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# Implementing in-home health coaching program and nurse-led program to Hong Kong community-dwelling elderly with chronic conditions

**Submission date**
12/12/2022

**Recruitment status**
No longer recruiting

**Registration date**
15/12/2022

**Overall study status**
Completed

**Last Edited**
14/12/2022

**Condition category**
Other

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] Record updated in last year

## Plain English summary of protocol

Background and study aims
In the year 2017-18, the multidisciplinary project team (nurses & social workers) completed conducting a community-based comprehensive risk assessment for 1604 high-risk elderly, those elderly residing in Kowloon and existing service users or our collaborating NGOs. From our findings, with the large demand for health concerns prevails, while our partnering NGOs are lacking resources to cope with the demand, our project team engaged in new donation funding to provide a health management program focusing on health education and fostering self-management to facilitate better health outcomes of these elderly persons.

The health management program is designed from our first phase assessment findings, developing a data-driven, evidence-based, and individualized care plan. Pre-frail elderly will receive a health program with health coaching as the major approach; while for the frail elderly, intensive nurse-led health education & monitoring program will be delivered to support the elderly as well as their caregivers. Both programs are delivered in-home for 12 weeks, while for health coaching, it is a hybrid mode between Face-to-face and teleconsultation, for the nurse program, due to the frailty of participants and less capable to communicate through teleconsultations, the 12 weeks program is delivered at the participant’s home.

Health coaching is a one-on-one collaborative partnership between health coaches and clients, it aims at facilitating clients gaining the knowledge, skill, tools and confidence to actively participate in their health conditions and attaining their self-identified health goals, through the guidance of health coaches. Differing from a traditional educational program which focuses on directive teaching; health coaching primarily engages the elderly with active listening, non-directive techniques of formulating appropriate questions, focusing on participants' inner resources, etc, ultimately resulting in a highly effective mode of improving self-efficacy. The most demonstrated health coaching technique is Motivational Interviewing (MI), it is a goal-

oriented, client-centered counselling style that is helping in resolving ambivalence at behavioral changes, this approach is also proven to be effective in improving clinical outcomes and eliciting positive behavioral changes for better chronic disease management.

The nurse-led program is aiming at promoting a healthy lifestyle, improving medication adherence, and enhancing caring skills of their caregivers by taking a case management approach. The design is based on many frail elderly in Hong Kong who cannot benefit from existing centre-based health management program due to limited mobility. Moreover, with their declined cognitive functioning, medication adherence is a huge concern; hence, our nurse-led program is designed to deliver care at elderly persons' homes, not only can address their problem of limited mobility, but also helps to facilitate better medication adherence by tailor-made intervention matching their home environment, and easier to engage caregiver to take part to provide better care to frail elderly. For any long-term care needs to be identified, nurses will make immediate referrals to connect the elderly and caregivers to receive support from community resources (e.g. General Outpatient Clinic, Community elderly centre, daycare centre, long-term homecare divisions, etc.) The ultimate objective is to support aging-in-place by leveraging the elderly person's informal and formal networks.

Who can participate?
Elderly persons aged 60 or above, residing in Kowloon and existing service users of 3 of our collaborating NGOs.

What does the study involve?
The study is to provide chronic disease management based on their frailty level – Pre-frail elderly will receive health coaching program; frail elderly will receive in-home nurse-led program for 3 months. Follow up os at 3 months after the intervention.

What are the possible benefits and risks of participating?
Both programs are expected to support elderly with better self-management skill to cope with their chronic conditions, to facilitate them living healthier and longer in the community, prevent early admission to institutional care.

Where is the study run from?
City University of Hong Kong

When is the study starting and how long is it expected to run for?
September 2018 to June 2022

Who is funding the study?
The study is supported by a local funder – Mr LAU Tat-chuen

Who is the main contact?
Prof Frank CHEN, youhchen@cityu.edu.hk
Ms Hera LEUNG, herleung@cityu.edu.hk

# Contact information

### Type(s)
Scientific

### Contact name

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# Additional identifiers

# Study information

Scientific Title
Implementing two chronic disease management programs for hong kong community-dwelling elderly: health coaching program for pre-frail elderly and nurse-led program for frail elderly, a multi-arm multi-stage (MAMS) trials

