

Developing a PH Disaster Surveillance-Response System

Rossi Sanusi

(<http://rossisanusi.wordpress.com>)

International Seminar on Disaster Health
Management

GMU school of Medicine

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11.00 - 12.30



Centers for Disease Control and Prevention

CDC 24/7: Saving Lives, Protecting People™

“State health departments should look first at the tools they are using in non-disaster settings to assess their applicability for adaption to a disaster response.”

(<http://www.cdc.gov/nceh/hsb/disaster/faqs.htm>)

Strategy for Developing a PH Disaster S-R System

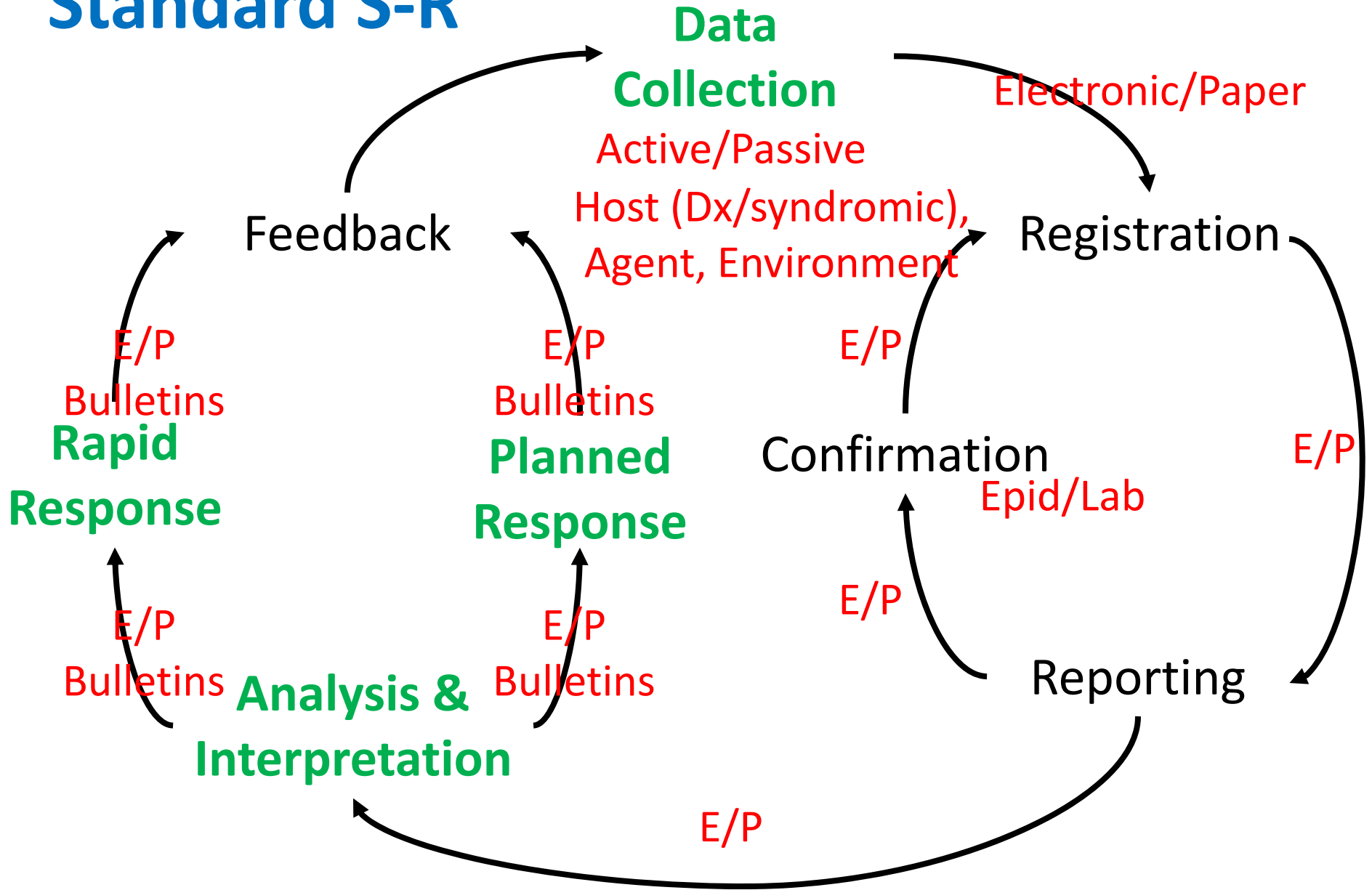
1. Develop Non-Disaster S-R System

2. Adapt Non-Disaster S-R → Disaster S-R

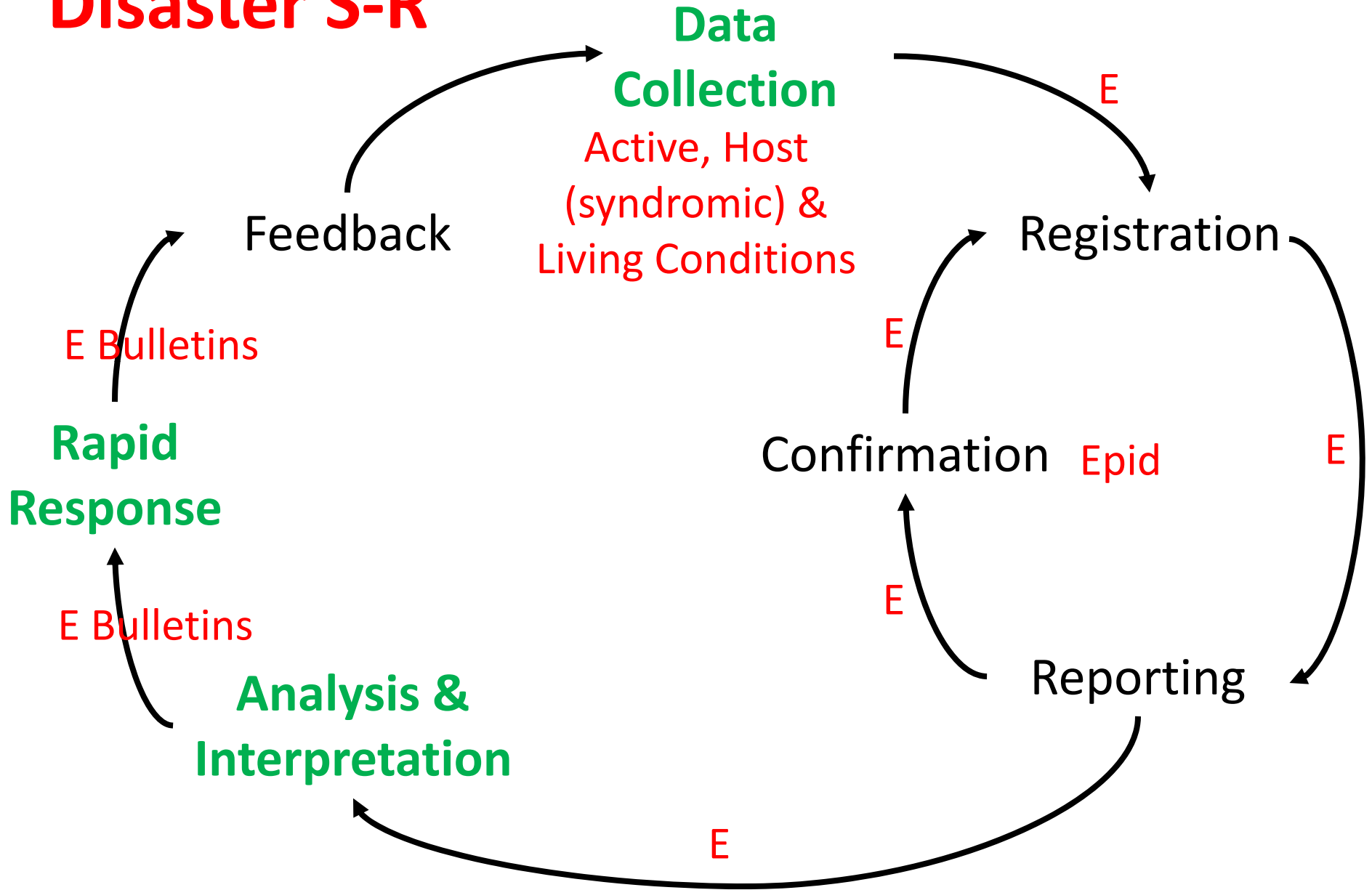


Disaster Cycle	Disaster Management Cycle	Surveillance-Response
Inter-disaster	Mitigation/ Reduction	Non-Disaster S-R
Pre-disaster	Preparedness/ Readiness	?
Impact	Response	?
Emergency	Response	?
Reconstruction	Recovery	Non-Disaster S-R

