

Overview of Major Issues for Assessment of Disease Burden of Viral Diseases in Asia

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Key questions

- Is there available data for target diseases in each country?
- How to obtain necessary information?
 - Major issues and challenges
- Why neglected diseases continue to be neglected?
- Where to go?
 - Future direction / possible solutions



**Is there available data for
target diseases in each
country?**

Yes, but.....

Available surveillance data

Country	Anthrax	Brucellosis	Cholera	Total dysentery	Amoebic dysentery	Dengue	Hantavirus	Total viral hepatitis	Influenza	Japanese encephalitis	Legionnaire	Leptospirosis	Meningococcal meningitis	Plague	Rabies	Salmonellosis	Shigellosis	Typhoid
Australia	Y	Y	Y	N		Y	Y	Y	Y		Y	Y	Y1	Y	Y	Y	Y	Y
Brunei	N	N	Y	Y	?	Y1	N	N	N	Y	N	Y	Y2	Y	N	Y	N	Y
Cambodia			Y	Y		Y							Y2					
China	Y	Y	Y	Y	N	Y	Y1	Y		Y1	N	Y	Y2	Y	Y	N	N	Y1
Hong Kong (China)	N	N	Y	Y1	Y1	Y	N	Y	Y	N	Y	N	Y1	Y	Y	N	N	Y
Japan	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	?	Y	Y	Y	?	Y	Y
Lao PDR	Y	N	N	Y1	Y	Y	N	Y	N	Y1	N	N	Y2	Y	N	N	N	Y
Macao (China)	N	N	Y	N	Y	Y	N	Y	N	N	N	N	Y	Y	Y	Y	Y	Y1
Malaysia	N	N	Y	Y	N	Y	N	Y	N	Y1	N	N	N?	Y	Y	N	N	Y1
Mongolia	Y	Y	Y	Y	N	N	N	Y	?	N	N	N	Y1	Y	Y	Y	Y	Y1
New Zealand	Y	Y	Y						Y		Y	Y	Y1	Y	Y	Y	Y	Y
Papua New Guinea			Y										Y2					Y
Philippines			Y			Y						Y	Y1		Y			Y
Rep. Korea	Y	N	Y	Y1	Y	N	Y	?	N	Y	N	Y	Y	Y	Y	N	Y	Y
Singapore			Y			Y		Y		Y				Y				Y
Viet Nam	N	N	Y	N	Y	Y	N	Y	Y	Y1	N	N	Y2	Y	Y	N	Y	Y

Available surveillance data

Country	Cholera*		Dengue/DHF		Influenza*		Encephalitis*		Meningitis*		Typhoid*	
	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999
Australia	5	4	558	181	na	2,102	na	na	421	558	72	67
Brunei	0	93	3	7	na	na	na	0	4	10	na	3
Cambodia	1,857	na	16,216	na	na	na	na	na	na	na	na	na
China	11,786	4570	76	1,306	na	na	11,891	8,108	3,606	2,852	56,854	47,977
Hong Kong	71	18	15	5	na	17,351	na	na	2	3	69	72
Japan	58	40	0	9	17,599	633,197	4	5	6	10	58	79
Lao PDR	na	na	7,671	2,507	na	na	5	5	na	84		83
Macao	8	0	0	0	na	na	na	na	0	0	8	4
Malaysia*	1,304	535	27,373	9,312	na	na	64	167	na	na	782	669
Mongolia	na	na	na	na	na	na	na	na	na	242	na	38
New Zealand	1	1	25	9	441	802	na	na	450	504	32	9
PNG	na	na	na	na	na	na	na	na	na	2,538	na	4,808
Philippines	729	330	31,829	9,221	na	na	na	na	na	88	na	523
Rep. Korea	0	na	na	na	na	na	3	na	13	na	380	na
Singapore	31	11	5,258	1355	na	na	1	18	na	na	57	49
Viet Nam	12	169	234,866	20,861	1,471,084	na	2,293	548	1,518	na	20,815	9,388

