

Program SPECIFICATION FOR Diploma Degree in Pain medicine

Code: 1716600

University: Alexandria

Faculty: Medical Research Institute

Program Specification

A- Basic information

1- Program title : Pain Medicine

2- Program type: single double multiple

3- Department(s) : Department of Anaesthesia and pain management.

4- Coordinator : Dr. Ahmed Rabah

5- External evaluator(s):

-Salwa shaarawy, professor in anaesthesia, Alex University

6- Last date of program specification approval: 5/6/2014

B- Professional Information

1- Program aims:

Provide the students with knowledge, skills and critical awareness to make significant contribution to services provided by the department. By the end of this program the student should:

1-Recognize the basic anatomy of the human body which is the fundamental science to learn and understand in order to adequately assess and manage pain. This includes anatomy of the central and autonomic nervous systems. Also the anatomy of the head ,neck and peripheral nervous system including upper and lower limbs plexuses which form the basis of the common practice of the nerve blocks and the cornerstone of their performance.

2-Recognize the basis for assessment , pathophysiology and management of acute pain and acute pain service. Clinical course: Training in acute pain service in the hospital, Candidates should attend round table discussion once a week during the course.

3-Recognize the principles of regional and neuroaxial blocks ,obstetric analgesia, acute neuropathy, non surgical pain and complex patients. Clinical coarse: Make 5 successful attempts of neuroaxial on simulators then give a chance to make a trial on patients under supervision. Learn how to perform a successful thoracic epidural, paravertebral block, different peripheral nerve blocks using nerve stimulation and ultrasound guided techniques. Candidates should provide at least 2 presentations during the course and should attend round table discussion once a week during the course

4- List basic knowledge about chronic pain including the basic cognitive and psychologic aspects of pain, basic principles in neuropathic pain assessment, basic principles in physiotherapy and in psychotherapy in pain management . Clinically the candidate should attend ,5 neuropathic pain clinic, , one comprehensive pain programme, 5 intervention pain techniques.

5- Assess and manage cancer pain, descrie the pharmacological and non pharmacological therapy for cancer pain.,neurolytic therapy, implant device injection, palliative care basic principles in musculo-skeletal and soft tissue pain, basic studying in low back pain, pain in :eldery , ICU, heamatology. children and at the end of life, basic principle in radiotherapy and chemotherapy management of pain as well as management of patients with headache.

6-Recall the recent advances in mechanism of action of analgesics,pharmacokinetics and pharmacodynamics, drug interaction of analgesics, , local anaesthetics ,NSAIDS, opioids, NMDA antagonists, antidepressants, anti convulsants, neuroleptics, corticosteroids and herbal medicine .

7-Define pain, Membrane potentials and synapses, nociceptors, Neural pathway:fast and slow fibers, Neurotransmitters:excitatory and inhibitory, Pain processing and transmission in spinal cord, Modulation(descending inhibition) and Peripheral sensitization, Central sensitization.

8-Recognize essential information about the nosocomial infection, and the importance of the different antiseptic and disinfection procedures in decreasing the incidence of infection, and improving the outcome. The course will also provide information about the proper antibiotic use to decrease the overwhelming problem of antibiotic resistance.

2- Intended learning outcomes (ILOS)

a- knowledge and understanding:

A1- Identify basic anatomical landmarks of the back and segmental cutaneous innervation (dermatomes).

A2- Discuss the effect of pain on different body systems with special emphasis on the neurological and psychological aspects.

A3- Describe the different groups of antimicrobial agents and identify the mechanisms of bacterial resistance.

A4- Identify basics of pain physiology and define nociceptors and reflex arc.

A5- Describe types of chronic pain and outline their management , with special consideration to pain in : elderly, ICU, hematology(sickle cell anemia- Lymphoma-leukemia), children and at the end of life (palliative care) and headache.

A6- Define acute pain service and identify the role of the staff and different protocols used and recognize the different modes of controlling pains in postoperative period and during labor pain.

A7- Describe the steps to perform neuroaxial blocks and truncal blocks ,and describe the different approaches of both upper and lower limb blocks brachial plexus block, lower limb blocks.

A8- Recognize the fundamentals of ethical & legal practice and know the quality standards of the practice

b- Intellectual skills:

b1- -Categorize the components of the central nervous system (CNS) and peripheral nervous system (PNS); explain the structural and functional divisions of each.

