Μεταπτυχιακό Πρόγραμμα Σπουδών

Διεθνής Ιατρική-Διαχείριση Κρίσεων Υγείας, Αθήνα

Ανάπτυξη και κατάρτιση μη τεχνικών δεξιοτήτων μέσω μοντέλων ιατρικής προσομοίωσης στην Ιατρική Μαζικών Καταστροφών

(Βιβλιογραφική ανασκόπηση)

[[File:NATO Special Ops train to save lives 08.jpg|thumb|NATO Special Ops train to save lives 08]]Public domain

ΜΙΧΑΗΛΙΔΟΥ ΕΥΑΓΓΕΛΙΑ

Αριθμός μητρώου φοιτήτριας: 20160145

26/08/2018

MSc. International Medicine, Health Crisis Management, Athens |

Development and training of non-technical skills through medical simulation models in Disaster Medicine (Bibliographic Review)

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26/08/2018

3 ο ΦΥΛΛΟ (Εσώφυλλο)

ΠΡΑΚΤΙΚΟ ΚΡΙΣΕΩΣ ΤΗΣ ΣΥΝΕΔΡΙΑΣΗΣ ΤΗΣ ΤΡΙΜΕΛΟΥΣ ΕΞΕΤΑΣΤΙΚΗΣ ΕΠΙΤΡΟΠΗΣ ΓΙΑ ΤΗΝ ΑΞΙΟΛΟΓΗΣΗ ΤΗΣ ΔΙΠΛΩΜΑΤΙΚΗΣ ΕΡΓΑΣΙΑΣ

Της Μεταπτυχιακής Φοιτήτριας Μιχαηλίδου Ευαγγελίας

Εξεταστική Επιτροπή

- ....., Επιβλέπων
- ....., Μέλος
- ....., Μέλος

ΗΤριμελής Εξεταστική Επιτροπή η οποία ορίσθηκε απο την ΓΣΕΣ της Ιατρικής Σχολής του Παν. Αθηνών Συνεδρίαση της .....ης ..... 20... για την αξιολόγηση και εξέταση της υποψηφίου κ. Μιχαηλίδου Ευαγγελίας, συνεδρίασε σήμερα .../.../....

ΗΕπιτροπή διαπίστωσε ότι η Διπλωματική Εργασία της κ. Ευαγγελίας Μιχαηλίδου με τίτλο : Ανάπτυξη και εκπαίδευση μη τεχνικών δεξιοτήτων μέσω μοντέλων προσομοίωσης στην Ιατρική Καταστροφών (Βιβλιογραφική Ανασκόπηση)/ Development and training of non-Technical skills through medical simulation mores (Bibliographic Review), είναι πρωτότυπη, επιστημονικά και 18 τεχνικά άρτια και η βιβλιογραφική πληροφορία ολοκληρωμένη και εμπεριστατωμένη.
Η εξεταστική επιτροπή αφού έλαβε υπ' όψιν το περιεχόμενο της εργασίας και τη συμβολή της στην επιστήμη, με ψήφους ..... προτείνει την απονομή στη παραπάνω Μεταπτυχιακή Φοιτήτρια την απονομή του Μεταπτυχιακού Διπλώματος Ειδίκευσης (Master's).

Στην ψηφοφορία για την βαθμολογία ο υποψήφιος έλαβε για τον βαθμό «ΑΡΙΣΤΑ» ψήφους ....., για τον βαθμό «ΛΙΑΝ ΚΑΛΩΣ» ψήφους ....., και για τον βαθμό «ΚΑΛΩΣ» ψήφους ..... Κατά συνέπεια, απονέμεται ο βαθμός «(Αριστα/Λίαν Καλώς/Καλώς)& (Βαθμός).....».