Main issues regarding surveillance data:

1. Inconsistencies

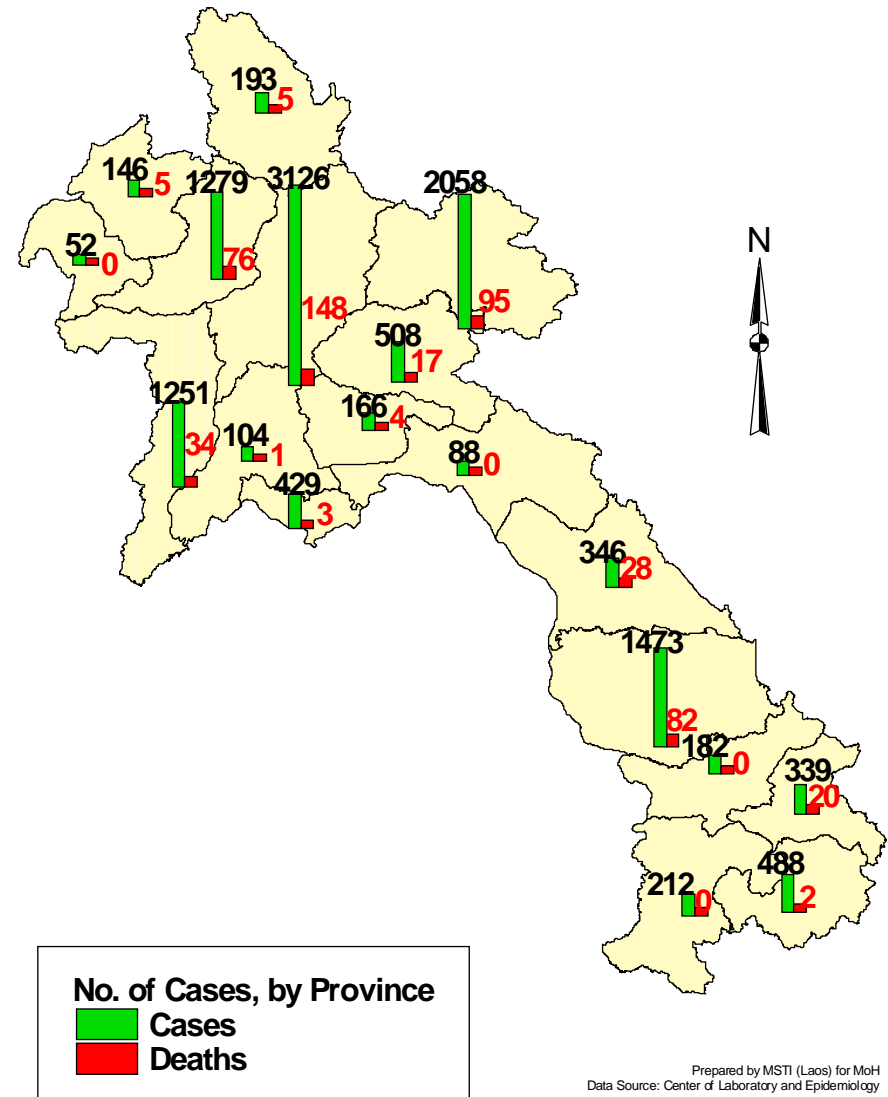
- Different conditions under the same name
e.g. Encephalitis
 - Laboratory confirmed JE
 - Clinically diagnosed JE
 - Viral encephalitis
 - Encephalitis
- Different case definitions
- Different figures in different systems

Main issues regarding surveillance data:

2. Incompleteness

- Geographic coverage
 - No reporting from certain areas
- Low compliance
 - Notifiable diseases are not notified!
- Limitation of hospital-based data
 - The patients don't go to hospital!
 - Private hospitals / clinics are not part of surveillance

Severe Diarrhea Cases and Deaths, 2000 (Total 12,440 Cases and 520 Deaths)



Main issues regarding surveillance data:

3. No validation

- Epidemiological data not linked with laboratory data
 - Influenza in Viet Nam in 1998: 1,471,084 cases
- No monitoring mechanism to endure validity of surveillance data

How to obtain necessary information?

