



MINISTRY OF HEALTH
SINGAPORE

Grant Call on Falls Prevention

National Innovation Challenge on Active and Confident Ageing

Public Briefing
29 Sep 2017

Programme

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National Innovation Challenge on Active and Confident Ageing

- The National Innovation Challenge (NIC) on Active and Confident Ageing was announced by Minister for Health and Chairman of the Ministerial Committee on Ageing as part of the Action Plan for Successful Ageing on 26 August 2015
- This NIC seeks to **catalyse innovative ideas and research** in Singapore that can **transform the experience of ageing** in Singapore, tomorrow.

More research into ageing issues:

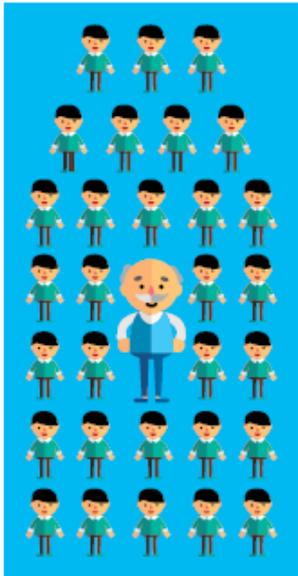
- Up to \$200 million set aside for a **National Innovation Challenge** to catalyse research related to ageing.



Singapore is ageing rapidly

By 2030, there will be over 900,000 Singaporean seniors

1 in 31



OUR POPULATION IS AGEING RAPIDLY.

In 1970, **1 in 31** Singaporeans was 65 or older. In 2015, it was **1 in 8**. By 2030, it will be **1 in 4**. We will have over 900,000 seniors, approximately double the current 440,000.

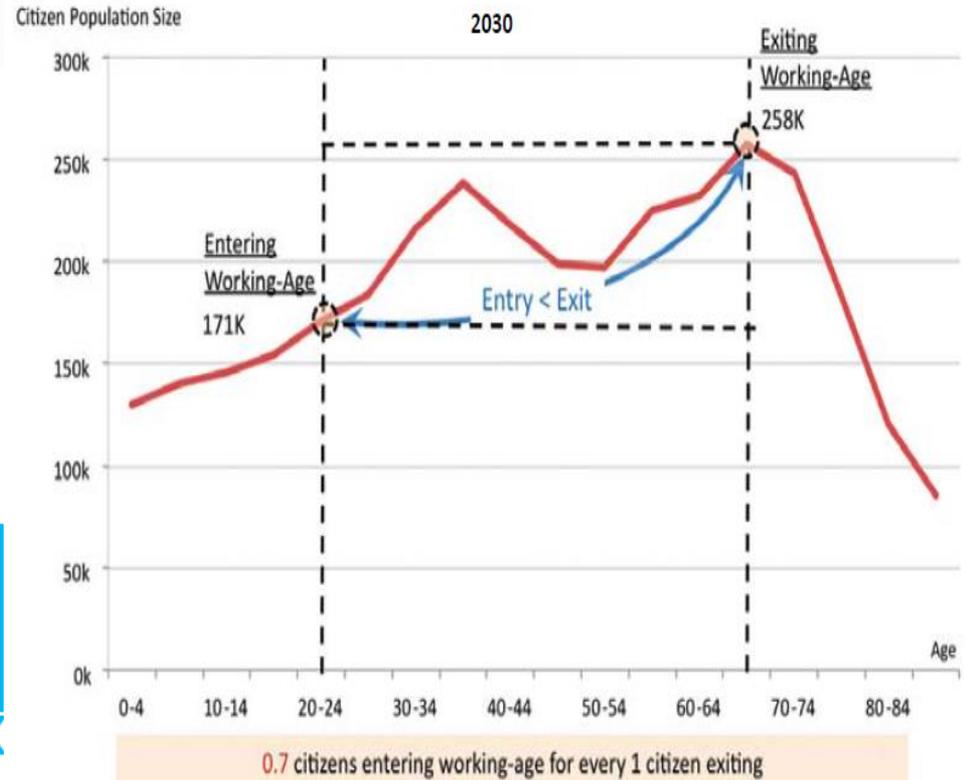
1 in 8



1 in 4



YEAR



Source: Population White Paper, Jan 2013.

We have since launched five grant calls

Ageing in Place

Care at Home Innovation Grant (Aug 2015)

- Improve productivity of home care, while ensuring good quality care that is responsive to the needs of the clients
- We want to foster partnerships between health or social care providers and technological solutions providers

Enabling Innovation Grant (Nov 2016)

We are looking for game changing innovative assistive devices or new models of assessment to enable seniors to age autonomously despite their disability.

