2015

MINISTRY OF HEALTH
SINGAPORE

Grant Call on Cognition

National Innovation Challenge (NIC) on Active and Confident Ageing

PUBLIC DOCUMENT
November 2015

Organised by:

Ministry of Health Singapore (MOH)

Supported by:

National Research Foundation (NRF)

CONTENTS

IMPORTANT NOTICES

1.1   For the avoidance of doubt, this Public Document for the Grant Call on Cognition shall be read with and shall be subject to the important notices as set out in Annex A.

INTRODUCTION

2.1   A study on the well-being of the Singapore elderly (WISE)[1] found that the prevalence of dementia was 10% in the elderly population aged 60 years and above. With a rapidly ageing population, the prevalence of dementia in Singapore is likely to increase. To help seniors age in place with dignity and grace, there will be growing demand for dementia care in the community. Moreover, there is scope to look into innovative solutions that could help 'lengthen the health span' of seniors by delaying or even reducing the risk of dementia.

OBJECTIVES

3.1   The Grant Call on Cognition under the NIC is organised by MOH to catalyse translational research and innovations that will fulfil two objectives;

   a) First, to improve cognitive functioning and delay the onset of dementia in older adults; and

   b) Second, to provide quality and cost-effective care for seniors with dementia in the community.

CHALLENGE STATEMENTS

4.1   There are two challenge statements for the Grant Call on Cognition. Participants forming Project Teams can submit more than one application and the Grant Proposal should be in response to any of the challenge statements. However, only one Project from a particular Project Team will be awarded with the Grant.

Challenge Statement A

   a)   The first challenge is targeted at delaying the onset of dementia or cognitive decline in the population. **Projects should look into formulating a scaleable preventive intervention programme that can be used safely to improve cognitive functioning or delay the onset**

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[1] This study was conducted by the Institute of Mental Health (IMH).

of cognitive decline in seniors. Project Teams must demonstrate the methodology to be used in measuring and achieving the desired outcome.

Challenge Statement B

b)   The second challenge is targeted at caring for seniors who have been diagnosed with dementia or cognitive impairment. **Projects should look into innovating a new model of care in caring for seniors with high cognitive impairment or dementia effectively in the community as an alternative to institutionalization in a nursing home.** Project Teams must demonstrate that the care model is scalable and is not much more expensive than nursing home care.

4.2   For avoidance of doubt, the words and expressions in the challenge statements shall have the meanings assigned to them:

"cognitive functioning"	Means the ability to perform mental activities (such as remembering, learning etc.)
"cognitive decline"	Means a reduction in the ability to perform mental activities (such as remembering, learning etc.) from a baseline that that is associated with conditions such as mild cognitive impairment (MCI), Alzheimer's disease and vascular dementia etc.
"dementia"	Means an illness that leads to the decline of the brain and its abilities in judgement, language, planning and behaviour. Common types of dementia include vascular dementia and Alzheimer's disease.
"model of care"	Means the philosophy, framework, systems and processes to plan and deliver care services to clients with dementia or high cognitive impairment.
"preventive intervention programme"	Means a set of activities or an activity that can be performed in the community to delay the onset of cognitive decline, prevent or reduce the risk of cognitive decline.

4.3   Awardees will receive funding support to pilot their Project for a period of up to three (3) years, with the possibility of an extension for another year. As part of the Project, Awardees will be required to monitor, track and evaluate the effectiveness of their Project; and establish evidence for subsequent scaling up and longer-term adoption nation-wide if successful.

4.4   By way of example, a comprehensive Project that achieves either of the challenge statements in clause 4.1 above may include, but are not limited to, any combination of solutions as follows:

    a)   A community-based brain stimulation activity using end-user mobile information-technology devices that enhance cognitive functioning in seniors;

    b)   A set of physical and social activities as well as accompanying nutrition plan to be implemented in senior care centres to help seniors delay the onset of dementia;

    c)   A new model of home and community based care that can achieve more comprehensive and more enabling care for persons with dementia, without a reduction in cost effectiveness ; or

    d)   Use of tele-health technologies to enable senior care centres to better care for seniors with dementia in the community and reduce the need for physical visits to a specialist.

4.5   For the avoidance of doubt, the above examples are meant only for consideration and are not MOH's specifications for the Grant Call on Cognition.

TECHNICAL GUIDELINES AND CONSIDERATIONS

5.1   Awardees must be willing to collaborate with MOH or MOH's Affiliates to ensure that any proposed solutions are flexible, extensible and based on open data standards used by the various health care and social care providers in Singapore. This is to facilitate future enhancements, information exchange and backend integration of services and functionality, to both existing and future systems.

ELIGIBILITY

General Eligibility

6.1   The Grant Call on Cognition is open to all Organisations, including healthcare providers, 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.