Major issues and challenges

Possible counterparts to conduct disease burden studies

- Universities and other training institutes
 - Limited research capacity
- Establishing new research facilities
 - Oxford lab (HCMC in Viet Nam), PI (Cambodia)
- National laboratory
 - e.g. NIHE (Viet Nam), RITM (Philippines), China CDC, IMR (Malaysia), NIH (Thailand), NCLE (Lao PDR)

Main issues with national laboratories: 1. They are in transition

Tow main functions

Researches

Reference

Main issues with national laboratories: 1. They are in transition

Tow main functions

The diagram illustrates the transition of national laboratories. It features a large teal circle on the left, representing 'Original functions', which contains a smaller teal rectangle labeled 'Researches'. To the right, there is a smaller orange circle representing 'New functions', which contains a smaller yellow rectangle labeled 'Reference'. The text 'Tow main functions' is positioned above the orange circle, and 'Original functions' is positioned below the teal circle.

Researches

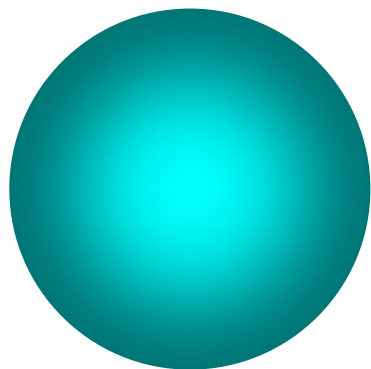
Reference

Original functions

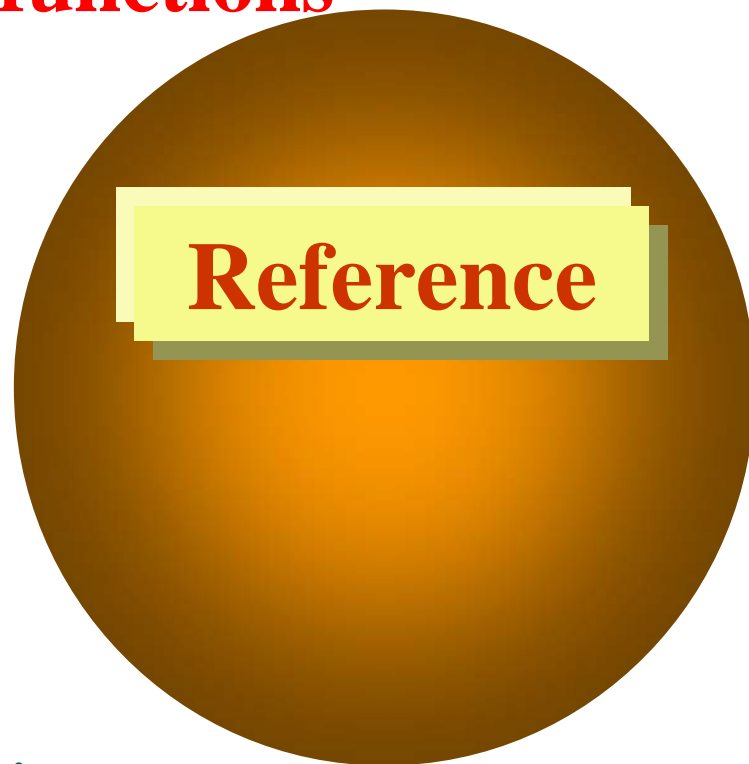
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Researches



