

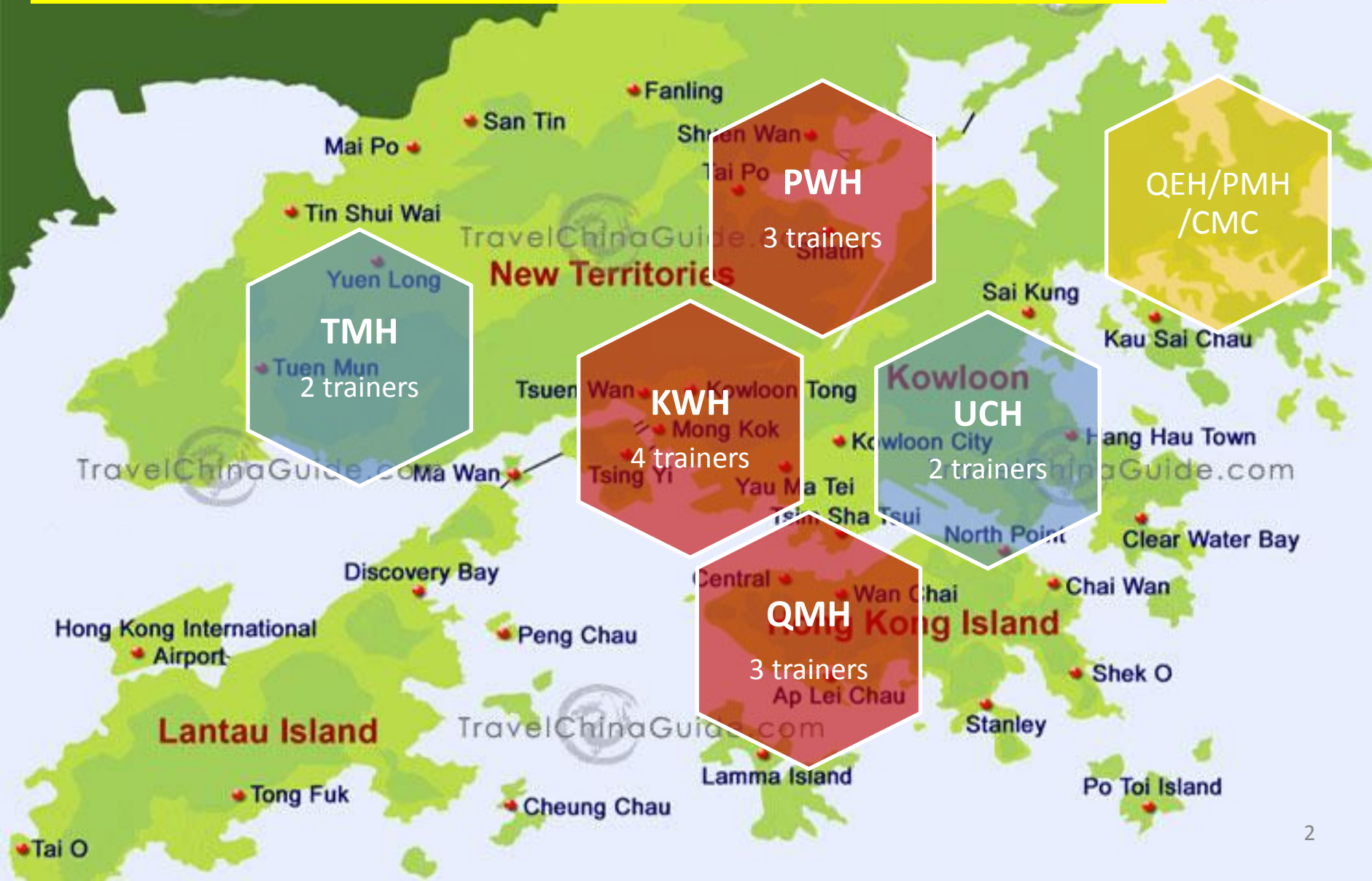
PRM and HKCH: Before and After

Alfred Tam

Chairman

PRM Subspecialty Board

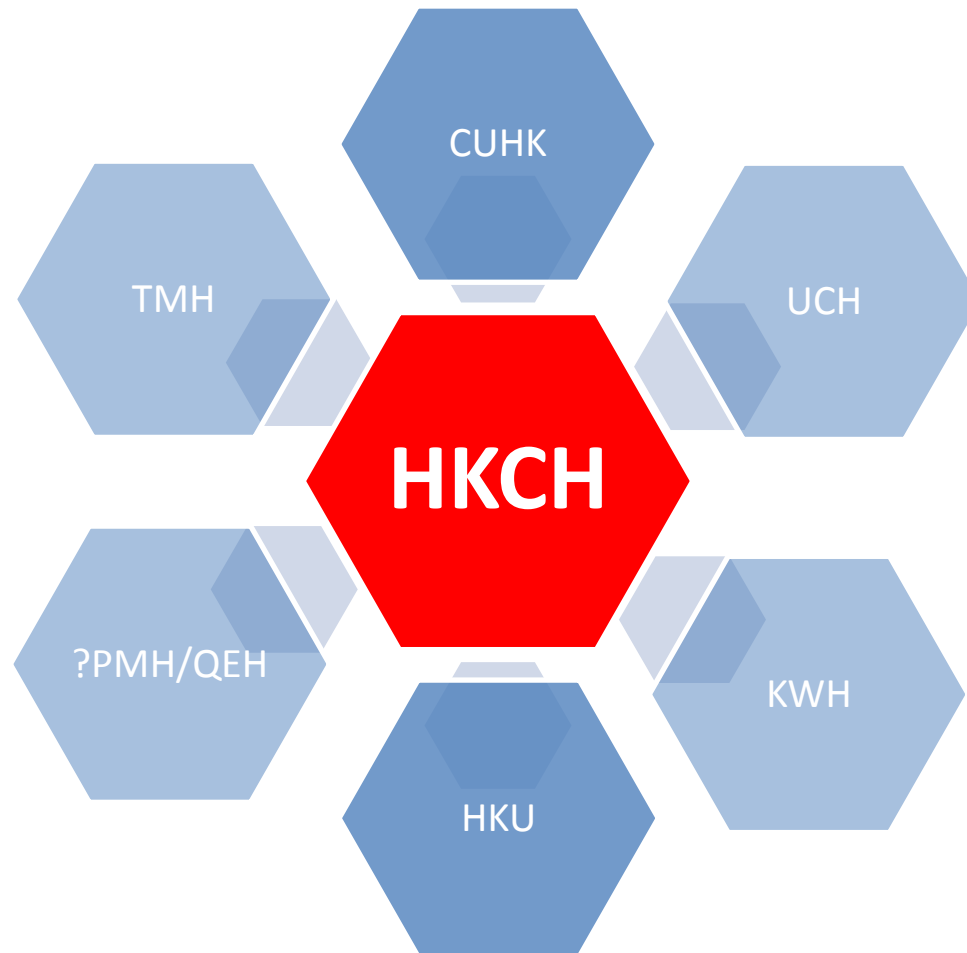
The Present Training Centres in PRM



Service model for PRM in HK

- Preparatory phase
 - continue current model with 5 training centres
- HKCH but no PRM
 - provide consultation service to patients in HKCH and diagnostic services
 - Lung function laboratory
 - Sleep Laboratory
 - Endoscopy
 - Cilia laboratory
- HKCH full function Ideal model
 - one team to cater for the need of the whole of HK

HKCH with PRM



HA Paediatric pulmonologists Now

- HA
 - 8 consultants
 - 9 SMO/AC
- Universities
 - 4 professors
- Most are working just over 50% in PRM!
- At least 13 of them work in the PICU as well!
- HA hospitals without paediatric pulmonologist :
 - YCH, TKOH, OLMH

Manpower in the HKCH Era

- At HKCH, the PRM unit should have at least **6** Consultants (full time)
- At QMH and PWH, there should be at least **2** full time equivalent (FTE) Professors/ Associate Professor/Consultants each to continue teaching and research activities apart from service.
- At the other spoke centres there should be staffed with at least **1** FTE PRM specialist to manage service.

