



**Tropical Health  
Solutions**



**Day 2**

**Atoifi-TDR Research Workshop 2:  
*Writing a Successful Grant Application*  
Background, Significance, Reviewing the literature**



# Aims for day 2

- Clarify points from Day 1
- Complete Day 1 (if we failed to do so)
- Discuss Background and Significance
- Discuss reviewing the literature

# Evaluation of Day 1

- Stones:

	Morning		Night	
	Number	%	Number	%
<b>Bad</b>	0	0.0%	0	0.0%
<b>OK</b>	7	30.4%	1	9.1%
<b>Very Good</b>	16	69.6%	10	90.9%
	23	100.0%	11	100.0%

- One Minute Reflections

- [Morning](#)
- [Night](#)



# Structure of a Funding Application

- Title
- Investigators
- Institutions
- Date
- Summary
- Amount
- Background
- Significance
- Research Question
- Aims and Objectives
- Methods
- Timeline
- Monitoring and Evaluation
- Ethical considerations
- Budget
- Budget Justification
- Track record of investigators
- Literature Cited
- Letters of support

# Funders: *Is it important?*

- **Background**

- Concisely describe what is known about the topic
- Based on a review of the literature
- If you have publications on this topic, cite them!

- **Significance**

- Why the topic is important
- Why your project is important
- The improvements or advances that your project will make

# Background / Problem statement

- Background is the explanation of why you want to do the research
- Explains what is known about the topic
- You have to demonstrate that you have a good understanding of the important issues
- Used to highlight where evidence is missing
- Builds a case for what you want to research
- Justifies your own aims and SMART objectives

# Significance / Rationale

- Describes why your research project is important
- Highlights that your results will provide valuable evidence that fills in a knowledge gap
- Must explain clearly your research question
- Must support your aims

## LF in Shortland Islands Proposal

### Significance and innovation

The findings from this project will assist Solomon Islands in demonstrating freedom from LF, a disabling Neglected Tropical Disease, targeted for global elimination. As part of the Pacific Programme for the Elimination of LF Solomon Islands was declared non-endemic for LF in 2010 (Anonymous 2010). The evidence for this was not strictly epidemiological but based on the opinion of a panel of experts (Anonymous 2010). When a country is declared LF-free, it has the responsibility for monitoring to detect any new cases of LF (WHO 2011). How this is to be done has not yet been clearly set out. A survey protocol has been determined, but not how the population to be surveyed should be selected. Systematic surveys of the rural population of Solomon Islands is difficult since village populations are

# Example: Our application to study LF in the Shortland Islands....

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## 11. Body of Proposal / Free-form text (4 pages)\*

### Aims and background

1. To trial rumour verification as a tool for the Global Elimination Programme for Lymphatic Filariasis (LF).
2. To determine whether the rumours that lymphatic filariasis is still present in the Outer Shortland Islands, Solomon Islands is supported by evidence that would justify a population survey to confirm that the causative parasite (*Wuchereria bancrofti*) is present.
3. To raise awareness of LF, including its life cycle, clinical effects, management and control in the community and health care providers in the Outer Shortland Islands.
4. To build capacity of research colleagues based at Atoifi Adventist Hospital, Solomon Islands, to respond to rumours of the occurrence of LF and other infectious diseases.

In collaboration with colleagues at Atoifi Adventist Hospital, a team from JCU investigated a new case of elephantiasis in East Kwaio, Malaita, Solomon Islands in 2011. The aim was to determine if the disease LF was still actively being transmitted in this remote area. This was an important study since Solomon Islands had been declared free of LF in 2010 by the World Health Organization (WHO 2010). The Pacific Programme to Eliminate Lymphatic Filariasis (PacELF) is a major part of the global push to rid the world of this disease. We found that although there was no evidence of transmission, one individual (an 18 year old male) was infected with the causative nematode parasite (*W. bancrofti*). The publication



# Example: Our application to improve treatment of TB....

## **Australian Respiratory Council Project Funding application**

**Project: East Kwaio, Solomon Islands: Community based stories for TB education and evaluation.**

**Applying organisation:** Atoifi Adventist Hospital, Malaita, Solomon Islands.

Director of Nursing: Rowena Asugeni [rowenaasugeni@gmail.com](mailto:rowenaasugeni@gmail.com)

PO Box 930, Honiara, Solomon Islands Phone: +762 482 481; Fax: +762 482 479

## **Project concept:**

This project will develop and trial a series of video-based education resources about community-based TB treatment and completion in East Malaita, Solomon Islands. The project will work closely with health workers and community leaders and use a traditional Solomon Islands oral story telling model of education and communication.

