

ภาคผนวก 1

Competency and curriculum milestones

Table 1 competencies, subcompetencies and curriculum milestones

Core competencies	Subcompetencies	Curriculum milestones
1. การบริบาลผู้ป่วย (Patient care)	<ol style="list-style-type: none"> Gathers and synthesizes essential and accurate information to define each patient's clinical problems (PC1) Develops and achieves comprehensive management plan for each patient (PC2) Manages patients with progressive responsibility and independence (PC3) Skill in performing procedures (PC4) Requests and provides consultative care (PC5) 	Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of disease and the promotion of health. They must demonstrate the application of their medical knowledge to achieve competence in the practice of health promotion, disease prevention, diagnosis, care, and treatment of patients of each sex, from adolescence to old age, during health and all stages of illness in patients with diseases in Table 2
2. ความรู้และทักษะหัตถการทางเวชกรรม (Medical knowledge and skills)	<ol style="list-style-type: none"> Clinical knowledge (MK1) Knowledge of diagnostic testing and procedure (MK2) Scholarship (MK3) 	Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiologic, and social behavioral sciences. Table 2

<p>3. ทักษะระหว่างบุคคลและการสื่อสาร (Interpersonal and communication skills)</p>	<ol style="list-style-type: none"> 1. Communicates effectively with patients and caregivers (ICS1) 2. Communicates effectively in interprofessional teams (ICS2) 	<ol style="list-style-type: none"> 1. Communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds 2. Communicate effectively with physicians, other health professionals, and health-related agencies 3. Work effectively as a consultant to, or member or leader of, a health-care team or other professional group 4. Maintain comprehensive, timely, and legible medical records
<p>4. การเรียนรู้และการพัฒนาจากฐานการปฏิบัติ (Practice-based learning)</p>	<ol style="list-style-type: none"> 1. Monitors practice with a goal of improvement (PBL1) 2. Learns and improves via performance audit (PBL2) 3. Learns and improves via feedback (PBL3) 4. Learns and improves at the point of care (PBL4) 	<ol style="list-style-type: none"> 1. Identify strengths, deficiencies, and limits in one's knowledge and expertise 2. Set learning and improvement goals 3. Systematically analyze practice, using quality improvement methods, and implement changes with the goal of practice improvement 4. Incorporate formative evaluation feedback into daily practice 5. Locate, appraise, and assimilate evidence from scientific studies related to patients' health problems 6. Use information technology to optimize learning 7. Participate in the education of patients, families, students, residents, and other health professionals
<p>5. วิชาชีพนิยม (Professionalism)</p>	<ol style="list-style-type: none"> 1. Has professional and respectful interactions with patients, caregivers and members of the interprofessional team (PRO1) 2. Accepts responsibility and follows through on tasks (PRO2) 3. Responds to each patient's unique characteristics and needs (PRO3) 4. Exhibits integrity and ethical behavior in professional conduct 	<ol style="list-style-type: none"> 1. Adhere to basic ethical principles: autonomy, beneficence, nonmaleficence, justice Demonstrate an attitude of caring derived from humanistic and professional values 2. Demonstrate compassion, integrity, and respect for others 3. Maintain accountability to patients, society, and the profession Demonstrate punctuality, reliability, and follow-through on commitments Prioritize patient needs above self-interest 4. Demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to, diversity in sex, age, culture, race, religion, disabilities, health problems, and sexual orientation

	(PRO4)	<p>5. Recognize personal limitations and seek and accept assistance or supervision</p> <p>6. Demonstrate high standards of ethical behavior Maintain appropriate boundaries and relationships with patients, other physicians, and other health-care team members</p>
6. การทำเวชปฏิบัติให้สอดคล้องกับระบบสุขภาพ (System-based practice)	<p>1. Works effectively within an interprofessional team (SBP1)</p> <p>2. Recognizes system error and advocates for system improvement (SBP2)</p> <p>3. Identifies forces that impact the cost of health care and advocates for and practices cost-effectiveness care (SBP3)</p> <p>4. Transitions patients effectively within and across health delivery systems (SBP4)</p>	<p>1. Work effectively in various health-care delivery settings and systems</p> <p>2. Transition patients within and across health delivery systems</p> <p>3. Incorporate considerations of cost awareness and risk-benefit analysis into patient care</p> <p>4. Advocate for quality patient care and optimal patient-care systems Assist patients in dealing with system complexities</p> <p>5. Work in an interprofessional team to enhance patient safety and improve patient-care quality</p> <p>6. Participate in identifying system errors and in implementing potential system solutions</p> <p>7. Acquire skills to organize, administer, and direct a clinical care unit such as an ICU, pulmonary function laboratory, respiratory therapy section, or outpatient practice and to work effectively as a member of a multidisciplinary team</p>