Manpower

- Currently **24** PRM first fellows approved now, likely another **6** plus **3** more accepted before training begins in 2017, making up a total of **33**.
- Among them **22** work in the public system. Most of them are only working just over 50% in PRM.
- **11** PRM first fellows have left HA in the past 8 years (mainly resignation)
- Taking retirement into consideration, **20** full time equivalent (FTE) PRM specialists need to be trained in the next 10 years to maintain current standard and projected needs (assuming no resignation)
- To cater for expansion and improvement of service, another **4** FTE PRM specialists should be added into the pool.

Other Professionals Urgently Needed!

- Lung function Laboratory Technician
 1. Pulmonary Function Assistant 2
 2. Pulmonary Function Assistant 1
 3. Pulmonary Function Technical Director
- Sleep Laboratory Technician
 - Polysomnographic Assistant 2
 - Polysomnographic Assistant 1
 - Polysomnographer
- Bronchoscopy needs
 - Anaesthetist
 - Nursing/ technical support
- Cilia Laboratory Technicians

Interface with General Paediatrics

- Most complex and all highly complex dealt with by PRM
- Most moderate and some complex dealt with by general paediatrics
- The exact delineation to be worked out by the board of PRM and general paediatrics

Service Gaps to be Filled:

- Sleep services
 - Long waiting time for PSG
 - Sleep technologist – no such ranking in HA , difficulty in recruitment
 - Limited service for CPAP/BiPAP titration
- Chronic ventilator beds
- Lung function testing
 - Lung function technicians
 - Infant lung function
- Ciliary function test
- Histology support for lung biopsy – interstitial lung disease
- Interventional bronchoscopy

- Surgical support for tracheal anomaly
- Genetic diagnosis of cong. Pulmonary disorders
- Limited support for craniofacial abnormalities
- Aerodigestive service
- Anaesthesia service for airway endoscopy
- Outreach program for complex resp. disorders
- AND many more !



Thank you!

INPATIENT WORKLOAD

(EXCLUDING DATA FROM YCH, TKOH,OLMH)

Case Complexity

Categorization of case complexity*	Disease factors		Treatment factors	
	Disease Severity	Disease Complications	Level of Care / Isolation	Procedures
Simple	mild	nil	clinic / ambulatory / general ward care, isolation: nil / contact / droplets	nil
Intermediate	moderate	mild (e.g. self-limiting, complete recovery)	general ward care, isolation: nil / contact / droplets / airborne / reverse	simple / non-invasive procedures (e.g. oxygen therapy, intravenous fluid)
Complex	severe	moderate (e.g. intervention required, short term morbidity but complete recovery anticipated)	HDU / SCBU / ICU / PICU / NICU care requiring intensive monitoring, with or without isolation	specialized / invasive procedures (e.g. chest drain, thoracocentesis, pleural biopsy, bronchoscopy)
Highly complex	life-threatening	severe (e.g. intervention required, only partial recovery or presence of long-term morbidity)	ICU / PICU / NICU requiring ventilatory support, multi-specialty care, or surgical management, with or without isolation	highly specialized procedures (e.g. intubation, ventilation, surgery, plasmapheresis, interventional radiology, ECMO, lung transplant)

In-Patient caseload (Complex)

	2010	2011	2012	2013	2014
A	233	273	405	421	433
B	81	108	57	61	66
C	375	248	223	416	660
D	340	258	254	171	328
E	122	188	185	224	258
F	242	234	227	223	322
G	483	568	423	479	575
H	401	315	362	394	306
I	479	583	278	391	419
J	175	459	557	563	290
Total	2931	3234	2971	3343	3657

In-Patient caseload (Highly Complex)

	2010	2011	2012	2013	2014
A	7	4	5	7	7
B	18	22	21	22	34
C	60	41	53	65	76
D	287	240	280	304	191
E	15	23	37	44	38
F	197	216	165	136	150
G	51	67	41	55	42
H	235	145	223	214	160
I	26	46	28	32	39
J	31	34	41	42	42
Total	927	838	894	921	779

OUT PATIENT WORKLOAD

(EXCLUDING DATA FROM YCH, TKOH,OLMH)

