Research Development Workshop

By Boon-How Chew

This training on the key points and fundamentals of research is for academicians, clinicians and health sciences professionals who want to '**go-now**' on learning and conducting a proper and high-quality clinical, biomedical and health sciences research. It is on the whole research process and related areas, see attached topics on the table on the next page. The suggested workshop fee is MYR100 for HPUPM/FPSK staff, MYR200 for UPM staff, MYR500 for non-UPM individuals, and USD500 for non-Malaysians. The fees from the HPUPM/FPSK/UPM staff will be waived as a reward upon satisfactory completion of the training.

PLANNING

- Reading materials: core and complementary lists (see further below)
- Diary of Progress
- Certificate of attendance or completion
- Workshop evaluation

PREPARATION

- **Preparatory Work**: Participants to decide on professional interest or areas to pursue within own specialty. Then write 500 words essay to introduce and to argue for the topic on the current challenges and the possible future direction in (own) professional practice.

IMPLEMENTATION

- **Duration**: 2 Days Workshops (5 slots of 3 hours) + 1 Day proposal presentation
- **Venue**: a hybrid of online and physical meetings
- **Secretariat**: pen or pencils, and colour papers, diary either as online or paper form. Print out the essay submitted by the participants earlier. This will initiate the research idea and topic during and from the workshop. Invite speakers from outside CRU. Organise pre-training meeting with all speakers. Conduct a survey on participants of their research experience:
    - Involvement in research as PI and co-investigator
    - Confidence in planning and conducting a research
    - Confidence in statistical analysis
    - Publication in journal as CA or co-author
    - Knowledge about journal publication process
    - Writing skills in Likert scale
- **Participant**: Laptop with applications and software essential for the research training. To build own research team for the proposed review article and research project. To hold at least ONE meeting each for the respective review and research before presentation of the study proposal.

OUTPUT

Output 1: Write a complete study proposal & make a presentation
Output 2: Write mini narrative or review article.
Output 3: Completed peer reviews for at least one case-report and two original reports.

RECOGNITION

Certificate of Attendance: Attended without any output
Certificate of Completion: Attended with 2 of 3 outputs

Register your interest and post your comment/request: https://forms.gle/mnjrZmdfCgddnuRP8

Suggested Structure of the Training Module

Day 1		
Hour	*Talk* / Topic	**Tent. Speaker**
0800-0815	*REGISTRATION*	
0815-0830	*Introduction* : Quality healthcare, research, KPI & career advancement	CBH & TDPA
0830-0845	*Testimony I* : Personal sharing by an outstanding researcher	TBD
0845-0915	*Interactive talk 1*: Understanding the whole research process	CBH
0915-1015	*Interactive talk 2*: Fundamental concepts of clinical epidemiology	CBH
1015-1030	*Interactive talk 3*: Classification of epidemiologic research	CBH
BREAK		
1045-1115	*Interactive talk 4*: An introduction to qualitative study & designs	*Invited speaker*
1115-1145	*Interactive talk 5*: Research question, literature review & conceptual framework	CBH
1145-1215	*Interactive talk 6*: An introduction to databases & search strategies	CBH *& an invited speaker*
1215-1245	*Interactive talk 7*: Theoretical design	CBH
1245-1315	*Interactive talk 8*: Data collection design	CBH
LUNCH		
1400-1430	*Interactive talk 9*: Sample size estimation	CBH
1430-1500	*Interactive talk 10*: Statistical design	CBH
1500-1515	*Interactive talk 11*: Summary: clinical epidemiology & research methodology	CBH
1515-1545	*Interactive talk 12*: Writing up a study proposal	CBH
1545-1615	*Interactive talk 13*: Ethics clearance for a clinical study	*Invited speaker*
1615-1645	*Interactive talk 14*: Funding opportunities	*Invited speaker*
BREAK & DISMISS		
Day 2		
0800-0815	*REGISTRATION*	
0815-0915	*Interactive talk 15*: Statistical analysis	CBH
0915-1000	*Interactive talk 16*: Comprehensive reporting, quality writing	CBH
1000-1030	*Interactive talk 17:* Publication process	CBH
BREAK		
1045-1245	*Interactive talk 18*: Sistem PRiMS (Putra Research & Innovation Management System) and UPM IP Putra Science Park	*Invited speaker*
LUNCH		
1400-1500	*Interactive talk 19*: What is evidence-based practice? Appraise the evidence: primary research and systematic reviews & meta-analysis	CBH
1500-1530	*Interactive talk 20*: Summary: a suggested roadmap for clinicians to higher quality in research and publication	CBH
1530-1545	*Testimony II*: Personal sharing by an outstanding researcher	TBD
1545-1630	*Closure*: Summary & What have you learned? *Q & A*	CBH
BREAK & DISMISS		

