

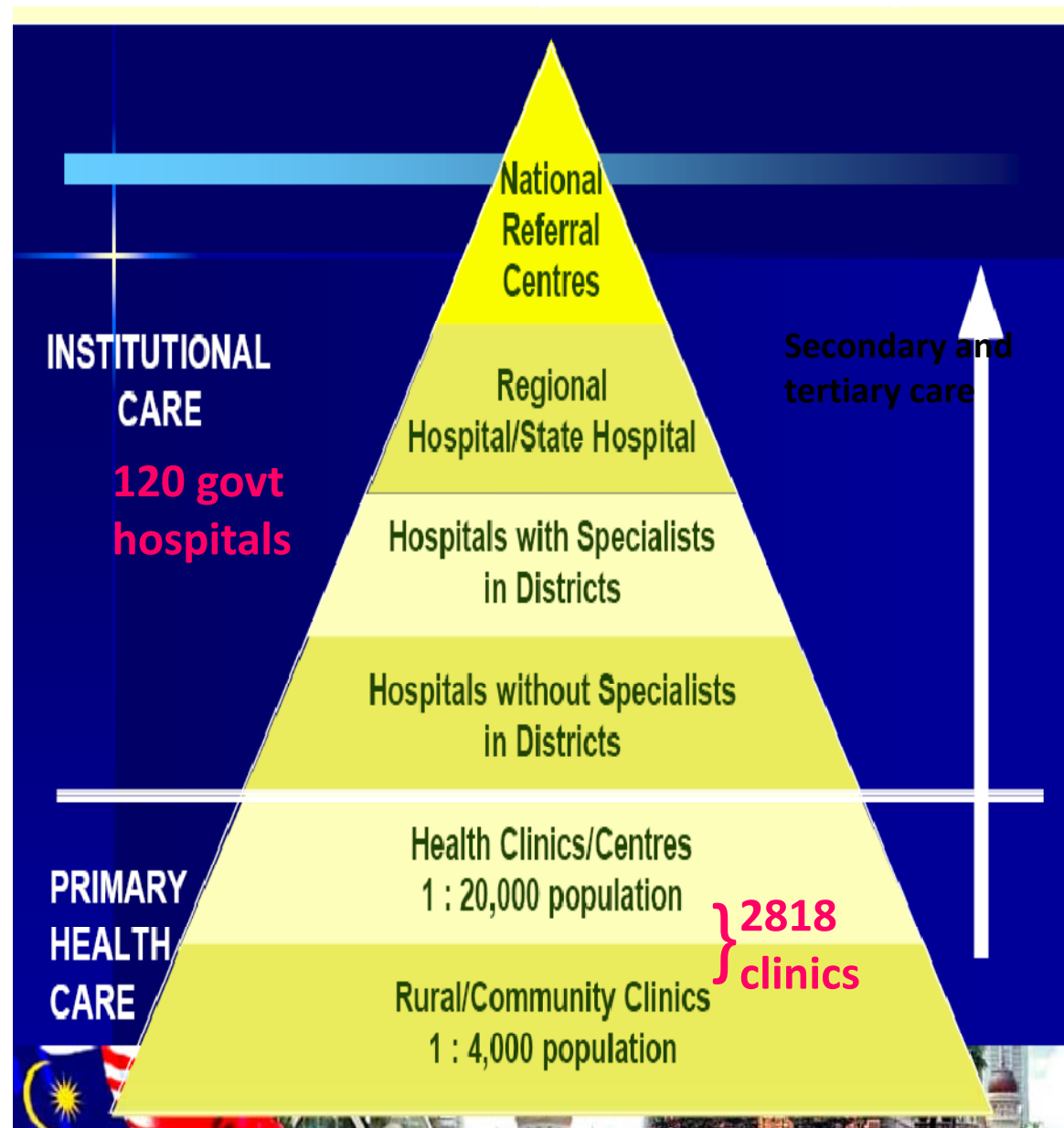
TELEPRIMARY CARE (TPC)

Extending Specialist Care for the Rural Communities

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Introduction

- Primary care centers
 - 87 % remote
 - 84 % Staffed by paramedics
- Referrals to secondary care hospitals are time-consuming and expensive
- Access to specialist care and medical information hampered by distance and records are facility based.