Project Team Composition

6.2   Participants in the Grant Call on Cognition are required to partner an implementation partner and form a Project Team comprising:

> a)   Members from multi-disciplinary (e.g. pairing medical and technology, engineering) background and/or involving more than one institution; and

> b)   An implementation partner such as a service provider (eg. healthcare provider, senior care centre, senior activity centre) or a community organisation (eg. a self-help group, voluntary welfare organisations, grassroots organisations) shall be part of the Project Team. Potential service providers can be found on the website, https://www.silverpages.sg/.

6.3   A service provider refers to:

> a)   An existing active ageing, home care and/or senior care service provider that is already operating in Singapore; or

> b)   An interested new entrant to the local care scene. The new entrant must either (i) be an existing healthcare and/or social care provider in Singapore; or (ii) an organisation with experience running active ageing and/or home and community care services outside Singapore.

6.4   There is no restriction on the number of Participants in each Project Team.

6.5   Participants are expected to form their own partnerships to participate in the Grant Call on Cognition. MOH reserves the right to disqualify or reject any Project Team in the event of the withdrawal of any Member from the Project Team.

Principal Investigator or Project Team Lead

6.6   Each Project Team must appoint a Principal Investigator / Project Team Lead to oversee and coordinate the implementation of the Project during the funding period of the Project.

6.7   The PI/TL will serve as the primary point of contact with MOH for the purpose of the NIC. The PI/TL shall make all reasonable efforts to ensure that all Members and Investigators in the same Project Team are informed of all matters relating to the Grant.

6.8   The PI/TL must reside in Singapore for at least six (6) months in each calendar year over the duration of the funding period of the Project.

Host Organisation

6.9   Project Teams shall identify a Host Organisation.

SUPPORT AND FUNDING

Project Funding

7.1   Awardees may qualify for up to 80% funding of approved qualifying costs to develop and implement their Project for a period of up to three (3) years, with the possibility of extension for another one (1) year. Approved qualifying costs include:

   a)   **Developmental costs**: These may include costs related to new equipment, IT hardware or software, manpower and training that are assessed prior to the implementation of the Project, and necessary to operationalise and evaluate the Project. Other developmental costs will be assessed on a case-by-case basis.

   b)   **Operating costs**: These include manpower cost, engagement of consultancy services, rental and leases, utilities, communications, public relations and promotions, travelling and transport and minor assets including medical equipment that are assessed to be necessary to operationalise and evaluate the Project. For Project Teams comprising existing service providers receiving mainstream subvention, MOH will consider funding incremental operating costs that are assessed to be above and beyond the operating costs of delivering care services prior to the implementation of the Project and necessary to operationalise and evaluate the Project. This is to ensure that existing service providers receiving mainstream subvention do not receive double funding for their standard operating costs.

7.2   The actual funding quantum for selected Projects will be determined upon assessment of the impact and scope of the Project.

7.3 Support for indirect costs, on top of supportable qualifying costs, is capped at 20% of the supportable qualifying direct costs.

7.4   Funding will be provided in phases and subjected to the successful attainment of milestones and Key Performance Indicators (KPIs) tied to each phase, as described in the table below:

	Design Phase	Development Phase	Implementation Phase
	Proof-of-Concept	Proof-of-Value	Test-bedding
Description	To articulate the concept of the programme / service / prototype and the process by which to achieve stated outcomes To provide studies and analysis that support the concept's viability for further development.	To develop and validate the programme / service / prototype so that it takes on a clearer form to achieve the intended outcomes.	To test and validate the programme / service / prototype in the field (a relevant environment) May include initial production and roll-out.
Requirements	N.A.	Successful attainment of KPIs and milestones for Design Phase. Proof-of-concept shows promising results and clear validation plan for proposed programme/service/ prototype through a pilot.	Successful attainment of KPIs and milestones for both Design and Development phases. Validated pilot programme/service/ prototype before field test-bedding.
Time Period	Three years, with the possibility of an extension for another year. Project Teams will have the flexibility to decide the time allocated to each phase. **The Implementation Phase should last for at least one year.**		

7.5   Project Teams are to demonstrate clear outcomes for the Proof of Concept and Proof of Value stages before proceeding to the test-bedding stage. Project Teams who fail to do so will not receive funding support for the Implementation Phase (or Test-bedding stage) of the Project.

7.6   All Projects must be conducted in Singapore and Funding shall not flow out of Singapore to support overseas entities.

7.7   The relevant Project Teams will be notified by MOH if they are shortlisted for the award of the Grant. MOH will then enter into negotiations with the Project Teams on the terms and conditions of the Letter of Award. Funding shall be granted subject to the mutual agreement between the relevant Project Teams and MOH on the terms and conditions of the Letter of Award.

