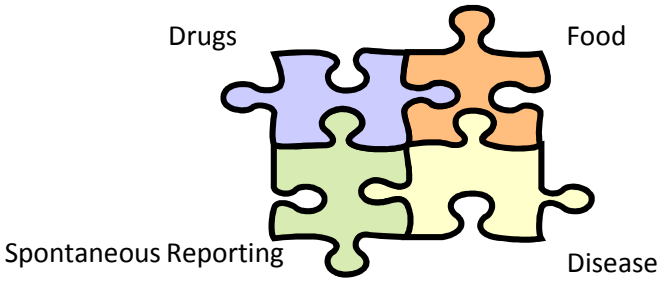
Optimizing reporting and feedback systems for ARV PV

Bulumko Futshane
MBChB AAHIVS



Disclaimer / Caveat

The views expressed
are those of the presenter.

SPONTANEOUS REPORTING

Current Set-Up is Passive/ Inadequate

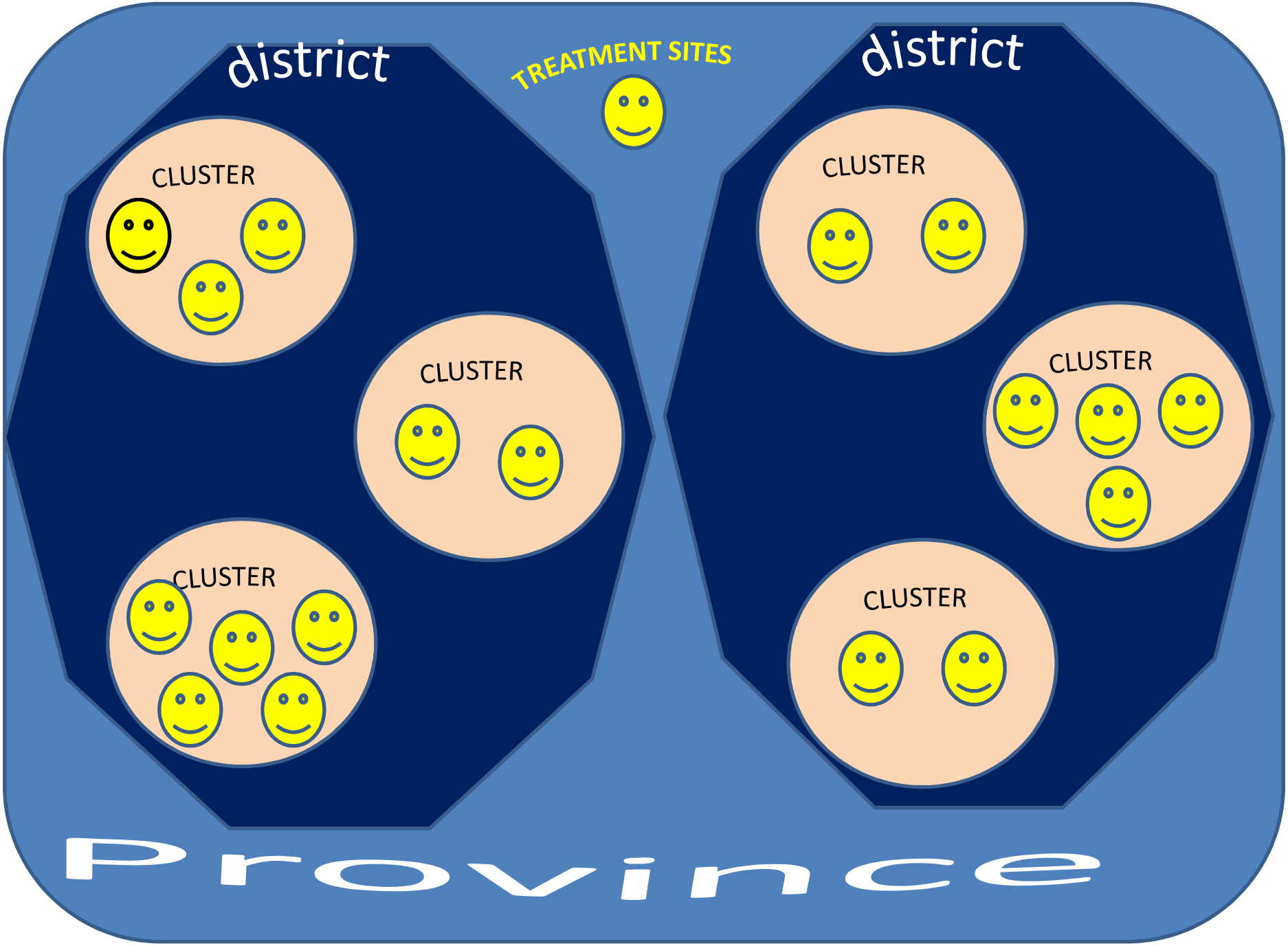
- Major emphasis is on medication safety rather than Patient safety.
- Mostly One Page of ADR Form-Hardly can contain adequate information for proper ADR analysis at PV Central office/MOH.
- Usually sent to a central authority-NDOH, Not enough capacity to review and give immediate feedback-information is scanty anyhow. (Passive)
- A major reason why most health care workers do not report-They usually need immediate assistance with their patients (Passive).