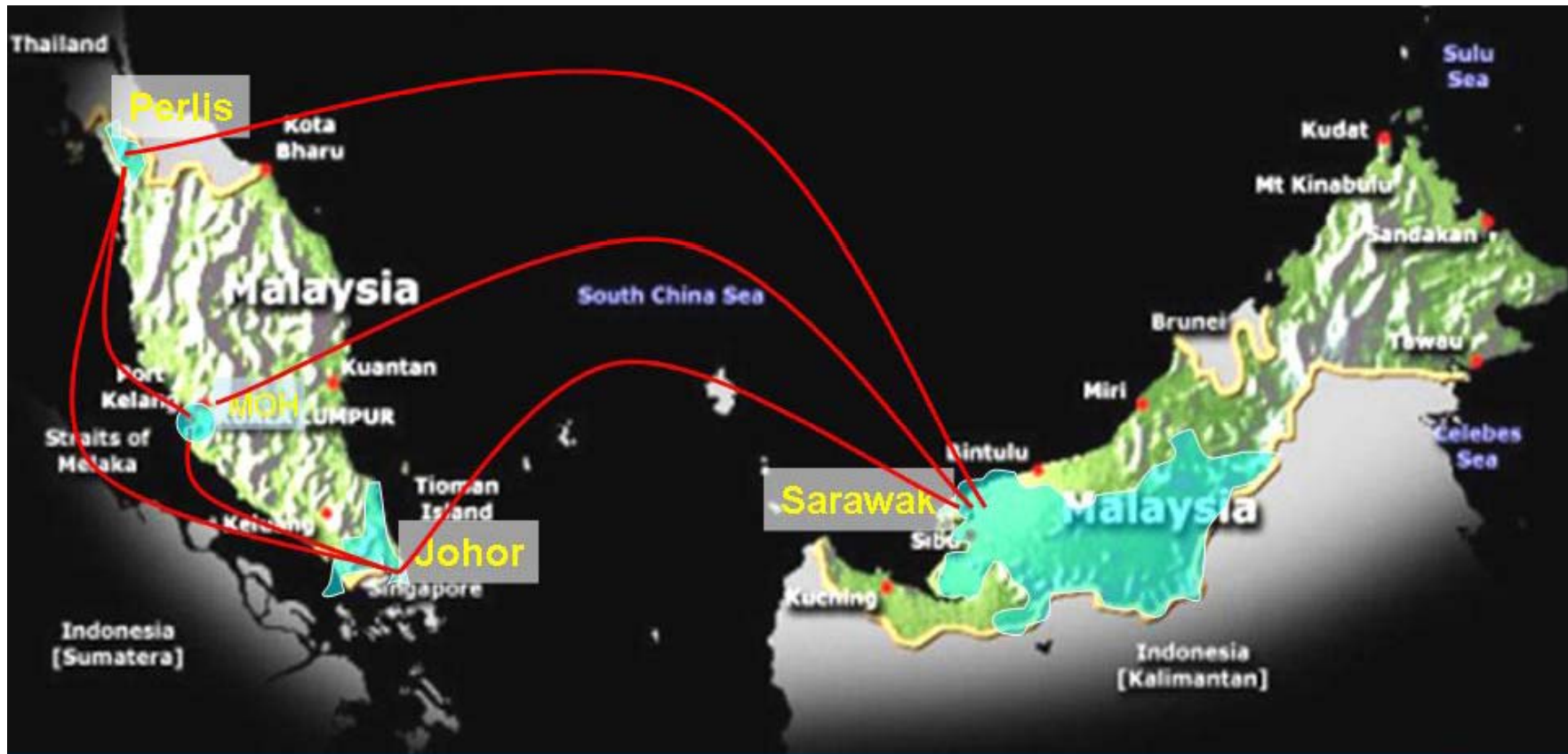




TELEPRIMARY CARE

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Teleprimary Care (TPC)



