



**INTREC – INDEPTH Training and Research Centres of Excellence
Synthesis Report of the First Phase of INTREC Work**

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1. INTRODUCTION

The WHO's Commission on Social Determinants of Health argued in 2008 that the dramatic differences in health status that exist between and within countries are intimately linked with degrees of social disadvantage (CSDH, 2008). For example, the lifetime risk of maternal death is one in eight in Afghanistan, while it is 1 in 17,400 in Sweden (WHO et al., 2007). Likewise, a baby boy born in Calton, a deprived district of Glasgow, Scotland, has a life expectancy of 54 years, as compared to the 82 years expected for a baby boy born just 12 km away, in the affluent suburb of Lenzie North (CSDH, 2008;32).

These differences are unjust and avoidable, and it is the responsibility of governments, civil society, and researchers to work to reduce them. Part of this work requires the production of setting-specific, timely, and relevant evidence on the relationship between social determinants of health (SDH) and health outcomes, and yet this information is limited, especially in low- and middle-income countries (LMICs).

This is particularly true for issues of adult health and chronic diseases. Traditionally, research in LMICs has concentrated mainly on infectious diseases and younger populations. However, with the ongoing demographic transition and ageing processes to be found in many populations, it is inevitable that countries will see significant changing disease patterns (Kowal et al., 2010). According to a theory of cumulative disadvantage (Dannefer, 2003), the longer that people spend in the hazardous environments caused by poor economic or social circumstances, the greater the physical and mental wear and tear they will suffer, and the less likely they will be to enjoy a healthy old age. Thus there is a strong need for the development of capacity-building activities to enable research on the social determinants of adult health in LMICs.

The INDEPTH Training and Research Centres of Excellence (INTREC) project was established with this need in mind. Its dual aims are (i) to provide SDH-related training for researchers from the INDEPTH Network of Demographic and Health Surveillance Sites in Africa and Asia, thereby facilitating the production of evidence on associations between SDH and health outcomes; and (ii) to enable the sharing of this information through promoting links between the researchers and decision makers, and by ensuring that research findings are presented to decision makers in an actionable, policy-relevant manner.

This synthesis report summarizes the results of the activities that were carried out during the first phase of INTREC, which began in January 2012. During this phase, baseline situation analyses were conducted in seven different countries of Africa and Asia (see below for details), addressing three main areas:

1. The core SDH issues of concern in each country;
2. Ongoing SDH-related work, both in terms of government policies and in terms of the efforts made non-governmental organizations;
3. The available SDH-related training in each country, as a baseline for INTREC to build on.

Meanwhile, an online 'concept mapping' exercise was conducted with INDEPTH researchers from these same seven countries in order to identify their own SDH training wishes.

Through this, we developed a picture of the ‘supply’ side of SDH training (i.e. what is currently available, as given in the country reports), complemented by a picture of the ‘demand’ side (i.e. what the INDEPTH scientists want, as identified through the concept mapping exercise). Collectively this work constitutes INTREC’s Work Package 1.

The recommendations from Work Package 1 were presented to INTREC’s International Advisory Group (IAG) during a specially convened meeting in October 2012 (as part of Work Package 2), and the members’ comments and reflections were noted. This document presents the main findings and recommendations from the country reports and the concept mapping exercise, as well as the IAG’s responses to these. We also include a draft outline of the INTREC training programme that is planned to begin later in 2013.

The information assembled in this report is aimed at delegates attending INTREC’s first International Stakeholder Meeting, which will be held in Accra, Ghana from March 19-21, 2013, with the intention of facilitating informed discussions about the strengthening of research and policy on the social determinants of health in LMICs in Asia and Africa.

a. The INTREC Consortium

The INTREC consortium consists of six partner institutions. Five of these are universities: Umeå University in Sweden; Gadjah Mada University in Indonesia; Heidelberg University in Germany; the University of Amsterdam in the Netherlands; and Harvard University in the USA.