B2- Appraise the strategy to use opioid in non cancer pain

B3- categorize tolerance and addiction in patients receiving opioids for chronic pain and able to dealing with and manage those patients with addiction.

B4- Analyze the Types Of Pain And Identify the concepts of Molecular Pathophysiology Of Pain Development, Peripheral And Central Sensitization And Pain Processing

B5- Analyze problems related to inadequate infection control including surgical site infection , catheter related infection and ventilator associated pneumonia.

B6- Analyze the hazards of exposure to ionizing radiation.

c- professional and practical skills:

c1 Demonstrate the lines of the thoracic wall and the major surface landmarks (jugular notch, sternal angle, infrasternal angle, midclavicular, anterior axillary and midaxillary ,posterior axillary line and midinguinal , ect)

C2- -Demonstrate neurological and psychological conditions.

C3- Use radiological anatomy, and diagnose different lesions in Xray films.

C4- Use intervention pain techniques including fluoroscopy guided interventions

d- General and transferable skills:

d1-Make scientific presentations

d2-Communicate effectively through group discussion

d3-Work in group.

d4-Use multimedia effectively and internet resources.

3- Academic standards

3a External references for standards (Benchmarks)

Generic Academic Reference Standards of the National Authority for Quality Assurance and Accreditation of Education (NAQAAE)
 Adopted at MRI council 12/2/2014 and re-adopted at 15/1/2023

Last date of ARS approval by institute council 15/1/2023

3b Comparison of provision to selected external references

Generic Academic Standards of NAQAAE	ARS of diploma of pain medicine
A1-Basic facts, theories, of the specialty and related subjects/ fields	a1.Describe the three layers of spinal meninges, boundaries of the spinal cord and identify spinal nerves, basic anatomical landmarks of the back and segmental cutaneous innervation (dermatomes). a2.Define acute pain service and identify the role of the staff and different protocols used.
A2-Fundamentals of ethical & legal practice	a3- Recognize the fundamentals of ethical & legal practice and know the quality standards of the practice
A3 -Quality standards of the practice	a4.Identify different types of pain and how to evaluate a pain patient , assess and measure pain using different pain score.
A4- Effect of the specialty practice on the environment including rules for environmental conservation	a5-Define sterilization and disinfection and familiarize the students with different antiseptics ,disinfectants and personal protective barriers used in hospitals
B1- Determine, analyze & prioritize problems	b1-Categorize the components of the central nervous system (CNS) and peripheral nervous system (PNS); explain the structural and functional divisions of each. b2- Appraise the importance of technology and the updates in analgesic drugs and techniques

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B2- Solve common problems effectively	b3- categorize tolerance and addiction in patients receiving opioids for chronic pain and able to dealing with and manage those patients with addiction.
B3- Critically appraise researches and articles	b4 Appraise pain management protocol in postoperative units, medical emergencies and trauma in both pediatrics and adults
B4-Evaluate professional risks	b5- Analyze the Types Of Pain And Identify the concepts of Molecular Pathophysiology Of Pain Development, Peripheral And Central Sensitization And Pain Processing
B5- Make decisions to solve professional problems according to available data	b6-Distinguish problems related to inadequate pain management
C1- Practice basic professional skills (clinical/practical & procedural skills) competently	c1.Illustrate the lines of the thoracic wall and the major thoracic surface landmarks and anatomical landmarks integral to the interventional pain practice c2.Use management of acute pain and complications of medications and blocks
C2- Write reports related to the profession (Patient records, self appraisal/ audit reports etc...)	c3. Use different pain scales for assessing pain and monitoring treatment.
D1- Communicate effectively using all methods	d1- Develop skills in communication using all methods. Manage time effectively.
D2- Use information technology to improve his/her professional practice	d2- Use information technology to improve professional practice and use different sources of information to obtain data.
D3- Practice self appraisal and determines his learning needs	d3- Make scientific presentation
D4- Use different sources of information to obtain data	d4- Use information technology to improve professional practice and use different sources of information to obtain data.