Out-patient case load

	2010	2011	2012	2013	2014
A	1227	1257	1292	1370	1501
B	1676	1652	1693	1635	1549
C	2476	2609	2553	2435	2664
D	370	272	244	315	375
E	979	989	875	1115	1083
F	2372	2268	2077	2012	2115
G	2637	2745	2680	2664	2768
H	3359	3313	3256	3228	3207
I	3591	3458	3095	4068	3993
J	1383	1757	1654	1044	920
Total	20070	20320	19419	19886	20175

Lung function lab

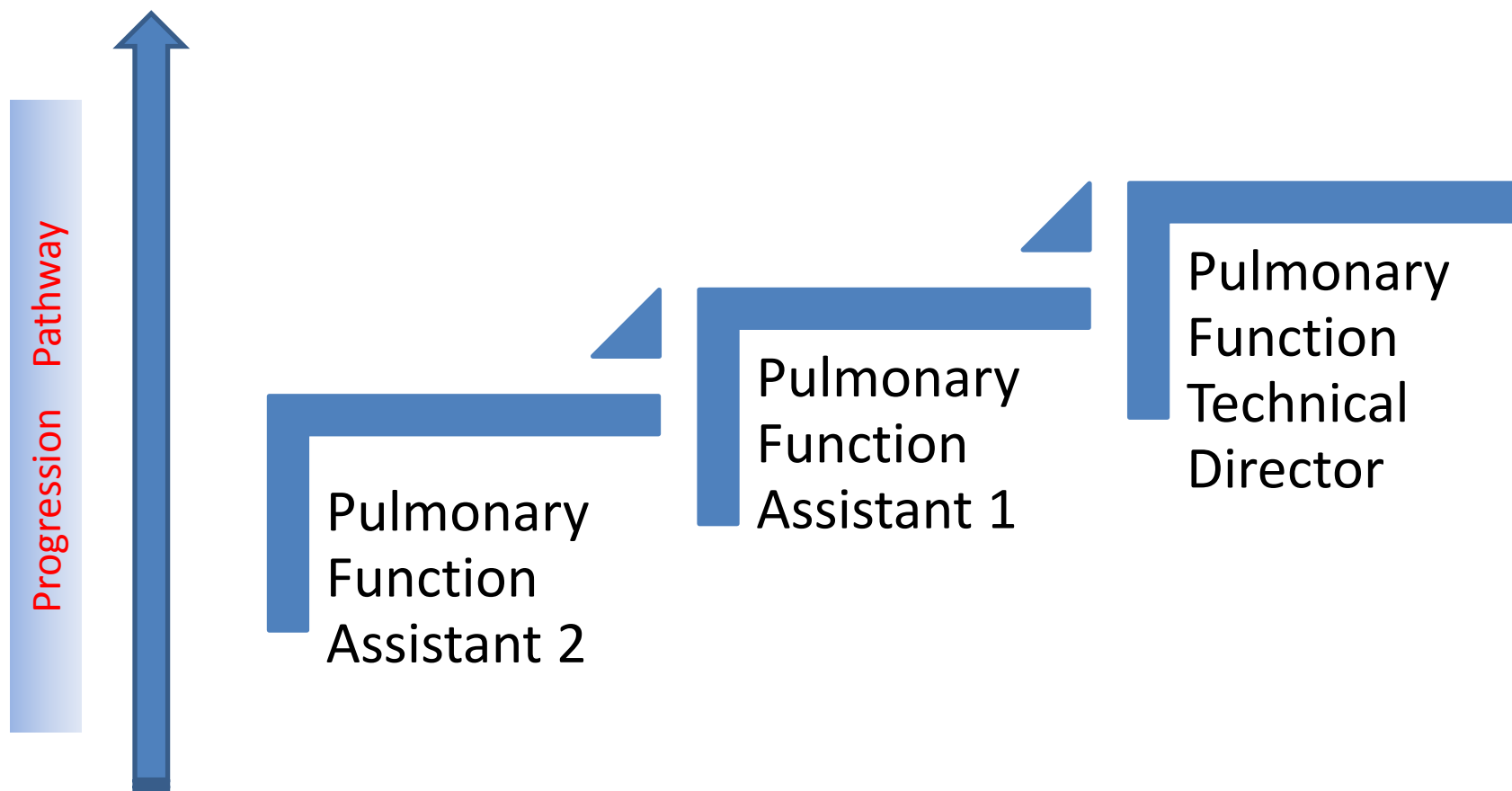
- Staff- visiting consultant + full time technical/nursing staff
- Equipment- being procured