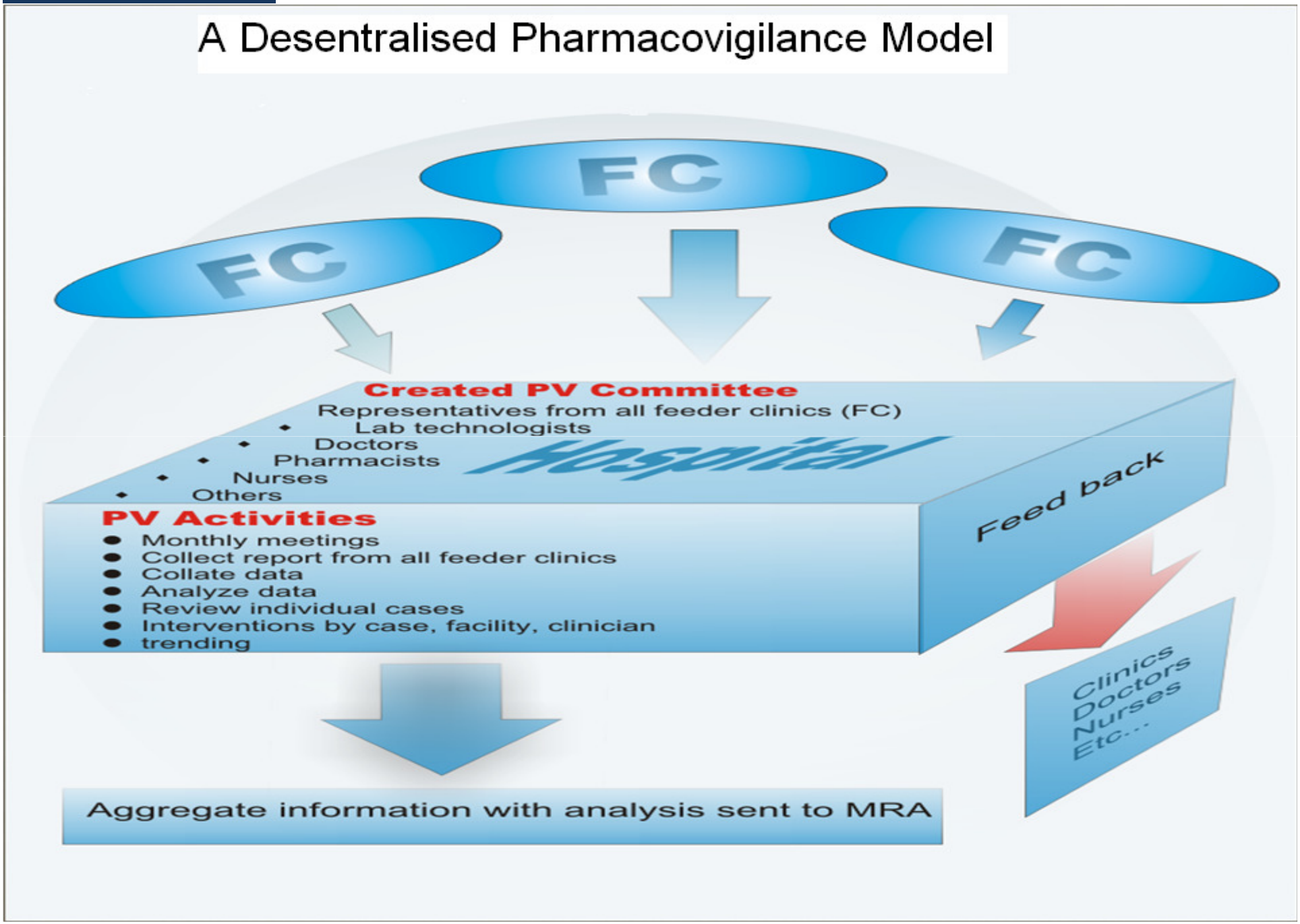
Patient-Focus Pharmacovigilance (Hybrid-Process)

