



UČNI NAČRT PREDMETA / SUBJECT SPECIFICATION	
Predmet:	Medicina v izrednih razmerah
Subject Title:	Disaster Medicine

Študijski program in stopnja Study programme and cycle	Študijska smer Study option	Letnik Year of study	Semester Semester
Dentalna medicina/Dental Medicine 2. stopnja/2nd cycle		3	6.

Vrsta predmeta / Course type	Izbirni/Elective
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Univerzitetna koda predmeta / University subject code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje Clinical training	Druge oblike študija Other forms of study	Samost. delo Individual work	ECTS
5	40				45	3

Nosilec predmeta / Lecturer:

Izr. prof. dr. Andrej Čretnik

Jeziki /

Predavanja / Lecture:

slovenščina/slovene

Languages:

Vaje / Tutorial:

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Prerequisites:

Vsebina:

Medicina v izrednih razmerah (Disaster medicine) je nova veja medicine, ki se je razvila v ZDA v zadnjih dveh desetletjih iz »Disaster managementa« in »Emergency medicine«. Postopno so jo prevzele tudi številne druge države, še posebej glede na naraščanje mednarodnih trenj, konfliktov, terorizma in spremenjenega načina vojaškega delovanja ter vse večjega pojavljanja naravnih katastrof in množičnih nesreč ter spremenjenih epidemioloških razmer (pandemij). Študenti se v okviru Medicine v izrednih razmerah seznajajo s splošnim delom (definicijami izrednih razmer, katastrofe, družbene krize, vojne, terorizma, množičnih nesreč itd.) in z etičnimi, socialnimi in psihološkimi vidiki v izrednih razmerah ter z javnozdravstvenimi vidiki na prehospitalem in hospitalnem nivoju in specifično obravnavo posebno ogroženih skupin prebivalstva (otroci, nosečnice, starostniki). Pridobijo si kompetence na področju načrtovanja in izvajanja medicine v izrednih razmerah na nivoju lokalne skupnosti, države in mednarodnih organizacij.

Content (Syllabus outline):

Disaster medicine is a new medical field that has developed in USA in the latest 20 years with merging "Disaster management" and "Emergency medicine." It has been widely adopted in many countries as a "medical response" of increasing threats and events in the field of international conflicts, terrorism and military strategy as well as increasing number of natural disasters and some other major incidents, including changed epidemiological situation and threats (pandemics).. Students get insight and earn competences in the general as well as special principles of disaster medicine, with medical response in the major incidents and in war settings. Beside definitions of specific terms they will be faced with the ethical, social and psychological aspects, together with Public Health measures in the Pre- and Hospital settings in major incidents with the special emphasize in the risk groups (children, pregnant women and elderly people). They will earn basic competences of preparedness and measures in the major incidents at the local, national and international level.

V specialnem delu obravnavamo vojno kirurgijo, množične naravne in mirnodobne nesreče (posledice civilizacije), nesreče ob terorističnih napadih in ukrepe v takšnih primerih.

V seminarskem delu je predvidena obravnava tovrstne problematike poglobljeno, s praktično obravnavo konkretnih primerov izrednih dogodkov v novejšem času (primeri terorizma, vojn, migracij, naravnih katastrof, množičnih nesreč, pandemij (COVID)...).

Študenti se bodo seznanili z ukrepi medicine v izrednih razmerah, triažo, organizacijo transporta in ukrepov v predbolnišničnem in bolnišničnem okolju, z mednarodno licenciranim naborom znanj in veščin (MRMI/MACSIM), kakor tudi sistematične obravnave hudo poškodovanega (Advanced Trauma Life Support) in principov kirurške obravnave „Damage control surgery“ vključno s posebnimi ukrepi v nevarnih ali infekcijskih razmerah.. Le-ta pomeni prilagoditev medicinskih ekip lokalnim tehničnim, kadrovskim in prostorskim danostim in se vklaplja v etapno obravnavo hudo poškodovanih pri množičnih poškodovanjih v mirnem času in v vojni.