The Proposed Model

3-tier structure

1. Pulmonary Function Assistant 2
2. Pulmonary Function Assistant 1
3. Pulmonary Function Technical Director

Proposed career progression model for technician



Pay Scale

	<u>Proposed titles</u>	<u>Rank equivalent</u>	<u>Pay</u>
Tier 1	<ul style="list-style-type: none">Pulmonary Function Assistant 2	PCA 2	HK\$13,972-17,464
Tier 2	<ul style="list-style-type: none">Pulmonary Function Assistant 1	PCA 1	HK\$17,586-20,717
Tier 3	<ul style="list-style-type: none">Pulmonary Function Technical Director	AMT	HK\$25,485-43,257

Tier 1

Post	Requirements	Key Responsibilities
Pulmonary Function Assistant 2	<ol style="list-style-type: none">1. Completed F.5/S.5 or equivalent2. Holding recognized certificate(s) of Care-related support worker training courses or Health Care Assistant training courses3. Holder of valid BLS (Basic Life Support in Child and Adult) certificate4. Completed the structured departmental training5. Able to speak fluent Cantonese, write and read Chinese and English, and speak English	<ol style="list-style-type: none">1. Arrange appointment2. Perform basic Respiratory Function Tests provided in Lab3. Perform stress ECG test4. Perform quality assurance of lab equipment5. Implement infection control in Lab6. Assist in store keeping and stocking taking of consumable7. Perform clerical work in Lab (including audit meeting preparation and follow up)8. Perform other related duties as assigned by supervisor as required

Tier 2

Post	Requirements	Key Responsibilities
Pulmonary Function Assistant 1	<ol style="list-style-type: none"> 1. (a) F. 5 with passes in 5 subjects in the HKCEE including Chinese Language, English Language (Syl. B) and Mathematics or equivalent; (b) S.5 with Level 2/ "Attained" /Grade E in 5 subjects in HKDSE including Chinese Language, English Language and Mathematics. 2. Possess at least 3 years' relevant work experience 3. Holder of Certified or Registered Pulmonary Function Technologist (CPFT or RPFT) or equivalent or Completed Structured Department Training Program and passed the related assessment. 4. Holder of valid BLS (Basic Life Support in Child and Adult) certificate 5. Able to speak fluent Cantonese, write and read Chinese and English, and speak English 	<ol style="list-style-type: none"> 1. Manage day-to-day operation of Lab 2. Supervise technicians on standard delivery of pulmonary function test 3. Perform advanced lung function test result 4. Perform regular equipment maintenance check to ensure proper functioning 5. Take care of patients and ensure patient safety during tests 6. Assist to train and coach less experienced/junior technical staff and supporting, and supervise their job performance 7. Initiate quality improvement activities 8. Participate in the planning, implementation, and evaluation of the service 9. Participate in clinical research works and quality assurance activities 10. Perform other duties as assigned by supervisors

Tier 3

Post	Requirements	Key Responsibilities
Pulmonary Function Technical Director	<ol style="list-style-type: none"> 1. BSc or equivalent 2. At least 5 years experience in Pulmonary function testing 3. At least 2 years of supervisory experience 4. Holder of Certified or Registered Pulmonary Function Technologist (CPFT or RPFT) or equivalent 5. Holder of valid BLS (Basic Life Support in Child and Adult) certificate 6. Competency in statistics 7. Able to speak fluent Cantonese and English, write and read Chinese and English 	<ol style="list-style-type: none"> 1. Supervise all pulmonary function tests provided in lab 2. Maintain quality assurance of lab equipment 3. Ensure clinical standard 3. Assist in pulmonary function test audit and data analysis 4. Manage budget to ensure adequate equipment and consumables for smooth running of the laboratory 5. Comply with guidelines and standards regarding safety, infection control issues, occupational safety and health issues, and privacy 6. Develop annual plan for service development 7. Participate in research Project 8. Assist in administrative duties