Standard S-R



Disaster S-R



OUTBREAKS

frequently happen in
Indonesia

Often reported late

News about Outbreaks

- ◊ Mass media
- ◊ Rumors

A health facility, symptom-based early
warning system is urgently needed
Real-time, accurate, and responsive

EWORS

EARLY WARNING OUTBREAK RECOGNITION SYSTEM (EWORS)



is a hospital (health facility)-based computer software for collecting and analyzing surveillance data in order to early detect communicable disease outbreaks

STANDARD EWORS FORM

FORMULIR ISIAN PASIEN EWORS

No Form Komputer

(diisi oleh operator)

I. Data Demografi (diisi oleh perawat)

No. Catatan Medik : _____

1. Bagian : Unit Gawat Darurat
Poliklinik Anak
Poliklinik Penyakit Dalam
2. Tanggal : _____ bulan: _____ tahun: _____
3. Umur : _____ tahun, _____ bulan
4. Jenis kelamin : Laki-laki Perempuan
5. Tempat tinggal:
Dalam Wilayah Republik Indonesia, Provinsi: _____
Kabupaten/Kota: _____
dan kecamatan/kelurahan: _____/_____
6. Dalam 10 hari terakhir, Anda pernah melakukan perjalanan:
 - a. Ke/dari LN, sebutkan (negara):
1. _____ 2. _____ 3. _____
 - b. Di dlm negeri, sebutkan (provinsi): 1. _____ 2. _____ 3. _____

II. Data Klinik (khusus untuk penyakit menular yang berpotensi KLB/wabah, diisi oleh dokter)

Keluhan / gejala:

- | | |
|--|--|
| <input type="checkbox"/> Anuria/oliguria | <input type="checkbox"/> Malaise |
| <input type="checkbox"/> Batuk | <input type="checkbox"/> Menggigil |
| <input type="checkbox"/> Batuk darah | <input type="checkbox"/> Mual |
| <input type="checkbox"/> Bubo-limfadenitis | <input type="checkbox"/> Muntah |
| <input type="checkbox"/> Dehidrasi | <input type="checkbox"/> Perdarahan kulit |
| <input type="checkbox"/> Demam | <input type="checkbox"/> Perubahan warna urin |
| <input type="checkbox"/> Diare cair | <input type="checkbox"/> Pilek |
| <input type="checkbox"/> Diare berdarah/lendir | <input type="checkbox"/> Ruam kulit |
| <input type="checkbox"/> Gangguan kesadaran | <input type="checkbox"/> Sakit kepala |
| <input type="checkbox"/> Hematemesis/melena | <input type="checkbox"/> Sakit otot/sendi/tulang |
| <input type="checkbox"/> Ikterus | <input type="checkbox"/> Sakit perut |
| <input type="checkbox"/> Kaku kuduk | <input type="checkbox"/> Sakit tenggorokan |
| <input type="checkbox"/> Kejang | <input type="checkbox"/> Sesak nafas |
| <input type="checkbox"/> Konjungtivitis | <input type="checkbox"/> Vesikel / bulloae |
| <input type="checkbox"/> Limfadenitis | |