Τα Μέλη της Εξεταστικής Επιτροπής

....., Επιβλέπων(Υπογραφή)

....., Μέλος (Υπογραφή)

....., Μέλος (Υπογραφή)

ΕΛΛΗΝΙΚΗ ΠΕΡΙΛΗΨΗ

Εισαγωγή: Εξαιτίας του δυναμικού περιεχομένου και της φύσης της ιατρικής καταστροφών απαιτείται η κατοχή πολλών και σύνθετων μη τεχνικών δεξιοτήτων οι οποίες μπορούν τόσο να διδαχθούν στη βασική τους μορφή, όσο και να εξασκηθούν, με τη βοήθεια των τεχνολογιών προσομοίωσης.
Οι μη τεχνικές δεξιότητες στην ιατρική καταστροφών αφορούν διάφορες κατηγορίες, όπως πχ η αντίληψη της εκάστοτε κρίσιμης κατάστασης, η ταχύτητα λήψης αποφάσεων, η συντονισμένη ομαδική εργασία και ικανότητα άσκησης ηγεσίας.

Σκοπός της συγκεκριμένης εργασίας είναι η συγκέντρωση των διαθέσιμων δεδομένων στην ανάπτυξη και εκπαίδευση των μη τεχνικών δεξιοτήτων στην ιατρική καταστροφών κυρίως μέσω προγραμμάτων προσομοίωσης .

Υλικό – Μέθοδοι : Πραγματοποιήθηκε συστηματική αναζήτηση της βιβλιογραφίας της τελευταίας δεκαετίας και συστηματική αξιολόγηση αυτής.

Συμπεράσματα: Με τη ραγδαία εξέλιξη της τεχνολογίας, η διάδοση και εφαρμογή της προσομοίωσης για την τελειοποίηση – ανάπτυξη μη τεχνικών δεξιοτήτων αναμένεται να είναι συνεχώς αυξανόμενη. μέχρι στιγμής δεν υπάρχει ξεκάθαρη απόδειξη ότι η εκπαιδευτική προσομοίωση μπορεί να ανατρέψει πλήρως λανθασμένες συμπεριφορές, δεξιότητες, αποφάσεις ή και επιδόσεις. Οι θετικές ερευνητικές ενδείξεις που υπάρχουν καταδεικνύουν την ανάγκη για περισσότερη έρευνα τα επόμενα χρόνια σε αυτήν την κατεύθυνση.

Λέξεις κλειδιά : Προσομοίωση , Μη Τεχνικές Δεξιότητες , Ιατρική Καταστροφών , Εκπαίδευση.

ENGLISH ABSTRACT

Introduction: Due to the dynamic nature and nature of disaster medicine, it is necessary to have many and complex non-technical skills that can be taught in their basic form and practiced with the help of simulation technologies. Non-technical skills in medical disaster relate to various categories, such as perception of critical condition, decision-making speed, coordinated teamwork, and leadership.
The purpose of this work is to gather the available data in the development and training of non-technical skills in medical disasters, mainly through simulation programs.

Material - Methods: A systematic search of the literature of the last decade and its systematic evaluation has been carried out.

Conclusions: With the rapid development of technology, the dissemination and implementation of simulation for refinement - the development of non-technical skills are expected to be continuously increasing. Hush far there is no clear evidence that educational simulation can completely reverse the wrong behaviors, abilities, decisions and/or performance. The positive research evidence that exists suggests the need for more research in the coming years in this direction.

Key words: Simulation, Non-technical Skills, Disaster Medicine, Education

Contents:

[[File:NATO Special Ops train to save lives 09.jpg|thumb|NATO Special Ops train to save lives 08]]Public domain

Preamble

The learning and improvement of specialized abilities is a fundamental and basic component of analysis and treatment generally in medicine, much more in casualty emergencies. The preparation of specialized aptitudes generally dies down in connection to the absorption of therapeutic information. The fundamental reason is that the total, far-reaching and broad improvement of no technical skills is hard to accomplish in the clinical practice of disaster medicine.

Fundamental reasons incorporate the danger of unintentional damage to the patient, and the focused and typically unequal workload of teachers and students, bringing about constrained administration of complex and intermittent episodes.

Competency-based instruction has continuously developed in the therapeutic setting. It has been observed to be similarly successful in pedantic and self – learning approaches (5, 9, 42-51). For the vast majority of the twentieth century, the medicinal instruction was about an unimportant amassing of realities.