## **Purpose of the project and background information:**

The TB team at Atoifi Adventist Hospital (AAH) have demonstrated that they have the skills, drive and

**What general lessons could you take from these example that might be relevant to your application?**

# Reviewing the literature

- The “literature” = the information published in print or as documents in electronic format; e.g., on the web
- Classification:
  - Peer-reviewed literature (most journal articles, some books)
  - Non-peer reviewed (journal articles, monographs)
  - “Grey” literature = not in scientific literature (reports, web pages, newspapers, popular journals, other documents)

# Peer-reviewed?

- Before a paper is published in a scientific journal, detailed comments are made about its quality
- The people making the comments are “reviewers”
- They are usually chosen because they have published papers on the same topic as the submitted manuscript = “peers” to the authors

# Peer review process

- The editor of the journal takes notice of the reviewers' comments
- Has three options:
  - Reject
  - Accept
  - Resubmit

## Example: Persistence pays off ....

- Humpress, Peter, a colleague from USA and I wrote a manuscript about head lice in the Pacific Island Countries and Territories (PICTs)
- It was a systematic literature review
- We submitted it to *New Zealand Medical Journal*

A systematic literature review of pediculosis due to head lice in Pacific Island Countries and Territories: What country specific research on head lice is needed?

Rick Speare<sup>1,2§</sup>, Humpress Harrington<sup>3</sup>, Deon Canyon<sup>4</sup>, Peter D. Massey<sup>5</sup>

# Rejected!

- But it had been sent to reviewers
- They said it was OK, but asked “*so what?*”
- We changed the “angle” and submitted it to the *Bulletin of the World Health Organization*
- Rejected by editor!
- We submitted it to *BMC Dermatology*
- Asked to revise
- Accepted after revision!

Speare R, Harrington H, Canyon D, Massey PD. A systematic literature review of pediculosis due to head lice in Pacific Island Countries and Territories: What country specific research on head lice is needed? *BMC Dermatology* (in press)

# What did reviewers' say?

## Reviewer 1

**Reviewer's report:**

Accept without revision

**Level of interest:**An article whose findings are important to those with closely related research interests

**Quality of written English:**Acceptable

## Reviewer 2

**Reviewer's report:**

1. As a first general comment there are some typographical errors that require correction, e.g.

- in the list of authors Peter D Massey is given the superscript identifier "5" but his affiliation is listed as "6" further down the page;
- in the Abstract, Background, you refer to "Pacific Countries and Territories (PICTs)" rather than "Pacific Islands Countries and Territories (PICTs)"
- in the main text Methods, line 123, you list databases as "PubMed, CIINAL, Web of Science..." which should be corrected to "PubMed, CINAHL, Web of Science..."

No doubt there are other typographical errors in the text that are less obvious, and I have not checked your bibliography for correct citations. Please check



# Grant applications are reviewed too

- Either by members of the selection panel
- Some are sent to external reviewers first
- Make sure that the Background and Significance is of good quality
- Don't make typographical and grammatical errors
- When reviewers see typographical errors, they are more likely to think that there will be errors in the science
- Get a person with good English writing skills to edit the proposal

# Why conduct a literature review?

- Improves the quality of your Background and Significance and your Methods
- Helps you answer the question: “Have similar studies been done in the past?”