Pertama kali merasakan keluhan: _____ hari yang lalu

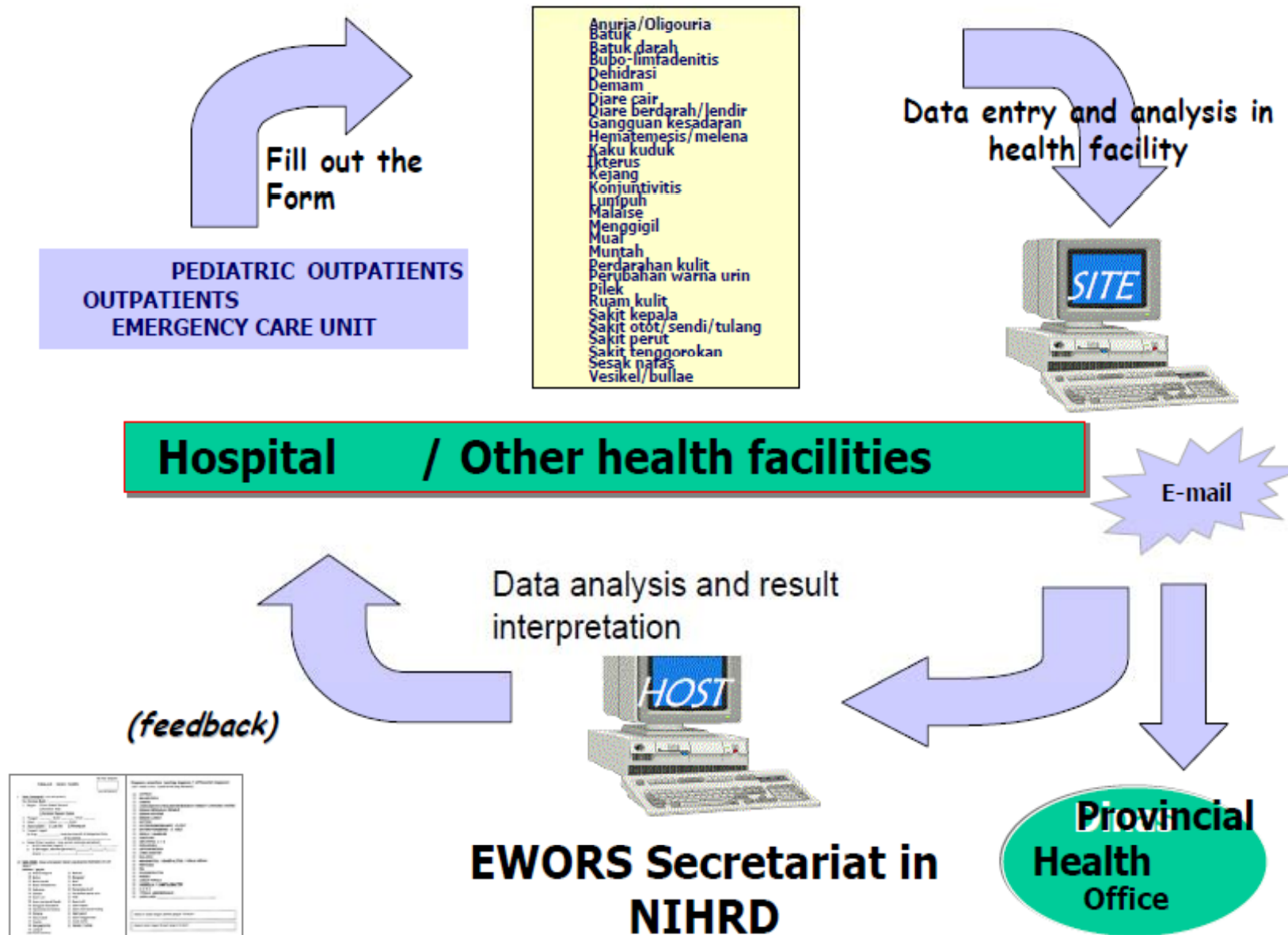
Diagnosis sementara (*working diagnosis / differential diagnosis*) (beri tanda x atau √ pada kotak yang tersedia)

- ANTRAX
- BRUSELOSIS
- CAMPAK
- CHIKUNGUNYA/ROSSRIVER/BARMAH FOREST/ O'NYONG-NYONG
- DEMAM BERDARAH DENGUE
- DEMAM KUNING
- DEMAM LASSA
- DIFTERI
- ENTEROHEMORRHAGIC E. COLI
- ENTEROTOXIGENIC E. COLI
- EBOLA / MARBURG
- HANTAAN
- HEPATITIS A / E
- INFLUENZA
- LEPTOSPIROSIS
- LYME DISEASE
- MALARIA
- MENINGITIS / ENSEFALITIS / VIRUS NIPAH
- PERTUSIS
- PES
- POLIOMYELITIS
- RABIES
- SCRUB TYPHUS
- SHIGELLA / CAMPYLOBACTER
- S A R S
- TYPHUS ABDOMINALIS
- LAIN-LAIN _____