This empowered a shallow learning style and advanced here and now reviews of a profound comprehension of subjects. Indiscipline like Calamity medication, where the primary objective is the patient's mind, students should utilize a blend of learning and expert abilities and demeanors.

Community critical thinking exercises that include cooperation among a gathering of people in which no single people in which no single individual has every one of the assets and no single individual is probably going to take care of the issue or achieve the undertaking targets without at any rate some contribution from others in the gathering issues in the PC based appraisal of community critical thinking, according to the majority of scholars on this topic.

The calamity condition is convoluted and upsetting. It is described by the situational vulnerability, time pressure and popularity for qualified considerations. MCI/Fiasco reproductions have been the major devices for training and change of reaction limit (3-7).

It gives a valuable, significant setting for an errand or issue – fathoming the circumstance, sufficiently complex to be conceivable, however not all that perplexing as to be unmanageable.

It expects people who dealing with disaster medicine to apply abilities or incorporate information in reaction to learners' activities and choices, the earth is customary to react with conceivable, genuine trustworthy responses or outcomes. The debacle condition is entangled and distressing. It is described by the situational vulnerability, time pressure and popularity for qualified considerations. Meaning of reproduction a reasonable situation in which learners in disaster medicine play out a significant undertaking and experience proper results as input for their conduct in that condition.

Reenactment innovation can help with the improvement of engine abilities as well as the maintenance of intellectual learning. Maintenance of learning and abilities is significantly higher when an intelligent recreation framework is utilized. The innovation can deliver a subjective surplus as a result of the utilization of the mechanical instrument itself.

The above picture is courteous concession after written application to the company

LIFECAST BODY SIMULATION

Introduction:

The Significance Soft Abilities in the services of disaster medicine

Soft skills are characterized as the individual qualities that empower a person to communicate adequately and harmoniously with others in stuff conditions, and are fundamental for effective execution in any relational setting. According to Abbas (1) these properties are much more pivotal in the medical services industry of disaster medicine and not only, where therapeutic experts and representatives all the more nearly collaborate with patients and different human groups, as a rule under to great degree troublesome and passionate conditions.

Accordingly, people work in disaster medicine issues should completely screen work possibility to guarantee they have the delicate aptitudes required to convey an outstanding level of care and administration to patients, while additionally having the capacity to effectively team up with staff individuals to boost hierarchical viability (52-57).
In the aviation business, accident analyses, machine analysis, and cockpit voice recordings unconcealed that unsafe conditions were overtimes associated with failures in staff ' non-technical (cognitive and social) skills, instead of an absence of technical data, ability to execute commands and algorithms.

The correlation between the skills of the team members, the possible initiatives they may be required to take and the performance (quality and safety results) are decisive for the outcome of the mission (43, 56).

Methodology

Problem statement:

In the period of the most recent century, the quantity of catastrophes has astoundingly expanded, showing that future ages of doctors will be called upon to give mass-setback treatment to a significantly more noteworthy degree than previously. Various examinations point to the absence of satisfactory preparing in the medicinal administration of catastrophe reaction – an insufficiency that has turned out to be drastically clear in the ongoing past. In each real crisis there are as yet noteworthy quantities of help staff who do not have a portion of the basic aptitudes, as a result, numerous legislatures and logical foundations concur that fiasco solution instruction ought to be incorporated into the standard restorative educational programs.

The significance of improving instruction and preparing in a debacle of global safety and health has broadly been seen by medical understudies underlining that will react to massive disasters.

This will be require specialist medical intervention which will be depend on non-technical skills. In any case, ongoing examinations have been demonstrated that exclusive a little level of restorative schools worldwide have included training of soft skills in medicine of catastrophes in their studies program. Along these lines, preparing restorative understudies to acquire non-technical skills through simulation, for getting to be helpful wellbeing experts is fundamental.