The sixth partner institution is INDEPTH – the International Network for the Demographic Evaluation of Populations and Their Health in Low- and Middle-Income Countries. With its Secretariat in Accra, Ghana, INDEPTH is an expanding global network, currently with 44 Health and Demographic Surveillance Systems (HDSSs) from 20 countries in Africa, Asia and Oceania. Each HDSS conducts longitudinal health and demographic evaluation of rural and/or urban populations. INDEPTH aims to strengthen the capacity of HDSSs, and to mount multi-centre research to guide health priorities and policies in LMICs, based on up-to-date evidence (Sankoh and Byass, 2012).

b. The seven participating countries

The seven countries included in this baseline study were Ghana, South Africa and Tanzania in Africa; and Bangladesh, India, Indonesia, and Vietnam in Asia. They were chosen because INDEPTH sites within each of them had previously participated in the network’s multi-country ‘SAGE’ study on aging and adult health, conducted in collaboration with WHO. The WHO-SAGE collaboration with INDEPTH has generated extensive publically available data, providing a unique possibility for research on the social determinants of health in these countries. Standardized data collection methods guarantee comparability of data across the sites while the longitudinal nature of the data enables inquiries into causal pathways of ill health and its determinants across these seven countries.

	Population (millions)	Life expectancy (male/female)	Total Fertility Rate	Non Communicable Diseases as % of all deaths	Gini Index
Ghana	24	57 / 64	4.0	39	42.8
South Africa	50	49 / 52	2.5	29	63.1
Tanzania	44	53 / 58	5.7	27	37.6
Bangladesh	161	68 / 72	2.5	52	32.1
India	1,205	66 / 68	2.6	53	33.4
Indonesia	239	66 / 71	2.2	64	34.0
Vietnam	92	69 / 74	1.9	75	35.6

Table 1 – Selected demographic, health and social variables relating to the seven INTREC baseline countries [Sources: INTREC country reports, see <http://www.intrec.info/publications.html>]

Table 1 gives a snapshot of some key demographic and health variables in the seven countries, and these highlight a number of similarities and differences between the countries and regions. Overall, the African countries have younger and more fertile populations than the Asian countries, and their societies are more unequal; while the Asian countries have much larger populations and higher rates of non-communicable diseases. Important differences are also to be found between the countries in each region, especially in the African countries: South Africa stands out as a younger, less fertile, and far more unequal society than the others.

2. METHODS

a. Country reports

Production of each country report was led by an in-country INTREC Social Scientist (ISS), with support from the INTREC Regional Coordinators for Africa and Asia (in Accra, Ghana; Johannesburg, South Africa; and Yogyakarta, Indonesia), and with overall technical responsibility provided by Umeå University in Sweden.

The selection of ISSs started with senior staff from the seven participating WHO-SAGE study sites being requested to identify suitable candidates for the job. These could not be found in three of the countries, however, so other contacts and networks were used to identify and recruit qualified social scientists. The ISSs came from a variety of professional backgrounds, including anthropology, psychology, health economics, and public health.

The report production process began in February 2012, in Yogyakarta, where ISSs and trainers were hosted by the Centre for Health Service Management, Gadjah Mada University for a one-week training programme. The aim was to introduce the ISSs to INTREC's objectives, to familiarize them with the concept and practicalities of SDH, and to work, step

by step, through the standardised format for the country reports that they would produce. These country reports include a country demographic and health profile, as well as sections on ongoing SDH training in the country, SDH country needs, SDH work in the country, SDH actors in the country, SDH policies in the country, analysis of a set of stakeholder interviews that they would conduct, and conclusions and recommendations.

After the training, the ISSs returned to their respective countries and began researching the different sections of their reports. This involved internet-based searches, discussions with administrators and lecturers in training institutions, as well as a series of stakeholder interviews in each country. The number of stakeholder interviews in each country ranged from 7 in South Africa to 15 in Indonesia; though none were conducted for Bangladesh for logistical reasons. With feedback from their dedicated ‘mentors’ at Umeå University, their Regional Coordinators and, in some cases, an in-country supervisor, the reports took shape, and they were all completed by the end of September 2012. See <http://www.intrec.info/publications.html> for links to the individual country reports.