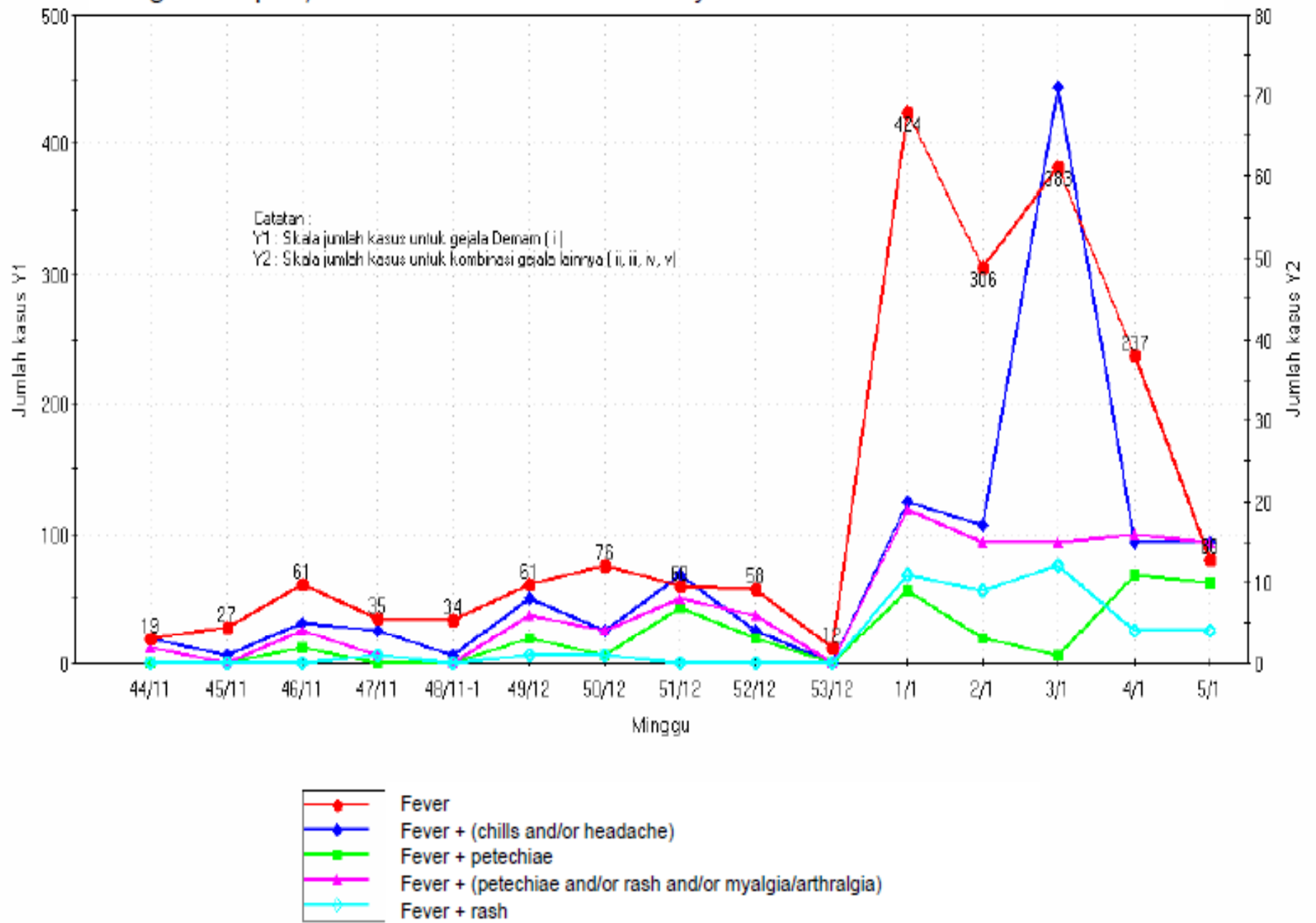
Nama & tanda tangan Dokter pengisi formulir:

Nama & tanda tangan Perawat pengisi formulir:

FLOWCHART OF DATA COLLECTION DIAGRAM

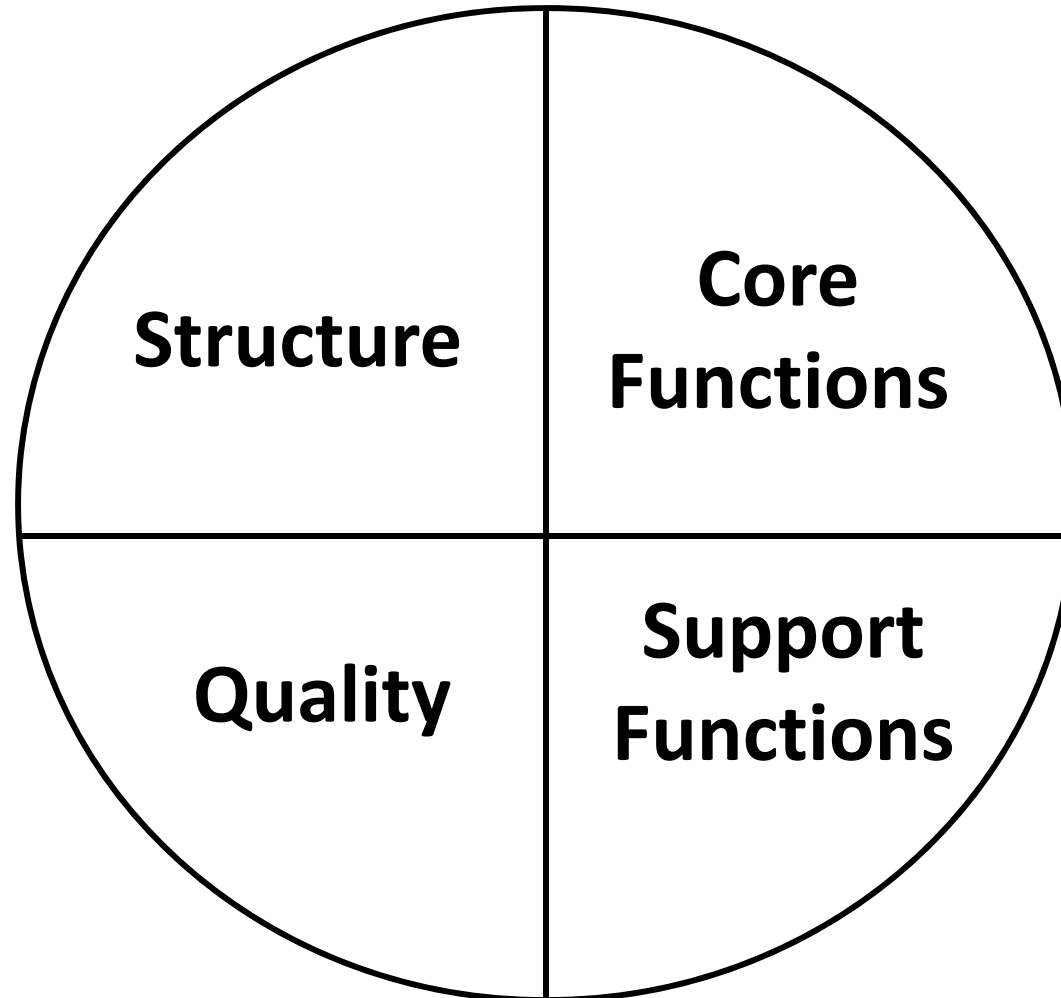


Cases with fever, petechiae, rash, myalgia/arthritis, chills and headache Sanglah Hospital, 01 November 2003 – 31 January 2004



WHO Surveillance-Response System

(<http://www.who.int/wer>)



Core Functions

- Data collection
- Registration
- Confirmation
- Reporting
- Analysis
- Rapid & Planned Response
- Feedback

Support Functions

(= Preparation)

- Standards and guidelines
- Training
- Supervision
- Communication
- Resources
- Coordination

Quality

- Timeliness
- Completeness
- Usefulness
- Sensitivity
- Specificity
- Simplicity
- Flexibility
- Acceptability
- Reliability
- Positive predictive value
- Representativeness

Structure

- Laws, legislation, regulations
- IHR compliance
- Surveillance strategy
- Data flow between levels
- Networking/partnership

Example: Pre-Disaster Phase



Mount Merapi Eruption July 22, 2013

PR of the National Disaster Mitigation Agency (BNPB):

- Hundreds of people in **Kemalang**, Klaten, evacuated themselves [to the] Kemalang sub district office ..., ...people in **Cangkringan** evacuated [to the] Glagaharjo village hall
- Most of the refugees had returned home. The vulnerable groups such as senior citizens, breastfeeding moms, and children still stay in the hall