It adopted the following procedure for the Systematic methodology review:

- Determining the research question and the appropriate studies
- Search for studies
- Selection of studies that meet the import criteria
- Evaluation of the quality of the selected studies
- Export data from studies
- Statistical analysis of data (meta-analysis)

Subsequently for the selection of appropriate studies :

All search results from various sources and removal of Duplicates with help from bibliographic reporting programs as PRISMA were merged (tab.1)

The titles and abstracts of all reports and isolation of potentially relevant studies were rode.

The full text of the potentially appropriate ones studies had been read.

Consideration/prohibition criteria

Papers were incorporated that announced investigations: a) focusing on non-specialized abilities estimates pertinent to the crisis mind condition. b) That were embraced in any nation. Papers were barred in the event that they were:

a) Not accessible in English.
b) Did exclude, or give access to the estimation instrument.
c) Related to specialized or clinical aptitudes estimates alone.

Following this, essential pursuit articles not meeting any of the consideration criteria by title or dynamic were barred; outstanding modified. A search of the literature was conducted to find and review instruments to quantify non-technical skills including: cooperation, leadership, higher cognitive process and scenario awareness. Electronic databases were searched from 2010 to 2018 and below are some of the databases used: Directory of open access books http://www.doabooks.org/ PubMed http://www.ncbi.nlm.nih.gov/pubmed/ Google scholar http: // scholar. google.com/ Scirus http://www.scirus.com/Google book search http://books.google.com/ The

Librarians' Internet Index http://www.lii.org/ Internet Public Library (IPL) http: //www.ipl.org as well as in: - MEDLINE- EMBASE- Cochrane Register of Controlled Trials (CENTRAL) SCOPUS, NATIONAL & KAPODISTRIAN UNIVERSITY OF ATHENS: Libraries & Information Services, WEB OF SCIENCE (WOS), NATIONAL ARCHIVE OF DOCTORAL DISTRIBUTIONS / ECB , OPENACCESS, OPENARCHIVES, JOURNAL OF MAGAZINES (EDETB), ZEFYROS, ARGO, DOAJ, Free Medical Journals & FreeMedical Books (via the Amedeo medical database), OCLCECO, U.S. NATIONAL LIBRARY OF MEDICINE (NLM) - Databases & Electronic Resources

Access methods enclosed the keywords: leadership, teamwork, scenario awareness, non-technical skills, standards, task performance analysis, resurgence, and medical emergency team, beside author and journal searches. Additionally to the current, systematic searches of the cooperation literature, one by one performed by the authors, were accessed for key papers between 2010 and 2018.

Reference has been made to important global writing

There are some gaps in the literature that make the research meaningful and original.

It is clear the relationship of the explanation behind the examination with the continuous written work in regards to the issue, the reason and the investigation questions are clear. The method grasped to answer ask about the request is appropriate.

- ✓ Data aggregation instruments have been adequately delineated and endorsed and trustworthy.
- ✓ Pleasing elucidations for the results are given.
- ✓ The ends rely upon the data assembled.
- ✓ The methodological obstructions of the investigation are seen.
- ✓ The structure and relationship of the parts of the investigation is clear
- ✓ Isolation of studies that meet the import criteria

Design

The PRISMA technique for examination of bibliography was utilized.