- Focus on patient specific parameters
- Multidisciplinary-At facility Level
- Review any missed opportunity to have prevented side effect
- Review other factors that may have contributed to the side effects and amend (Active)
- Review management approach and amend as clinically necessary. (Active)
- Upon completion, forward form/case to central authority NDOH/WHO for national/international trending.

Objectives of Decentralized PV Program

- To closely monitor and detect ADRs as early as possible.
- To study the frequency of both known and newly diagnosed ADRs. (Incidence more challenging to determine)
- To determine factors attributing to ADRs such as age, drug interaction, prescription errors, etc.
- To give clinical/management feedback to physicians, pharmacists,Nurses, medical and administrative personnel.
- To prevent or minimize ADR occurrence.
- To evaluate the possibility of expanding PV to entire country.
- Report to Medicines Regulatory Authority-Pharmacovigilance Unit.


district
TREATMENT SITES
district
CLUSTER
CLUSTER
CLUSTER
CLUSTER
CLUSTER
CLUSTER
Province

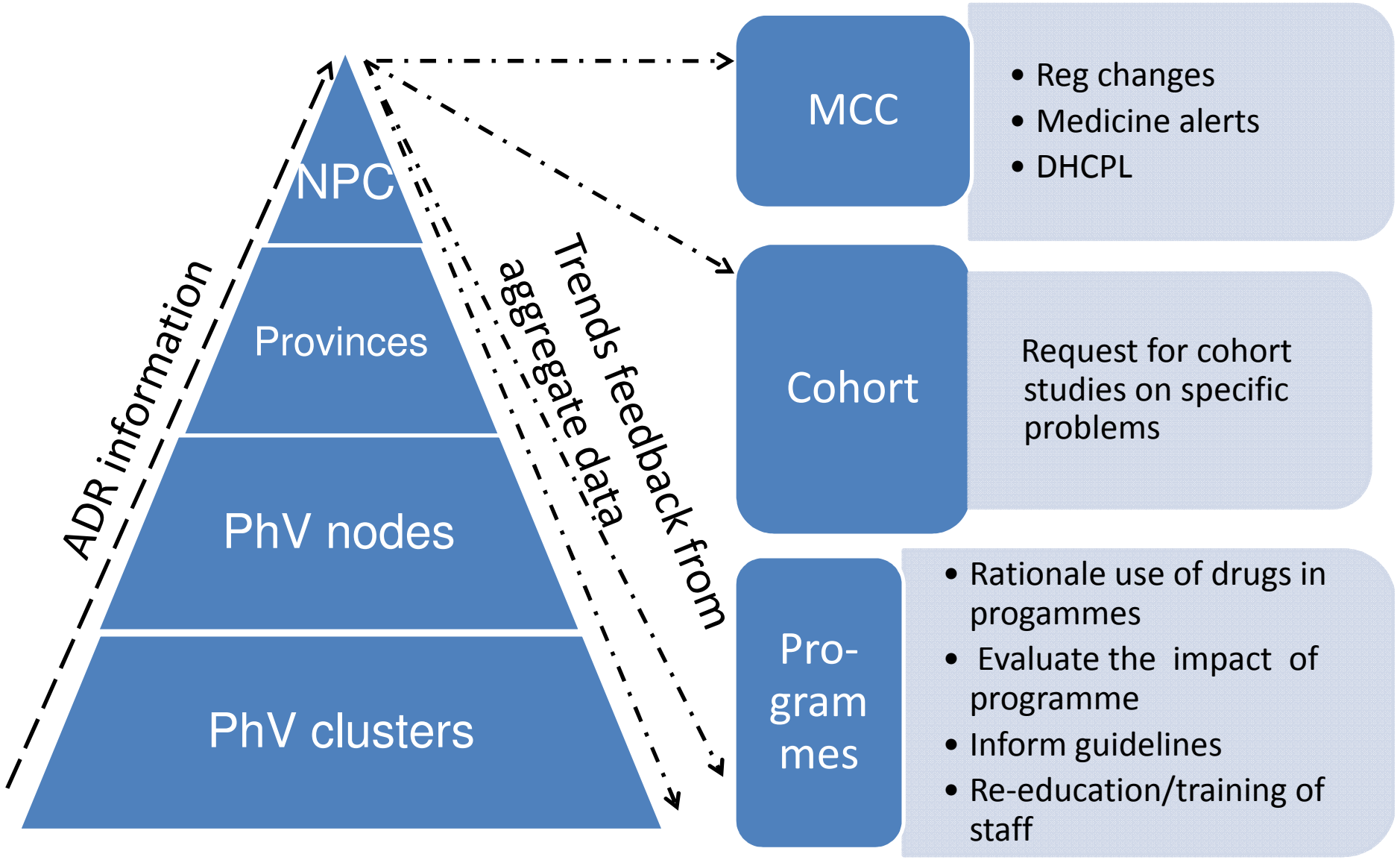

A Desentralised Pharmacovigilance Model
FC
FC
FC
Created PV Committee
Representatives from all feeder clinics (FC)
Lab technologists
Doctors
Pharmacists
Nurses
Others
Hospital
PV Activities
Monthly meetings
Collect report from all feeder clinics
Collate data
Analyze data
Review individual cases
Interventions by case, facility, clinician
trending
Feed back
Clinics
Doctors
Nurses
Etc...
Aggregate information with analysis sent to MRA

PhV Committee

Encourage:

- HCWs speak of ADR → patients
- Documentation
- Leaning from other HCWs
- Proper management of ADRs
- Patient centered vs medicine centered

Pharmacovigilance Plan



ADVERSE DRUG REACTION AND DRUG RESISTANCE REPORT
HIV/AIDS AND TB TREATMENT PROGRAMME

DISTRICT
CLUSTER FACILITY NAME
MAIN TEL NO | MAIN FAX NO

(Please place original form in the patient records and send duplicate to NDoH

PATIENT DETAILS:

Name		**Patient Ref No**		**DOB**	
NHLS Lab No		**Gender**		**Pregnant**	
Allergy	**Weight (kg)**	**Height (cm)**		**Age**	

MEDICINES (AND CONCOMITANT MEDICINES, INCLUDING HERBAL PRODUCTS, IF KNOWN)

Medicine	Suspect drug (*)	Dose	Interval	Route	Date started	Date stopped	Prescriber

ADVERSE DRUG REACTION

Date of onset of reaction (dd/mm/yyyy)

Description of reaction or problem (tick all that apply) – Attach additional information as required

☐ Pain/tingling/numbness in extremities	☐ Psychosis/hallucinations	☐ Unusual bruising	☐ Enlarged breast(s)
☐ Back pain	☐ Fat gain	☐ Unusual bleeding	☐ Depression
☐ Persistent muscle pain	☐ Fat loss	☐ Rash	☐ Heartburn
☐ Abdominal pain	☐ Fat redistribution	☐ Dizziness	☐ Headache
☐ Impaired concentration	☐ Weight loss	☐ Problems with breathing	☐ Anxiety
☐ Unusual fatigue	☐ Constipation	☐ Nausea	☐ Confusion
☐ Insomnia/sleep issues	☐ Loss of appetite	☐ Vomiting	☐ Other
☐ Hearing loss	☐ Fever	☐ Diarrhoea	☐ Other
☐ Ringing in the ears	☐ Chills	☐ Vision changes	☐ Other

LABORATORY RESULTS: SELECT ABNORMAL ONE(S) AND WRITE THE VALUES (BL=BASELINE; CURR=CURRENT)

	Hb	*ALT*	*Neutro*	*Chol*	*LACT*	*K+*	*Serum Cr*	*CD4*	*Viral Ld*	*Other*
BL										
CURR										

ADVERSE REACTION OUTCOME

Intervention Required: ☐ Patient counseled ☐ Referred to expert
☐ Additional clinic visit ☐ Additional lab request ☐ Hospitalization ☐ Other

Action Taken: ☐ Discontinued suspect drug ☐ Decreased dose ☐ Treated ADR (Name + Dose) ☐ Other

Patient Outcome:

RELEVANT CLINICAL HISTORY (ATTACH ADDITIONAL INFORMATION)

Date patient initiated ARVs (dd/mm/yyyy) | Initial regimen

How long has patient been diagnosed with HIV | Years | Months

How long has patient been on ARV treatment | Years | Months

Concomitant medical condition(s) (tick all that apply):
☐ Hypertension ☐ Diabetes ☐ Karposi Sarcoma ☐ Tuberculosis ☐ Other

Additional Information

EARLY WARNINGS FOR DRUG RESISTANCE

In the past 3 months, what are the dates for patient's ARV pick-ups (last 3 dates)?