Reference



New functions

Main issues with national laboratories: 1. They are in transition

Tow main functions

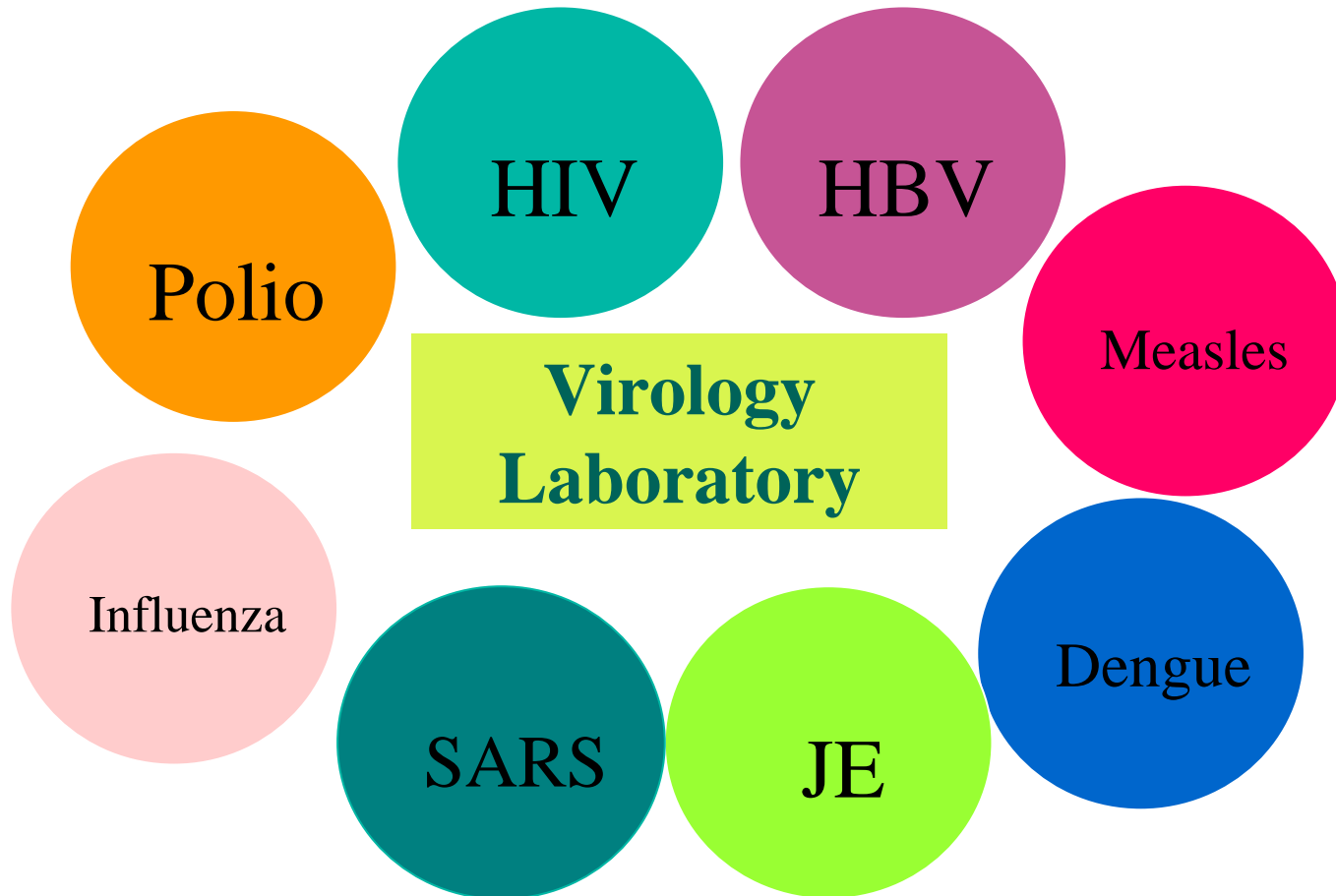


Researches

Reference

New functions

Main issues with national reference laboratories: 2. Too much to do



Main issues with national reference laboratories: 3. Competing priorities

