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SEAOHUN
South East Asia One Health
University Network

CORE Competencies and One health – from theory to action

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Tufts | **OneHealth**
UNIVERSITY



SEA OHUN
South East Asia One Health
University Network

Setting the scene

SEAOHUN started with One Health as the catalyst.....

One Health Vision.....

.....a multidisciplinary collaborative approach to improving the health of humans, animals and the environment, endorsed by FAO, OIE and WHO, USAID

One Health approach.....

.....encourages the collaborative efforts of multiple disciplines working locally, nationally, and globally, to attain optimal health for people, animals, and our environment

SEAOHUN was established under EPT1
(2010-2014)

~ to embed the philosophy of One Health and the One Health approach in future outbreak response and disease investigation leaders

~ to establish the spirit of multiple disciplines working together early in their careers...

...university students like the ones we teach!

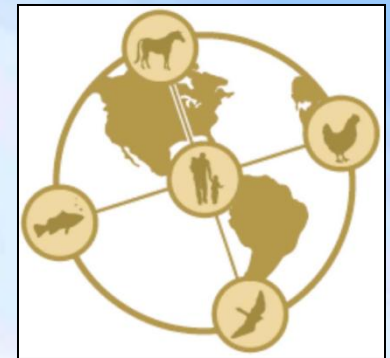
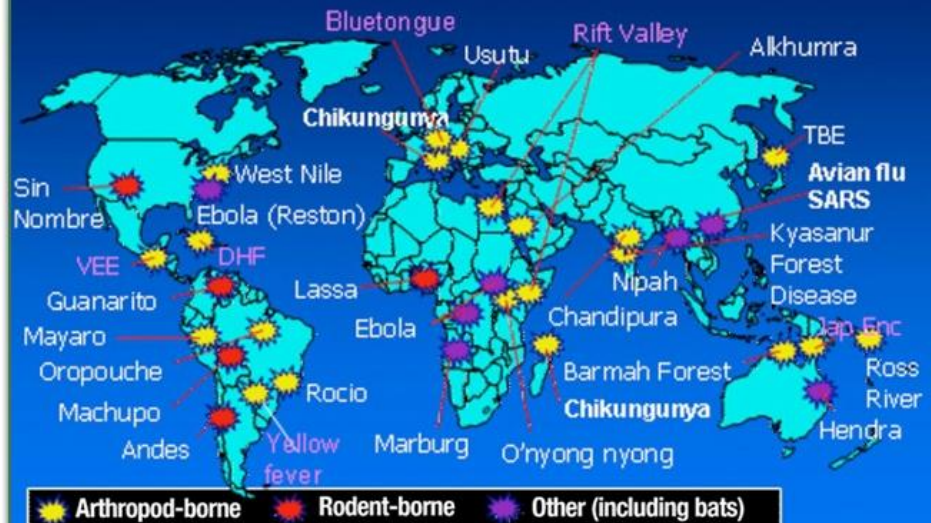
Examples of One Health Issues (all are complex problems or 'wicked problems')

- Zoonotic disease response and control; pathogen surveillance and monitoring
- Food safety farm to fork
- Public health – animal human interface, pollution, farming, cross-species interactions, animal products trade
- Wildlife health – human encroachment and interaction, bush meat, ecosystem understanding and approach
- Antimicrobial resistance – overuse in animals, incorrect usage, spread of resistant bacteria from animals to humans
- Disaster preparedness – rescue and emergency services, disease risks, interactions between animals and people

Goal of EPT2 One Health Workforce (2014-2019)

To employ the strengths of universities to prepare the OH workforce in the **competencies and skills** for preventing, controlling, detecting and responding to zoonotic diseases

Emerging and Reemerging infections - 70% vector-borne or zoonotic



Investigation and control of zoonotic diseases is impossible without a trans-disciplinary approach involving human, animal, environmental and other scientific disciplines

Some disciplines who might work together in response to an outbreak of a zoonosis or other OH issue....

Physicians
Veterinarians
Nurses
Ecologists
Zoologists
Entomologists

Sociologists
Economists
Anthropologists
Pathologists
Microbiologists
Epidemiologists
Politicians!

Many other “ologists”

....BUT HOW DO THEY WORK TOGETHER???

Training in the One Health Approach is important...