V okviru takšne obravnave se študenti seznajajo s tehnikami „omejevanja škode« na vseh organskih sistemih (trepanacija glave, »packing« v prsni in peritonealni votlini ter retroperitonealno in suprapubično, urgentna leva torakotomija pri poškodbah v toraks in abdomen, „Damage control“ tehnika pri kompleksnih poškodbah ekstremitet, itd.)...

In the special part basic principles in the field of war surgery and medical response in the major incidents in natural and civil disasters and terrorist's attacks will be discussed.

Practical aspects will be concerned in seminars through the real situations in the recent major incidents across the world including pandemics (COVID)).

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Students will discuss principle measures in the major incidents with triage, organization of transport and medical organization in pre- and hospital settings, with the licensed system for medical response in major incidents (MRMI/MACSIM), accompanied with the skills of the Advanced Trauma Life Support and "Damage Control Surgery" including special measures in hazardous or infective situations.. Basic principles of civil settings adjustments to the situation of major incident in the civil disasters as well as war conditions, with the "stage organization", will be presented.

Basic principles of "Damage Control Surgery" in all the body parts will be discussed (Skull trepanation , packing of body cavities in polytraumatized patients, emergency left thoracotomy, principles of "Orthopaedic damage control surgery", etc.)

Temeljni literatura in viri / Textbooks:

- Lennquist Sten ed. Medical Response to Major Incidents and Disasters. A Practical Guide for All Medical Staff. Springer Verlag Berlin Heidelberg 2012. ISBN 978-3-642-21894-1, DOI 10.1007/978-3-642-21895-8
- Smernice za delovanje sistema nujne medicinske pomoči ob množičnih nesrečah. Eds. Dujić D, Simčič B. Ljubljana: MZ; 2013. http://www.mz.gov.si/fileadmin/mz.gov.si/pageuploads/kakovost/NMP_2013/mnozicne_nesrece/Smernice_NMP_mnozicne_tisk_2.pdf
- American College of Surgeons, Committee on Trauma. Advanced Trauma Life Support for Doctors, Student Course Manual, 10th Edition. Chicago: American College of Surgeons, 2018.
(prejme vsak slušatelj, ki se prijavi na ATLS tečaj (odg. oseba za tečaje v RS: Roman Košir)
- R. Komadina, V. Smrkolj: Kirurški vidiki medicine v izrednih razmerah (Medicinska fakulteta, Maribor, 2009)

DOPOLNILNO GRADIVO:

- Vincent, Jean Louis (ur.), et al. *Textbook of critical care*. 7th ed. Philadelphia: Elsevier. 2017.
- Mattox KL, Feliciano DV, Moore EE eds. Trauma, 8th Edition, New York, McGraw-Hill, 2017. ISBN-13: 978-1259860676
- Ciottone GR (ed.): Ciottone's Disaster Medicine 3rd ed. Philadelphia: Elsevier, 2024.

Cilji:

Študent se seznani s principi ukrepov ob izrednih razmerah (triaža, transport, ukrepi za zagotavljanje življenjskih funkcij (veščinami ATLS (Advanced Trauma Life Support oz. načelom "Damage control" kirurgije...) in z osnovnimi načeli vojne kirurgije (temelnimi zdravstvenimi ukrepi, s principi etapnega zdravljenja, vzpostavitev postaj-enot medicinske oskrbe (npr. ROLE 1, ROLE 2...

Objectives:

Principles of damage control surgical techniques, skills of ATLS, packing of body cavities, organization of field hospital.

Predvideni študijski rezultati:

Znanje in razumevanje: - načel organizacije medicinskih ukrepov v izrednih razmerah - triažnih postopkov - stopenjske oskrbe na predbolnišničnem in bolnišničnem nivoju - osnovnih postopkov zagotavljanja življenjskih funkcij oz. preživetja (ATLS, »Damage control surgery«...) Prenesljive/ključne spretnosti in drugi atributi: - primarna in sekundarna triaža - veščine oživljanja (ABCDE...) - veščine kirurgije omejevanja škode (drenaža in „packing“ telesnih votlin oz. prostorov, postavljanje fiksatorjev...) - organizacija stopenjske oskrbe...