Laboratory priorities

Government priorities

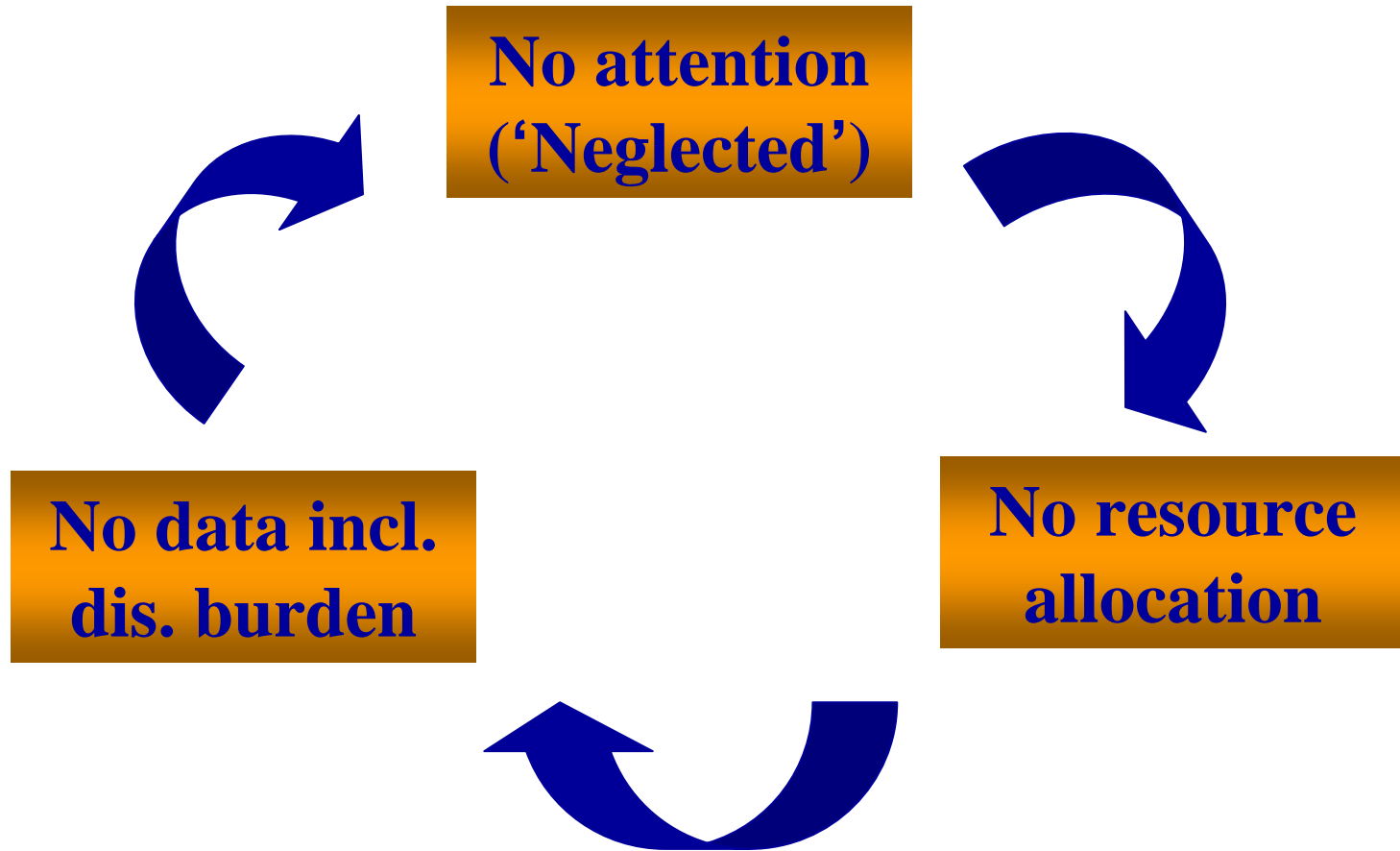
Donor priorities

Main issues with national laboratories: 4. Shortage of staff

- Laboratory staff
- Epidemiologists
- Field researchers
- Research coordinator
 - Management of various researches

Why neglected diseases continue to be neglected?