**No: Is a very good justification for your study!**

**Yes: Is an answer to your question known?**

**What problems have been identified?**

**Use to modify your Methods**

**Modify your research question**

**Modify your research hypothesis**

# Finding relevant literature

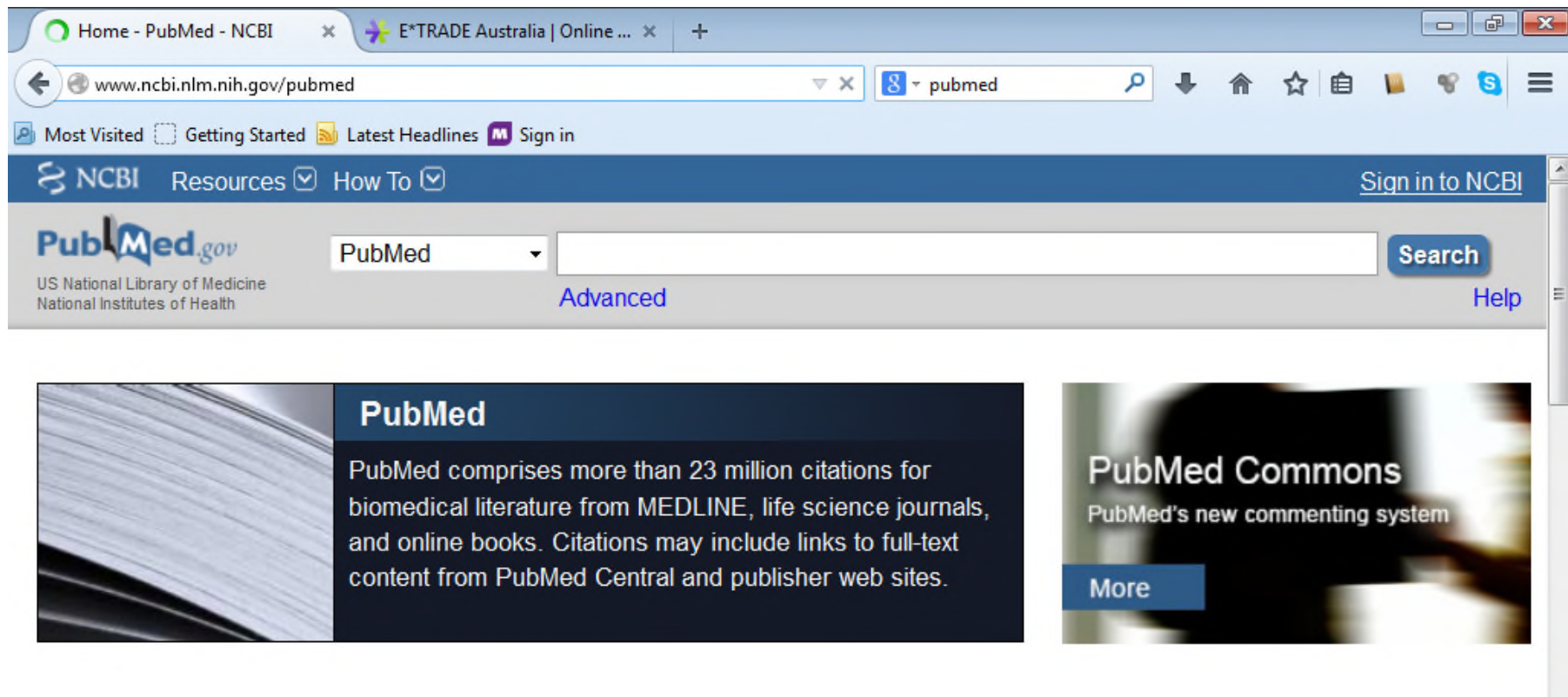
- No internet access:
  - Difficult!
  - Find a recent relevant publication, read it carefully, and look at references that it cites
  - Try to get these
  - Ask colleagues working on the topic
  - Collaborate with someone who does have access to internet

# Finding relevant literature: Internet access

- Use electronic databases
- PubMed to search peer-reviewed journals
  - Free
  - Get open access articles
- WHO HINARI site to get access to journals
- Can use Google Scholar
- Results must be manageable
  - If get 100s of papers, the search may be too wide

# PubMed

- <http://www.ncbi.nlm.nih.gov/pubmed>



The screenshot shows a web browser window with the URL [www.ncbi.nlm.nih.gov/pubmed](http://www.ncbi.nlm.nih.gov/pubmed). The page features the NCBI logo and navigation links for Resources and How To. A search bar is prominently displayed with a dropdown menu set to 'PubMed' and a 'Search' button. Below the search bar, there are two promotional banners. The left banner, titled 'PubMed', states that the database contains over 23 million citations for biomedical literature from MEDLINE, life science journals, and online books, and that citations may include links to full-text content from PubMed Central and publisher web sites. The right banner, titled 'PubMed Commons', describes it as PubMed's new commenting system and includes a 'More' button.

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**PubMed**  
PubMed comprises more than 23 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full-text content from PubMed Central and publisher web sites.