GRANT PROPOSAL SUBMISSION

<u>Overview of Grant Proposal Submission</u>

8.1   Grant Proposals will be submitted through a **two-stage process**, as follows:

<u>Project Abstract</u>.   Project Teams shall first submit an abstract of their Project, using the "Project Abstract Submission Template" that can be downloaded from the National Medical Research Council (NMRC) webpage at (http://www.nmrc.gov.sg/content/nmrc_internet/home/grant/compgrants/nicaca1.html). Participants shall furnish all necessary information and documents as required in the template. Two hard copies of the Project Abstract and any supporting documents should reach MOH **no later than 8 January 2016 at 1700hrs**. All Project Abstracts received will be preliminarily assessed for compliance with the eligibility criteria and scope. Shortlisted eligible Project Teams will be asked to flesh out their Project in greater detail for the second stage.

a)   <u>Project Proposal</u>.   MOH will invite the respective PI/TL of shortlisted Project Teams via email to submit their detailed Project Proposal using the "Project Proposal Submission Template" that will be emailed to them. Project Teams shall furnish all necessary information and documents as required in the template. There is no limit to the length of the Project Proposal. Two hardcopies of the Project Proposal and any supporting documents should reach MOH no later than the deadline stated by MOH in the invitation email.

8.2   All submissions to MOH must be clearly marked as "Cognition - National Innovation Challenge (NIC) on Active and Confident Ageing", and delivered or mailed to:

<div align="center">

National Innovation Challenge (NIC) on Active and Confident Ageing
Programme Office
Ministry of Health
College of Medicine Building
16 College Road Singapore 169854

</div>

8.3   In addition to submitting hard copies as provided above, Project Teams shall email soft copies of their Project Abstract and Project Proposal to NIC_Ageing@moh.gov.sg by the respective deadlines.

8.4   MOH reserves the right to reject late submissions of Grant Proposals.

Project Abstract

8.5   Project Abstracts should include, but shall not be limited to, the following:

- Objective(s) of the Project;
- Literature review and the evidence/basis for the Project;
- Key components and innovations of the Project;
- How the Project could address the challenge statement;
- Summary of the implementation plan, timelines and milestones of the Project; and
- Summary of the evaluation framework and KPIs to track for the Project.

8.6   The length of the Project Abstract should not be longer than 6 pages.

Project Proposal

8.7   Project Proposals should include, but shall not be limited to, the following:

- Objective(s) of the Project;
- Summary of supporting evidence from the literature review for the intended objective(s) and/or solution(s) of the Project;
- Description on the key components and innovations of the Project and how the Project could address the challenge statement, including computations on KPIs;
- Description on:
  - the preventive intervention programme of the Project and how the proposed programme could be used safely to improve cognitive functioning or delay the onset of cognitive decline in seniors; OR
  - the new model of care of the Project and how the proposed model of care can be used effectively for seniors with high cognitive impairment or dementia in the community at comparable or lower cost to nursing, home care;
- Detailed Project phases, including a detailed implementation plan, timelines and milestones for the Project;
- Detailed evaluation framework and KPIs to track for the Project;
- Scalability and sustainability of the Project;
- Fees and charges payable by patient or client, if any;
- Required Funding for the Project;
- Challenges in Project design;
- Discussion on key assumptions of the Project; and
- IP declaration.

8.8   Additional guidance on completing Grant Proposals are as follows:

a) <u>Roles and Responsibilities</u>.   The roles and responsibilities of every Member of the Project Team must be clearly specified. Specifically, Project Teams are to articulate which Member will be in charge of tracking outcome measures, ensuring quality and safety of care for clients and administering of the funding if awarded.

b) <u>Preventive Intervention Programme or Care Model</u>.   Project Teams are expected to articulate in detail their preventive intervention programme or care model and approach towards care planning and service delivery. Project Teams will be expected to test-bed the proposed solution at the implementation phase if awarded the Grant. They will also be expected to ensure the safety and well-being of clients involved in any activity conducted in relation to the NIC is not compromised in any manner whatsoever.

c) <u>Implementation Plan</u>.   Project Teams are required to describe all implementation activities, stages, Milestones and targets.

d) <u>Computation of KPIs</u>.   Project Teams are required to state the current and target KPIs by phases as elaborated in clause 7.4 above based on the following indicators.

Key Area	KPI
Challenge Statement A Improvement in Cognitive Functioning	Project Teams are to demonstrate <u>improvement in cognitive functioning or a reduction in the risk of cognitive decline</u>. Project Teams are required to report the existing baseline for these KPIs in their Project Proposal and set targets to be met at the end of the Project. Project Teams are to also indicate appropriate tools for measuring these KPIs.
Challenge Statement B Care in the Community	Project Teams are to demonstrate <u>better care for dementia patients in the community without increase in costs</u>. Project Teams are required to report the existing baseline for these KPIs in their Project Proposal and set targets to be met at the end of the Project. Project Teams are to also indicate appropriate tools for measuring these KPIs. (For instance, NH-eligible dementia patients being effectively cared for in the community, at similar or lower cost, with similar or better clinical outcomes.)