How often is patient scheduled for consultation? ☐ Monthly ☐ Once every 3 months ☐ Other

Please provide the most recent dates (last 3 dates) for patient's clinical consultation

REPORTING DOCTOR/PHARMACIST/NURSE

Name | Qualifications
Facility | E-mail
Tel | Signature | Date

CASE 4

- **FRH707**
- 30yr old Male; wt 48kg
  - Patient has been diagnosed of HIV for 16 months and has been on ARVs for 11 months.
  - Patient also has a history of recurrent TB (2 times)
  - Now has MDR TB
  - Cur ALT – 86 ^{H}
  - Cur HB – 6.8g/dl
  - Cur Cr – 92
  - BL CD4 – 184
  - Cur CD4 – 375
  - Cur VL - <25
- **ARV & other drugs: 1A (D4T/3TC/EFV) NA**
  - PZA/ Ethamb/ INH/ Kanamycin/ Oflox/ Ethionamide/ Terizidone
  - Amitriptyline 75mg nocte
  - Pyridoxine 25mg bd
  - Fluconazole 200mg qd

Date Tx started: 10/10/08

Onset of reaction: 20/08/09

Date reported: 15/09/09

- **Description of reaction:**
  - Pain, tingling and numbness in the extremeties (feet)
  - Painful enlarged breasts
- **Intervention:**
  - Discontinued suspected drugs D4T/EFV
  - On 15/07/09 Changed EFV to NVP 200mg dly for 2 weeks then bd; Changed D4T to TDF
  - Symptoms improved
  - Patient counselled
- **Reaction type**: Predictible
- **Severity of reaction:** Moderate
- **Causality**: Probable
- **Reporting facility & staff**: Frere /Pharmacist

COMMENTS

Nurses

- Is it gynaecomastia or lipomastia (pseudogynaecomastia)?
- How do we differentiate between the two
- If not sure how do you approach it?

Pharmacists

- Patient probably had pre-existing PN and D4T should have been avoided
- Probability of drug-drug interaction

Lab Tech

•Evidence of mitochondrial damage (High ALT)
•It could also be drug induced hepatitis (EFV, Amitryptilline, D4T)

Doctor

•Probably safer to stop D4T & Efv
•No need for NVP lead dose in patient previously exposed to NNRTI
•Explained and showed the breast examination