Table 2 competencies and curriculum milestones regarding year of education

Competency and curriculum milestones	Year 1	Level	Year2	Level
1. Patient care				
<p>Fellows must be able to provide patient care that is: compassionate, appropriate, and effective for the treatment of disease and the promotion of health. They must demonstrate the application of their medical knowledge to achieve competence in the practice of health promotion, disease prevention, diagnosis, care, and treatment of patients of each sex, from adolescence to old age, during health and all</p>	√	3	√	4

stages of illness in patients with				
- Obstructive lung disease				
○ Asthma	√	3	√	4
○ COPD	√	3	√	4
○ Bronchiectasis, central airway obstruction	√	3	√	4
- Critical care medicine				
○ Assessment and monitoring	√	3	√	4
○ Therapeutics	√	3	√	4
○ Prevention and management of complications	√	3	√	4
○ Respiratory failure	√	3	√	4
○ Non-respiratory critical care	√	3	√	4
- Diffuse parenchymal lung disease				
○ ILD associated with systemic inflammatory disease	√	3	√	4
○ Idiopathic interstitial pneumonias	√	3	√	4
○ Granulomatous interstitial lung diseases	√	3	√	4
○ Diffuse cystic lung diseases; Radiation-induced pneumonitis/fibrosis; Drug-induced ILD; Pulmonary alveolar proteinosis; Constrictive bronchiolitis; Genetic and other rare ILD	√	3	√	4
- Sleep medicine				
○ Respiratory	√	3	√	4
○ Non-respiratory	√	3	√	4
- Neuromuscular and skeletal (Hypoventilation)				
○ Chest wall and skeletal, obesity, neuromuscular disease, ventilatory control	√	3	√	4
- Infections				
○ Common syndromes	√	3	√	4
○ Major pathogens (including TB and NTM)	√	3	√	4
○ Host defense mechanisms; Vaccination; Immunocompromised host; Extrapulmonary infection in the ICU	√	3	√	4
- Neoplasia				

○ Lung cancer	√	3	√	4
○ Other intrathoracic tumors	√	3	√	4
○ Malignant pleural disease; Complications; Pulmonary nodules; Physiologic assessment for thoracic surgery; Interventional pulmonary medicine and thoracic surgery; Lung cancer screening	√	3	√	4
- Pleural disease				
○ Effusions and pleural pathology	√	3	√	4
○ Structure and physiology; Pneumothorax; Diagnostic and therapeutic procedures	√	3	√	4
- Vascular disease				
○ Pulmonary thromboembolic disease	√	3	√	4
○ Pulmonary hypertension; Pulmonary vasculitis and capillaritis; Pulmonary vascular malformation; Sickle cell disease	√	3	√	4
- Respiratory physiology and pulmonary symptoms				
○ Respiratory physiology	√	3	√	4
○ Special situations; Approach to pulmonary symptom	√	3	√	4
- Occupational and environmental disease				
○ Tobacco use treatment and smoking cessation; Occupational asthma and work-exacerbated asthma; Indoor and outdoor pollution; Barometric or thermal-related disorders; Pneumoconiosis; Work and disability evaluation; Toxic inhalations; Environmental cancer risk	√	3	√	4
- Epidemiology				
○ Interpretation of clinical studies	√	3	√	4
- Quality, safety and complications				
○ Complications of medical care	√	3	√	4
○ Methods of assess quality, safety and patient satisfaction; Methods for improving quality and safety; Disclosure of errors to patients and family members; Ethics and professionalism	√	3	√	4
Provide or perform the following diagnostic tests or procedures to patients appropriately				
- Plain chest radiography	√	3	√	4
- CT scan of the chest	√	3	√	4
- Spirometry	√	3	√	4

- Lung volume and DLCO	√	3	√	4
- CPET	√	3	√	4
- Polysomnography	√	3	√	4
- Serum biomarkers	√	3	√	4
- Bronchoscopy with tissue biopsy	√	3	√	4
- Intensive care ultrasound	√	3	√	4
- Setting invasive and non-invasive mechanical ventilator	√	3	√	4
- Setting PAP therapy for sleep-disordered breathing	√	3	√	4
2. Medical knowledge and skills				
<i>Clinical knowledge (MK1)</i>				
- Obstructive lung disease				
○ Asthma	√		√	
○ COPD	√		√	
○ Bronchiectasis, central airway obstruction	√		√	
- Critical care medicine				
○ Assessment and monitoring	√		√	
○ Therapeutics	√		√	
○ Prevention and management of complications	√		√	
○ Respiratory failure	√		√	
○ Non-respiratory critical care	√		√	
- Diffuse parenchymal lung disease				
○ ILD associated with systemic inflammatory disease	√		√	
○ Idiopathic interstitial pneumonias	√		√	
○ Granulomatous interstitial lung diseases	√		√	
○ Diffuse cystic lung diseases; Radiation-induced pneumonitis/fibrosis; Drug-induced ILD; Pulmonary alveolar proteinosis; Constrictive bronchiolitis; Genetic and other rare ILD	√		√	
- Sleep medicine				

○ Respiratory	√		√	
○ Non-respiratory	√		√	
- Neuromuscular and skeletal (Hypoventilation)				
○ Chest wall and skeletal, obesity, neuromuscular disease, ventilatory control	√		√	
- Infections				
○ Common syndromes	√		√	
○ Major pathogens (including TB and NTM)	√		√	
○ Host defense mechanisms; Vaccination; Immunocompromised host; Extrapulmonary infection in the ICU	√		√	
- Neoplasia				
○ Lung cancer	√		√	
○ Other intrathoracic tumors	√		√	
○ Malignant pleural disease; Complications; Pulmonary nodules; Physiologic assessment for thoracic surgery; Interventional pulmonary medicine and thoracic surgery; Lung cancer screening (4.5%)	√		√	
- Pleural disease				
○ Effusions and pleural pathology	√		√	
○ Structure and physiology; Pneumothorax; Diagnostic and therapeutic procedures	√		√	
- Transplantation	√		√	
- Vascular disease				
○ Pulmonary thromboembolic disease	√		√	
○ Pulmonary hypertension; Pulmonary vasculitis and capillaritis; Pulmonary vascular malformation; Sickle cell disease	√		√	
- Respiratory physiology and pulmonary symptoms				
○ Respiratory physiology	√		√	
○ Special situations; Approach to pulmonary symptoms	√		√	
- Occupational and environmental disease				
○ Tobacco use treatment and smoking cessation; Occupational asthma and work-exacerbated asthma; Indoor and outdoor pollution; Barometric or thermal-related disorders; Pneumoconiosis; Work and	√		√	