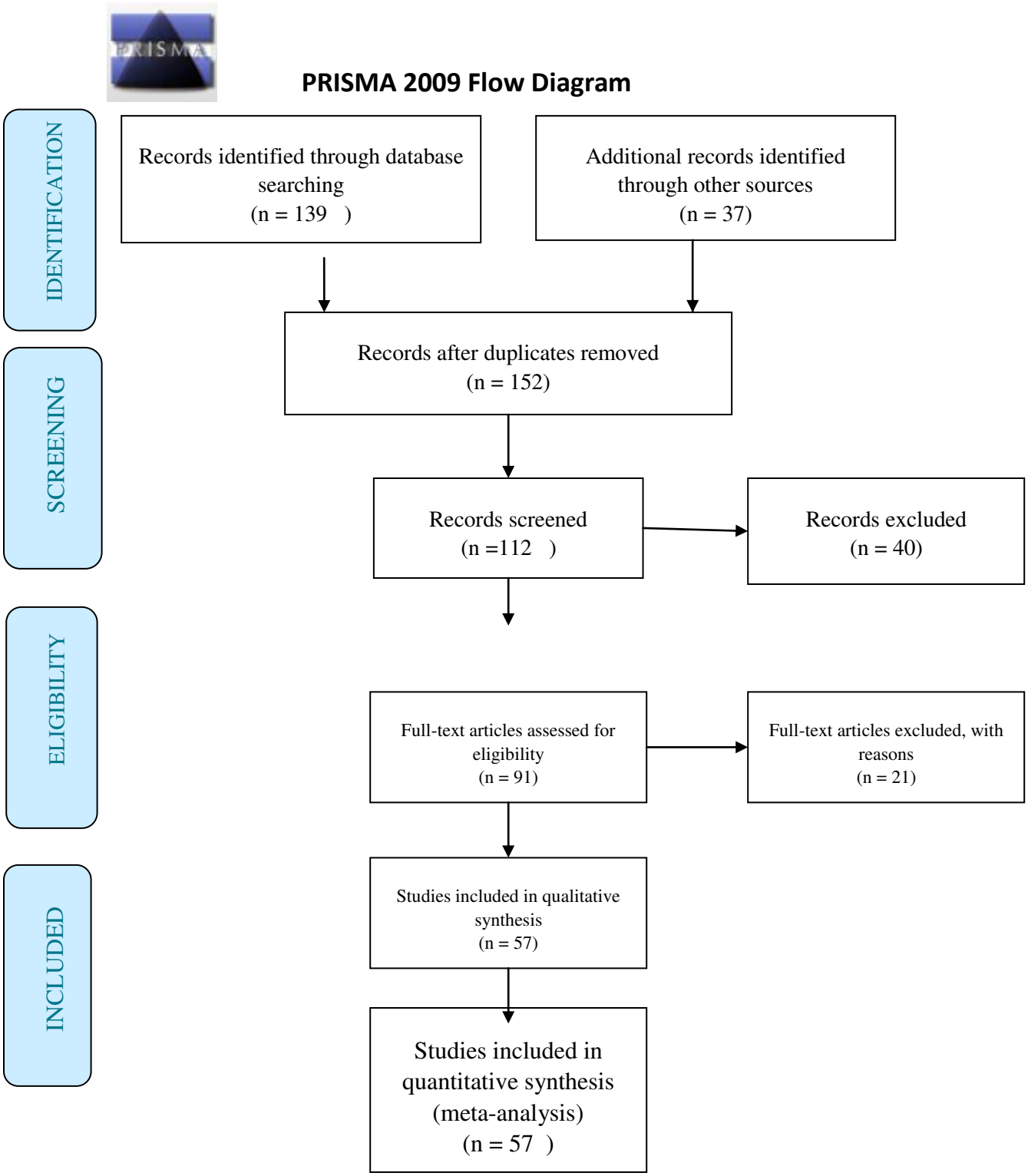

Table 1.Description of the selection of appropriate articles for the bibliographic review by PRISMA technique

Measurable examination

Measurable examination of information was performed utilizing SPSS 16.0 programming (Chicago, IL, USA). The between rater unwavering quality was estimated utilizing an intra-class relationship.
For all tests, a P-estimation of <0.05 was viewed as noteworthy (two-sided).

Main part

The impersonation of a true procedure or task of a framework over time. Envelops the advancement of a model that will repeat the key highlights and characteristics of a real framework.

The model speaks to the framework itself, while reproduction speaks to the conduct of the framework after some time Utilized with progress over the long haul in Flying Military Driving Transportation, Vehicles, Urban arranging Assembling Solution Medicinal recreation is a moderately new idea for preparing and assessment of doctors in disaster medicine incorporates a differing scope of procedures.

The main occurrence of medicinal reproduction was by Dr. Gregoire of Paris in the seventeenth century (6), utilizing a puppet he intended to show helped and muddled conveyances to birthing specialists.