- Enterprise-wide EHR system
 - 73 primary care clinics, 4 hospitals, 10 health offices in 4 States (Johor, Sarawak, Perlis, Selangor and FT Kuala Lumpur) with HQ in Putrajaya
 - Lease lines and satellites

Teleconsultation in TPC

- Reason for T/C
 - Diagnostic assistance
 - Management assistance
 - Counseling & patient education
 - Patient request
 - CME

T/CinTPC (Application)

Module

- General consultation module

Type

- Symptom based
- Diagnosis based

Method

- Store & forward
- Real time – schedule/
- unscheduled

FACTORS TO FACILITATE T/C

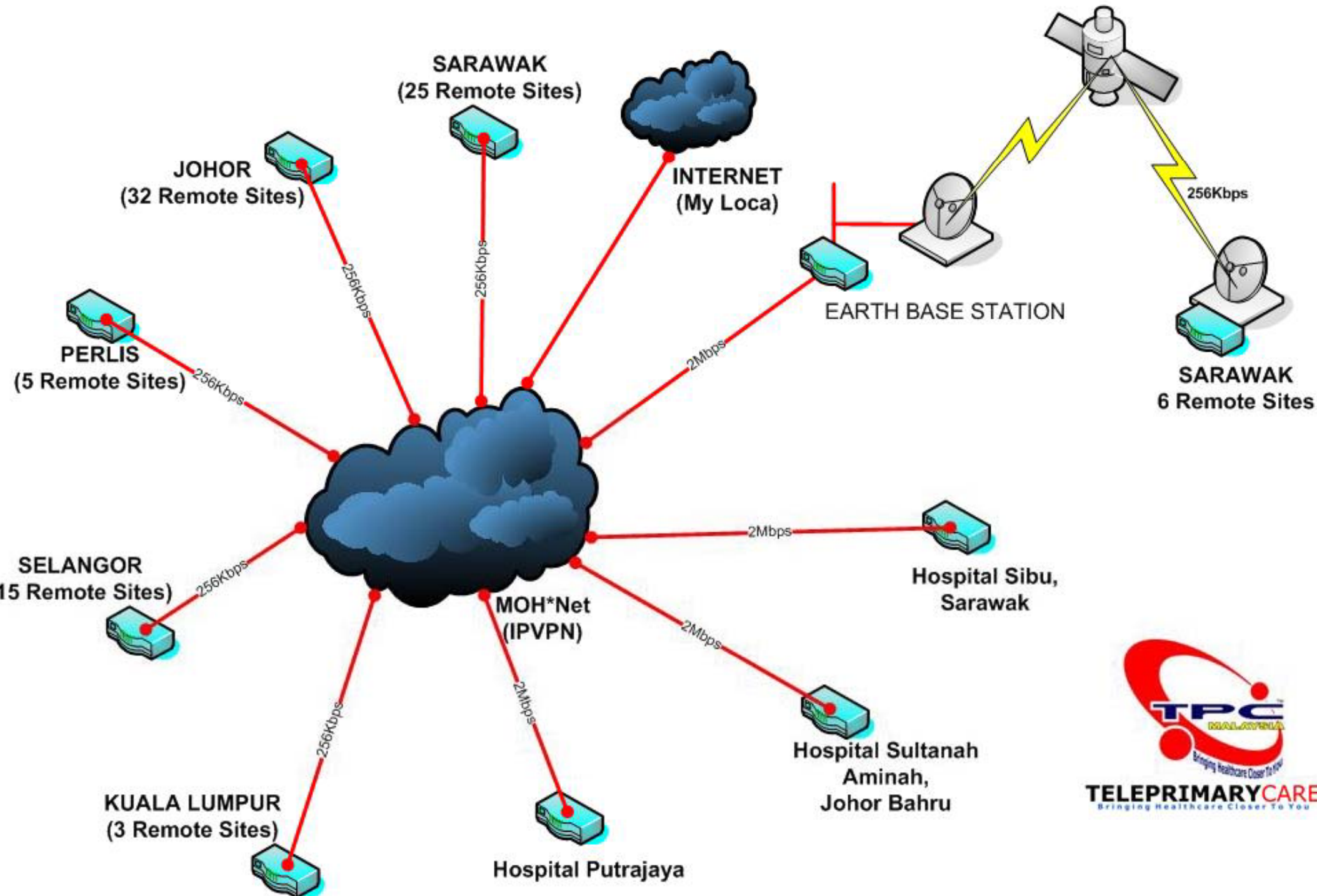
CASE NOTES

- Able to share within facility

Other attachments

- Lab results
- Images

Network Architecture



Facilitating feature in TPC

- T/C can be done at any terminal because all sites are connected by WAN



Picture courtesy Sarawak Health Department

Process Re-engineering