**PubMed Commons**  
PubMed's new commenting system  
More

The image shows a browser window displaying the WHO HINARI website. The browser's address bar shows the URL [www.who.int/hinari/en/](http://www.who.int/hinari/en/). The website header features the HINARI logo with the tagline "Research in Health" and a navigation menu with links for Arabic, Chinese, English, Français, Русский, and Español. A "Login to HINARI" button is visible in the top right. Below the header is a search bar with a "Search" button. The main content area is titled "HINARI Access to Research in Health Programme" and contains a paragraph describing the program's mission: "HINARI Programme set up by WHO together with major publishers, enables low- and middle- income countries to gain access to one of the world's largest collections of biomedical and health literature. Up to 13,000 journals (in 30 different languages), up to 28,800 e-books, up to 70 other information resources are now available to health institutions in more than 100 countries, areas and territories benefiting many thousands of health workers and researchers, and in turn, contributing to improve world health." Below this text is a download link for a "Map of country breakdown 2014" (png, 121kb). To the right of the main content is a sidebar with a "Give to HINARI" section, a "Portuguese HINARI website" link, and a section for "Other Sister Programmes with".

WHO | HINARI Access to Rese...

www.who.int/hinari/en/

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Contributions

**HINARI Access to Research in Health Programme**

HINARI Programme set up by WHO together with major publishers, enables low- and middle- income countries to gain access to one of the world's largest collections of biomedical and health literature. Up to 13,000 journals (in 30 different languages), up to 28,800 e-books, up to 70 other information resources are now available to health institutions in more than 100 countries, areas and territories benefiting many thousands of health workers and researchers, and in turn, contributing to improve world health.

↓ Map of country breakdown 2014  
png, 121kb

Give to HINARI  
You can make a difference

Portuguese HINARI website  
HINARI site in portuguese

Other Sister Programmes with

<http://www.who.int/hinari/en/>

# Decide on a search strategy

- Research question – decide on key words
- **Search terms** to find publications on the topic
- Write these down!
- Number of publications (**hits**) must be recorded
- Always keep a record of database searched, search terms, number of hits

# Decide on a search strategy

## Example

- For papers on diabetes in Tonga, search terms
  - *diabetes AND Tonga*
- Hits = 19
- [Page of hits](#)
- [Hit 6 – Gestational diabetes](#)
- [Hit 3 - Obesity](#)
- Read the title and the abstract of each hit
- Decide “*Is it relevant to your question or topic?*”



# Exclude hits that are not relevant

- Exclude duplicates (record the number)
- Decide if the hit is relevant by reading title and abstract
- Use exclusion criteria to exclude hits that are not relevant: (record the number)
  - No English title or abstract
  - Not on topic (eg, diabetes in Tonga)
- Get full copies of the included papers to read

# Use these to write the Background and Significance

- What the problem is
- What is known
- What is not known
- What difference your study will make
- Why this is important

# Search strategy can get complicated

- For papers on diabetes in Solomon Islands
- If *diabetes AND Solomon Islands* is searched the computer may read it as *diabetes AND Solomon AND Islands*
- PubMed hits = 136
- [Page of hits](#)
- Search as *diabetes AND “Solomon Islands”*
- PubMed hits = 11

# Example: Head lice in Pacific Island Countries and Territories

- Started as a question “*What has been published on head lice in Solomon Islands?*”
- What search terms did we use?
  - (Head lice) AND (Solomon Islands)
  - Pediculosis AND (Solomon Islands)
- We could have used ((Head lice) OR pediculosis) AND (Solomon Islands)
- PubMed – number of hits = 2
- Excluded 1 (not SI but PNG)

# Example: Head lice in Solomon Islands

Eason RJ, Tasman-Jones T: Resurgent yaws and other skin diseases in the Western Province of the Solomon Islands. *P N G Med J* 1985, 28:247-250.

- Decided to change the question “*What has been published on head lice in the Pacific Island Countries and Territories (PICTs)?*”
- What search terms did we use?
  - ((Head lice) OR pediculosis) AND each of the 22 PICTs



# Reviewing the publications

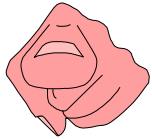
## Organize the publications that are included

- Write comprehensive summaries of each
- Sort by topics
- Put into a table
- Write literature review
- Write the list of references immediately

# Literature Review



**is not: a list**



**but: an organized classification and evaluation**

**The objective is:**

to demonstrate your intellectual ability to recognize relevant information

to classify and synthesize this information

to evaluate and organize it according to the guiding concept (i.e. research hypothesis / question / aims)

# Lit review can be “used” several times

- In the grant application
- To inform
  - Research Question
  - Aims
  - Objectives
  - Methods
- As a publication
- In the report to funders



# Structure of a Funding Application

- Title
- Investigators
- Institutions
- Date
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- Background
- Significance
- Research Question
- Aims and Objectives
- Methods
- Timeline
- Monitoring and Evaluation
- Ethical considerations
- Budget
- Budget Justification
- Track record of investigators
- Literature Cited
- Letters of support