Study objectives
1. Health coaching – Implementing health coaching based chronic disease management program to pre-frail community-dwelling elderly through home visits, to improve their self-efficacy, health behaviours and self-management skills
2. Nurse-led program – Improve disease management skills for frail community-dwelling elderly

and their caregivers through case management approach by leveraging informal and formal networks, nurses deliver the program at elderly's home to address to limited mobility and/or impaired cognitive functioning

## Ethics approval required
Old ethics approval format

## Ethics approval(s)
Approved 28/08/2018, City University of Hong Kong Research Committee (Human and Areffacts Research Ethics Sub-Committee, c/o Research Grants & Contracts Office, City University of Hong Kong, Tat Chee Avenue, Kowloon, Hong Kong; +852-3442-6287; rohumanethics@cityu.edu.hk), ref: H001173A –

## Primary study design
Interventional

## Study design
Interventional multicenter multi-arm multi-stage trial

## Study type(s)
Treatment

## Health condition(s) or problem(s) studied
Chronic conditions - Hypertension, Diabetes Mellitus, Hyperlipidemia, Heart Diseases, COPD
Health risks - Elevated Blood Pressure/ Glucose, Central Obesity or Chronic pain ≥5

## Interventions
The study is a 12-week interventional, multicenter, a multi-arm multi-stage trial, aimed at understand the effect of two interventions: 1) Health coaching for pre-frail community-dwelling elderly; and 2) Nurse-led program for frail community-dwelling elderly, for the effectiveness on managing participants' chronic conditions and health risks.

All participants (including all control group participants) underwent data collection procedures at baseline. Following the baseline visit, eligible participants were non-randomly assigned into 5 arms: During Nov 2018 to Aug 2020, Elderly with good cognitive functioning (passed Mini-Cog screening test), moderate or low fall risk (with a Tinetti Poma score 19 or above), and with-out a diagnosis of dementia or cognitive impairment, will be assigned to the Health Coaching group (Experimental and Control group); Elderly with risk of impaired cognitive function (with a Mini-Cog score of 2 or below), and/or with high fall risk (with a Tinetti Poma score 18 or below), and /or with a diagnosis of dementia or cognitive impairment, will be assigned to the Nurse-led programme (Experimental and Control group). While participants recruited during Nov 2020 to Nov 2021, all elderly is assigned as an independent control group, details of each group assignment are as below:

Participants recruited during Nov 2018 to Aug 2020
1. Experimental Health Coaching group
- Receive 12 weeks health coaching based chronic disease management program. Intervention involved 6 face-to-face sessions and 6 telephone-follow up sessions (on alternate weeks), for which case manager apply motivational interview skills to facilitate participants define their

health vision and support them in achieving self-defined health-related goals
- Face-to-face sessions are conducted through home visits
- Baseline assessment conducted every 3 months in a 0-3-6 time points

2. Control Health Coaching group
- Control group was assigned based on the stratification of: gender, having medical diagnose(s) (e.g. Hypertension, Diabetes Mellitus, Hyperlipidemia, Heart Diseases, COPD) AND/OR risk factors (e.g. Elevated Blood Pressure/ Glucose, Central Obesity) AND/OR with chronic pain
- Baseline assessment conducted every 6 months in a 0-6 time points
- Receive standard care from the community

3. Experimental Nurse-led group
- Receive 12-weekly face-to-face sessions, for which nurses provided weekly in-home health monitoring and education with individual care plan, taking case management approach. Interventions includes leveraging elder's informal and formal networks - caregiver support and training (informal network), identification and connecting community resources (formal network) to facilitate medication adherence, self-management skills, lifestyle modification, pain management and engagement in fall prevention strategies of the elderly
- Baseline assessment conducted every 3 months in a 0-3-6 time points

4. Control Nurse-led group
- Control group was assigned based on the stratification of: gender, having medical diagnose(s) (e.g. Hypertension, Diabetes Mellitus, Hyperlipidemia, Heart Diseases, COPD) AND/OR risk factors (e.g. Elevated Blood Pressure/ Glucose, Central Obesity) AND/OR with chronic pain
- Baseline assessment conducted every 6 months in a 0-6 time points
- Receive standard care from the community