Physical Exam: Gynecomastia vs Pseudogynecomastia vs Cancer

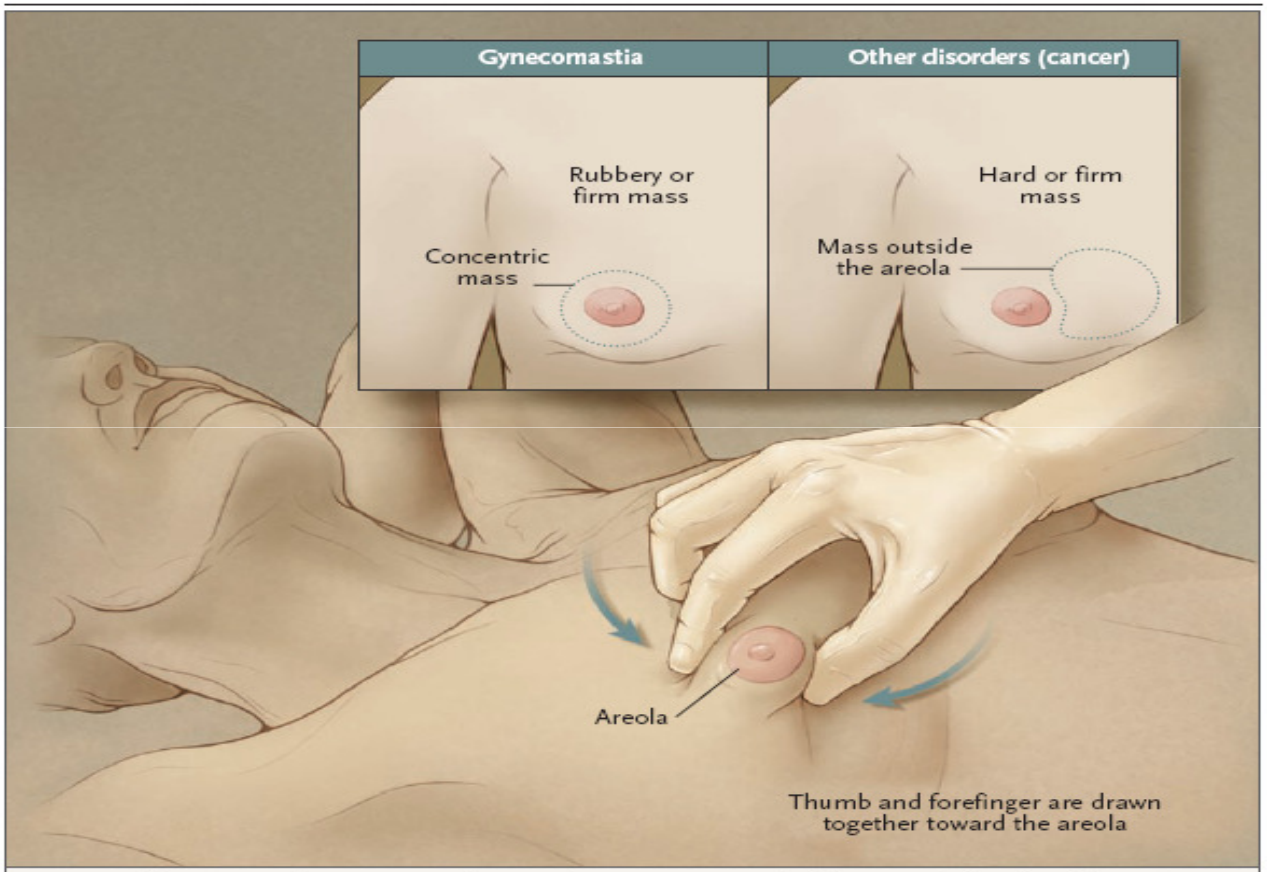


Figure 2. Differentiation of Gynecomastia from Pseudogynecomastia and Other Disorders by Physical Examination.
The patient lies flat on his back with his hands clasped beneath his head. Using the separated thumb and forefinger, the examiner slowly brings the fingers together from either side of the breast. In patients with true gynecomastia, a rubbery or firm mound of tissue that is concentric with the nipple–areolar complex is felt, whereas in patients with pseudogynecomastia, no such disk of tissue is found.

NEJM 2007;357: 1229-37.

SAFETY CHALLENGES / CONCERNS

- Aneamia:
  - No mention on management
  - AZT not an option currrently
- TDF use and Acute Renal insufficiency:
  - Use of TDF and Kanamycin probably not the best option
- Drug – drug interactions:
  - **Fluconazole + Ofloxacin:**may result in additive effects and increased risk of ventricular arrhythmias including torsade de pointes and sudden death
- Switching Drugs:
  - EFV to NVP no lead in dose required

In summary, the major objectives of a PV Program

- Create awareness of staff from hospitals and feeder clinics on patient/medication safety
- **Integrate PV as part of normal patient care for each discipline**
- Address patient treatment related matters especially medication safety in a multi-disciplinary approach.
- Look at drug safety risks drivers as a team
- Identify gaps in the healthcare facility that may interfere with drug therapy
- Identify causalities and review intervention measures taken
- Collate reports documented and design interventions for common problems
- Design facility-specific/systems interventions as necessary.
- Overall goal is to improve patient outcomes.
- **Finally send all collected information to the MRA**

Conclusions

- **Think less about drug safety: more about patient safety**
  - **Use and react to concerns**
  - **much** more interest in patient safety issues
    - Medication errors
      - Root –cause analysis
- **Think less about regulating (incl. withdrawal) and automating data input: more about useful information output**

- **Think more about impact and consequences of decisions and non-decisions**

Acknowledgements

- **Mukesh Dheda**: National PV Coordinator
  NDoH

- **Henry Fomundam**: HIV/AIDS Pharmaceutical Consultant
  Regional Director (Africa)
  Howard University

- **Prof Dan Kayongo**: Executive Director
  Eastern Cape Regional Training Centre (WSU)