Vicious cycle of 'neglected diseases'



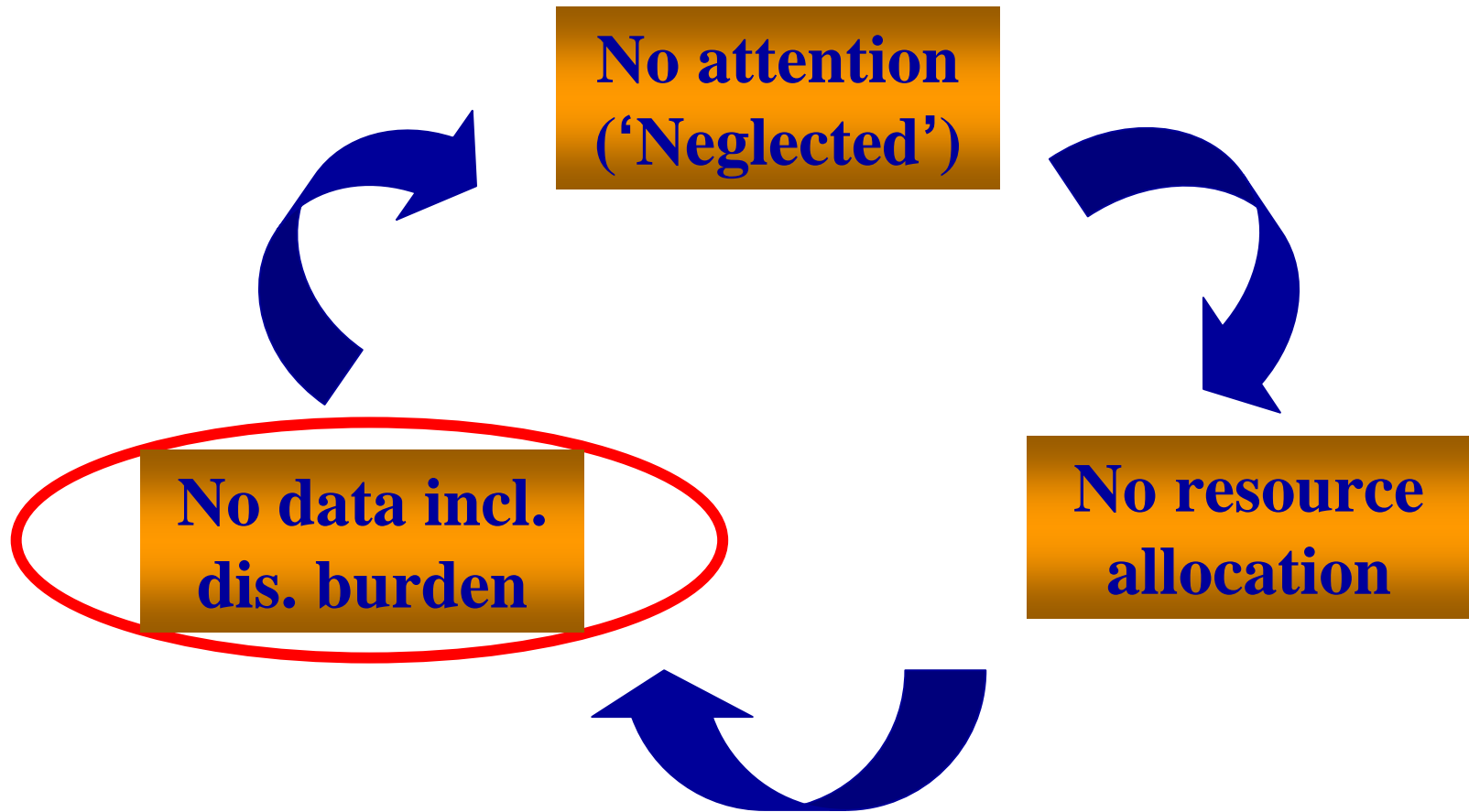
Donor support and government commitment to high profile diseases