The ISSs faced a few challenges during the production of the country reports. For example, information on SDH courses was often unavailable via training institutions’ websites, and there were cases of administrators being reluctant to provide details of the courses. Poor internet connections were experienced by some ISSs, significantly slowing down the data collection process. Further, a number of the stakeholders were very busy, and it was difficult to organize interviews with them.

b. Concept mapping

We conducted a “concept mapping” study in order to investigate what INDEPTH researchers from the seven WHO-SAGE countries may want to learn in order to be able to conduct research on SDH. Concept mapping is a mixed-methods approach that integrates familiar qualitative focus group techniques (e.g., brainstorming, rating, and sorting) with multivariate statistical analyses to help describe the ideas of a group on the topic of interest in a structured way, and to represent these ideas visually through a map. The process typically requires the participants to produce a large set of statements through brainstorming, in response to a focus question; to rate each statement on one or more dimension; and to individually sort these statements into categories (Kane and Trochim, 2006; Trochim, 1989).

While the concept mapping methodology was initially developed for use in focus group sessions, software for web-based applications has become available in recent years. In this project we conducted a web-based concept-mapping exercise using software to support data entry and analysis (Concept Systems, 2012).

The study took a three-step approach. First, INDEPTH scientists from all the INDEPTH centres in our seven participating countries were asked to produce as many statements as they wished in response to the following ‘focus prompt’: *“In order to conduct research on the causes of health inequalities in my country, I would need background knowledge on...”* We received the responses to the focus prompt via the internet for about three weeks. After the statement collection process was closed, we identified and removed all duplicate statements.

We then asked the respondents to rate each statement on a five point scale in terms of how important they felt it would be for the INTREC training programme. Finally, we asked them to sort these same statements into thematic areas, based on the similarity of their content.

Ninety two researchers participated (out of 160 invited, a 57% response rate) in at least one concept-mapping activity (brainstorming, rating, or sorting). Fifty three came from INDEPTH HDSSs in Africa, 18 from INDEPTH HDSSs in Asia, 10 were academics at Gadjah Mahda University in Indonesia, and 11 were individual members of the INTREC consortium.

The results were analyzed separately for INDEPTH researchers from Africa and Asia and from Gadjah Mada University and the INTREC collaboration, using descriptive statistics and cluster analysis. Concept maps were then generated for each group. In this reports we only present data for the African and Asian INTREC HDSS groups, showing the different thematic areas identified by respondents in relation to each other, as well as the relative importance attached to each thematic area.

c. International Advisory Group

INTREC's International Advisory Group (IAG) consists of international experts on social determinants of health, research education and capacity building. The Group was formed to provide ongoing, independent, and expert input regarding the development of different aspects of INTREC.

The seven country reports, and the findings from the concept mapping exercise, were reviewed by the members of IAG and discussed during a joint meeting with INTREC members in October 2012.

3. FINDINGS

a. Key SDH issues in the seven countries

While many of the social determinants of health identified in the reports varied by country, there were also several cross-cutting SDH factors that affect life in all seven countries. These included poverty, gender, geographical region, literacy, and health care availability and quality. Each of these variables plays some role in determining health outcomes in all countries of the world, and as such they could be seen as more or less universal social determinants of health (CSDH, 2012:8).

In addition to these universal social determinants, each report highlighted issues that were particularly critical in its country of focus; although it is important to note that several of these issues were also identified in the other country reports. Examples are given here from the different country reports to illustrate the range of SDH challenges to be found in our seven participating countries.

