

BHRC to Meet the Challenges of Health Research in a Private Hospital Setting



Kunanusont C. MD, PhD

Chaiyos Kunanusont MD, PhD¹

Abstract

Three challenges of supporting health research in a private hospital setting were identified as (i) weak evaluation of research projects, (ii) weak connection between research and implementation and (iii) misunderstanding on the concepts and processes of research. This paper describes briefly experiences of the Bangkok Health Research Center and its strategies to meet these challenges.

After a year of renovations at the Bangkok Health Research Center (BHRC), three main challenges of conducting health research in a private hospital setting have been identified. They are (i) weak evaluation of research projects, (ii) weak connection between research and implementation and (iii) misunderstanding of the concepts and processes of research. The BHRC is trying to address these challenges by sharing knowledge among rapidly expanding networks of hospitals and building specific capacity of concerned staff as well as managers through several mechanisms. This paper describes briefly our experiences, our thoughts, and finally our dreams.

The BHRC was established in November 2011 to provide health information for health staff and the public. In the first two years, the Center focused on collecting and sharing health information and supporting research projects that were initiated by either external sponsors and hospital staff themselves. Starting with a renovation in the final quarter of 2013, BHRC formulated its vision to be in a leading position in health research in South-East Asia using four key strategies of (a) networking and partnership, (b) capacity building, (c) knowledge and technology management and (d) happy work place happy collaboration. An interim 2014 work plan was formulated to improve performance. By the end of 2014, 27 projects had been registered. Among them, 17 were Routine to Research (R2R) projects while 10 were clinical trials. Looking ahead, there have been more than 50 pre-proposals of R2R submitted for 2015 implementation.

Since August 2014, BHRC has been certified by Arbeitsgemeinschaft für Osteosynthesefragen (AO) Foundation to be an AOCSC-AO Clinical Study Center. This reflects not only the clinical trial capacity of Bangkok Hospital Medical Center (BMC) but also its capacity to build/strengthen capacity in clinical trials and its capacity to coordinate multicenter studies. As a Level One AOCSC, BMC is certified to deliver the following: a) conduct prospective, randomized clinical studies, (b) set aside a dedicated and trained team to conduct clinical studies, (c) ensure a quality assurance system is in place and (d) act as Principal Coordinating Investigator. In addition, BHRC has been collaborating with King Mongkut's University of Technology Thonburi (KMUTT) on medical device inventions. Furthermore, BHRC has played key roles in adding research activities in collaboration with Oregon Health and Science University (OHSU) on occupational health.

Keywords: health research in a private hospital, bangkok health research center, BHRC

¹ Director, Bangkok Health Research Center, Bangkok Hospital Group, Bangkok, Thailand.

* Address Correspondence to author:
Chaiyos Kunanusont MD, PhD
Director, Bangkok Health Research Center, Bangkok Hospital Group,
2 Soi Soonvijai 7, New Petchaburi Rd.,
Bangkok 10310, Thailand.
e-mail: chaiyos.ku@bangkokhospital.com

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In terms of training, BHRC conducted three on site and outreach capacity building activities on Research Methods, Critical Appraisal and introduction to Good Clinical Practice (GCP). Subsequent to the trainings, BHRC followed through by forming a group of participants that have taken part actively in bi-monthly journal clubs. Later in the year, we conducted a training needs survey, which guided us to plan for seven trainings in 2015. BHRC will provide more comprehensive trainings in GCP, Research Methods and Biostatistics in Research. In late 2014, BHRC developed an in-house individual training facility for Clinical Research Nurses (CRNs), deploying a mentor (a highly experienced senior CRN) who has worked with Thailand Ministry of Public Health - US Centers for Disease Control Collaborative project (TUC) for 30 years.

The Three Structural Challenges

In the final quarter of 2014, BHRC team conducted an analysis to identify gaps that hindered progress in research and grouped them into three key challenges. These are 1) weak evaluation of research projects, 2) weak connection between research and implementation and 3) misunderstanding of the concepts and processes of research. BHRC became aware of the first challenge when it confirmed that research findings were not being either monitored or assessed. We recognized that something worse than shooting in the dark was shooting without an ability to hear. That was because one would not even know whether the ammunition was failed. BHRC did attempt to conduct a research program review at the end of 2014 but was not successful because of limited funds.

The second challenge of **“weak connections between research findings and implementation”** has two main determinants: externally initiated research projects and internally compelled research conduct. External sponsors, mostly pharmaceutical companies, continue working with medical experts from academic institutes on clinical research. This has resulted in a specific and highly focused research agenda. Research findings are often presented in highly specialized conferences and published in highly specialized journals, leaving limited applications for inter-departmental development. For the internally compelled research conduct, Bangkok Hospital stipulates that research is required for promotion of specific nurse officers. Quite often, once this requirement has been fulfilled, the application of research results is not pursued any further.

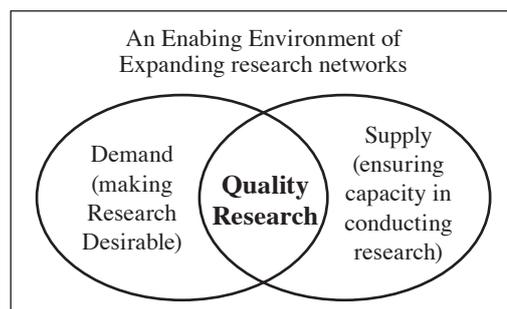
The third challenge of **“misunderstanding of the concepts and processes of research”** encompasses several gaps and conditions. Research seems to be a rhetorical word in many roundtable discussions. However, when it came to real investments, either on financial support or on human resources scale, prior commitments disappeared altogether. There was a misunderstanding that publications were the same as research. Among many practitioners,

there is a lack of understanding of the processes involved in conducting research. This has led them to start with an approach based on **“what data to collect”** and **“how many subjects to enroll”** instead of starting with **“what we want to know”**. In other words, research questions should be framed correctly as they determine research design, statistics collected and subsequent sample sizes.