- HIV/AIDS
- TB
- Malaria
- EPI
- Avian influenza

‘More neglected’ diseases in Asia

- Antimicrobial resistance
- Leptospirosis
- Typhoid fever
- Hantavirus infection
-
-

Vicious cycle of 'neglected diseases'

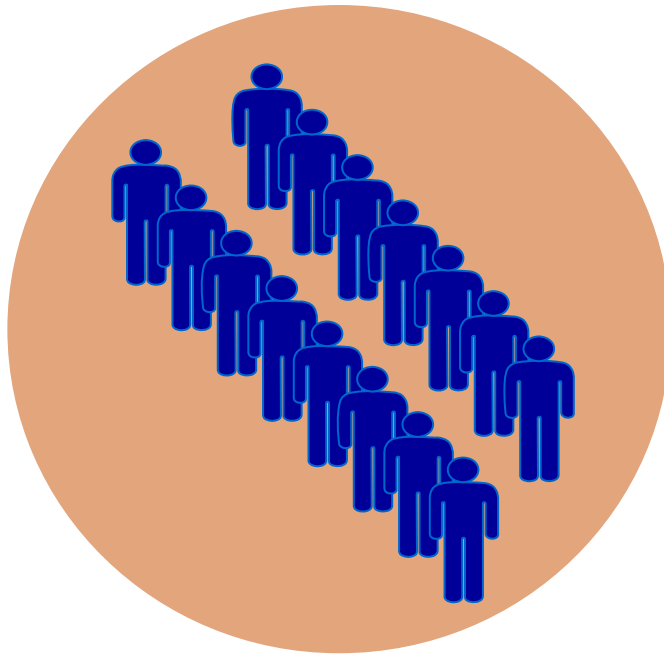


Where to go?

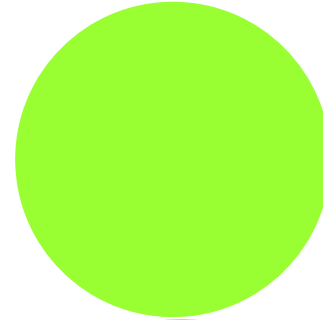
Future direction / possible solutions for disease burden studies

Future direction / solution

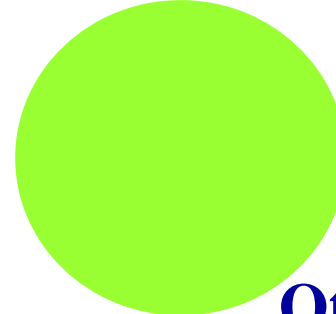
Well designed community-based studies may be necessary