- **Ghana – Sanitation and hygiene.** A recent study carried out by the World Bank's Water and Sanitation Program found that 16 million Ghanaians (approximately 64% of the population) use unsanitary or shared latrines, and 4.8 million (19%) have no latrines at all and defecate in the open. Access to sanitation demonstrates high inequities; the poorest 20% of the population are 22 times more likely to practice open defecation than the wealthiest 20% of the population (WSP, 2012).
- **South Africa – Migration and social exclusion.** These factors have been found to be major determinants of health in South Africa. In one study, immigrant Mozambican households in the rural north east of the country showed significantly higher all-cause mortality, adult and child mortality compared to South African households in the same area. Mozambicans generally have a lower standard of living, live further away from health facilities, and endure poor sanitation and electricity supplies (Sartorius et al., 2010). Another study in the same area concluded that short term migrants are up to twice as likely to die compared to long term migrants and residents, primarily as a result of the social exclusion that they face when living in new environments (Clark et al., 2007).
- **Tanzania – Malnutrition and micronutrient deficiency.** Overall, urban Tanzanian children are more likely to enjoy better nutrition than rural children. Leach and Kilama (2009) report that 26% of urban children under five years of age are stunted, compared with 41% of rural children. Malnutrition is caused by food insecurity, poor caring practices, an unhealthy living environment, and inadequate access to quality health services – all of which are socially determined (IMF, 2007).
- **Bangladesh – Arsenic poisoning.** WHO standards permit a level of arsenic in drinking water of 10 parts per billion (0.01 microgramme per litre of drinking water), but, for practical purposes, the officially accepted level in Bangladesh is five times higher, at 50 parts per billion, or 0.05 microgrammes per litre. The reason for this is the extremely high rates of arsenic groundwater contamination across the country, which some experts have described as the worst mass poisoning of a population in history. The worst affected areas are in the south and east parts of the country. More than 80 million people are at risk of arsenic poisoning, and around 6.8 million people suffer from arsenical skin lesions or other conditions such as melanosis (hyper pigmentation), leuco-melanosis, keratosis and hyperkeratosis (Safiuddin et al., 2011).
- **India – Caste.** Social stratification in India is based on the caste system, which has been in place for a long time. The higher castes include the elite in the society, such as the Brahmins and Marathas. The lower, socially disadvantaged groups include the 'scheduled caste', 'scheduled tribes', and 'other backward class'. The majority of lower caste people live in rural areas, and they often work as agricultural laborers. Health status of the different castes can be illustrated by childhood immunization rates: in 2005-2006, the national immunization rate was 44%, but the scheduled tribes achieved only 31% of immunization coverage, while coverage for scheduled castes was higher, at 40%. Higher castes were reported to have an immunization coverage rate of 54% (Reddy et al., 2011).
- **Indonesia – Tobacco (non) legislation.** Tobacco smoking is highly prevalent in Indonesia, and is widely accepted culturally, especially among males. Boys are often introduced to smoking at an early age, and the habit is used as a means of socializing, as signifying higher status, and portraying a modern life style as well as wealth. The 2010 Basic Health Survey (Indonesia Ministry of Health, 2010) found smokers who

had started smoking at age 5-9 years. Forty one percent of boys aged 13-15 years were found to smoke, while among girls the same age the rate was 3.5%. Tobacco use is estimated to kill up to 400,000 Indonesians each year. Indonesia does not comply with international tobacco control policy efforts. It is one of the few nations that has never signed or ratified the Framework Convention on Tobacco Control (FCTC). Further, the country does not follow WHO compliance on enforcing bans on tobacco advertising, promotion and sponsorship.

- **Vietnam – Road traffic accidents.** Injury mortality rates are highly variable throughout Viet Nam. According to WHO (2009), the majority of death and injuries on the roads are confined to the age group of 15 to 49 years – the group that makes up 56% of total population, and the most economically active group. WHO estimates that road traffic injuries are the leading cause of death for those aged 15-29 years in Viet Nam. Injury mortality annual rates are highly variable throughout Viet Nam. The highest (60.7 per 100,000 people) are found in the low socioeconomic areas of the Northern provinces. Provinces surrounding the two largest cities of Hanoi and Ho Chi Minh City have the lowest injury mortality rates with 38.4 and 36.8 deaths per 100,000 people respectively.

b. Policies and action on SDH

In all seven countries, we found that there are good policies relating to SDH, both within and beyond the health sector. Within the health sector, the policies cover many of the areas that one might expect to see, such as free health care for the poor and for children, national health insurance, national drug policies, and national AIDS policies.