Reenactment has advanced throughout the years to extend from utilizing institutionalized patients to automated patients; from part-undertaking mentors to high-constancy puppets numerous fields in prescription are developing into an interventional and hands-on way to deal with handling medical problems. Recreation has been generally utilized in disaster medicine pieces of preparing Careful fields are additionally utilizing reenactments to pre-establish methods.

Fig.1A late seventh-century "birthing phantom. These weren't supposed to be specifically just like the living body, however rather a basic reproduction permitting midwives to grasp the position of the kid within the passage way (19).

By permission of the Dittrick Medical History Center and Museum

As of late received into disaster health crisis preparing over the world. Crisis prescription as a claim to fame involves acing both information and fitness Characterization:

- Virtual reenactment where genuine individuals utilize recreated gear in a reproduced world or virtual condition.
- Live reenactment where genuine individuals utilize recreated or sham hardware in reality. Emergency asset administration (CRM) requires two arrangements of abilities: both specialized aptitudes Technical Skills (TS) and non-specialized abilities or better non technical skills (NTS), or conduct execution. TS have been characterized as the 'ampleness of the moves made from a therapeutic and specialized point of view', and NTS have been characterized as 'basic leadership

and group association forms utilized amid the group's administration of a circumstance'(1, 7, 13, 16-38).

There is an absence of major understanding whether great technical skills execution is joined by great execution, or whether the preparation of non-technical skills affects the execution of TS amid emergency (9).

Understanding the connection between these two traits in such circumstances could have expansive ramifications for clinical execution preparing, evaluation, and research. This investigation expects to decide the connection amongst technical skills and non-technical skills amid a reenacted emergency situation. We conjecture that TS and NTS are related and are not autonomous of each other amid emergency circumstances (47-56).

Conventional and Contemporary Training

As of late, medicinal college training has started to show an alternate way to deal with both the conventional model of living educating and clinical practice by managing okay and multifaceted nature under the supervision of an administering educator (13). Lately, innovative and logical disclosures have started and are being utilized in medicinal instruction as much and in disaster medicine, going for the quick, fast, subjective, worldwide and self-coordinated routine with regards to restorative learning and aptitudes.

Additionally, the consistent stream of subjective, inquire about and down to earth data, which is currently created in a quick and regularly expanding way, has started to invite some inflexibility in the best possible method for learning and comprehension through conventional means (38). Albeit these days a piece of the clinical preparing happens, all things considered, circumstances (generally okay and dependable with the nearness of a director), therapeutic preparing has turned out to be progressively delicate to security issues and the nature of arrangement of medicinal administrations in emergent situations. In this manner, better approaches for learning and honing are being looked for which can be connected in a controlled situation for instructing to manage uncontrolled breakdowns such as those in mass casualties (16-35).

So it becomes perceived that this procedure will require the clinical treatment of instances of rich assorted variety (35).

Simulation training utilizing reproduction advancements is a logical field, which goes for definitely decreasing a large number of the inconveniences related to the conventional learning model. Experimental simulation programs have sufficiently acquired proof from the effective utilization of pilot training programs for a long time in the field of aeronautics. Specifically, pilot test programs have loaned to their individual therapeutic highlights, for example, high photorealism amid a virtual flight, the deluge of multisensory information into the assessment and utilization of material criticism and complex movement advances. From a specialized perspective, this information is straightforwardly pertinent to restorative instruction, what's more rehearsing - realizing they can likewise be utilized to unabashedly assess, enhance and sort the trainee's specialized abilities. The term reproduction incorporates into expansion to its instructive measurement and its scientific - computational frame. Specifically, medicinal models are frequently utilized in the restorative science to mimic different minuscule marvels (for example photon collaboration with MONTECARLO) (21, 33, 49). Be that as it may, these models, which are for the most part of measurable starting point, are called upon to depict and dissect a wonder at a minute level with a specific end goal to make valuable determinations, for the structure/type of a tissue or an injury, the method of communication of the radiation (54).