disability evaluation; Toxic inhalations; Environmental cancer risk				
- Epidemiology				
○ Interpretation of clinical studies	√		√	
- Quality, safety and complications				
○ Complications of medical care	√		√	
○ Methods of assess quality, safety and patient satisfaction; Methods for improving quality and safety; Disclosure of errors to patients and family members; Ethics and professionalism	√		√	
<i>Knowledge of diagnostic testing and procedure (MK2)</i>				
- Plain chest radiography	√		√	
- CT scan of the chest	√		√	
- Spirometry	√		√	
- Lung volume and DLCO	√		√	
- CPET	√		√	
- Polysomnography	√		√	
- Serum biomarkers	√		√	
- Bronchoscopy with tissue biopsy	√		√	
- Intensive care ultrasound	√		√	
- Mechanical ventilation (invasive and non-invasive)	√		√	
- PAP therapy in sleep-disordered breathing	√		√	
3. Interpersonal and communication skills				
- Communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds	√	3	√	4
- Communicate effectively with physicians, other health professionals, and health-related agencies	√	3	√	4
- Work effectively as a consultant to, or member or leader of, a health-care team or other professional group	√	3	√	4
- Maintain comprehensive, timely, and legible medical records	√	3	√	4
4. Practice-based learning				

- Identify strengths, deficiencies, and limits in one's knowledge and expertise	√	3	√	4
- Set learning and improvement goals	√	3	√	4
- Systematically analyze practice, using quality improvement methods, and implement changes with the goal of practice improvement	√	3	√	4
- Incorporate formative evaluation feedback into daily practice	√	3	√	4
- Locate, appraise, and assimilate evidence from scientific studies related to patients' health problems	√	3	√	4
- Use information technology to optimize learning	√	3	√	4
- Participate in the education of patients, families, students, residents, and other health professionals	√	3	√	4
5. Professionalism				
- Adhere to basic ethical principles: autonomy, beneficence, nonmaleficence, justice Demonstrate an attitude of caring derived from humanistic and professional values	√	3	√	4
- Demonstrate compassion, integrity, and respect for others	√	3	√	4
- Maintain accountability to patients, society, and the profession Demonstrate punctuality, reliability, and follow-through on commitments Prioritize patient needs above self-interest	√	3	√	4
- Demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to, diversity in sex, age, culture, race, religion, disabilities, health problems, and sexual orientation	√	3	√	4
- Recognize personal limitations and seek and accept assistance or supervision	√	3	√	4
- Demonstrate high standards of ethical behavior Maintain appropriate boundaries and relationships with patients, other physicians, and other health-care team members	√	3	√	4
6. System-based practice				
- Work effectively in various health-care delivery settings and systems	√	3	√	4
- Transition patients within and across health delivery systems	√	3	√	4
- Incorporate considerations of cost awareness and risk-benefit analysis into patient care	√	3	√	4
- Advocate for quality patient care and optimal patient-care systems	√	3	√	4
Assist patients in dealing with system complexities	√	3	√	4

- Work in an inter-professional team to enhance patient safety and improve patient-care quality	√	3	√	4
- Participate in identifying system errors and in implementing potential system solutions	√	3	√	4
- Acquire skills to organize, administer, and direct a clinical care unit such as an ICU, pulmonary function laboratory, respiratory therapy section, or outpatient practice and to work effectively as a member of a multidisciplinary team	√	3	√	4

ภาคผนวก 2

Entrusable professional activities (EPA)

คือ กิจกรรมที่มีความสำคัญมาก (critical activities or task) ที่ผู้จะประกอบอาชีพเป็นอายุรแพทย์โรคระบบการหายใจ ทุกคนต้องทำได้ด้วยตนเองอย่างถูกต้องและมีความปลอดภัยต่อผู้ป่วย ระหว่างการฝึกอบรมดังนี้

1. Manage care of pulmonary problems in the ambulatory setting
2. Manage care of pulmonary problems in the in-patient setting
3. Manage care of pulmonary and critical care problems in the emergency and critical care setting
4. Provide pulmonary and critical care consultation to general internal medicine and non-medical specialties
5. Perform common pulmonary and critical care procedures
6. Providing palliative care to patients and their families
7. Demonstrating lifelong personal learning activities
8. Practicing patient safety
9. Working with inter-professional health care teams

1. แนวทางการเรียนรู้และการประเมิน EPA

1.1 Level of EPA

Level 1 = สามารถปฏิบัติงานได้ภายใต้การควบคุมของอาจารย์อย่างใกล้ชิด

Level 2 = สามารถปฏิบัติงานได้ภายใต้การชี้แนะของอาจารย์

Level 3 = สามารถปฏิบัติงานได้โดยมีอาจารย์ให้ความช่วยเหลือเมื่อต้องการ

Level 4 = สามารถปฏิบัติงานได้ด้วยตนเองโดยไม่ต้องควบคุม

Level 5 = สามารถปฏิบัติงานได้ด้วยตนเองและควบคุมผู้ที่มีประสบการณ์น้อยกว่าได้

EPA and Competencies matrix (Pulmonary and Pulmonary Critical Care)