Day 3 after 2-3 months post-workshop		**Facilitator**
0800-0815	*REGISTRATION & Intro*	
0830-1230	Study proposal presentation	CBH

Reading Materials

Core List

1. Chew BH. Planning and Conducting Clinical Research: The Whole Process. *Cureus*. 2019 Feb 20;11(2):e4112. doi: 10.7759/cureus.4112
2. Boaz A, Hanney S, Jones T, Soper B: Does the engagement of clinicians and organisations in research improve healthcare performance: a three-stage review. *BMJ Open.* 2015, 5(12).
3. Ioannidis JPA: Why Most Published Research Findings Are False. *PLoS Med.* 2005, 2(8):e124
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5. Macleod MR, Michie S, Roberts I, Dirnagl U, Chalmers I, Ioannidis JP, Al-Shahi Salman R, Chan AW, Glasziou P: Biomedical research: increasing value, reducing waste. *Lancet.* 2014, 383(9912):101-104.
6. Chalmers I, Bracken MB, Djulbegovic B, Garattini S, Grant J, Gulmezoglu AM, Howells DW, Ioannidis JP, Oliver S: How to increase value and reduce waste when research priorities are set. *Lancet.* 2014, 383(9912):156-165.
7. Munn Z, Stern C, Aromataris E, Lockwood C, Jordan Z: What kind of systematic review should I conduct? A proposed typology and guidance for systematic reviewers in the medical and health sciences. *BMC Med Res Methodol.* 2018, 18(1):5.
8. Clarke M: Doing new research? Don't forget the old. *PLoS Med.* 2004, 1(2):e35.
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11. Bordage G. Conceptual frameworks to illuminate and magnify. *Med Educ.* 2009 Apr;43(4):312-9. doi: 10.1111/j.1365-2923.2009.03295.x.
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15. Meyer H, Varpio L, Gruppen L, Sandhu G. The Ethics and Etiquette of Research Collaboration. *Acad Med*. 2016 Dec;91(12):e13. doi: 10.1097/ACM.0000000000001439.
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18. Guyatt G, Jaeschke R, Heddle N, Cook D, Shannon H, Walter S: Basic statistics for clinicians: 1. Hypothesis testing. *CMAJ.* 1995, 152(1):27-32.
19. Guyatt G, Jaeschke R, Heddle N, Cook D, Shannon H, Walter S: Basic statistics for clinicians: 2. Interpreting study results: confidence intervals. *CMAJ.* 1995, 152(2):169-173.
20. Jaeschke R, Guyatt G, Shannon H, Walter S, Cook D, Heddle N: Basic statistics for clinicians: 3. Assessing the effects of treatment: measures of association. *CMAJ.* 1995, 152(3):351-357.
21. Guyatt G, Walter S, Shannon H, Cook D, Jaeschke R, Heddle N: Basic statistics for clinicians: 4. Correlation and regression. *CMAJ.* 1995, 152(4):497-504.
22. Katz MH: Multivariable analysis: a primer for readers of medical research. *Ann Intern Med* 2003, 138(8):644-650.
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28. Lingard L, Watling C. It's a Story, Not a Study: Writing an Effective Research Paper. *Acad Med*. 2016 Dec;91(12):e12. doi: 10.1097/ACM.0000000000001389
29. Meyer HS, Carline J, Durning SJ. Ten Tips to Move From "Revisions Needed" to Resubmission. Acad Med. 2016 Dec;91(12):e15. doi: 10.1097/ACM.0000000000001391
30. Research Toolkits & Resources on HPUPM website: https://hpupm.upm.edu.my/research_hpupm/research_toolkits_resources-12873

Complementary List

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