We have since launched five grant calls

'Lengthening Health Span'

Grant Call on Cognition (Nov 2015)

- Translational research and innovations that could function and delay the onset of dementia in older adults
- Invent new models of care that will provide quality and cost effective care for seniors with dementia in the community

Healthy Ageing Innovation Grant

(May 2017)

- Translational research and innovations that could (i) reduce the risk, (ii) delay the onset and/or (iii) decelerate the progress of frailty in older adults

We have since launched five grant calls

Productive Longevity

Ageless Workplaces Innovation Grant

(May 2016)

- Improve the productivity of older workers
- Enable older workers to be employable at 65 years and beyond.
- Looking for game-changing solutions

Grant Call on Falls Prevention

- This is our sixth grant call, under the NIC thrust on “Lengthening Health Span”
- We seek **translational research that could** (i) **identify seniors at a higher risk for falls in an accurate and cost effective manner**, as well as (ii) **reduce their fall risks**, including effectively preventing recurrent falls among these seniors, and enable them to **age in place safely in their own homes** (i.e. not in institutions)
- We are looking at both primary and secondary falls prevention
- Project Teams must consider the scalability of the solution and its ability to be sustained in the longer term.
- Research solely focused on telehealth, tele-monitoring or tele-rehabilitation would not be considered.

Challenge Statement

The challenge is to formulate **cost-effective, accurate and timely methods to identify seniors at higher risk of falls and develop a scalable intervention programme or solution that can be applied to reduce the risk of falls and/or recurrent falls in seniors living in the community by 40% compared to baseline measurements**, so that seniors with high fall risk can age well in the community without the need for premature institutionalisation or recurring readmissions. The proposed projects can pertain to either primary or secondary fall prevention. Project teams must demonstrate the methodology to be used in identifying falls, measuring and achieving the desired outcome, including the possible use of proxy indicators (e.g. balance and strength), pre-and post-intervention.

Examples of Research Projects (1)

Potential Research may include, but are not limited to,

Single domain/multi-domain intervention programmes to actively prevent high-risk seniors from having their first fall

- Preventive falls-risk assessment programmes deployed in senior care centres aimed at picking up seniors with a high risk for falls, and providing necessary interventions to address risk factors identified
- Delivery of targeted physical activities, exercises and education programmes that can increase awareness on fall risk, for scaling up nationally

Examples of Research Projects (2)

Preventive intervention programmes that are viable and effective in community-based care setting

- Care pathways that focus on addressing the risk of recurrent fallers through established training protocols and practical intervention programmes administered in the community
- Apps that can connect clinicians with service providers to streamline clinical referrals to evidence-based community interventions
- Translational research that focus on identifying the risk factor(s) for recurrent falls and developing innovative and appropriate interventions that tackle these factor(s)

Eligibility

- Applicants forming Project Teams can submit **more than one Application** in response to the challenge statement but a Project Team will only be awarded Funding for **one Research project**.
- Open to all **public, private or non-profit organisations**, research institutes and institutes of higher learning, registered and/or incorporated in Singapore.
- There are no restrictions on nationality for individuals, but the entity they represent must be registered in Singapore either through the setting up of a local equivalent of the entity in Singapore or through a consortium with Singapore-registered entities in order for the entity represented to be eligible.
- Project teams are to identify a 'Host Institution' for the administration of the Research.

Project Team Composition

- Required to partner an implementation partner and form a Project Team comprising:
 - Members from **multi-disciplinary** (e.g. pairing medical and technology, engineering) backgrounds; and
 - An **implementation partner** (e.g. service providers, community organisation) to test-bed the proposed solutions.
- **No restriction** on the number of Institutions, Investigators and Collaborators in each Project Team
- Applicants are expected to **form their own** partnerships.

Project Funding

- Awardees may qualify for **up to 80% funding** of approved qualifying costs to develop and implement their Research for a **period of up to 3 years**, with the possibility of extension for another 1 year (with no additional funding).
- Qualifying costs include both **incremental developmental and operating costs**
- Project Teams are expected to **co-fund the remaining 20% of qualifying costs**
- Support for **indirect costs**, *on top of supportable qualifying costs*, **is capped at 20% of the supportable qualifying direct costs**. Only Singapore-registered Institutions that are IHLs or not-for-profit entities, including public healthcare providers, may qualify for support for indirect costs.
- Funding will be provided in phases and subjected to the successful attainment of milestones and Key Performance Indicators (KPIs) tied to each phase.

Explanation of Costs

- In general, qualifying costs are **incremental direct costs** that are required to **execute or implement the Research**, and are held **accountable to the performance** of the particular Research. These include,
 - Expenditure on manpower (EOM);
 - Expenditure on new equipment; and
 - Other operating expenses (OOE)
- **Indirect costs** are those that are **incurred for common or joint objectives** and therefore cannot be identified readily and specifically with a particular Research, but contribute to the ability of the Host Institution to support the Research. Examples include,
 - General administration and general expenses (eg. provision of research space)
 - Operation, maintenance, rental and departmental administration expenses
 - Library expenses, departmental administration expenses

Project Phases

Project teams will have the **flexibility to decide the time allocated** to the phases as follows,

Design phase (Proof-of-concept). Project teams are to articulate the concept of the programme / service / prototype and the process by which to achieve stated outcomes. Project teams should also provide studies and analyses that support the concept's viability for further development.

Development phase (Proof-of-value). Project teams are to develop and validate the programme / service / prototype so that it takes on a clearer form to achieve the intended outcomes.

