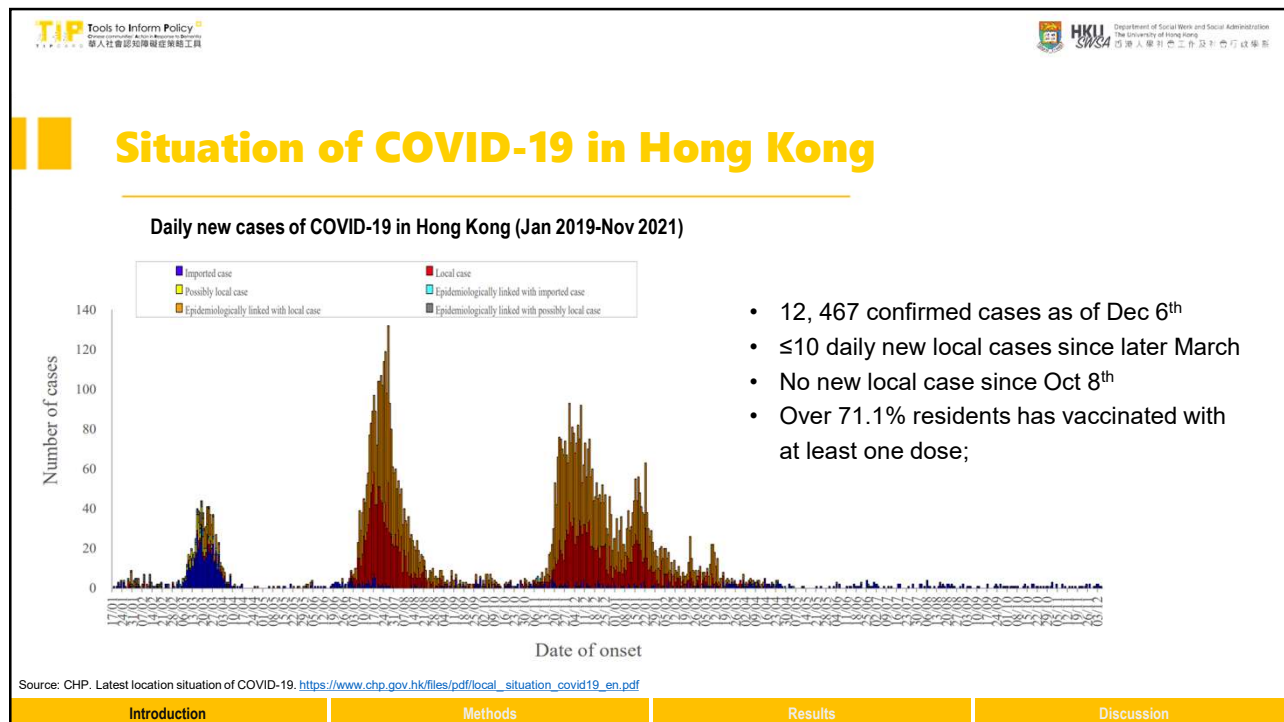
Introduction

Methods

Results

Discussion

2



3

TIP Tools to Inform Policy
 香港社會政策研究及策劃工具

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‘New Normal’ in the post-pandemic period

- “New normal” life with strict prevention and control measures of COVID-19
- Healthcare and social care services have been resumed


Sources: <https://www.straitstimes.com/asia/east-asia/normality-returns-to-hong-kong-as-businesses-reopen-and-people-go-out>; <https://www.theatlantic.com/technology/archive/2020/05/how-hong-kong-is-leaving-coronavirus/611524>

Introduction
Methods
Results
Discussion

4




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Service use of people living with dementia and COVID-19

During COVID-19 outbreak



'Exhausted' family and friends spent 92 million extra hours caring for loved ones with dementia since lockdown


Tuesday 29 September 2020

- During the post-pandemic period, can informal caregiving for dementia get back to “normal”?
- Does informal care compensate formal care as a consequence of COVID-19?


