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The Ascend Research Network— Enabling Human Capacity Development

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Abstract

In the world's effort to control and prevent non-communicable diseases (NCD) it is critical to develop the necessary human capacity. The potential and benefits certainly exist for educational and collaboration program development involving NCD control/prevention initiatives, institutions and students in disease endemic countries. With the burden greatest in low and middle income countries (LMIC) the incentive exists for such countries to participate in the dialogue and creation of human capacity development programs. Partnerships between institutions in the developed world and those in LMIC will provide for unique knowledge transfer opportunities. One such example is the Ascend Research Network (Ascend).

1.0 Introduction



The Ascend (Asian Collaboration for Excellence in Non-communicable Disease) Research Network was initiated through a US NIH Millennium Promise Award granted to Monash University Australia and its institutional partners in Malaysia, Sri Lanka, India, and the US. The goal of this network is to support the development of a research network to strengthen the research capacity in non-communicable diseases over five years

(2010-2014) in Asia. (MEMS, 2011; Ascend, 2012) Specifically, the ASCEND program aims to:

- Provide high quality research training to over 40 early career researchers from Asia.
- Strengthen NCD research capacity across Asia.
- Build a regional network of researchers and research institutions in Asia to improve the prevention and control of NCDs.
- To bring awareness of NCDs in Asia and to assist with integrating evidenced programs into policy and practice in partnership with government and non-government organizations.

(ASCEND, 2011; 2012)

In this case, the Ascend Research Network will strengthen the research skills of its trainees as well as create a network of research institutions and mentors that can support its trainees throughout as well as upon completion of the training program. The ultimate impact will be on policy creation that can work cooperatively with such research endeavors to control and prevent NCDs in the associated LMICs.

2.0 Training Institutions and Governance of the Research Network

The Ascend Research Network partners include:

- Monash University, Australia
- Monash University, Malaysia
- Sree Chitra Tirunal Institute for Medical Sciences and Technology, India
- University of Colombo, Sri Lanka
- University of North Carolina, US

The first 3-week teaching block is held at Monash University, Malaysia (Sunway Campus) in Kuala Lumpur; however, it is expected that future programs will likely take place in other countries and at other institutions. (ASCEND, 2011)

The research network is governed by program directors that are supported by the training advisory group. Academic personnel consist of both teaching faculty and local as well international mentors. To date, teaching faculty include those from Malaysia, China, India, Sri Lanka, Australia, Denmark, and the US.

3.0 The Program

The ASCEND program provides research training with respect to the prevention and management of non-communicable diseases and their risk factors with a predominant focus on diseases prevalent in the Asia Pacific Region. The aim is to understand NCDs, control and prevent such diseases at the individual, community, national, regional and, global levels. Equally critical is to understand the role of health services and health systems capacity development as part of disease management programs. (ASCEND, 2011)

The first group of 25 trainees from India, Sri Lanka, China, and Malaysia, have already participated in a three-week intensive program in non-communicable diseases. This first teaching block consists of four modules. These modules consist of:

- NCD concepts, epidemiology and prevention and control;
- Epidemiology and applied research methods;
- Tools and communication for public health research and;
- Developing, implementing and evaluating health promotion and

intervention programs in communities, health services and, other community settings.

During this 3 week teaching block, students participated in field visits. Field visits made included to the:

- Institute for Medical Research
- Clinical Research Centre
- Institute for Public Health
- Institute for Health Systems Research
- Institute for Health Management
- Institute for Health Behavioural Research
- National Diabetes Institute
- Sunway Medical Centre

Following this, trainees have returned to their home country to continue a 12-month long research project being mentored by global experts in the field of chronic non-communicable disease. Noteworthy is the support of trainees through online web-based learning activities. (Monash, 2011; IANPHI, 2012) In the second teaching block, trainees have the objective to develop translation and policy development skills. After presenting their work to faculty, mentors, and the training group, trainees will work to consolidate their research including the preparation of key manuscripts for publication and presentation at their home institutions and international meetings.