<http://en.bisnis.com/articles/mount-merapi-erupts>



Village hall = verandah = pendopo

Example: Impact & Emergency Phase



Mt Merapi Eruption 26th October 2010

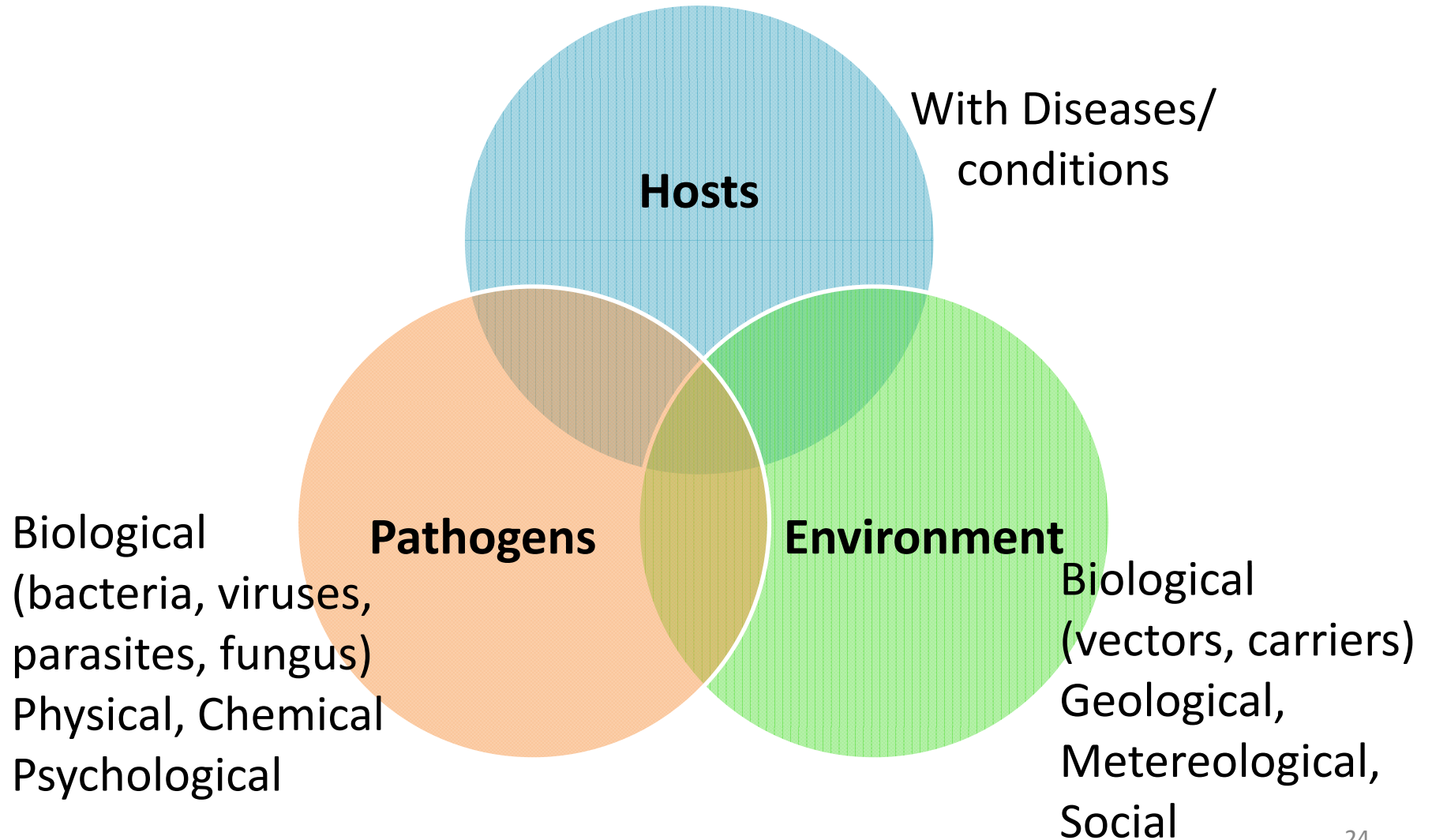
- The evacuees are now staying in at least 113 evacuation centers located across four districts with inadequate privacy and sanitation facilities.
- Cramped condition in evacuation centers and anxiety over the possibility of future eruptions are having an impact on the psychological wellbeing ...