Competencies	EPA 1	EPA 2	EPA 3	EPA 4	EPA 5	EPA 6	EPA 7	EPA 8	EPA 9
Patient care	•	•	•	•	•	•		•	•
Medical knowledge and skills	•	•	•	•	•	•	•	•	•
Practice-based learning	•	•	•	•	•	•	•	•	•
Interpersonal and communication skills	•	•	•	•	•	•		•	•
Professionalism	•	•	•	•	•	•	•	•	•
System-based practice	•	•	•	•	•	•		•	•

EPA 1

Manage care of pulmonary problems in the ambulatory setting

EPA 1: Manage care of pulmonary problems in the <u>ambulatory</u> setting	PC	MK	ICS	PBL	PRO	SBP
1. Management airway diseases	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
2. Management pulmonary infection	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
3. Management DPLD	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
4. Management PVD	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
5. Management pleural diseases	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2

	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
6. Management lung tumor and mediastinal mass	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
7. Management pulmonary manifestations or complications in non-pulmonary diseases and non-medical conditions	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
8. Management sleep-disordered breathing	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
Specifications	<ol style="list-style-type: none"> 1. Detect significant problems of patients 2. Perform systemic physical examination correctly 3. Able to identify clinical relevant problems/differential diagnosis 4. Provide appropriate and relevant investigations 5. Provide appropriate and relevant procedures 6. Provide proper and adequate management 7. Inform patients with proper and adequate information 8. Record proper and adequate clinical information 					
Context	Ambulatory setting					
Required experience for entrustment	Experience:					

	<ul style="list-style-type: none"> - Demonstrate experience coping with patients' problems at ambulatory setting - Completeness of OPD records
Assessment information source to assess progress and ground a summative entrustment decision	<ul style="list-style-type: none"> - Direct observation - Information from colleagues (multisource feedback) - Medical records - Bed-side discussion
Entrustment for which level of supervision is to be reached at which stage of training	<p>End of Year 1</p> <p>In complex, advanced or end-stage ambulatory cases: achieve level 3</p> <p>In non-complicated cases: achieve level 4</p> <p>End of Year 2</p> <p>In complex, advanced or end-stage cases: achieve level 4</p> <p>In non-complicated cases: achieve level 5</p>

EPA 2

Manage care of pulmonary problems* in the in-patient setting

EPA 2: Manage care of pulmonary problems* in the in-patient setting	PC	MK	ICS	PBL	PRO	SBP
1. Management airway diseases	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
2. Management pulmonary infection	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
3. Management DPLD	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
4. Management PVD	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
5. Management pleural diseases	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3

	PC4 PC5			PBL4	PRO4	SBP4
6. Management lung tumor and mediastinal mass	PC1 PC2 PC3 PC4 PC5	MK1 MK2	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
7. Management pulmonary manifestations or complications in non-pulmonary diseases and non-medical conditions	PC1 PC2 PC3 PC4 PC5	MK1 MK2	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
8. Management sleep-disordered breathing	PC1 PC2 PC3 PC4 PC5	MK1 MK2	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
Specifications	<ol style="list-style-type: none"> 1. Able to appraise patients' severity 2. Able to detect significant history/symptoms from patients/relatives/referral physicians 3. Perform systemic physical examination correctly 4. Able to identify clinical relevant problems/differential diagnosis 5. Provide appropriate and relevant investigations 6. Provide appropriate and relevant procedures 7. Provide proper and adequate management 8. Provide proper and adequate information to the patients/relatives/referral physicians 9. Record proper and adequate clinical information 10. Able to lead and communicate with the health-care team 					

Context	In-patient setting
Required experience for entrustment	Experience: <ul style="list-style-type: none"> - Demonstrate experience coping with patients' problems at general ward setting - Completeness of medical records
Assessment information source to assess progress and ground a summative entrustment decision	<ul style="list-style-type: none"> - Direct observation - Information from colleagues (multisource feedback) - Medical records - Bed-side discussion - Medical conferences
Entrustment for which level of supervision is to be reached at which stage of training	End of Year 1 In complex, advanced or end-stage case: achieve level 3 In non-complicated cases: achieve level 4 End of Year 2 In complex, advanced or end-stage cases: achieve level 4 In non-complicated cases: achieve level 5

EPA 3

Manage care of pulmonary and critical care problems* in the emergency and critical care setting

EPA 3 : Manage care of pulmonary and critical care problems* in the emergency and critical care setting	PC	MK	ICS	PBL	PRO	SBP
1. Management non-complicated respiratory failure	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
2. Management ARDS	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
3. Management complication during mechanical ventilation	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
4. Management sepsis or septic shock	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2
	PC3			PBL3	PRO3	SBP3
	PC4			PBL4	PRO4	SBP4
	PC5					
5. Management cardio-pulmonary arrest	PC1	MK1	ICS1	PBL1	PRO1	SBP1
	PC2	MK2	ICS2	PBL2	PRO2	SBP2

	PC3 PC4 PC5			PBL3 PBL4	PRO3 PRO4	SBP3 SBP4
6. Management non-complicated arrhythmia	PC1 PC2 PC3 PC4 PC5	MK1 MK2	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
7. Palliative care case management	PC1 PC2 PC3 PC4 PC5	MK1 MK2	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
8. Management patients during weaning period	PC1 PC2 PC3 PC4 PC5	MK1 MK2	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
9. ICU bed allocation	PC1 PC2 PC3 PC4 PC5	MK1 MK2	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
10. Oxygen and aerosol therapies	PC1 PC2 PC3 PC4 PC5	MK1	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
Specifications	1. Able to assess patients' severity					