D5- Work in teams	d5-Develop team work skills ,work as team leader as well as a member in larger teams.
D6- Manage time effectively	d1- Develop skills in communication using all methods. Manage time effectively.
D7- Work as team leader in situations comparable to his work level	d5-Develop team work skills ,work as team leader as well as a member in larger teams.
D8- Learn independently and seek continuous learning	d6-Develop skills in self appraisal, learning and seek continuous learning

4- Curriculum structure and contents

4.a program duration: 1.5 years

Program durations was determined according to the average time needed for student graduation over the last 10 years

4.b program structure : 3 semesters

4.b.i- No. of hours per week in each year/semester:

Semester	Number of hours
6Cr	(basic studies anatomy, physiology and pharmacology),
9Cr	(acute pain(a),acute pain (b), internal medicine),
11 Cr	(chronic pain (a),chronic pain (b) and radio diagnostic approaches).

4.b.ii- No. of credit hours	Lectures	<input type="text" value="14"/>	Practical	<input type="text" value="16"/>	<input type="text" value=""/>	Total	<input type="text" value="30"/>
	Compulsory	<input type="text" value="26"/>	Elective	<input type="text" value="4"/>	Optional	<input type="text" value="0"/>	

4.b.iii- No. of credit hours of specialized courses No. **26** % **86.7**

4.b.iv- No. of credit hours of other courses No. **4** % **13.3**

4.b.v- Program levels (in credit-hours system)

NA

5- Program Courses

5.1- Compulsory

Code No.	Course Title	No. of credit hours	No. of hours /week	
			Lecture	Clinical
1716601	Anatomy	2	1	2
1716602a	Acute pain I	3	1	4
1716602b	Acute pain II	4	1	6
1716603a	Chronic pain	4	2	4
1716603b	Chronic painII	4	2	4
1716604	Pharmacology of pain	2	2	0
1718620	Radiodiagnosis	3	2	2
1715605	Internal medicine	2	1	2
1716606	Physiology of pain	2	2	0
	TOTAL	26	14	24

5.2- Elective I

Code No.	Course Title	No. of credit hours	No. of hours /week	
			Lecture	practical
1708720	Immunology	1	1	0
1706722	Infection Control	2	2	0
1721720	Medical statistics	2	1	2
1720721	Computer	2	1	2
1713620	Genetics	1	0	1

5.3- Elective II

NA

5.4- Optional

NA

6- Program admission requirements

Graduate students with a M.B.Ch.B. of Medicine.

7- Teaching and learning methods

Lecture

Practical/Clinical

Discussion Groups

Problem Solving

Case Study

Training Workshops

Scientific meetings

Powerpoint presentation

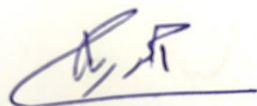
7- Regulations for progression and program completion

For the progression and completion of the program to obtain the degree of Diploma in pain medicine, the student must complete 30 credit hours with CGPA of at least C+ through courses.

8- Evaluation of program intended learning outcomes

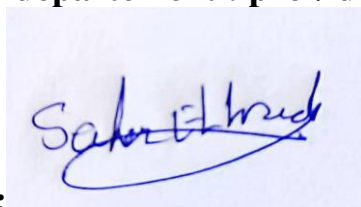
Evaluator	tool	Sample
1- Senior students	Questionnaire	At least 50%
2- Alumni	Questionnaire	Representative sample
3- Stakeholders (Employers)	meeting	Representative sample
4- External Evaluator(S) External Examiner (s)	report	Prof/dr/Salwa shaarawy
5- Other	NA	

Program coordinator : Dr/ Ahmed Rabah



Signature:

Head of the departement : prof/ dr/ sahar elkaradawy



Signature:

Date 6/8/2023

MATRIX OF DIPLOMA PROGRAMME AIMS VERSUS ILOS

AIMS	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	D1	D2	D3	D4
	1	X								X						X						
2		X			X					X							X		X	X		
3								X			X			X		X			X	X		
4							X						X									
5			X																			X
6				X								X										
7		X												X				X				
8					X			X											X	X	X	

