

# Research Fellowship Application: What do you need to know?

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# Agenda



1. Assessment Criteria
2. Tips for Preparing Your Application
3. Common Weaknesses: Research & Training Plans
4. Q&A

# Assessment Criteria

- Fellowship Applicant's Capability (30%)
- Training Proposal (35%)
- Research Proposal (35%)

## Note:

Applications will be assessed by the Research Fellowship Assessment Panel (RFAP). Recommendations will be made after the interview with shortlisted applicants.

# Fellowship Applicant's Capability (30%)

Applicant's research potential and capability, including –

- applicant's qualifications
- track record in research & training

# Training Proposal (35%)

- Importance of the training to healthcare development
- Relevance of the training to the research proposal

# Research Proposal (35%)

- Scientific merits of the research proposal
- Translational potential/value of research proposal to public health or health services in Hong Kong



# Tips for Preparing Your Application

# Research in context (in the proposal template)

## 1. Two questions to be addressed:

- (i) What is the existing evidence before this study based on an up-to-date literature search? State clearly whether research on a similar topic has been / is being carried out. Outline the research approaches in other studies and highlight their deficiencies and the research gap.
  
- (ii) How will this study add value to existing evidence to improve patient care, population health, influence clinical practice and/or healthcare system, or inform health policy in Hong Kong and elsewhere?

**Elaborate in details with reference in “Introduction”!**



Think of a **research question** that is...

- filling a **gap in the current literature** of the topic (thus, need a review on the topic) or anticipate major breakthrough on research
- very **clear** and with important **implications & translational value**
- simple, not the more the better

# Quality of scientific content:

- Background; what is known (critically evaluate the literature), what is not known (current gaps), and why is it essential to find out (relevance and significance).
- Do you have a clear, concise and testable hypothesis ?
- Are your objectives and aims coming into focus ?
- Preliminary evidence/pilot findings?
- Grantsmanship is very important!

# Aims & Hypotheses

1. State the aims clearly (specific and realistic)
  - limit the research objectives to **no more than three**.
2. State how the objective(s) will contribute to new knowledge or needed understanding of the subject
3. If hypotheses are applicable:
  - Clearly and appropriately cited
  - Be consistent with the cited research objectives

# Study Design

1. Study design has to be scientifically sound
2. Use of appropriate type of investigation to answer the research questions and attain the objectives (e.g. prospective / retrospective; cohort / cross-sectional / randomised controlled trial)
3. Study design described in sufficient detail to allow
  - Assessment of workload
  - Timetable
  - Experiments, observations to be made, randomisation method where relevant, and the use of controls

# Methods & Subjects

1. Clearly describe the sampling and recruitment procedures (e.g. inclusion/exclusion criteria, intervention/control groups, target population, etc.)
2. Adequate sample size to establish:
  - prevalence/incidence or other such rates or estimates within acceptable bounds of precision; or
  - statistical power for hypothesis tests?



Justification for sample size shall be provided in **ALL APPLICATIONS** including pilot/proof of concept studies

# Outcomes & Data Analysis

1. Define primary outcome
  - Addresses the most important objective
  - Basis for sample size calculation
2. Secondary outcomes relevant to the objectives
3. Confounding variables to be measured
4. Specific statistical tests to answer each specific objective & test specific hypothesis
5. Sufficient details on qualitative data analysis/other complex analysis, e.g. Cost-Effectiveness Analysis

# 1. Common Weaknesses: Research Plan

- Low translational potential of research findings  
e.g. No local subject/data to demonstrate applicability in Hong Kong
- Overly ambitious study design leading to question on feasibility
- Study design/analytic plan is inadequate/inappropriate to address the research questions
- Sample size estimation is not justified or provided

## 2. Common Weaknesses: Research Plan

- Lack of technical details or demonstration of competence to execute the proposed research
- Not aware that ethics/safety approvals and/or consent for access to third-party data is needed before project commencement
- Use of data of another study needs proper approval
- Use of readily available/secondary data:
  - Can use data from CMS/CDARS ready for analysis?  
(**CMS**: Clinical Management System; **CDARS**: Clinical Data Analysis and Reporting System)
  - Can analysis of publicly available data/information address the research questions?
  - Is the required data available in the datasets? Are the data reliable?



# 3. Common Weaknesses: Research Plan

## *Introduction, objectives*

- The literature is incomplete (some well known studies not referenced / unaware local studies or other relevant studies)
- Something similar has been done
- Objectives are not clear, not specific, or too many, not achievable
- The study is over ambitious, no pilot data
- Inappropriate study design to carry out the study

# 4. Common Weaknesses: Research Plan

## *Methods & analysis plan*

- Study design inappropriate
- Sampling not feasible or representative
- Some important confounders missing
- The scales have not been validated
- The questionnaire is too long
- The intervention is not clear (too complicated, not feasible...)
- Sample size calculated incorrectly or use wrong reference
- Statistical method incorrect
- Not clear how the results can be used in services

# 5. Common Weaknesses: Training Plan

- Overseas training programme is insufficiently detailed for assessment
- Associations between the knowledge/skills to be acquired from the training programme and the research plan are poorly stated
- Training courses or structured mentorship activities are not specifically described
- Proposed training is not relevant to the research plan
- The proposed training is available in Hong Kong

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# Seek guidance from your Mentor!



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# Wish You Success!