4.0 Project Examples

The focus of research activities includes cardiovascular diseases, diabetes, hypertension, chronic kidney disease, and the prevalence of chronic NCDs. (Table 1) Trainees have successfully published, presented posters, enrolled in further graduate studies, and assumed academic positions. The success of the first round is more than evident given the number of applications for the 2012

session. Beyond an increase in number, this next round has generated interest from other regions in Asia. The 2012 round of applicants includes researchers from Sri Lanka, India and Malaysia, Nepal, Bangladesh, and China.

Trainee Country of Origin	Focus of Research Activities
India	Cardiovascular risk factors in a rural population in India
	Anti-tobacco advocacy
	Hospital based tobacco cessation
	Role of yoga and peer groups on glycaemic outcomes and adherence to therapy in Type II DM
	Risk factors of coronary heart disease in selected urban population in India
	Module development on lifestyle modification for populations at risk for diabetes in Malaysia
	Prevalence of pre-hypertension and hypertension in urban South India
	Peer support for physical activity for women in South Kerala
	Microeconomic impact of cardiovascular disease
	Peer support for diabetes in rural Kerala
Malaysia	Association of serum advanced glycation end products (AGEs) with risk of developing type 2 diabetes mellitus
	Development and validation of a measurement scale for type 2 diabetes in Asian population
	Cardiovascular risk

Trainee Country of Origin	Focus of Research Activities
	management
	An e-approach to dietary intervention for diabetes mellitus
	Peer support for diabetes prevention for the Malaysian population
	Serum markers in the prediction of chronic kidney disease (CKD)
	Patient management and impact from myocardial infarction
	Efficacy of an intervention for smoking cessation
Sri Lanka	Dietary and lifestyle modification to reduce cardiovascular risk
	Chronic NCD risk factors among adolescents
	Economic impact of Diabetes in Sri Lanka
	Bankers Health Initiative
	Development of a training module for diabetes mellitus
	Health management and intervention in NCDs
China	Community based screening and intervention program for Stroke in Beijing China

Table 1: Phase 1 Trainee Research

5.0 Outcomes

At the conclusion of the 18 month program, trainees should be able to:

- Assess the individual and societal burden of diabetes, heart disease, and related conditions in low and middle income countries;
- Identify the role and contribution of lifestyle factors and other more

‘upstream’ influences in relation to these conditions in low and middle income countries;

- Design, appropriately conduct, write-up, and disseminate the findings of an appropriate research project that is relevant to the needs of the trainee’s country;
- Understand how different kinds of study methods, measurement approaches, and approaches to research can be used to strengthen the evidence base for health promotion and disease prevention; and
- Demonstrate how research findings can contribute to improved health practice and/or relevant policy and thereby, reducing the overall burden of diabetes, heart disease, and related conditions.

(ASCEND 2012)

The Ascend Research Network has extended the goal of disease management in LMICs from neglected diseases to non-communicable diseases that have become increasingly prevalent in these countries. Beyond intervention and the sourcing of solutions from developed countries and MNCs, the Ascend Research Network seeks to develop the necessary human capacity in LMICs. With the announcement of similar programs by the recently established WIPO Re: Search initiative and the use of this model to train postdoctoral fellows from Africa in the area of neglected diseases, of value will be the documentation of outcomes and impact on disease management—providing a template for other stakeholders contemplating human capacity development program creation. The opportunity certainly exists for educational and collaboration program development involving public research institutions and students in disease endemic countries.

6.0 Future Program Development

A role exists for both public and private sector stakeholders to catalyze the formation of multi-institutional training programs targeting emerging and BoP markets. The goals however will likely differ as a function of primary catalyst—from the development of research capacity to be applied to the public setting to the development of research and product development capacity with the application generally to the private sector. Beyond training programs such as the Ascend Research network taking advantage of the facilities available to participant institutions, open innovation platforms recently developed by GSK, Pfizer, and Novartis include in many cases, the development of distinctive R&D centres in emerging markets. Regardless of participants and objectives, training programs that address the full value chain associated with intervention discovery, development, delivery and application are clearly necessary. (Figure 1) Of interest will then be the level of collaboration between such initiatives to ensure both health innovation capacity development and health delivery capacity.