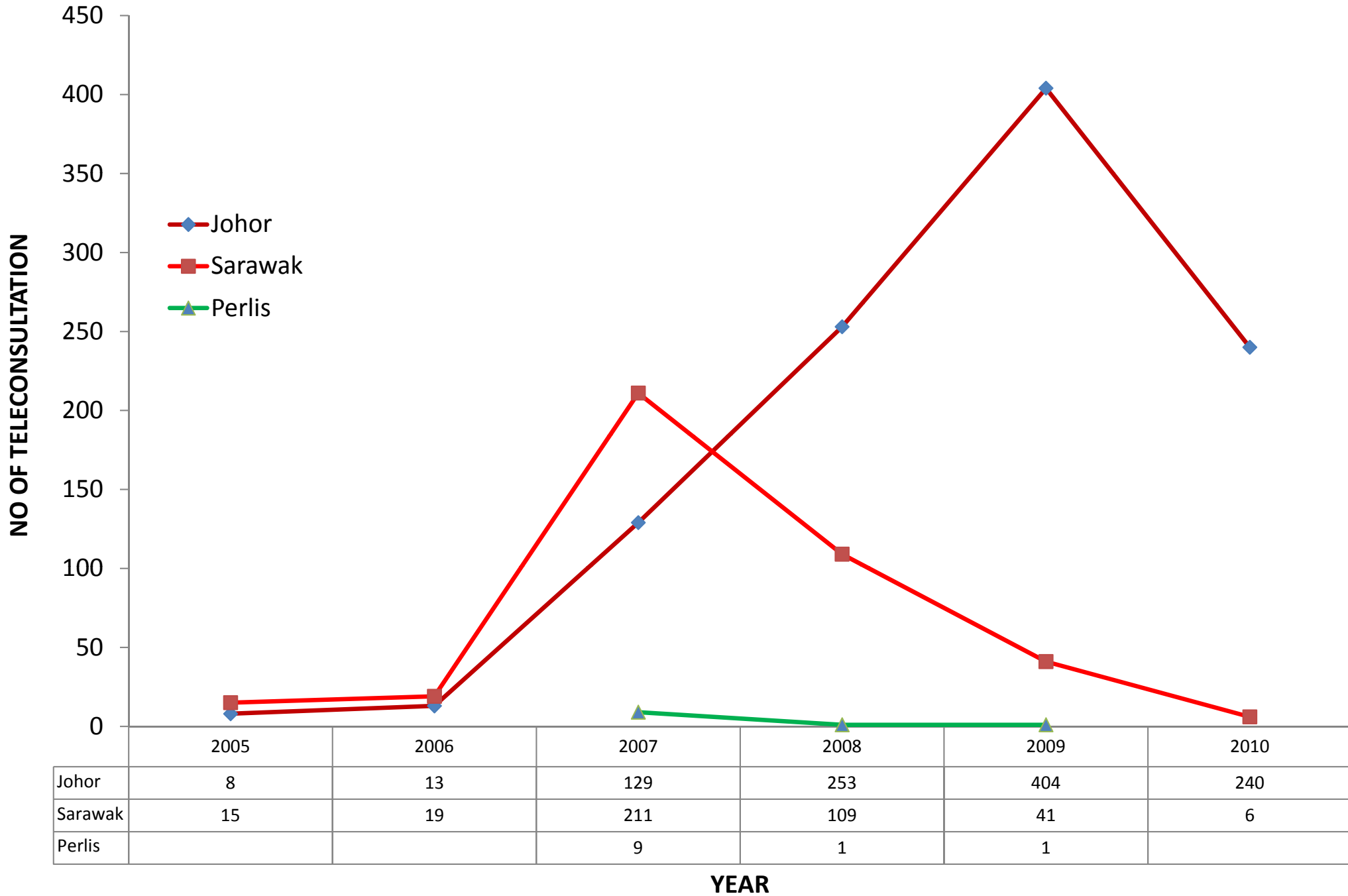
Work Culture

- Paramedics refer to health clinics medical officers/Family Medicine Specialist

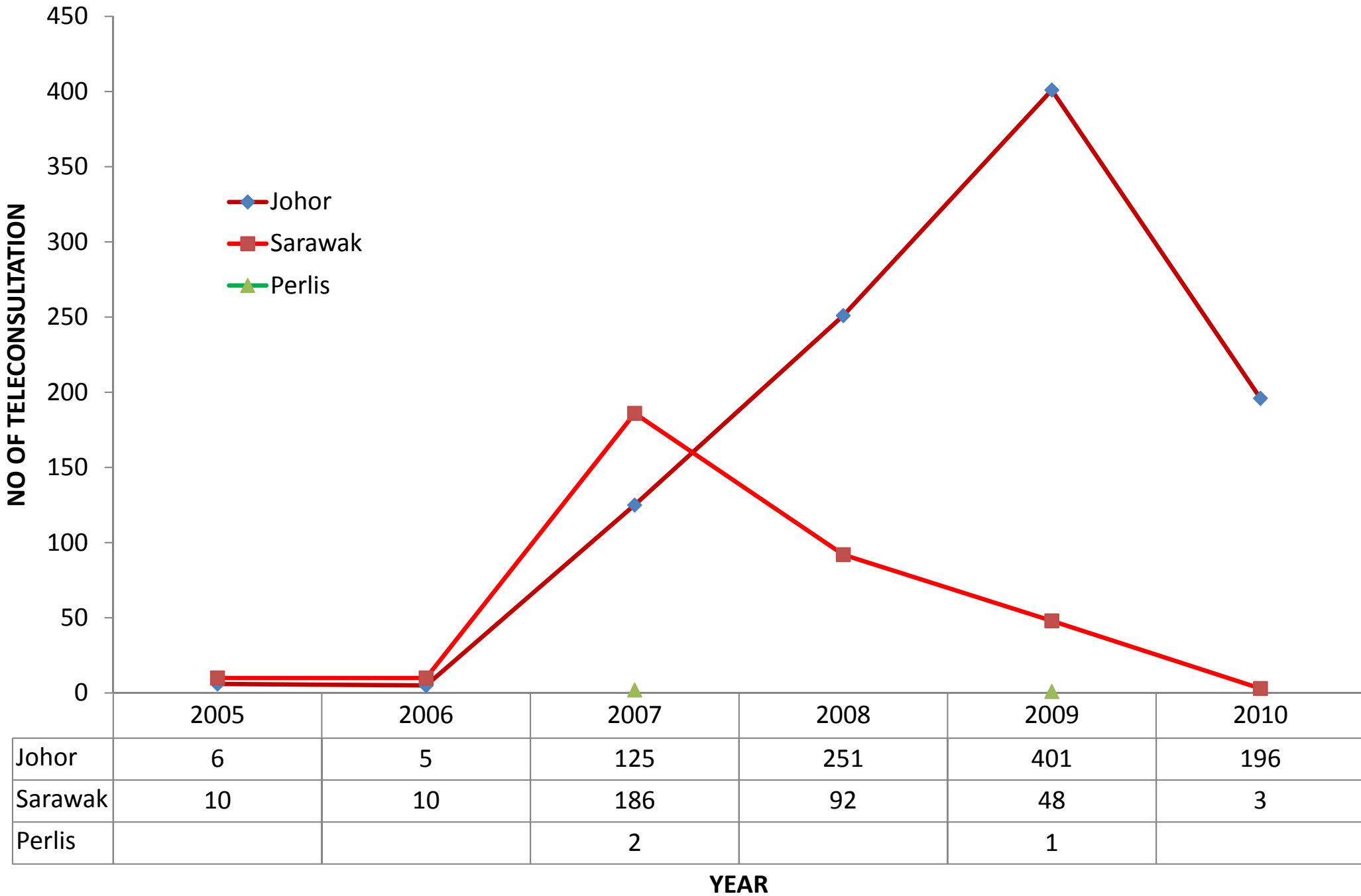
Work Process

- Minimal parameters
- Paramedics refer direct to specialist
- Refer to hospital outside of health clinic locality

TELECONSULTATION (REQUEST)



TELECONSULTATION (RESPONSE)



ICD Code	Diagnosis Name
E11	Type 2 diabetes mellitus (NIDDM),(Diabetes due to insulin secretary defect,Secretary defect insulin resistant diabetes)
E11.21	Type 2 diabetes mellitus with diabetic nephropathy
I10	Essential hypertension (Primary hypertension)
Z34	Encounter for supervision of normal pregnancy
O24.41	Gestational diabetes mellitus in pregnancy
R74	Abnormal serum enzyme levels
I25	Chronic ischemic heart disease (IHD)
E11.23	Type 2 diabetes mellitus with diabetic renal failure
