What you need to have in your application (or how not to make a good project idea fail!)

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Key Factors Assessed

1. Relevance and Originality
2. Scientific Content
3. Design and Methods
4. (Statistical/Economic) Analysis/outcome measures
5. Applicability to local context
6. Track record (necessary expertise/previous project outcomes/overlap with other grant applications?)
7. Institutional support (HA/university backup?)
8. Translational potential
9. Value for money

Relevance and Originality

- Is the research question novel and/or relevant to Hong Kong?
- Does the proposed research build on earlier studies or just repeat work in a new setting?
- Does the application identify the knowledge gap to be filled?
- What translational potential does the proposed research have, i.e. what is the potential impact on health policy, clinical practice and provision of health services in HK and internationally?

Scientific Content (I)

Methods stated clearly?

- Without this, cannot begin to evaluate!
- Methods appropriate to objectives?
- Balanced, not too weak, but not excessive
- Can the objectives be achieved with these methods?

Relevant expertise in team or being purchased?

- Essential for all sophisticated analysis - cannot pay team members

Scientific Content (II)

Staff/Equipment/Consumables appropriate?

- Not a way to get equipment bought for your other projects or to get money that should come from HA budgets

References appropriate and up-to-date?

- Critical/local/recent references missing calls into question expertise
- Appropriate credit for self and others - this includes your competitors! You will not lose out by referencing them

Scientific Content (III)

Pilot study?

- Reluctant to spend HK$1.5M on a project that looks like high risk it may fail, unless very high benefit
- Need to provide sufficient details of pilot outcomes (effect size/feasibility?)
- Make use of grants for pilots, rather than expecting us to guess whether project is feasible

Design and Methods (I)

Study design appropriate?

- Obviously specific to type of study and objectives and outcome measures, so hard to make generic comments, but design must be able to attain your objectives, given your outcome measures
- If RCT is gold standard and not using, why not?
- Explain source of subjects, if not territory wide, why not?
- If have controls, are they really appropriate controls? Matched properly?
- Randomization - how is it done, and have you addressed any risk of contamination (sample institutions versus patients)?

Design and Methods (II)

Primary and secondary outcome measures stated clearly?

- Need specifics and rationale, not just outline

Effect sizes appropriate?

- Do not suggest large effect size without justification, e.g. educational interventions rarely have large effect size
- This is where a pilot study helps a lot.

Sample size appropriate?

- Expect power calculations, not just confidence intervals or collection feasibility.

Design and Methods (III)

Inclusion/exclusion appropriate?

- Need to justify, do not make us guess

Sample size feasible within time stated?

- Include evidence that you can really get access to the patients and of likely flow rate of patients, given inclusion/exclusion (pilot!)
- We have had BAD experience of people failing to get close to target sample size and yet still spend all the money

Design and Methods (III)

Contingency plans, especially for multi-stage proposal?

- Without this, risk rejection as we have had BAD experiences where people spend all the money even when the first stage failed.
- It is now a requirement to include potential pitfalls and contingency plans in the application form

Ethics (consent/approvals)?

- Prior institutional approval necessary, but may not be sufficient if we cannot see how you will deal with any ethical dilemmas (show us the informed consent form and explain how you will address any risks)

Analysis/Measures (I)

Equipment/Instruments in place (translated/validated/calibrated?)

- Need to tell us which instruments and provide sufficient information that they are feasible for planned use
- If not yet translated/validated, is there plan, expertise, time for this?

Data collection feasible/appropriate?

- Time per subject/respondent burden/is consent likely (e.g. blood tests)?
- Work schedule for research staff sensible?

Analysis/Measures (II)

Analysis resources feasible/appropriate (including equipment/reagents/statistician/economist/computers/software)

- Are they all in place as needed?
- Poor/naive/amateur economic/statistical analysis wastes all the time/money spent on data collection (e.g. proper cost benefit analysis requires more than collecting HA estimated costs!)

Analysis/Measures (III)

(Sufficient)Details of analysis provided?

- e.g. Do not just state "multivariate statistical tests will be performed". Ask your economist/statistician for advice on the proposal

Analysis valid/feasible/appropriate to objectives given measures?

- Ensure that they can address ALL the objectives or remove unattainable objectives

Translational potential

- How will positive results be translated into improved health services, changes in clinical practice, informed health policy?
- Reviewers (overseas and local) often comment on the translational value of the proposal, especially given the new focus on non-academic impact in HK and the UK.
- HMRF research should be “useful” as well as “interesting”
- Identify who are the research end users before you write the proposal and work with them (they may have insights into healthcare needs, subject recruitment, applicability of the findings)
- Involve research end users during the project
- Inform research end users after completion (prepare a comprehensive dissemination plan – not just peer-reviewed publication, also consider workshops for frontline staff, newspapers/ radio/ TV/ internet
- Who are the decision-makers in your field and how will you inform them about these findings?

Value for Money

- Budget ceiling is $1.5M
- Most applicants request the maximum amount
- Consider smaller scale studies (e.g. $0.25M - $0.75M), esp. for pilot studies, to test unusual hypotheses, or if PA is a young / inexperienced researcher
- Justify needs in detail
  - Manpower: number of staff, pay scale, duration, % effort
  - Other expenses ("consumables"): itemise in detail
  - Equipment: can you share department resources; do you really need a new computer?
- GRB will trim unnecessary or redundant work / manpower / consumables / equipment and reduce budgets accordingly
- Calculate sample sizes clearly and state a feasible plan to obtain them
  - Invest appropriate time and resources into securing the target number of subjects
  - You will be queried about any shortfall;
  - Projects have been terminated due to failure to recruit sufficient sample size;
  - Part of the grant may need to be returned if the shortfall is not justified / explained satisfactorily

Happy to answer questions!