A wide range of SDH-related policies from outside the health sector was also identified, split broadly into two categories: those that redistribute state finances to the poor; and those that seek the empowerment of disadvantaged groups through legislation and other means.

Financial redistribution is exemplified by the social assistance grants that are given out in South Africa, including the State Older Persons Grant, the Disability Grant, the Child Support Grant, the Foster Child Grant and the Care Dependency Grant. Eligibility for grants is dependent on an income-based means test. At another level, the Ghana Petroleum Revenue Management Act (2011) provides a framework to guide the efficient collection, allocation and management of revenue from that country's rapidly developing oil sector. The Act has authorised the establishment of a Stabilization Fund to take care of revenue volatility through expenditure smoothing, and a Heritage Fund to ensure intergenerational equity and to create an alternative source of income for the future.

A good example of an empowerment policy is to be found in Bangladesh, in the form of the National Women Development Policy (2011). The main goal of this policy is to ensure equal rights for men and women, through providing women with guarantees about their human rights, their equal and full participation in society (including issues of political and economic participation and land ownership), proper education, eradicating female poverty, eliminating all discrimination and violence against women, and ensuring nutrition and health for women. This policy also talks about inheritance rights for women, though this needs to be

stated carefully within the context of Islamic law that also prevails in the country, since the religion has some different views about inheritance rights for women.

In spite of this raft of strong SDH-related policies, however, we found that a number of initiatives are not being effectively or fully implemented. The reasons for this were variously given as corruption; poor infrastructure; shortages of financial and human resources; mismanagement; and political opposition. All of these issues lie well beyond the reach of INTREC, but it is nonetheless important to recognise that since ineffective policy implementation is a significant part of the SDH landscape, bringing about policy change remains as a necessary but perhaps insufficient component in addressing the social determinants of health. Efforts therefore need to be made to promote proper implementation, through, for example, advocacy and building alliances with other, non-governmental actors.

Such civil society groups – both national and international – work in large numbers in each of the seven countries. They deal with all manner of SDH issues in all manner of ways, including:

- **Programmatic implementation** – for example, Help Age International in Tanzania, which focuses on reducing the impact of HIV and AIDS on older people and their families; and Basic Aid in Ghana, which aims to counter the geographically inequitable distribution of mental health care services in the country by serving the poorly resourced north.
- **Operational research** – for example, the Maharashtra Association of Anthropological Sciences in India, which applies knowledge of theory and methods in anthropological sciences for community development in order to address issues of poverty, disease, deprivation, and exploitation.
- **Advocacy activities** – for example, BRAC in Bangladesh, whose work includes Legal Empowerment, and Gender Justice; and the Partnership for Action in Health Equity (PAHE) in Vietnam, which advocates for health equity within the context of the country's rapid economic and social development.

c. SDH training

SDH-related courses are offered in all seven countries, on a wide range of topics. However, (i) the number of places available for students is limited; (ii) the training tends to be public-health-oriented (since it is usually taught in Schools of Public Health) rather than inclusive of the broader, multi-sectoral issues associated with SDH; and (iii) insufficient funding places limitations on both students – who have to self-fund or obtain funding themselves – and on the training institutions themselves, thus affecting participation and quality.

Limited availability of training

The courses that we considered to be SDH-relevant included, for example, social epidemiology; child health and nutrition; applied research methods; health promotion; socio-cultural dimensions of health; health care management; and health policy, economics and finance. Most such courses take place within Master of Public Health (MPH) programmes in Schools of Public Health. However, a number of these courses are given as electives rather than core courses, meaning that some MPH graduates may not be exposed

to, or have a good grasp of them. Further, since the courses are locked into programmes, students need to take the whole programme in order to take the course, and this is simply not feasible for many people (for example, decision makers or those working in NGOs).