- To ensure that One Health professionals are well-trained for their roles in OH teams
- To ensure that professions have the skills to work collaboratively with each other and with governments, the private sector and communities
- To encourage disciplines to work together to develop and restructure health systems to benefit from One Health

SEAOHUN Objectives

1. To promote and advance the One Health approach for control of emerging and re-emerging infectious and zoonotic diseases
2. To improve the competencies of One Health professionals
3. To build a One Health evidence base through research activity
4. To build cadres of trained professionals to be One Health current and future leaders



- The initial focus for SEAOHUN was on platform activities to embed the One Health philosophy –
 - ✧ Development of nationally and regionally-relevant OH Core Competencies
 - ✧ Development of content for a generic One Health course

SEAOHUN OH Core Competency Project

In order to work together effectively, it is essential that future professionals adopting the One Health approach have a common platform – a set of **Core Competencies** – enabling them to interact easily and to ‘**speak the same language**’ .

What are One Health Core Competencies
and why are they important?

These are Competencies that are essential for an
effective One Health approach

They are specifically related to outbreak
response, disease investigation, surveillance and
control

OH Competencies that are held in common
across the SEAOHUN region were designated as
“OH Core Competencies”

But first – what are competencies?

- Knowledge, skills, and behaviours that can be measured, **Core Competencies** are essential for the success of an organisation
 - For this project, competencies were identified using a participatory approach, based on institutional and national needs

Terminology

- **Core Competency:** a measurable knowledge, skill, or behavior that every member of a One Health team must have
- **Competency Domain:** a set of competencies that are grouped together in a logical category
- **Technical competencies** – epidemiology, microbiology, diagnostics etc., the skills and knowledge which **are critical but different to CC skills, and which are taught in the specific disciplines**

Seven Competency Categories (Domains) were
identified
(for which skills can be identified and
measured)

Based on consensus involving teams of
professionals from member universities in each
of the four SEAOHUN countries

One Health (OH) Core Competency Domains for SEAOHUN: Country and Regional Results



OHCC Regional Domains by Country July 2012 Workshop Results

| OHCC Regional Domains by Country July 2012 Workshop Results | | | | SEAOHUN Regional Domains October 2012 |
|---|--------------------------------|-------------------------------|---------------------------------|--|
| Malaysia | Indonesia | Thailand | Vietnam | |
| Management | Management | Planning and Management | Planning and Management | Management |
| Communication | Communication | Communication and Informatics | Communication and Informatics | Communication and Informatics |
| Culture and Beliefs | Culture and Beliefs | Culture and Ethics | Culture and Beliefs | Culture and Beliefs |
| Leadership and Professionalism | Leadership and Professionalism | Leadership | Leadership | Leadership |
| Collaboration and Partnership | Collaboration | Collaboration and Partnership | Collaboration and Partnership | Collaboration and Partnership |
| Ethics | Values and Ethics | | Values and Ethics | Values and Ethics |
| Systems Thinking | Systems Thinking | Systems Thinking | Systems Thinking | Systems Thinking |
| | | One Health Knowledge | Policy, Regulation and Advocacy | |

SEAOHUN Regional OHCC Domain Definitions

| Domain | Definition |
|-------------------------------|--|
| Management | The ability to plan, implement, monitor, and evaluate One Health programs in order to maximize effectiveness of One Health action and desired outcomes |
| Culture and Beliefs | The ability to understand analyze, and appreciate social, religious, and historical diversity across different cultures with individuals and societies |
| Leadership | The ability to initiate a shared trans-disciplinary vision and to motivate and inspire teams across sectors to organize, manage, and foster OH action |
| Values and Ethics | The ability to identify and respond to OH issues at multiple levels with integrity, honesty, trust, fairness, accountability, adaptability in diverse contexts |
| Collaboration and Partnership | The ability to foster and sustain effective collaboration across disciplines with OH teams, individuals, stakeholders, communities in the advancement of OH actions |
| Communication and Informatics | The ability to effectively acquire, process, synthesize, share, and exchange information across sectors and disciplines in order to establish, enhance, and promote One Health actions |
| Systems Thinking | The ability to analyze how various elements influence and interact with one another within a global perspective that results from the dynamic interdependencies among human, animal, environmental, and ecological systems |

Specific SEAOHUN OH Core Competencies were identified within Domains

| Domain | Specific Competencies for Integration |
|-------------------------------|---|
| Management | Categorize problems according to priority, and formulate goals and objectives |
| Culture and Beliefs | Generate trust among the community within an OH program |
| Leadership | Evaluate project implementation, team performance, outcomes, and impacts for continuous improvement |
| Values and Ethics | Actively support other team members, and show a willingness to share skills, knowledge, expertise, and time |
| Collaboration and Partnership | Formulate strategies to harmonize collaboration and partnership across disciplines |
| Communication and Informatics | Apply various communication media approaches |
| Systems Thinking | Ability to think 'outside the square' and to identify the many factors associated with a disease occurrence |