Source: <https://www.alzheimers.org.uk/news/2020-10-05/exhausted-family-and-friends-spent-92-million-extra-hours-caring-loved-ones>

Introduction
Methods
Results
Discussion

5



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Research Aim


- To examine the impact of COVID-19 on service use pattern of formal-informal care for people with dementia during the post-pandemic period.

Introduction
Methods
Results
Discussion

6



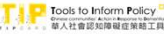
Data




- **Cost of dementia study, TIP-CARD project**
<https://www.tip-card.hku.hk/> @tip_card
- **Phone survey starting from March 2021**
 (Ongoing, N=482/1,000)
- **Dyad participants: people living with dementia (incl. MCI) and their informants in the community**

Introduction
Methods
Results
Discussion

7



Tools to Inform Policy: Chinese Communities' Action in Response to Dementia (TIP-CARD)



TIP-CARD is a three-year research project consisting of three inter-related studies. It aims to build on existing data, fill gaps in evidence, and consolidate findings with stakeholders to provide the policy tools to inform the best strategies for dementia care in Chinese communities.

1 Situation Analysis


2 Cost of Dementia

3 Simulation Modelling


<https://www.tip-card.hku.hk/>

Introduction
Methods
Results
Discussion

8



Tools to Inform Policy: Chinese Communities' Action in Response to Dementia (TIP-CARD)




TIP-CARD is a three-year research project consisting of three inter-related studies. It aims to build on existing data, fill gaps in evidence, and consolidate findings with stakeholders to provide the policy tools to inform the best strategies for dementia care in Chinese communities.

1 Situation Analysis

2 Cost of Dementia

3 Simulation Modelling


Aim: To generate new evidence about the **cost and impact** of dementia **in the community**




<https://www.tip-card.hku.hk/>

Introduction
Methods
Results
Discussion


9



Data




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<https://www.tip-card.hku.hk/> @tip_card
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Funded by Research Impact Fund of Research Grants Council (RGC)
Project Reference No.: R7017-18

Introduction
Methods
Results
Discussion

10



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Cross-Department Activity Response System
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Informal care time

- Care time of multiple informal carers in past 30 days
- Captured by “Resource Utilization in Dementia” (RUD)
 - Time for Activities of daily living (ADL) tasks
 - Time for Instrumental activities of daily living (IADL) tasks
 - Time for supervision tasks


(Wimo et al, 2013)

Introduction
Methods
Results
Discussion

11



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Cross-Department Activity Response System
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COVID-19 impact on service utilisation

Question: “Due to COVID-19, to what extent your recent service utilisation in healthcare / social care / informal care has been affected?”

A. No impact; B. Increased by _____%; C. Decreased by _____%

Dependent variable (DV): Increased informal care hours due to COVID-19	Independent variables (IV): Whether form care use decreased due to COVID-19	Covariates
$DV = T_b - T_c$ $= [T_c / (1 - \text{change } \%)] - T_c$ <ul style="list-style-type: none"> T_b: Informal care hours before COVID-19 T_c: Current informal care hours <p>A discrete-continuous variable</p> <ul style="list-style-type: none"> y_i ≥ 0 y_i = 0, with mass point at zero 	<p>Two binary variables</p> <ul style="list-style-type: none"> Decrease in social care service use due to COVID-19 (0=No; 1=Yes) Decrease in health care service use due to COVID-19 (0=No; 1=Yes) 	<ul style="list-style-type: none"> Social demographics Number of informal carers Diagnosis of dementia Comorbidity Functional status (ADL, IADL) Cognition (HK-MoCA-5min)

Introduction
Methods
Results
Discussion

12

Analytic strategy

A two-part model was used to examine association between increased informal care hours and decrease in formal care service use

- First part: Logit regression to predict the probability of increasing informal care
- Second part: Generalised linear model (GLM) with the log link and gamma distribution to predict the level of increased care hours if DV is positive