Sleep Lab

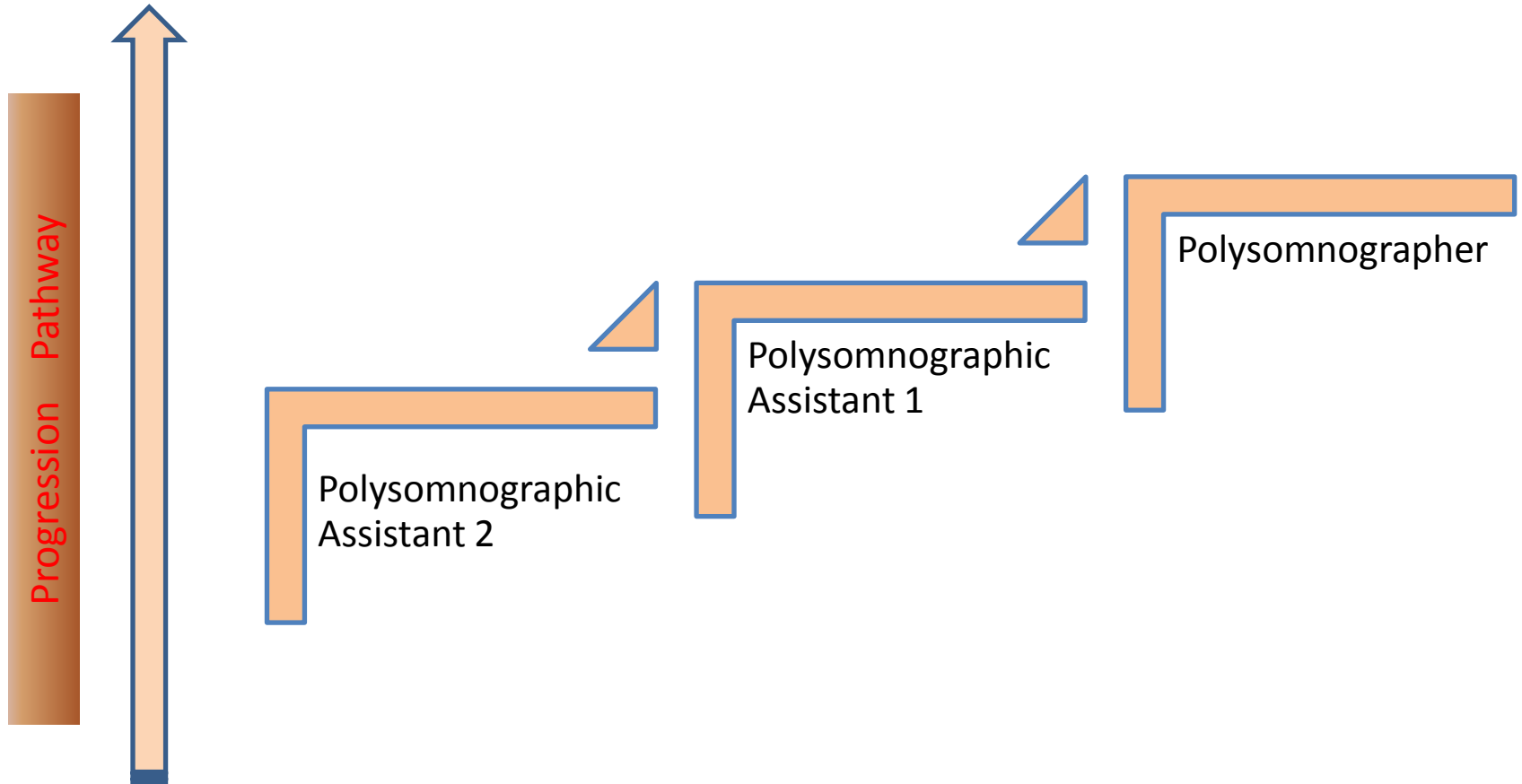
- Staff- visiting consultant + full time technical / nursing staff
- Equipment- being procured