Another critical misunderstanding is mixing Clinical Research Nurses (CRN) with Nurse Researchers. The CRN have specific roles of ensuring smooth and correct implementation of clinical trials (that have been well formulated) while Nurse Researchers are researchers who initiate research projects, undertake data collection, analysis, interpretation and report results. Failure to differentiate their roles usually results in unsettlement of performance evaluation. This then hinders subsequent year work plan formulations and can eventually lead to burn out.

In organizations where expertise is a priority, such as in private hospitals and academic institutions, it is common to rely on a group of people or a unit to be responsible for something such as research. Although BHRC has some research experts, the Center has to repeatedly advocate that research studies must be de-centralized because **“Research is everyone’s business”**.

In 2014, we conducted a situation assessment and found weaknesses both in terms of capacity and demand for research. So in 2015, we will start promoting a research agenda using a demand-supply-environment model (Figure 1). BHRC will put efforts in 1) expanding research networks-creating an enabling environment, 2) ensuring availability of research support through strengthening capacity in conducting research (supply) and 3) making research desirable (demand).



Figures 1: Demand-Supply-Enabling Environment Model

1. Expand research network to create an enabling environment

Knowledge and experience sharing is fundamental to development. The process fosters building more achievements on the existing achievements and prevents repeating the same mistakes. This is crucial for new researchers. BHRC aims to **“turn the light on”** by connecting people so they know who to consult and who to partner with. At the very least, we will do the following:

- a. Form research groups in Bangkok Hospital and network hospitals by bringing active researchers together, keeping them busy with research fora and journal club activities.
- b. Encourage network hospitals with Joint Commission International (JCI) accreditation to scale up number and improve quality of their research projects.
- c. Expand collaboration on research and training with domestic and international institutions, such as KMUTT, Faculty of Medicine Siriraj Hospital, Oregon Health and Science University.

2. Strengthen staff capacity to ensure availability of research support

BHRC will focus on capacity strengthening of hospital personnel in conducting research using curricula developed by national and international bodies such as the National Research Council of Thailand (NRCT), Faculty of Medicine Siriraj Hospital and Oregon Health and Science University.

BHRC provides technical support from the first step of research question formulation to later stages such as defining research design, identifying research statistics, calculating sample size, processing data and writing up reports. We will keep providing basic training on research methods, biostatistics and Good Clinical Practices (GCP). In addition, BHRC will continue to provide in-house on-the-job training for CRN. In the near future, accredited self-learning courses will be provided online.

3. Make research desirable to improve demand for research

Demand for research arises every day, but remains unrecognized for the most part. Health professionals encounter critical questions all the time but only a few of them pursue research. We found that motivation to conduct research is often brought down by the feeling that research is complex. From our quick investigation among those who gave up research in 2014, three main reasons were reported. These were (i) no time, (ii) unsettled roles of team members and (iii) discouragement due to feedback from IRB. Some of these could be fixed by the following:

- a. Setting achievements in research as a key performance indicator of an individual or a unit in every hospital.
- b. Improving shift arrangements and job rotation to allow more time for research.
- c. Providing grants to support new research projects.
- d. Awarding successful research projects.
- e. Promoting research support tools, such as an online research portal and literature search.

Where we are in the pond

BHRC is three years old with limited budget and limited human resources. Although research units are

not uncommon in private hospitals, it is quite a unique phenomenon that Bangkok Hospital invests in research because the investment is clearly marked for development.

We are aware that our budget is insufficient, but we are grateful for the funds we have. It is understood that financial resources for research worldwide remain universally inadequate. This has been well recognized but has not been addressed. In 2004, participants of the Ministerial Summit on Health Research in Mexico acknowledged that high-quality research could improve the health status of populations and that there was a critical need for increasing funding for research.¹ In general, only 10 percent of the \$70 billion spent annually on global health research was spent in poor countries, which bear 90 percent of the world's disease burden.² A follow up analysis on this revealed that research funding has somewhat increased but is still not adequate.^{3,4} We looked at data from World Bank and found that in 2009, while Thailand spent 0.25 percent of GDP on research and development, Malaysia spent 1.01 percent of their GDP, Singapore 2.20 percent and The Philippines 0.11 percent of their GDPs.⁵

We want to improve our human resources capacity. Thailand is somewhat at 10 percent of what it should be in terms of researchers. With the current growth, the country might need 20 more years to meet research "demand" as there are only around two researchers for every 10,000 population. The ratio in newly industrialized countries is 20-30 and in developed countries 40-70.⁶

With only five researchers in BHRC, we seem to be small fish in a small pond. However, for the Bangkok Hospital Medical Center where some three thousands staff are working, our researcher to population ratio is around eight per 10,000. This is already considerably higher than the country's average. To match with the newly industrialized countries, we need to only double the size of our team.

That is why we dare to dream big

That is why we dare to say that it is possible to meet the challenges of health research in Bangkok Hospital. We are working hard because we foresee that one day research will be an integrated part of every unit in Bangkok Hospital and network hospitals. On those days, everybody thinks research, every question is answered through proper literature reviews or suitable data collection and data analysis. Every table presents reliable findings, which are derived using proper statistical methods and relevant *p*-values are well displayed. With these, every prescription and every step of operations are the best attainable ones and everybody keeps trying to find the better alternative than the best ones they are practicing. And the roles of Bangkok Health Research Center would be minimal because research is everywhere.

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