7.0 References

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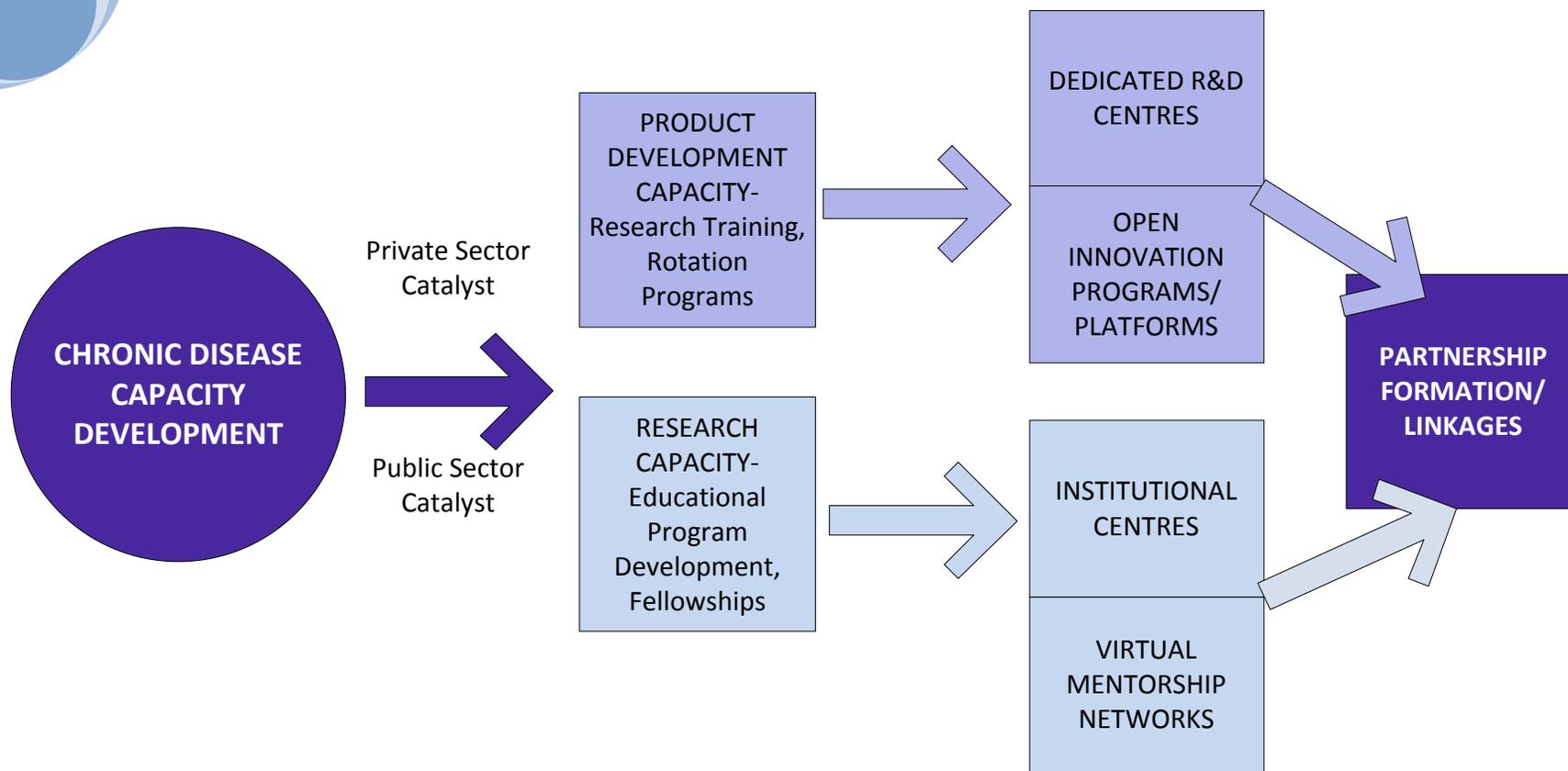


Figure 1: Catalyzing Chronic Disease Capacity Development