Implementation phase (Test-bedding) - At least one year. In this phase, project teams are to test and validate the programme / service / prototype in the field (a relevant environment). This phase may also include initial production or roll out.

Application Process

*Proposals will be evaluated through a **two-stage process***

Project Abstract

- First, submit a short 5-page **Proposal Abstract** of the Research, including a comprehensive literature review that show the reasons for choosing a particular solution
- Project Teams are to use the “Project Abstract Submission Template” that can be downloaded from NMRC webpage
- Two hard copies of the Project Abstract and any supporting documents should reach MOH **no later than Tues, 31 October 2017 at 5:00pm.**
- Project Teams shall email soft copies to NIC_Ageing@moh.gov.sg by the deadline

Project Proposal

- Shortlisted proposals will then be invited to submit a **detailed Project Proposal**. This will be evaluated by an evaluation panel.

Project Abstract

- **Objective(s)** of the Project;
 - Literature review and the **evidence/basis** for the Research;
 - Key **components and innovations** of the Research;
 - How the Research could **address the challenge statement**
 - Summary of the **implementation plan, timelines and milestones** of the Research
 - Project teams should emphasise on the **scalability and proposed plans to ensure widespread adoption of the solution**; and
 - Summary of the **evaluation framework and KPIs** to track for the Research.
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Additional Guidance (1)

Roles and Responsibilities

- The roles and responsibilities of every Institution, Investigator and Collaborator must be clearly specified.

Proposed Solution(s)

- To articulate in detail the proposed solution and how it can achieve the targeted outcomes/KPIs.
- Project Teams will be expected to test-bed the proposed solution at the implementation phase if awarded the Grant.

Implementation Plan

- Project Teams are required to describe all implementation activities, stages, Milestones and targets.

Additional Guidance (2)

Ethics Consideration

- Expected to ensure the safety and well-being of persons involved in any activity conducted in relation to the NIC is not compromised in any manner whatsoever.
- Ensure that all potential human subjects are assessed by a qualified assessor if necessary, e.g. allied health professional, registered nurse or doctor, to determine the need for and suitability of the prototype (if applicable) before the subjects would use the prototype.
- Take into consideration all applicable laws, including the Human Biomedical Research Act, the Health Products Act, Health Products (Medical Devices) Regulations , Allied Health Professionals Act and the Medical Registration Act to ensure that proposed designs are in line with regulatory requirements.

Mandatory KPIs (1)

KPI 1: Effectiveness

Project teams should clearly state how the defined population would be identified and chosen, as well as how falls are defined, identified and tracked. Project teams should also demonstrate:

- A reduction in the risk of falls, compared to an appropriate control group; OR
- the prevention of recurrent falls in seniors over a specific period of time by tracking appropriate measures(s) pre-and post-intervention

Possible KPIs may include:

Proportion of seniors identified to be at a high risk for falls with improvement in risk profile, post-intervention

Improvements in proxy measures (e.g. balance and strength) associated with the risk of falling, as compared to an appropriate control

Reductions in emergency department (ED) visits due to falls, as compared to baseline

Reductions in acute hospital utilisation due to falls among those aged 65 years and above, as compared to baseline or an appropriate control group

Mandatory KPIs (2)

KPI 2 Cost-effectiveness and Manpower Savings

- Project Teams are to demonstrate that the proposed intervention or solution is cost-effective and demonstrate the potential manpower savings and/or effectiveness as compared to existing programmes or intervention.

KPI 3 Quality

- Project teams are to propose at least one clinical/client KPIs to track. Possible clinical / client KPIs can include:
 - Acceptability by target population
 - Adherence to programme
 - Improvement in functional, physiological, emotional, behavioural and/or cognitive wellbeing as measured by appropriate tools

Broad Evaluation Criteria

Component	Evaluation Criteria
Grant Requirements	<ul style="list-style-type: none">• Proposal Submission• Locally-Based Project & Lead Principal Investigator• Team Composition• Address Challenge Statement
General	<ul style="list-style-type: none">• Background of Lead Principal Investigator• Track record
Impact and Outcomes	<ul style="list-style-type: none">• Impact• Cost-effectiveness of the proposed solution• Proposed outcomes / KPIs• Scalability and sustainability of proposed solution
Innovativeness	<ul style="list-style-type: none">• Innovativeness of proposed solution
Implementation	<ul style="list-style-type: none">• Project feasibility and adoption in the local context• Reasonableness of funding request

Timeline

Activity	Date
Call for Applications	18 Sep 2017 (Mon)
Public Briefing	29 Sep 2017 (Fri)
Deadline for Project Abstract Submission	31 Oct 2017 (Tues)
Deadline for Submission of Project Proposal	5 Jan 2018 (Fri), or as otherwise specified by the Grantor in the invitation email
Evaluation and Moderation Process	Jan 2018 – Feb 2018
Announcement of Results	By end FY2017

Questions?

For enquiries, please email
[NIC Ageing@moh.gov.sg](mailto:NIC_Ageing@moh.gov.sg)