Metode poučevanja in učenja:

Predavanja Seminarji

Načini ocenjevanja:

Način (pisni izpit, ustno izpraševanje, naloge, projekt) - pisni izpit ŠTUDIJSKE OBVEZNOSTI ŠTUDENTOV: - udeležba na predavanjih, seminarjih POGOJI ZA PRISTOP K POSAMEZNEMU PREVERJANJU ZNANJA: - pisna seminarska naloga
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Intended learning outcomes:

Knowledge and Understanding: - basic organisation of settings in the major incidents - triage - stage organization at the prehospital and hospital level - basic resuscitation principles (ATLS, Damage Control Surgery...) Transferable/Key Skills and other attributes: - primary and secondary triage - resuscitations skills - "Damage control" skills (drainage and packing of body cavities, external fixation of long bone fractures...) - stage organization... - triage

Learning and teaching methods:

Lectures Seminars

**Delež (v %) /
Weight (in %)****Assessment:**

100 %	Type (examination, oral, coursework, project): - written examination ACADEMIC OBLIGATIONS OF STUDENTS: - participation at the lectures, seminars REQUIREMENTS FOR ACCESS TO INDIVIDUAL KNOWLEDGE CHECKING: written seminar
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Reference nosilca / Lecturer's references:

LAUFER, Kevin, PETEK, Karina, RAKUŠA, Sofia, RAKUŠA, Matej, RAKUŠA, Martin, ČRETNIK, Andrej. Traumatic brain injury during the SARS-CoV-2 pandemics in Slovenia : a single center study. <i>Journal of clinical medicine</i>. 2022, vol. 11, issue 23, str. [1]-10. ISSN 2077-0383. https://doi.org/10.3390/jcm11237017, https://www.mdpi.com/2077-0383/11/23/7017, DOI: 10.3390/jcm11237017. [COBISS.SI-ID 131184899], [JCR, SNIP, WoS, Scopus] ČRETNIK, Andrej, FEKONJA, Anita. The use of selective laser melting in mandibular retrognathia correction. <i>Metals</i>. Sep. 2022, vol. 12, issue 9, str. [1]-10, ilustr. ISSN 2075-4701. https://doi.org/10.3390/met12091544, https://www.mdpi.com/2075-4701/12/9/1544, DOI: 10.3390/met12091544. [COBISS.SI-ID 122131203], [JCR, SNIP, WoS, Scopus] FEKONJA, Anita, ČRETNIK, Andrej. Comparison of craniofacial morphology in individuals with and without hypodontia with a special focus on the number of congenitally missing teeth. <i>Frontiers in public health</i>. 2022, [vol.] 10, str. 1-9. ISSN 2296-2565. https://www.frontiersin.org/articles/10.3389/fpubh.2022.1013862/full, https://doi.org/10.3389/fpubh.2022.1013862, DOI: 10.3389/fpubh.2022.1013862. [COBISS.SI-ID 130493187], [JCR, SNIP, WoS, Scopus] KAFTANDZIEV, Igor, BAKOTA, Bore, TRPESKI, Simon, ARSOVSKI, Oliver, SPASOV, Marko, ČRETNIK, Andrej. The effect of the ankle syndesmosis reduction quality on the short-term functional outcome following ankle fractures. <i>Injury</i>. 2021, vol. 52, suppl. 5, str. s70-s74, ilustr. ISSN 1879-0267. https://www.sciencedirect.com/science/article/pii/S0020138321003569?via%3Dihub, https://doi.org/10.1016/j.injury.2021.04.047, DOI: 10.1016/j.injury.2021.04.047. [COBISS.SI-ID 63598595], [JCR, SNIP, WoS, Scopus]
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2024/2025

[WoS](#) do 5. 1. 2023: št. citatov (TC): 1, čistih citatov (CI): 1, čistih citatov na avtorja (CIAu): 0,17, [Scopus](#) do 17. 12. 2022: št. citatov (TC): 2, čistih citatov (CI): 2, čistih citatov na avtorja (CIAu): 0,33]