Introduction

Methods

Results

Discussion

13

Sample characteristics

People living with dementia	Mean/N	SD/%
Age, year	82.7	8.7
Gender (female)	324	67.4%
Diagnosis of dementia or MCI (Yes)	423	87.9%
Number of comorbidity other than dementia/MCI	2.1	1.6
ADL score (Modified Barthel ADL index, range 0-100)	70.2	32.7
IADL (Lawton IADL scale, range 0-27)	7.2	7.7
Cognition(HK-MoCA-5min, rang 0-23)	7.0	7.7

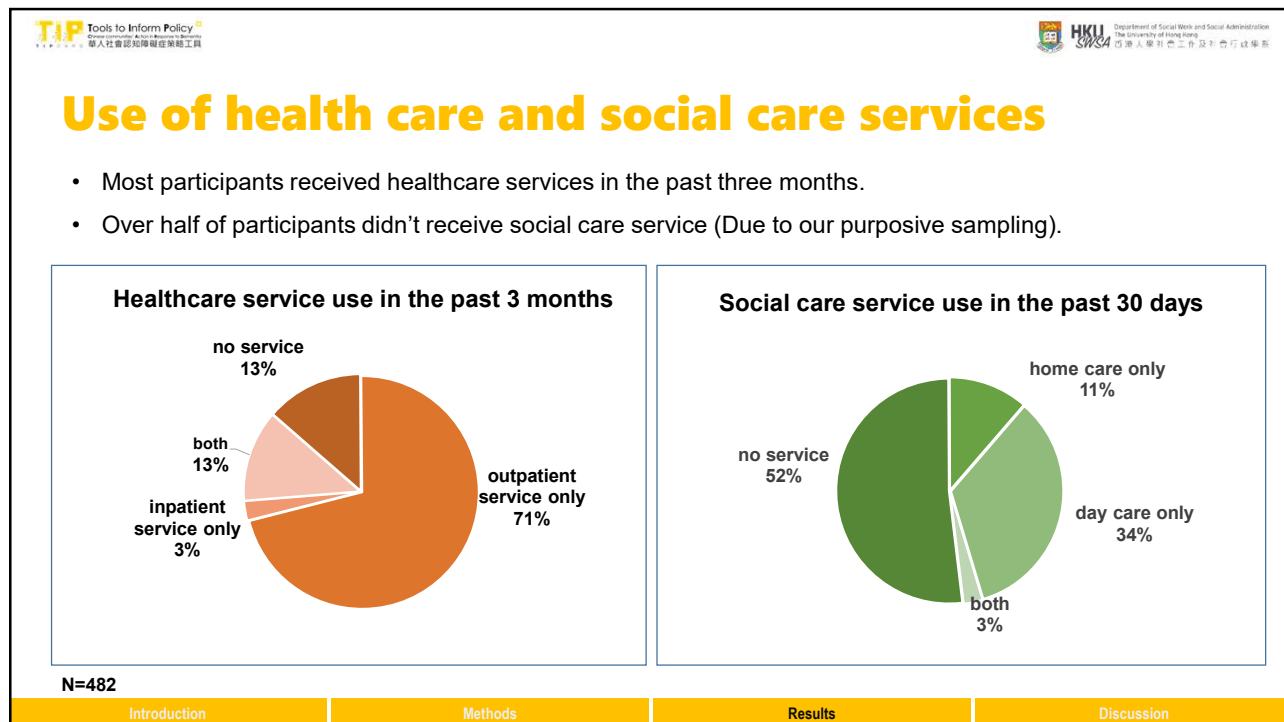
Introduction

Methods

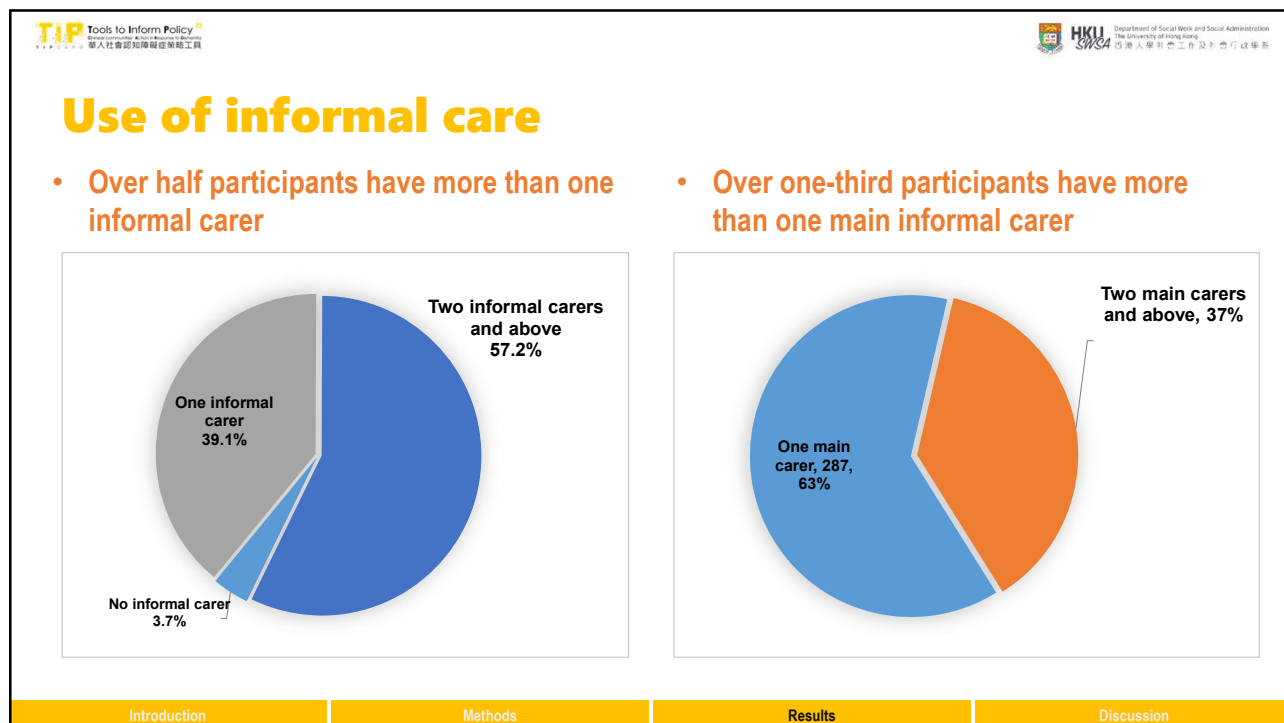
Results

Discussion

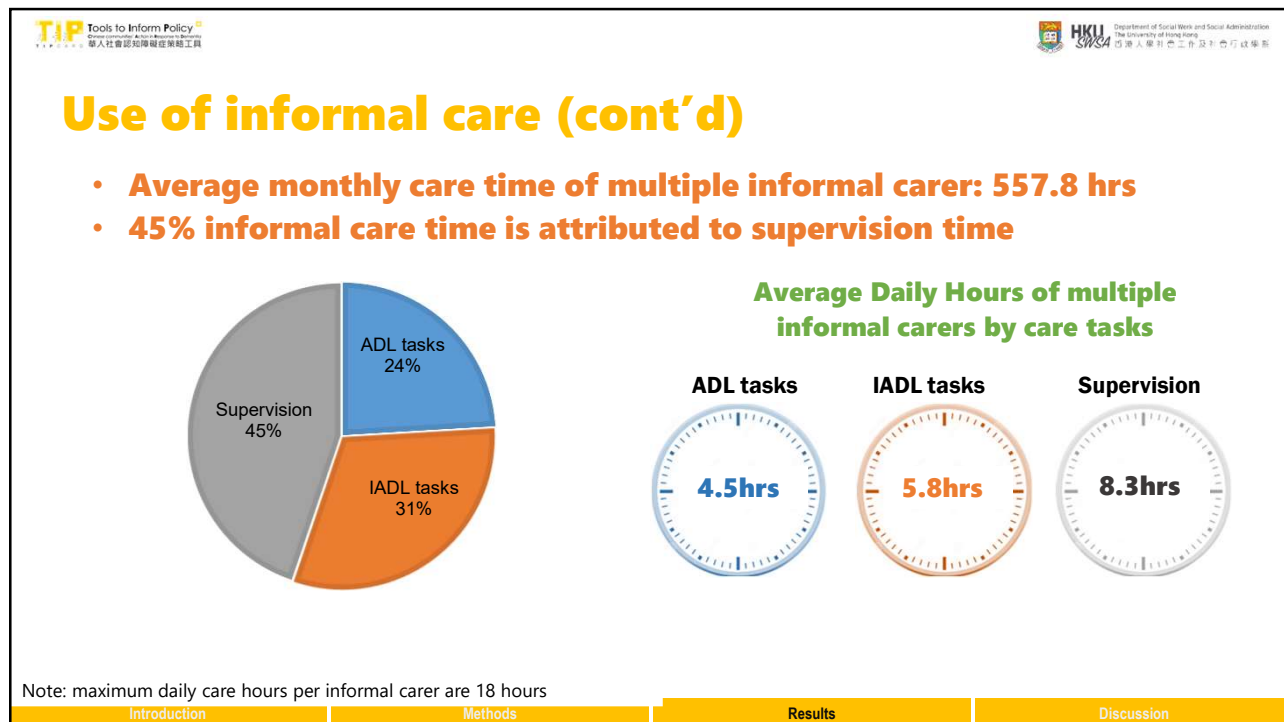
14



15



16



17

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COVID-19 impact on service use

Covid-19 impact	Healthcare		Social care		Informal care	
	N (%)	Average change %	N (%)	Average change %	N (%)	Average change %
No impact	396 (82.5%)	/	439 (91.27%)	/	358 (78%)	/
Increased use	15 (3.13%)	67.77%	4 (0.83%)	43%	86 (18.74%)	53.40%
Decreased use	69 (14.38%)	48.94%	38 (7.9%)	70.50%	15 (3.27%)	47.16%