	<ol style="list-style-type: none"> 2. Able to perform appropriate and relevant management in critical condition (e.g. CPR, shock, arrhythmia) according to clinical problems 3. Able to perform the appropriate and relevant specific procedure e.g., central venous line insertion, emergency ultrasound or adjustment of mechanical ventilators 4. Able to detect significant history/symptoms from patients/relatives/referral physicians on first arrival 5. Perform systemic physical examination correctly 6. Able to identify clinical relevant problems/differential diagnosis 7. Provide appropriate and relevant investigations 8. Provide proper and adequate informations to the patients/relatives/referral physicians 9. Record proper and adequate clinical information 10. Able to lead and communicate with the health-care team
Context	ED/ICU/IMCU/RCU setting
Required experience for entrustment	Experience: <ul style="list-style-type: none"> - Demonstrate experience coping with patients' problems at ED/ICU/IMCU/RCU setting - Completeness of medical records
Assessment information source to assess progress and ground a summative entrustment decision	<ul style="list-style-type: none"> - Direct observation - Information from colleagues (multisource feedback) - Medical records - Bed-side discussion - Medical conferences
Entrustment for which level of supervision is to be reached at which stage of training	End of Year 1 in complex, advanced or end-stage cases: achieve level 3 in non-complicated cases: achieve level 4 End of Year 2

	in complex, advanced or end-stage cases Level 4
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	in non-complicated cases: achieve level 5
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EPA 4

Provide pulmonary and critical care consultation to general internal medicine and non-medical specialties

EPA 4: Provide pulmonary and critical care consultation to general internal medicine and non-medical specialties	PC	MK	ICS	PBL	PRO	SBP
1. Management consultation cases with pulmonary medicine problems	PC1 PC2 PC3 PC4 PC5	MK1 MK2	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
2. Management consultation cases with critical pulmonary problems	PC1 PC2 PC3 PC5	MK1 MK2	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
Specifications	<ol style="list-style-type: none"> 1. Able to detect significant history/symptoms from patients/relatives/consulting physicians 2. Perform systemic physical examination correctly 3. Able to identify clinical relevant problems and/or patient's risks to particular procedures/interventions 4. Provide appropriate and relevant investigations 5. Provide proper and adequate management including plan of follow-up 6. Effectively communicate with consulting physicians and patients with proper and adequate information 7. Record proper and adequate clinical information 					
Context	OPD, in-patient, emergency and critical care setting					
Required experience for entrustment	<u>Experience:</u>					

	<ul style="list-style-type: none"> - Demonstrate experience coping with providing consultation to non-medical specialties - Completeness of consultation records
Assessment information source to assess progress and ground a summative entrustment decision	<ul style="list-style-type: none"> - Direct observation - Information from colleagues (multisource feedback) - Medical records - Bed-side discussion
Entrustment for which level of supervision is to be reached at which stage of training	<p>End of Year 1</p> <p>in complex, advanced or end-stage cases: level 3 in non-complicated cases: level 4</p> <p>End of Year 2</p> <p>in complex, advanced or end-stage cases: level 4 in non-complicated cases: level 5</p>

EPA 5

Perform common pulmonary and critical care procedures

EPA 5: Perform common pulmonary and critical care procedures	PC	MK	ICS	PBL	PRO	SBP
1. Bronchoscopy	PC4 PC5	MK2	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
2. Essential lung and critical care ultrasound	PC4 PC5	MK2	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
3. Mechanical ventilator setting both invasive/non-invasive and hospital/ambulatory	PC4 PC5	MK2	ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
4. Pulmonary function interpretation	PC4 PC5	MK2	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
5. Polysomnography interpretation	PC4 PC5	MK2	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4
6. Setup PAP therapy	PC4 PC5	MK2	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP3 SBP4

Specifications	<ol style="list-style-type: none"> 1. Perform lung and critical care ultrasound 2. Perform bronchoscopy 3. Perform setting mechanical ventilation in common causes of respiratory failure both invasive/non-invasive and hospital/ambulatory 4. Interpretation of pulmonary function 5. Interpretation of PSG 6. Setting PAP therapy
Context	OPD, in-patients, or intensive care unit
Required experience for entrustment	<p><u>Experience:</u></p> <p>Perform critical care ultrasound 50 cases/ 2 years</p> <p>Perform bronchoscopy 200 cases/ 2 years</p> <p>Set mechanical ventilator 200 cases/ 2 years</p> <p>Interpret PFT 300 cases/2 years</p> <p>Interpret PSG 100 cases/2 years</p> <p>Set up PAP therapy 50 cases/2 years</p>
Assessment information source to assess progress and ground a summative entrustment decision	- record procedure
Entrustment for which level of supervision is to be reached at which stage of training	<p>End of Year 1</p> <p>Perform all procedure at level 3</p> <p>End of Year 2</p> <p>Perform all procedure at level 4</p>

EPA 6

Providing palliative care to patients and their families

EPA 6: Providing palliative care to patients and their families	PC	MK	ICS	PBL	PRO	SBP
1. Management end stage lung diseases in ambulatory setting	PC1 PC2 PC5	MK1	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO3 PRO4	SBP1 SBP4
2. Management end of life care in in-patient setting	PC1 PC2 PC5	MK1	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO3 PRO4	SBP1 SBP4
3. Management end of life care in critical care setting	PC1 PC2 PC5	MK1	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO3 PRO4	SBP1 SBP4
Specifications	<p>Breaking bad news to patients with incurable diseases</p> <ol style="list-style-type: none"> 1. Conveying a conversation to inform a diagnosis of the incurable disease to patients with or without their relatives 2. Active listening to the patients' perception and concerns 3. Supporting the patients and maintaining realistic hope <p>Advanced care planning to patients with end-of-life incurable diseases</p> <ol style="list-style-type: none"> 1. Initiating a conversation to the patients with end-of-life incurable diseases (with or without their relatives) to plan ahead the future action when the patient may not be capable to make decision e.g. proxy, life-prolongation modalities, intubation and CPR 					

