July 29, 2009 [Knowledge and skills to pick up before graduating: a wish list]

MSc

- Epi & biostats - basics to intermediate
- Some knowledge about TB (with greater depth in thesis area)
- Data entry and management skills (e.g. EpiData, ACCESS)
- Data analysis using STATA (or equivalent)
- Manage references using EndNote (or equivalent) and search PubMed effectively
- Peer review at least one manuscript for a journal (under supervision)
- Write and publish at least 2 papers (but participate as coauthor in others, as opportunities arise)
    - Do at least one primary data collection project, if feasible
- Apply for studentships/fellowships
- Understand research ethics and IRB processes
- Give at least a couple of seminar presentations
- Attend and participate in TB journal club
- Attend MIRTH, RECRU, EPI seminars
- Attend at least one international conference and present poster/oral talk

PhD

- Epi & biostats - advanced
- Attend specialized workshops and advanced trainings outside of McGill, if opportunities come up
- Develop good scientific writing skills - take workshops, if necessary, but mostly by writing a lot and getting feedback
- Solid knowledge about TB in general (with substantial depth in thesis area); need to read a lot!
- Data entry and management skills (e.g. EpiData, ACCESS)
- Data analysis using STATA (or equivalent)
- Manage references using EndNote (or equivalent) and search PubMed effectively
- Peer review several manuscripts for journals (under supervision initially, and then independently)
- Write and publish at least 3-6 first-authored papers (but participate as coauthor in others, as opportunities arise);
    - some can be systematic reviews
    - portfolio of high and moderate risk projects
    - some suggested by supervisor and others conceived, executed and completed entirely by you
    - at least one primary data collection project
    - at least one methodologically-oriented study
- Apply for studentships/fellowships (including CIHR and other doctoral awards)
- Understand research ethics and IRB processes
- Learn project management skills (time management, ethics, personnel, supervision, database management, etc)
- Learn grant writing skills and submit one small grant, if possible (at least participate in your supervisor's grants and see how it is done)
- Contribute to WHO or other policies/guidelines, if opportunities arise
- Attend one international conference every year and present posters/oral talks
- Get some international research exposure (at least one project)
- Get some teaching exposure as TA (at least for one course)
- Give invited seminar presentations (as many as possible)
- Lead a TB journal club
- Attend MIRTH, RECRU, EPI seminars and give as many talks as you can
- Join professional societies and participate in their activities (ATS, Union, SER, APHA, etc)
- Lead or participate in departmental or research unit activities (coordinate courses, events, seminars, journal clubs, EBOSS, etc)
- Accompany supervisor on field visits, if opportunities arise
- Keep some ideas/projects that can be carried over into the post-PhD phase
- Towards the end of PhD, learn how to submit job applications and interview for positions, plan job talks, negotiate potential offers, etc.

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