Some courses are offered outside Schools of Public Health as part of other postgraduate curricular, or as stand-alone short courses. These include topics ranging from the Sociology of Health, to HIV/AIDS and Society, and Nutritional Security for Health and Development. Not surprisingly, SDH training is rare outside the health sector. While education is highlighted as a critical social determinant of health, few if any educational training courses in the INTREC countries cover SDH.

Overall, while there is a good diversity in the SDH-relevant courses given, the actual number of courses available for each country is quite limited. Consequently, entry into the various programmes in each of the three countries is highly competitive, which means that many people who would like to receive training in SDH are unable to do so. In one institution, for example, we learned that 298 applications for the 2011/2012 MPH course had been received, but only 88 students could be admitted (30% of those who applied).

Insufficient SDH-specific training

Although much of the SDH-related training takes place at schools of public health, several respondents felt that the specifics of SDH were not adequately covered in the public health training curricula, and that these courses were not practical or detailed enough to equip students with a clear conceptual grasp of SDH. Conceptually, the students are taught and will recognise that inequalities exist in society, but they are taught about these inequalities through a public health lens, not through an SDH, ‘*causes of the causes*’ lens. Therefore, while various aspects of their courses may deal with inequities and other SDH-related issues, SDH is not the focus of the training and the link is often not made explicit. As one informant said, her students were therefore unprepared to address “real issues” when they finished their courses.

A further training gap is to be found in the relatively limited focus given in the various curricula to research methods (qualitative and quantitative), and to health economics. Both these areas are critical to SDH, insofar as they provide the basis for showing evidence (or not) of intervention effectiveness and its relationship to equity; how and why an intervention might be improved; and, critically for policy makers, evidence (or not) of cost effectiveness for different sub-populations.

Staffing, funding, and institutional infrastructure

The issues of staffing, funding, and institutional infrastructure are intertwined, and when any of them are less than adequate, bottlenecks in the provision of education are almost inevitable. At one of the institutions we surveyed, the staff reported feeling under-manned and overworked. Further, their remuneration was not seen as competitive, which meant that staying motivated was difficult, as was recruiting high quality new staff to reduce their burden.

We also learned of one case of a promising course on Social Epidemiology that was, in the end, dropped, due to insufficient funds. On a more hopeful note, reference was made to an

SDH-related portion of an MPH programme whose financial security is being covered, at least for the time being, by USAID funding. While this particular financing remains quite insecure, it does nonetheless indicate recognition by the donor community of the need for such support.

As for the students themselves, few Schools of Public Health offer scholarships for their MPH programmes, which means that students need to secure their own funding. Most students are supported by their employers or by other funding agencies, but it is clearly essential that for SDH training to be accessible in such institutions, it must be made as inexpensive to students as possible in order to give those without access to substantial resources the opportunity to participate.

d. Concept mapping

Participants in the concept mapping exercise generated 108 statements in response to the focus prompt (*“In order to conduct research on the causes of health inequalities in my country, I would need background knowledge on...”*), which we reduced to a list of 59 mutually exclusive statements. The results from the rating and thematic clustering activities were aggregated and analyzed separately for researchers from African and Asian HDSSs, using Trochim’s methods (Kane and Trochim, 2006; Trochim, 1989). First, the means of the importance ratings assigned by participants to each statement were calculated at a group level. This resulted in a rated list of statements for Asian and African researchers. Secondly, multi-dimensional scaling techniques and cluster analysis (Kruskal and Wish, 1978) were used to identify how statements were grouped into thematic cluster by each group.