	<ol style="list-style-type: none"> 2. Explaining the possible choices with unbiased view and without rush 3. Active listening to the patients' opinions and desires 4. Respect the patients' decisions
Context	OPD, in-patients, or intensive care unit
Required experience for entrustment	<p><u>Experience:</u></p> <p>Manage end stage (breaking bad news) cases</p> <p>Perform end of life care management</p>
Assessment information source to assess progress and ground a summative entrustment decision	- Direct observation
Entrustment for which level of supervision is to be reached at which stage of training	<p>End of Year 1</p> <p>Level 3</p> <p>End of Year 2</p> <p>Level 4</p>

EPA 7

Demonstrating lifelong personal learning activities

EPA 7: Demonstrating lifelong personal learning activities	PC	MK	ICS	PBL	PRO	SBP
1. Complete portfolio		MK3		PBL1 PBL2 PBL3 PBL4		
Specifications	<ol style="list-style-type: none"> 1. Able to reflect what have been learned from internal, external or personal academic activities 2. Able to reflect what are the impacts to one's practice from those learning activities 3. Able to propose a personal development plan (PDP) 					
Context	Personal learning activities					
Required experience for entrustment	<p><u>Experience:</u> Demonstrate how to perform lifelong learning to mentor</p>					
Assessment information source to assess progress and ground a summative entrustment decision	- Mentor's opinion					
Entrustment for which level of supervision is to be reached at which stage of training	<p>Supervise or support at end of the first years – level 3 Unsupervised at the end of final year – level 4</p>					

EPA 8
Practicing patient safety

EPA 8: Practicing patient safety	PC	MK	ICS	PBL	PRO	SBP
1. Caring patients at ambulatory setting	PC1 PC2 PC3 PC4	MK1 MK2 MK3	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	-	SBP1 SBP2 SBP4
2. Caring patients at in-patient setting	PC1 PC2 PC3 PC4	MK1 MK2 MK3	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	-	SBP1 SBP2 SBP4
3. Caring patients during procedure	PC1 PC2 PC3 PC4	MK1 MK2 MK3	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	-	SBP1 SBP2 SBP4
4. Caring patients during critical condition	PC1 PC2 PC3 PC4	MK1 MK2 MK3	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	-	SBP1 SBP2 SBP4
Specifications	<ol style="list-style-type: none"> 1. Understands and participates in the hospital system for patient safety eg. medical reconciliation 2. Management patients with standard care 3. Perform correctly common safety behaviors eg. handwashing, gown/mask wearing, medical reconciliation 4. Reports patient safety errors (real or potential) when identified 					

	<p>5. Works with team members to identify root causes of patient safety errors and implement solution</p> <p>6. Performs procedures according to hospital standards</p>
Context	Ambulatory / emergency / in-patient setting / special care units
Required experience for entrustment	<p><u>Experience:</u></p> <ul style="list-style-type: none"> - Demonstrate correct handwashing - Perform medical reconciliation - Incorporate with the hospital risk reports, RCA and PDSA
Assessment information source to assess progress and ground a summative entrustment decision	<p>Direct observation</p> <p>Information from colleagues (multisource feedback)</p>
Entrustment for which level of supervision is to be reached at which stage of training	<p>End of Year 1</p> <p>Level 4</p> <p>End of Year 2</p> <p>Level 5</p>

EPA 9

Working with inter-professional health care teams

EPA 9: Working with inter-professional health care teams	PC	MK	ICS	PBL	PRO	SBP
1. Working as a team leader in ICU or RCU	PC1 PC2 PC3 PC4 PC5	MK1 MK2 MK3	ICS1 ICS2	PBL1 PBL2 PBL3 PBL4	PRO1 PRO2 PRO3 PRO4	SBP1 SBP2 SBP4
Specifications	<ol style="list-style-type: none"> 1. Understands roles and responsibilities as a leader of health care teams 2. Understands roles of other professions to appropriately assess and address the health care needs of the patients and populations served and how the team works together to provide care 3. Works with individual of professions to maintain a climate of mutual respect and share values 4. Communicates with patients, families and other health professions in a responsive manner to support a team approach to maintenance of health and the treatment of disease 5. Listens actively, and encourages ideas and opinions of other team members 6. Applies relationship-building values and the principle of team dynamics to perform effectively in different team roles to plan and deliver patient-centered care 7. Applies leadership practices that support collaborative practice and team effectiveness 					
Context	Ambulatory / emergency / in-patient setting					

Required experience for entrustment	<p><u>Experience:</u></p> <p>Demonstrate experience in leading the health care team during primary physician or chief ward rotation within 2 years of training</p>
Assessment information source to assess progress and ground a summative entrustment decision	<p>Direct observation</p> <p>Information from colleagues (multisource feedback)</p> <p>E-portfolio - Personal development plan</p>
Entrustment for which level of supervision is to be reached at which stage of training	<p>End of Year 1</p> <p>Level 4</p> <p>End of Year 2</p> <p>Level 4</p>