- 14.38% and 7.9% participants reported decreased service utilisation in healthcare and social care respectively, among whom their service use decreased by 48.9% and 70.5% averagely.
- 18.74% participants reported an increase in informal care, with an average increase rate of 53.4%.

Introduction Methods **Results** Discussion

18

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Results of the two-part model analysis on increased monthly informal care hours due to COVID-19

	Logit (n=418)		GLM (n=79)	
	OR	SE	β	SE
Decrease in social care service use due to COVID-19 (ref.=no decrease)	7.078***	2.812	-0.059	0.21
Decrease in healthcare service use due to COVID-19 (ref.=no decrease)	3.125***	1.014	-0.372	1.31
Gender (ref.=male)	0.861	0.251	0.207	0.75
Age	1.010	0.016	0.011	0.89
Number of informal carer	0.967	0.104	0.253**	3.16
Dementia diagnosis	0.586	0.252	-0.714	1.61
Number of comorbidity	0.901	0.081	-0.050	0.64
ADL score	1.003	0.005	0.001	0.22
IADL score	0.987	0.025	-0.066**	2.96
MoCA-5min score	1.002	0.023	0.013	4.25

- The logit model showed those who reported a decrease in formal care service use had a higher likelihood of receiving additional informal care (Social care, OR: 7.1; Health care, OR: 3.1)
- The GLM showed those with more informal carers or with more IADL needs received higher level of increased informal care hours.

Notes: SE, standard error; GLM, generalised linear model; Participants who reported a decrease in informal care due to COVID-19 were not included in this analysis (n=15); * p<0.05, ** p<0.01, *** p<0.001

Introduction


Methods

Results

Discussion

19

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Cross-jurisdiction Active Research Strategy
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Discussion

Changes in service use pattern of formal care due to COVID-19 is related to that of informal care.

Informal care may be invoked as a compensatory mechanism for the reduced formal care, while increased informal care hours is dependent on the availability of family carers and care needs.

In the post-pandemic period, long-term care policy should consider the impact of COVID-19 on formal-informal care relationship.

Introduction

Methods

Results

Discussion

20