African INDEPTH researchers (n = 53)		Asian INDEPTH researchers (n = 18)	
Indicators to measure, analyse and evaluate (the dynamics of) health inequalities in different contexts	4.47	Evidence on causes of health inequalities in my country	4.50
Translating research into policy: how to package lessons learned from research projects into policy messages	4.40	Translating research into policy: how to package lessons learned from research projects into policy messages	4.42
Methods for measuring/studying health inequalities	4.37	Analysis of longitudinal data	4.33
Analysis of longitudinal data	4.33	Monitoring and evaluation methods	4.33

Table 2 – Top four statements according to importance for INTREC training programme (1=low, 5=high)

Table 2 gives an overview of the four top-rated statements as identified by researchers from African and Asian INDEPTH HDSSs. Examination of these shows that there was significant confluence of opinion between the two groups. Two of the four statements were the same for both African and the Asian respondents (translating research into policy, and analysis of longitudinal data; see the arrows), and issues to do with health inequalities (causes, measurement and analysis) were also deemed to be very important by both groups.

The 6 overarching themes or thematic clusters constituted by the 59 statements are given for both the African and Asian researchers in Table 3. The Table shows that while similar themes were found in the responses of the two groups of respondents, they were rated differently.

African INDEPTH researchers (n = 53)	Asian INDEPTH researchers (n = 18)
Studying health inequalities (4.00)	Research and policy (4.17)
Research methods (3.93)	Health systems (4.00)
Health of specific groups (3.83)	Social determinants of health (3.92)
Demography and health inequalities (3.72)	Research design and methods (3.92)
Health policy and health systems (3.53)	Factors causing health Inequalities (3.75)
Research support (3.32)	Social medicine (3.58)

Table 3 – SDH training needs identified by African and Asian respondents from INDEPTH HDSSs through the concept mapping exercise, by theme. (The numbers behind the cluster names indicate the mean priority rating assigned by respondents to the statements within the thematic cluster: 1=low, 5=high.)

Overall, this concept mapping exercise indicates that the INTREC training programme will fulfill its objectives if it follows a broadly similar approach for Africa and Asia, but with specific issues highlighted for each region.

4. RECOMMENDATIONS

We have concluded from the seven country reports that our overall goal – to develop and provide a comprehensive educational programme on SDH for INDEPTH scientists in the seven countries – is very much needed, and that we will be filling an important niche. Based on these findings, as well as those from the concept mapping exercise, and advice from the IAG, our recommendations for future INTREC training are divided into three broad categories, as given below.

a. INTREC training structure and delivery

Three core areas have been highlighted in terms of course structure and delivery in order to increase accessibility to the training, and to maximize its relevance:

- i. **Independent, stand-alone short courses** should be developed, rather than just those that can only be taken as part of longer degree programmes.
- ii. **Online media** should be used as an additional means of providing SDH education. While the availability of computers and internet coverage is not universally good in all INTREC countries, the situation is consistently improving, and the opportunity to complement face-to-face classroom teaching should be taken.
- iii. **Target audience** – individual teaching approaches must be taken for different audience groups (whether researchers, trainers, professional groups, or decision-makers). Clearly identifying the target audience is therefore essential.

b. INTREC training content

Topics to be covered in the courses should include:

- i. **The key SDH identified in the country reports**, including the cross-cutting SDH issues, and the country-specific SDH issues (as case studies).
- ii. **Learning to understand national political structures**, the policy process, and how to approach policy makers with research findings.
- iii. **Methods**: Students should be made aware of both the quantitative and qualitative tools of analysis that are available, of methods to monitor the longer term health impacts of SDH-directed initiatives, and of the challenges inherent in measuring and understanding health inequities.
- iv. **Inter-disciplinarity**: Educate researchers on how methods from other fields can be used to study SDH.
- v. The importance of, and methodology for collecting **local/district level data**.
- vi. **Implementation case studies**: Examples of what has, and has not worked in different settings
- vii. **Economic analysis**, thereby equipping students with the ability to highlight the economic burden to government of *not* addressing SDH.
- viii. **Advocacy** for evidence-based SDH policy and practice.
- ix. **Presentation of findings** so that they can persuade, elicit interest, engage, and initiate action amongst both the policy makers and the general population.
- x. **The importance and challenges of inter-sectoral action** – for example, case studies of multi-sectoral cooperation, in which students examine what was done, what challenges were faced, how much these challenges were contextual or generic, and what were the successes.
- xi. **Theory and practice** should be integrated.