The Proposed Model

3-tier structure

1. Polysomnographic Assistant 2
2. Polysomnographic Assistant 1
3. Polysomnographer

Proposed career progression model for technician



Pay Scale

	<u>Proposed titles</u>	<u>Rank equivalent</u>	<u>Pay</u>
Tier 1	<ul style="list-style-type: none">Polysomnographic Assistant 2	PCA 2	HK\$13,972-17,464
Tier 2	<ul style="list-style-type: none">Polysomnographic Assistant 1	PCA 1	HK\$17,586-20,717
Tier 3	<ul style="list-style-type: none">Polysomnographer	AMT	HK\$25,485-43,257

Tier 1

Post	Requirements	Key Responsibilities
Polysomnographic Assistant 2	<ol style="list-style-type: none"> 1. Completed F.5/S.5 or equivalent 2. Holding recognized certificate(s) of Care-related support worker training courses or Health Care Assistant training courses 3. Holder of valid BLS (Basic Life Support in Child and Adult) certificate 4. Completed the structured departmental training 5. Able to speak fluent Cantonese, write and read Chinese and English, and speak English 	<ol style="list-style-type: none"> 1. Arrange appointment 2. Perform basic polysomnographic recording and related procedures provided in lab 3. Perform quality assurance of lab equipment 5. Implement infection control in Lab 6. Assist in store keeping and stocking taking of consumable 7. Perform clerical work in Lab (including audit meeting preparation and follow up) 8. Perform other related duties as assigned by supervisor as required

Tier 2

Post	Requirements	Key Responsibilities
Polysomnographic Assistant 1	<ol style="list-style-type: none"> 1. (a) F. 5 with passes in 5 subjects in the HKCEE including Chinese Language, English Language (Syl. B) and Mathematics or equivalent; (b) S.5 with Level 2/ "Attained" /Grade E in 5 subjects in HKDSE including Chinese Language, English Language and Mathematics or equivalent 2. Possess at least 3 years' relevant work experience 3. Holder of valid RPSGT (Registered Polysomnographic Technologist) certificate or RST (Registered Sleep Technologist) certificate 4. Holder of valid BLS (Basic Life Support in Child and Adult) certificate 5. Completed the structured departmental training and passed the related assessment 6. Able to speak fluent Cantonese, write and read Chinese and English, and speak English 	<ol style="list-style-type: none"> 1. Perform advance polysomnographic recordings and related procedures, and implement appropriate interventions according to guidelines; 2. Prepare and calibrate equipment required for recordings, clean after use; 3. Prepare consumables for recordings and check stocks periodically, clean/disinfect after use; 4. Perform regular equipment maintenance check to ensure proper functioning; 5. Take care of patients and ensure patient safety during tests; 6. Comply with guidelines and standards regarding safety, infection control issues, occupational safety and health issues, and privacy; 7. Complete and verify documentation; 8. Assist to train and coach less experienced/ junior technical staff and supporting staff, and supervise their job performance; 9. Participate in clinical research works and quality assurance activities; 10. Perform clerical duties of the unit; 11. Perform other duties as assigned by supervisor

Tier 3

Post	Requirements	Key Responsibilities
Polysomnographer	<ol style="list-style-type: none"> 1. BSc or equivalent 2. At least 5 years experience in Sleep laboratory 3. At least 2 years of supervisory experience 4. Holder of valid RPSGT or RST or equivalent 5. Holder of valid BLS (Basic Life Support in Child and Adult) certificate 6. Competency in statistics 7. Able to speak fluent Cantonese and English, write and read Chinese and English 	<ol style="list-style-type: none"> 1. Supervise all polysomnographic recording and related procedure provided in lab 2. Maintain quality assurance of lab equipment 3. Ensure clinical standard 4. Assist in sleep lab audit and data analysis 5. Manage budget to ensure adequate equipment and consumables for smooth running of the laboratory 6. Comply with guidelines and standards regarding safety, infection control issues, occupational safety and health issues, and privacy 7. Develop annual plan for service development 8. Participate in research Project 9. Assist in administrative duties

Endoscopy

- Provided in OT / endoscopy suite
- Anaesthetist support
- Visiting consultants
- Equipment: have not been consulted yet!!

Training

- Full Training centres: KWH, PWH, QMH
- Training centres: TMH, UCH
- Phase 1- continue present model with some modifications with trainees / trainers paired to visit HKCH with activities counted as accredited training