Courses vs ILOs matrix

	A 1	A 2	A 3	A 4	A 5	A 6	A 7	A 8	B 1	B 2	B 3	B 4	B 5	B 6	C 1	C 2	C 3	C 4	D 1	D 2	D 3	D 4
Anatomy	X								X						X				X	X	X	
Acute pain I					X			X			X						X		X	X		X
Acute pain II			X									X				X			X		X	X
Chronic pain I							X							X						X	X	X
Chronic pain iiII				X			X							X					X	X		X
Pharmacology pain					X							X								x		x
Radiodiagnosis			X					X								X		x		X		X
Internal medicine		X								X									X		X	X
Physiology						X					X			X			X		x	x		x

ARS VS ILOs

ARS of diploma of pain medicine	A 1	A 2	A 3	A 4	A 5	A 6	A 7	A 8	B 1	B 2	B 3	B 4	B 5	B 6	C 1	C 2	C 3	C 4	D 1	D 2	D 3	D 4
	A1	X		X		X			X													
A2		X				X																
A3				X																		
A4							X															
A5		X		X																		
B1									X	X	X	X										
B2													X									
B3										X												
B4											X			X								
B5													X									
B6								X														
C1															X	X	X					
C2																X		X				
C3															X		X					
D1																			X			X
D2																			X		X	
D3																			X			X
D4																				X	X	
D5																				X	X	X
D6																			X			X

Teaching and Learning Methods Vs Courses Matrix

	Acute pain(A) 1716602(A)	Acute pain(B) 1716602(B)	Chronic pain(A) 1716603(A)	Chronic pain(B) 1716603(B)	Anatomy 1716601	Pharmacology 1716604	Physiology 1716606
Lecture	X	X	X	X	X	X	X
Practical/Clinical	X	X	X	X	X		
Brainstorming							
Discussion Groups	X	X	X	X	X		
Problem Solving	X	X	X	X			
Case Study	X	X	X	X			
Training Workshops	X	X	X	X			
Self-Directed Learning							
e-learning							
Project							
Scientific meetings	X	X	X	X			
Powerpoint presentation	X	X	X	X	X	X	X
Journal clubs							

Graduate Attributes of Diploma program in pain management

Generic Graduate Attributes of NAQAAE	Graduate Attributes of Diploma in pain management	Program aims
	By the end of this program, Graduate of Diploma in pain management, should be able to	
Apply specialized knowledge related to professional skills in the field of specification.	Identify anatomy of the central and autonomic nervous systems. Also the anatomy of the head ,neck and peripheral nervous system including upper and lower limbs plexuses	Recognize the basic anatomy of the human body
Identify professional problems in the field of specification and propose solutions to them.	Train in acute pain service in the hospital, Candidates should attend round table discussion once a week during the course.	Recognize the basis for assessment , pathophysiology and management of acute pain
Master professional skills in the field of specification.	Learn how to perform a successful thoracic epidural, paravertebral block, different peripheral nerve blocks using nerve stimulation and ultrasound guided techniques.	Recognize the principles of regional and neuroaxial blocks
Use appropriate technology means in his/her professional practice of the field of specification.	Diagnose neuropathic pain and do intervention pain techniques.	Recognize the basic cognitive and psychologic aspects of chronic pain
Communicate and lead work teams in a systematic, professional manner.	Describe the pharmacological and non pharmacological therapy for cancer pain.	Assess and manage cancer pain in multidisciplinary method
Take professional decisions in case of available information.	Describe pharmacological treatment of pain	Identify mechanism of action of analgesics, pharmacokinetics and pharmacodynamics of drugs
Use available resources efficiently.	Recognize Pain processing and transmission in spinal cord	Recall the recent advances in mechanism of action of analgesics
Relate his/her studies to community development and environmental preservation.	Help in pain relief in different branches of medicine	List basic knowledge about chronic pain
Act in a manner that reflects a commitment to integrity,	Recognize recent advances in pain management protocol	Assess and manage cancer pain

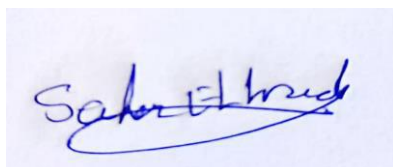
credibility, professionalism, and accountability.		
Realize the need for self-development and engaging in continuous learning.	Recall the recent advances in drugs	Recognize the principles of regional and neuroaxial blocks

Program Coordinator / Dr/ Ahmed Rabah



Signature

Head of the Department prof/Dr/ Sahar Elkaradawy



Signature

Date of Approval 6/8/2023