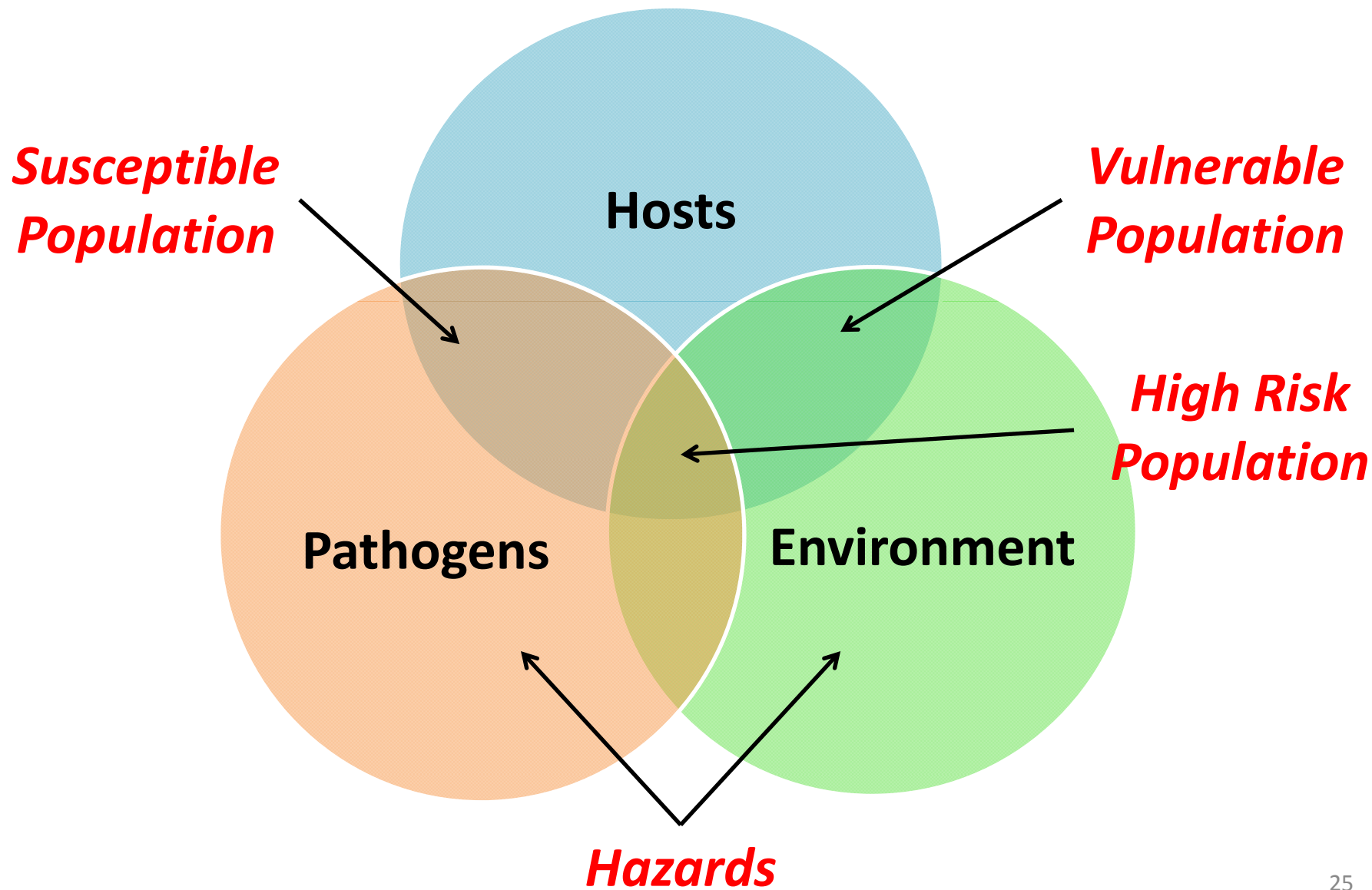
(<http://www.cwsindonesia.or.id/en/news/>):



- The President has given full authority over the response to BNPB and has further mobilized National resources such as Military personnel and line ministries as needed. The Ministry of Social Affairs has mobilized 1,600 volunteers to assist with the provision of food, shelter and NFIs to the affected population.

What Data to Collect?





Disaster Ecology

HELP !