Key Area	KPI
For both challenge statements Quality	Project Teams are to propose <u>at least three clinical/client KPIs</u> to track. Possible clinical / client KPIs can include: • Customer satisfaction • Level of caregiver stress / burden • Improvement in functional, physiological, emotional, behavioural and/or cognitive wellbeing as measured by appropriate tools • Number and frequency of hospital (re)admissions of enrolled clients • Number of nursing home admissions Project Teams are required to report the existing baseline for these KPIs in their Project Proposal and set targets to be met at the end of the Project. Project Teams are to also indicate appropriate tools for measuring these KPIs.
For both challenge statements Cost-effectiveness	The <u>preventive intervention programme</u> must show that it is <u>cost-effective</u>. Whereas, the new model of care in the community should also demonstrate that it can be delivered at a lower cost as compared to institutionalisation in a nursing home without any compromise to quality.

e)   <u>Budget</u>.   Project Teams are required to articulate the total required resources and budget to implement their Project. Qualifying costs include developmental costs as described in clause 7.1(a) and operating costs as described in clause 7.1(b).

f)   <u>Declaration of IP</u>. Project Teams are required to disclose and describe any Background IP (whether owned by a Member of the Project Team or a third party) mentioned in the Grant Proposal. The information to be disclosed shall include the type of IP (e.g. patent, copyright, confidential information), the IP owner, whether the IP has been registered or is pending registration, and whether the IP is commercially available off-the-shelf or whether the IP must be customised for use for the Project.

<u>Other Things to Note</u>

8.9   All information submitted pursuant to the Grant Call on Cognition including supporting technical data and applicable documentation must be in the English language.

8.10   The following Grant Proposals will be rejected:

a) Incomplete Grant Proposals, e.g. missing literature review, missing documents, missing signatures, sections left blank and missing CVs, etc.; and

b) Inappropriate submission template used.

8.11   Participants should ensure that all information contained in the Grant Proposals and any other information submitted to MOH relating to the Grant Call on Cognition is complete, accurate and not misleading.

EVALUATION AND AWARD

Evaluation

9.1   Grant Proposals will be evaluated by an evaluation panel comprising evaluators from multidisciplinary backgrounds, including representatives from MOH, AIC and clinical specialists in geriatrics and neurology.

9.2   Shortlisted Project Teams may be required to present their Project(s) (at their own cost and expense) and answer questions from the evaluation panel. Details on the presentation (if any) will be released to the shortlisted Project Teams at a later date.

9.3   The criteria listed below shall be used for the evaluation of the Grant Proposals:

Component	Evaluation Criteria
Grant Requirements	Literature review in Proposal Abstract and Project Proposal submission Locally-based Project and PI/TL Project Team composition Addressed one of the challenge statements
General	Project Proposal submission Background of PI/TL Track record of Members of the Project Team
Business	Scalability of proposed solutions Sustainability of proposed solutions Innovativeness of proposed solutions
Performance	Proposed preventive programme / care model (including scientific excellence) Proposed outcomes
Implementation	Project feasibility in the local context Clear implementation plans with demonstrable outcomes in field pilot stage Reasonableness of funding request and charges

9.4   The evaluation panel reserves the right to reject any or all Grant Proposals submitted pursuant to the Grant Call on Cognition, without being obliged to give any reason thereof.

Negotiation

9.5   Where a Grant Proposal is selected by the evaluation panel for consideration for award, the relevant Members in the Project Team will be notified. The terms of the Project, Milestones, KPIs and Funding quantum will be separately negotiated and agreed to between MOH and the Members in the Project Team.

Award

9.6   The final decision to award the Grant will be made by MOH on the evaluation panel's recommendation. MOH and the evaluation panel shall not be obliged to enter into any correspondence with any Member regarding reasons for non-acceptance of a Grant Proposal.

Progress Reports

9.7   Awardees will be required to submit to MOH annual progress reports on all Project-specific KPIs, the progress of the Project implementation and any challenges that may impede progress as stated in the Letter of Award.

IMPORTANT DATES TO NOTE

10.1   The timeline for key activities under the Grant call on Cognition is set out below.

Activity	Date
Call for Grant Proposals	9 November 2015 (Mon)
Public Briefing	11 November 2015 (Wed)
Deadline for Proposal Abstract Submission	8 January 2016 (Fri)
Deadline for Submission of Project Proposal	29 February 2016 (Mon)
Evaluation and Negotiation Process	March 2016 – May 2016
Announcement of Results	By June 2016

CONTACT DETAILS

11.1   Any enquiries regarding the NIC should be emailed to NIC_Ageing@MOH.gov.sg.