c. Collaboration

On the basis that the whole is far greater than the sum of its parts, where feasible, INTREC should endeavor to collaborate with institutions and individuals who can advance the SDH agenda. These include:

- i. **INDEPTH sites** – As well as offering the SDH training, we could explore the possible benefits of exchanges with other, non-INTREC HDSS centres in order to develop understanding of specific social determinants – for example, gender – as experienced within different cultural contexts.
- ii. **Existing SDH research and training institutions** (such as the Ramlingaswami Centre for Social Determinants of Health in Delhi).
- iii. **Institutions offering SDH-related courses** (such as Schools of Public Health) as well as other training networks and collaborations (e.g., Welcome Trust Initiative working with the PhD training in Africa)
- iv. **Policy makers** – Efforts need to be made to bring about proper dialogue and collaboration between researchers and policy makers. This includes identifying and working closely with **key gatekeepers** into the policy arena.
- v. **Policy champions** – INTREC needs to identify individuals who can champion SDH research findings, and who are prepared to be accountable for that research.

- vi. **NGOs** – INTREC could support suitable NGOs by providing training in operational and evaluation research, so as to improve service provision.
- vii. Other **professional networks and movements**, including Asia-specific consortium of public health, UNESCAP, primary health care movement, People’s Health Movement, and various local associations.
- viii. **Media** – SDH are not well understood by the general public, and the media (print, TV, radio, and online) should be utilised where possible to raise awareness of the issue.

5. DRAFT INTREC TRAINING PROGRAMME

The draft INTREC training programme comprises topics related to adult health and its social determinants in the seven WHO-SAGE INDEPTH countries and is organized sequentially in five educational blocks.

The first block is an online course offering a graduate level introduction to the current social determinants of health (SDH) framework and methods. The course will be offered to selected INDEPTH scientists from target countries and taught by the School of Public Health faculty from Harvard University, USA. It is scheduled to be launched in October 2013, at the INDEPTH Annual General Meeting in Johannesburg, South Africa.

The second block provides more in-depth training in methods and will be conducted as regional (Ghana and Indonesia based) workshops on quantitative and qualitative methods in Social Determinants of Health. Each workshop will be about a week long and will train 2-3 researchers from each INTREC country. The quantitative methods workshop will be taught by faculty from Heidelberg University, Germany. The qualitative methods workshop will be conducted jointly by professors from Umeå University, Sweden and the University of Amsterdam, Holland. The methods workshops will be conducted in February-March 2014.

The third block will apply the learning to local data collection and analyses in the context of the researchers’ country. The goal of this workshop is to begin developing particular SDH focused case studies by integrating quantitative and qualitative methods. It will be offered as a hands-on data workshop to the leading INTREC learners, who completed blocks one and two. The workshop will take place at the Harvard Center for Population and Development and will be led by a group of public health experts from Harvard University, USA. The case studies workshop is planned for April 2014.

The fourth block is planned as a brief online seminar/webinar focusing on presentation techniques. This block will be co-developed by the Harvard Center for Population and Development, Gadjah Mada University in Indonesia and INDEPTH specialists in South Africa and Ghana. The goal of this block is to help INTREC researchers build a bridge between research and policy, and to learn to present their case studies in most accessible ways. The researchers will learn how to hone the key messages derived from their work and develop techniques to communicate those messages to a varied audience such as policymakers and stakeholders. The webinar is planned for June 2014.

The fifth block is planned as an online forum for researchers and policy makers, where INTREC-trained researchers will be presenting their results and post their case studies as well as presentations given regionally to the policymakers in each country. This forum will provide the important exchange of information, discussion and continuous collaborative learning for all participants of the project. The online forum is scheduled to be launched in October 2014.

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