Participants recruited during Nov 2020 to Nov 2021
5. Individual control group
- Participants are referred by NGO under Support Team for Elderly members
- Baseline assessment conducted every 3 months in a 0-3-6 time points
- Receive standard care from the community

## Intervention Type
Behavioural

## Primary outcome(s)
Measured at baseline, post intervention (3-4 months), and follow up (6-7 months):
1. Blood pressure (mmHg)
2. Blood glucose
3. BMI (kg/m$^2$)
4. Waist circumference (cm)
5. Self-care functioning measured with Barthel Index for Activities of Daily Living (ADL) and The Lawton Instrumental Activities of Daily Living Scale (IADL)
6. Cognitive Functioning was measured with Mini-Cog
7. Fall Risk was measured by Tinetti Performance-Oriented Mobility Assessment (POMA)
8. Physical activities was measured by The Chinese Version of the Physical Activity Scale for the Elderly (PASE-C)
9. Quality of life was measured by EQ-5D-5L (Traditional Chinese Version for Hong Kong)

10. Self-efficacy was measured by General Self-efficacy Scale - C (GSE-C)
11. Medical service utilization were measured by hospitalization, readmission, length of stay, ER visits for the past 3 months

### Key secondary outcome(s)
There are no secondary outcome measures

### Completion date
30/06/2022

## Eligibility

### Key inclusion criteria
1. Aged 60 or above
2. Referred by collaborating NGOs, existing service users of (i) Support Team for Elderly or (ii) Integrated Homecare Services (Ordinary Case)
3. Residing in the following areas of Hong Kong – Kowloon (i) Yau Tsim Mong (ii) Sham Shui Po (iii) Homantin
4. Living at home before and after discharged from hospital
5. Communicate in Cantonese, Mandarin or English
6. No active psychiatric syndromes
7. At least one of the following health conditions:
7.1. Hypertension
7.2. Diabetes Mellitus
7.3. Hyperlipidemia
7.4. Heart Diseases
7.5. COPD
7.6. Elevated Blood Pressure / Glucose
7.7. Central Obesity
7.8. Chronic Pain

### Participant type(s)
Patient

### Healthy volunteers allowed
No

### Age group
Senior

### Sex
All

### Total final enrolment
1097

### Key exclusion criteria
1. Aged 59 or below
2. Residing outside the designated areas and non-collaborating NGOs service users
3. Having no chronic conditions or health risks as listed in “Inclusion criteria”

4. Adverse Home Environment: Woodlouse, severe hygienic problem
5. Unstable mental conditions: Violent tendency, Paranoid delusion, etc
6. Communication problems: Language other than Cantonese, Mandarin, or English; Severe hearing problem which cannot be corrected by hearing aids

### Date of first enrolment
15/11/2018

### Date of final enrolment
24/11/2021

## Locations

### Countries of recruitment
Hong Kong

### Study participating centre
**Salvation Army: Yaumatei Multi-service Centre for Senior Citizens**
3/F, No 11 Wing Sing Lane
Yaumatei
Kowloon
Hong Kong
852

### Study participating centre
**Hong Kong Christian Service Shamshuipo Integrated Home Care Service Team**
Room 219-235, Block 23
Shek Kip Mei Estate
Shamshuipo
Kowloon
Hong Kong
852

### Study participating centre
**Tung Wah Group of Hospitals: Wong Cho Tong District Elderly Community Centre**
G/F, Wong Cho Tong Social Service Building
39 Sheung Shing Street
Homantin
Kowloon
Hong Kong
852

## Sponsor information

**Organisation**
City University of Hong Kong

**ROR**
https://ror.org/03q8dnn23

# Funder(s)

**Funder type**
Other

**Funder Name**
Investigator initiated and funded

# Results and Publications

**Individual participant data (IPD) sharing plan**
The datasets generated and/or analysed during the current study will be available upon request from Ms Hera LEUNG (herleung@cityu.edu.hk)

**IPD sharing plan summary**
Available on request, Published as a supplement to the results publication

**Study outputs**

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|---|---|---|---|---|
| Participant information sheet | HK Christian Service participants | | 14/12/2022 | No | Yes |
| Participant information sheet | Salvation Army participants | | 14/12/2022 | No | Yes |
| Participant information sheet | Tung Wah participants | | 14/12/2022 | No | Yes |