ภาคผนวก 3

รายละเอียดเกณฑ์ผ่านเลื่อนชั้นปี

ตารางสรุปเกณฑ์การเลื่อนชั้นปี

ชั้นปี	ระยะเวลาการฝึกอบรม	สัดส่วนการเข้ากิจกรรมวิชาการ	EPA1	EPA2	EPA3	EPA4	EPA5	EPA6	EPA7	EPA8	EPA9
1	≥80%	≥80%	P	P	P		P	P			
2	≥80%	≥80%	P	P	P	NP	P	P	NP	NP	NP

หมายเหตุ: P หมายถึงการประเมิน EPA จากการปฏิบัติงานดูแลผู้ป่วย; NP หมายถึงการประเมิน EPA ที่ไม่ได้ประเมินจากการดูแลผู้ป่วยโดยตรง เช่น จากแบบสอบถามผู้ร่วมงาน จากการสังเกต หรือจากการตรวจ medical record เป็นต้น

รายละเอียดเกณฑ์แต่ละ EPA ที่ประเมินจากการปฏิบัติงานดูแลผู้ป่วย

EPA 1: Manage care of pulmonary problems in the <u>ambulatory</u> setting	ชั้นปีที่ 1	Level	Experience (cases/years)	ชั้นปีที่ 2	Level	Experience (cases/years)
1. Management airway diseases						
a. Non-complicated	√	4	50	√	5	50
b. Complicated	√	3	10	√	3-4	10
2. Management pulmonary infection						
a. Non-complicated	√	4	10	√	5	10
b. Complicated	√	3	3	√	3-4	3
3. Management pleural diseases						
a. Non-complicated	√	4	-	√	4	-
b. Complicated	√	3		√	3-4	
4. Management lung tumor and mediastinal mass						
a. Non-complicated	√	4	-	√	5	-
b. Complicated	√	3		√	4	
5. Management sleep-disordered breathing						
a. Non-complicated	√	4	-	√	4	-

EPA 2: Manage care of pulmonary problems* in the in-patient setting	ชั้นปีที่ 1	Level	Experience (cases/years)	ชั้นปีที่ 2	Level	Experience (cases/years)
1. Management airway diseases						
a. Non-complicated	√	3	-	√	4	-
b. Complicated	√	2		√	3	
2. Management pulmonary infection						
a. Non-complicated	√	3	10	√	4	10
b. Complicated	√	2	5	√	3	5
3. Management pleural diseases						
a. Non-complicated	√	3	-	√	4	-
b. Complicated	√	2		√	3	
4. Management lung tumor and mediastinal mass						
a. Non-complicated	√	3	10	√	4	10
b. Complicated	√	2	5	√	3	5

EPA 3: Manage care of pulmonary and critical care problems* in the emergency and critical care setting	ชั้นปีที่ 1	Level	Experience (cases/years)	ชั้นปีที่ 2	Level	Experience (cases/years)
1. Management non-complicated respiratory failure	√	3	-	√	4	-
2. Management ARDS	√	2	2	√	4	2
3. Management complication during mechanical ventilation	√	3	-	√	4	-
4. Management sepsis or septic shock	√	3	10	√	4	10
5. Management cardio-pulmonary arrest	√	4	-	√	5	-

EPA 5: Perform common pulmonary and critical care procedures	ชั้นปีที่ 1	Level	Experience (cases/years)	ชั้นปีที่ 2	Level	Experience (cases/years)
1. Bronchoscopy	√	3	50	√	4	50
2. Essential lung and critical care ultrasound	√	4	25	√	4	25
3. Mechanical ventilator setting both invasive/non-invasive and hospital/ambulatory	√	3	100	√	4	100
4. Interpretation pulmonary function	√	4	150	√	5	150
5. Interpretation PSG	√	3	50	√	3	50
6. Set up PAP therapy	√	3	25	√	3	25

EPA 6: Perform common pulmonary and critical care procedures	ชั้นปีที่ 1	Level	Experience (cases/years)	ชั้นปีที่ 2	Level	Experience (cases/years)
1. Management end stage lung diseases in ambulatory setting	√	3	-	√	4	-
2. Management end of life care in in-patient setting	√	3	-	√	4	-
3. Management end of life care in critical care setting	√	3	-	√	4	-

ภาคผนวก 4
เนื้อหาของการฝึกอบรม/หลักสูตร

เนื้อหา	ชั้นปีที่ 1	ชั้นปีที่ 2
<i>Basic knowledge</i>		
- Anatomy of respiratory system	√	√
- Respiratory system physiology in normal and abnormal condition	√	√
- Immunology, embryology, pathogenesis and pathology of respiratory system	√	√
- Pharmacology in respiratory system medication	√	√
<i>Clinical knowledge</i>		
- Obstructive lung disease		
○ Asthma	√	√
○ COPD	√	√
○ Bronchiectasis, central airway obstruction	√	√
- Critical care medicine		
○ Assessment and monitoring	√	√
○ Therapeutics	√	√
○ Prevention and management of complications	√	√
○ Respiratory failure	√	√
○ Non-respiratory critical care	√	√
- Diffuse parenchymal lung disease		
○ ILD associated with systemic inflammatory disease	√	√
○ Idiopathic interstitial pneumonias	√	√
○ Granulomatous interstitial lung diseases	√	√
○ Diffuse cystic lung diseases; Radiation-induced pneumonitis/fibrosis; Drug-induced ILD; Pulmonary alveolar proteinosis; Constrictive bronchiolitis; Genetic and other rare ILD	√	√
- Sleep medicine		