Example of domain to important skill

- **Skill/Behavior:** good communicator
- **Competency:** ability to create an effective message
- **Measurement:** ability of the target audience to correctly restate the message in their own words
- **Competency Domain:** Communication

Other examples of competencies in the broad domains that are vital for OH team members
(note that overlaps will occur)

Leadership – strategy development, development of clear scopes of work and roles and responsibilities, ability to be a team leader and a team member, conflict resolution, ability to achieve compromise, problem-solving skills, governance, evaluation of project implementation, outcome and impacts for continuous improvement

Collaboration – ability to work across sectors and disciplines, understanding of systems and needs, opportunities and challenges; ability to interact with others and to find common ground; relationship building, networking skills

What are the OHCC being used for?

The Core Competencies are being used by universities, working with stakeholders from government and other sectors, to **map** and identify current gaps in curricula, to discuss opportunities to fill those gaps and to develop acceptable strategies to produce the future OH leaders in our communities –

– individuals with the skills to effectively and efficiently work together to protect human, animal and environmental health

“a new graduate species”!



Collaboration

Disease

Management

Behavior

Development

Policy

Culture

Management

Leadership

Eco
System
Health

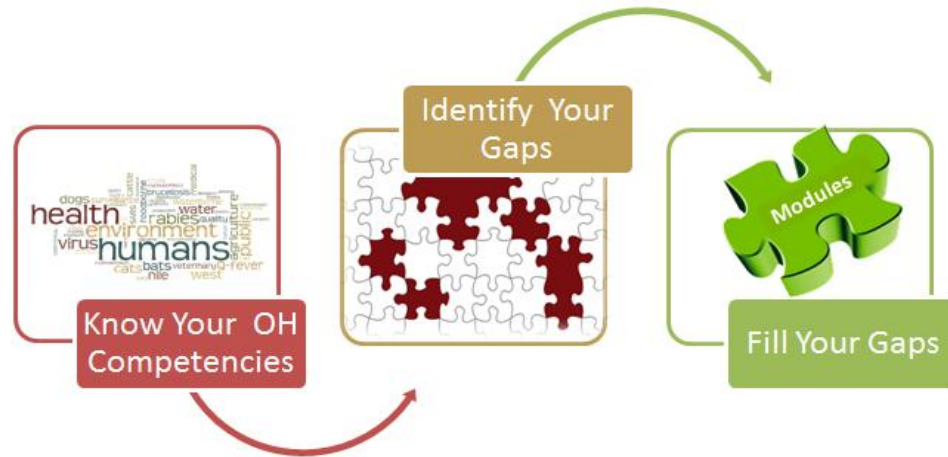
Systems
Thinking

Communication



The next step was to use the competencies to develop a set of regionally-relevant OH training modules

How to Develop a One Health Course to Meet Your Needs



Step One: Know your One Health competencies

Step Two: Review your curriculum and identify **competency gaps**
OR if you are designing a new course or a short-course, identify **which competencies you want to include**

Step Three: Use the One Health Course materials to fill the gaps

SEAOHUN Regional CC Domains

Management

Communication and
Informatics

Culture and Beliefs

Leadership

Collaboration and
Partnership

Values and Ethics

Systems Thinking

The 15 modules
were a mix of
technical and
core
competencies

The 15 SEAOHUN Regional OH Course Modules

Behavior development

Ecosystem health

Fundamentals of infectious disease

One Health concepts and
knowledge

Epidemiology and risk analysis

Policy, advocacy and regulation

Public health

Systems thinking

Collaboration and partnership

Communication and informatics

Culture, beliefs, values and ethics

Leadership

Infectious disease management

Management

One Health economics

Conclusions

1. A highly successful and collaborative network of related OH faculties has been established in South East Asia
1. Network members from multiple disciplines have worked closely together to define the required competencies for One Health professionals and to develop training materials to be used for revising courses and developing new ones – both for pre-service and in-service training
1. Universities have initiated dialogue with government and other stakeholders on the makeup of the future OH workforce and this will be built upon and strengthened during EPT2

OUR WORLD.....



OUR HEALTH....!