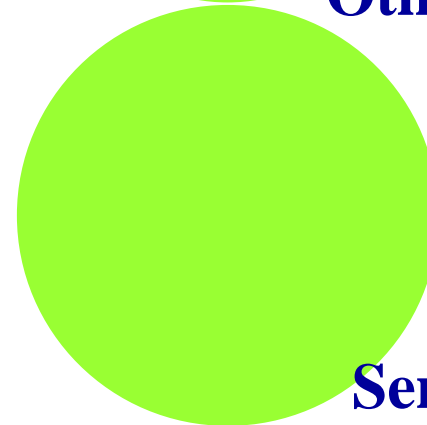
Cases in the community



Private hospital



Other HC facility



Sentinel hospital

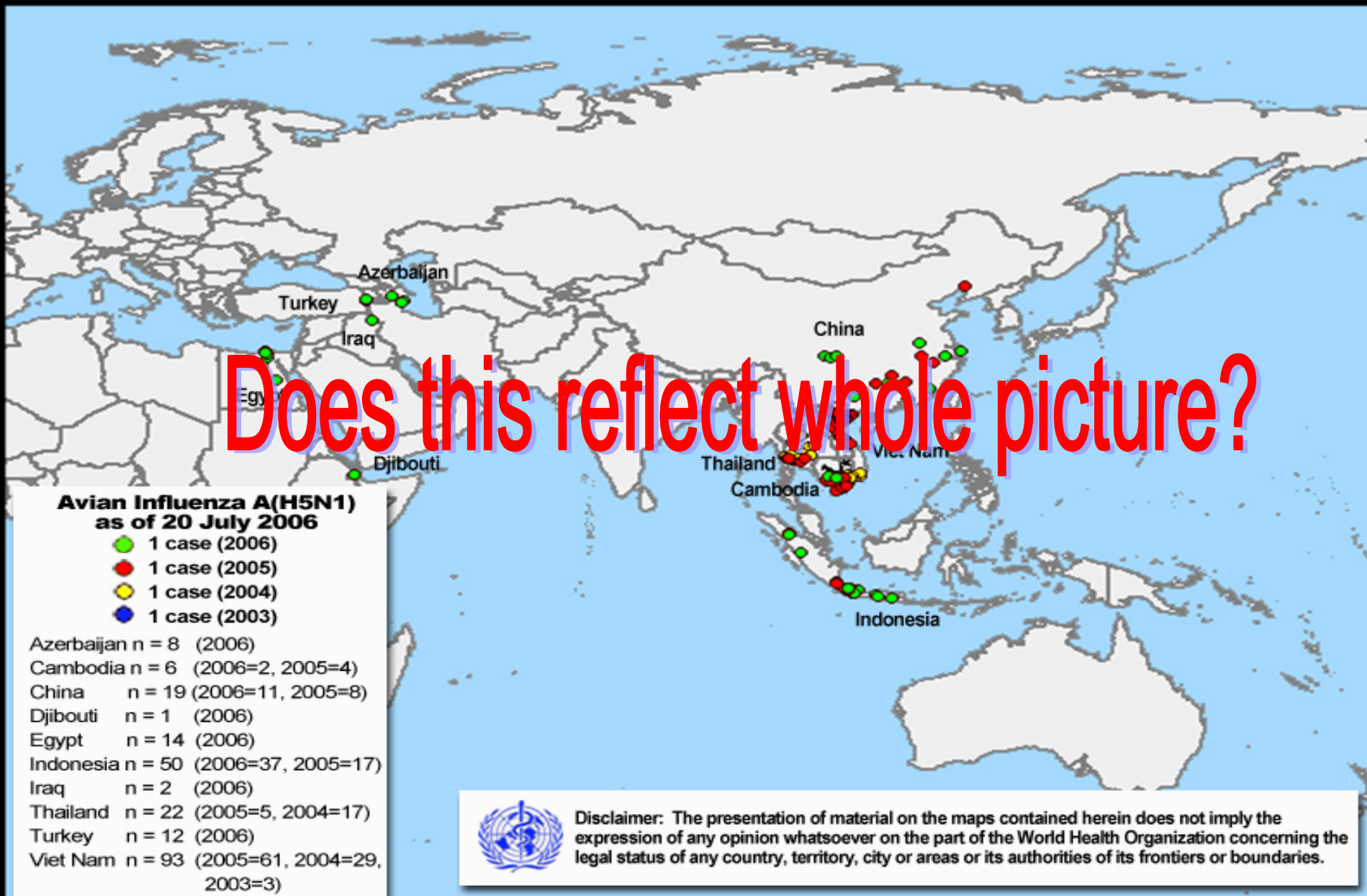
Future direction / solution

More coordinated and integrated approach

- There are so many programs / projects that collect disease data
 - National programs
 - Donor supported projects
- There are duplications / overlaps
- Disease burden studies can be done as integrated part of existing programs

Human cases of H5N1

(232 cases with 134 deaths as of yesterday)



Why AI surveillance still not fully functioning?

- Lack of basic capacity
 - Lab: National reference lab, Local labs
 - Epi: National, local, hospital, community
- External short-term supports (technical and financial) don't solve the problem
- Shifting toward capacity strengthening

Future direction / solution

Capacity strengthening

- Strengthening
 - Laboratory capacity
 - Epidemiological capacity
 - Research capacity
- Best and possibly shortest way to achieve both short-term and long-term objectives



Thank you



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