○ Respiratory	√	√
○ Non-respiratory	√	√
- Neuromuscular and skeletal (Hypoventilation)		
○ Chest wall and skeletal, obesity, neuromuscular disease, ventilatory control	√	√
- Infections		
○ Common syndromes	√	√
○ Major pathogens (including TB and NTM)	√	√
○ Host defense mechanisms; Vaccination; Immunocompromised host; Extrapulmonary infection in the ICU	√	√
- Neoplasia		
○ Lung cancer	√	√
○ Other intrathoracic tumors	√	√
○ Malignant pleural disease; Complications; Pulmonary nodules; Physiologic assessment for thoracic surgery; Interventional pulmonary medicine and thoracic surgery; Lung cancer screening (4.5%)	√	√
- Pleural disease		
○ Effusions and pleural pathology	√	√
○ Structure and physiology; Pneumothorax; Diagnostic and therapeutic procedures	√	√
- Transplantation	√	√
- Vascular disease		
○ Pulmonary thromboembolic disease	√	√
○ Pulmonary hypertension; Pulmonary vasculitis and capillaritis; Pulmonary vascular malformation; Sickle cell disease	√	√
- Respiratory physiology and pulmonary symptoms		
○ Respiratory physiology	√	√
○ Special situations; Approach to pulmonary symptoms	√	√
- Occupational and environmental disease		
○ Tobacco use treatment and smoking cessation; Occupational asthma and work-exacerbated asthma; Indoor and outdoor pollution; Barometric or thermal-related disorders; Pneumoconiosis; Work and	√	√

disability evaluation; Toxic inhalations; Environmental cancer risk		
- Epidemiology		
○ Interpretation of clinical studies	√	√
- Quality, safety and complications		
○ Complications of medical care	√	√
○ Methods of assess quality, safety and patient satisfaction; Methods for improving quality and safety; Disclosure of errors to patients and family members; Ethics and professionalism	√	√
<i>Knowledge of diagnostic testing and procedure</i>		
- Plain chest radiography	√	√
- CT scan of the chest	√	√
- Spirometry	√	√
- Lung volume and DLCO	√	√
- CPET	√	√
- Polysomnography	√	√
- Serum biomarkers	√	√
- Bronchoscopy with tissue biopsy	√	√
- Intensive care ultrasound	√	√
- Mechanical ventilation (invasive and non-invasive)	√	√
- PAP therapy in sleep-disordered breathing	√	√
<i>Others</i>		
- การตัดสินใจทางคลินิก และการใช้ยาอย่างสมเหตุสมผล	√	
- ทักษะการสื่อสาร	√	
- จริยธรรมทางการแพทย์	√	
- การสาธารณสุข และระบบบริการสุขภาพ	√	
- กฎหมายการแพทย์ และนิติเวชวิทยา	√	
- หลักการบริหารจัดการ	√	
- ความปลอดภัยของผู้ป่วย	√	

- การดูแลตนเองของแพทย์	√	
- การเกี่ยวพันกับการแพทย์ดั้งเดิม การแพทย์ประเพณีนิยมพื้นถิ่น และการแพทย์เสริม	√	
- พื้นฐานและระเบียบวิจัยทางการแพทย์	√	
- เวชศาสตร์อิงหลักฐานประจักษ์	√	

รายนามคณะอนุกรรมการ

จัดทำเกณฑ์หลักสูตรการฝึกอบรมแพทย์ประจำบ้าน อนุสาขาโรคระบบการหายใจ และภาวะวิกฤตโรคระบบการหายใจ 2561

- | | |
|--|------------------|
| 1. รองศาสตราจารย์นายแพทย์นิธิพัฒน์ เจียรกุล | ประธาน |
| 2. รองศาสตราจารย์นายแพทย์อรรถวุฒิ ตีสัมโชค | เลขานุการ |
| 3. พันโทนายแพทย์อมรชัย เลิศอมรพงษ์ | ผู้ช่วยเลขานุการ |
| 4. แพทย์หญิงพิชญา เพชรบรม | ผู้ช่วยเลขานุการ |
| 5. รองศาสตราจารย์แพทย์หญิงสุรีย์ สมประดีกุล | |
| 6. ผู้ช่วยศาสตราจารย์นายแพทย์นัฐพล ฤทธิ์ทยมัย | |
| 7. ผู้ช่วยศาสตราจารย์นายแพทย์พงศ์เทพ ธีระวิทย์ | |
| 8. รองศาสตราจารย์แพทย์หญิงประภาพร พรสุริยะศักดิ์ | |
| 9. แพทย์หญิงเปี่ยมลาภ แสงสายัณห์ | |
| 10. แพทย์หญิงณัฏฐ์ผลิกา กองพลพรหม | |
| 11. พันโทนายแพทย์ประพันธ์ กิตติวรวิทย์กุล | |
| 12. นายแพทย์สมคิด อุ้นเสมาธรรม | |
| 13. ผู้ช่วยศาสตราจารย์นายแพทย์อภิชาติ คณิตทรัพย์ | |
| 14. นายแพทย์สันติ สิลัยรัตน์ | |
| 15. ผู้ช่วยศาสตราจารย์นายแพทย์ศิวศักดิ์ จุทอง | |
| 16. ศาสตราจารย์แพทย์หญิงวิภา รัชชัยพิชิตกุล | |
| 17. นายแพทย์ธนากรณ์ อนันตะเศรษฐกุล | |
| 18. รองศาสตราจารย์นายแพทย์ณัฐพงษ์ เจียมจริยธรรม | |