N18	Chronic renal failure (Chronic uremia,Diffuse sclerosing glomerulonephritis)
I25.11	Atherosclerotic heart disease of native coronary artery with angina pectoris
N30.0	Cystitis
Z36	Encounter for antenatal screening
E11.31	Type 2 diabetes mellitus with diabetic retinopathy NOS
E11.33	Type 2 diabetes mellitus with diabetic cataract
E78.2	Mixed hyperlipidemia
H25	Age-related cataract (Senile cataract)
N20.0	Calculus of kidney
E11.32	Type 2 diabetes mellitus with diabetic proliferative retinopathy
E11.31	Type 2 diabetes mellitus with diabetic background retinopathy
E11.39	Type 2 diabetes mellitus with other diabetic ophthalmic
B18	Chronic viral hepatitis
E78.0	Pure hypercholesterolemia
B18.2	Chronic viral hepatitis C
Q65	Congenital deformities of hip
R73.02	Impaired glucose tolerance (oral)
O24.4	Gestational diabetes mellitus NOS
E11.2	Type 2 diabetes mellitus with renal complications

VC Clinic Session – Belaga Health Clinic



Hybrid of TPC and Skype

Specialist at Hospital Sibul



Pictures courtesy Sarawak State Health Department

Types of cases seen

– live saving and improve QOL!

Patient	HOPI/Referral	Diagnosis & Outcome
2 month old boy	Prolonged jaundice, maternal history of treated malaria	Referred Bintulu - confirmed malaria (has h/o "being warm")
1 month old girl	Cleft lip - family history - elder sibling, mother, grandmother - no money to go!	Referred to visiting Plastic Team in Sibul and operated

Types of cases seen – specialist consultation via VC (saving time & cost)

Patient	HOPI/Referral	Diagnosis & Outcome
4 y.o. boy	Congenital cataract (defaulted FU after lens aspiration)	refer eyes, EIP in Belaga, FU VC
18 month boy	Erb's palsy	under physio in Bintulu; VC FU
2 y.o. boy	Level 5 CP (HIE) - no FU after d/c (FDS area)	EIP, baclofen, benzhexol, FU VC

REFERRAL