Restorative recreation in instruction is an alternate space, going for the sensible reenactment of plainly visible wonders experienced in the clinical schedule, going for better training and assessment of learners. In any case, computational models, for example, MONTECARLO procedures can likewise be utilized in the instructive reenactment, however, to investigate and decipher the information created by the separate test systems (21, 33, 49). In outline, one could state that computational reenactment can be an apparatus for instructive recreation in medical training in massive destruction, however not vice versa.

The Points of interest

A portion of the approaches to address the above difficulties in therapeutic training is the rearrangement of claim to fame restorative projects, the association of little gathering meetings and the advancement of self-coordinated instruction. Be that as it may, the brokenness in exchanging therapeutic information and gaining from the amphitheater to the clinical condition keeps on existing. Medical reproduction has been proposed as another way to deal with instructive learning vacuum (insufficient training in all-encompassing methodology and chain of command of episodes) through simulation

The aviation domain provides a higher analogy for the ”temporary” groups that area unit found in acute medical specialties than industrial or military cooperation analysis supported established groups.

Crew resource management (CRM) coaching that emphasizes transportable skills (for no matter crew a pilot is roistered to on a given flight), has been recognized to own potential application in medication, particularly for groups that occupy with disaster medicine (13-19). Drawing on analysis from aviation science that created the behavioral marker system NOTECHS for rating European pilots’ non-technical skills for cooperation on the flight deck, this paper outlines the Non-Technical Skills behavioral classification system for doctors, nurses, and paramedics that dealing with disaster medicine. This taxonomy was used because the styling basis for a coaching course, Crisis shunning Resource Management for any category of professionals accustomed to developing soft skills. Any developments of this coaching program for groups in medicine area unit outlined(45).

The Best Delicate Abilities Required in Disaster Medicical services

Correspondence Capacity

Viable correspondence capacities are basic for people in any medicinal services setting in disaster. Forthcoming the providers should show ability in successfully collaborating with different authoritative levels and correspondence styles, and should be happy with talking about an extensive variety of very delicate data in an expert way. Moreover, in circumstances including extreme health disaster crises, the requirement for clear, compact correspondence is foremost, as time is of the pith in numerous examples (19-43).

Cooperation

A great part of the work in the medicinal services in disaster medicine is cooperative, with numerous people connecting in groups nearby others, for example, specialists, special forces and attendants. According to McGaghie (10) having the capacity to viably work in gatherings and add to a more prominent objective is basic for fruitful execution, and enhances the level of tend to patients. As indicated by many researches cooperation is especially fundamental to tolerant care in wellbeing frameworks with numerous levels of wellbeing workers and for sure efficiency and achievement of goals (10-19).

Versatility

Because of the quick paced and exceedingly powerful nature of patient care in abnormal environments and stuff conditions, those in the medicinal services must be to a great degree versatile to quickly evolving conditions (16-46).

This implies having the capacity to rapidly switch duties in a crisis health emergent setting, or knowing how to deal with an unpredictable restorative

system in a quiet and figured way. Whatever the conditions, the doctor or the paramedic expert in disaster medicine must be prepared for the unforeseen at any minute (3 -14).

Streamline Ability Obtaining Knowledge in disaster medicine

Accomplices with the ability obtaining industry's driving evaluation programming suppliers to empower medicinal services enlisting experts to streamline their applicant determination process, settle on more educated employing choices, and diminish pointless cost and contracting danger to their association (14-16). By coordinating ability evaluation programming with their candidate following framework, scouts can rapidly and effortlessly direct point by point hopeful appraisals as a component of the application procedure, and can browse pre-decided appraisals or create custom arrangements of inquiries in light of particular position prerequisites and hierarchical needs. As Cook mention (14-15) besides, flawlessly coordinating ability obtaining and evaluation programming frameworks additionally incorporates applicant data into a solitary arrangement of record to advance information honesty and diminishes the requirement for manual, excess information passage exercises.

In doing this, the shot of expensive human blunder is significantly decreased, additionally empowering medicinal services in disaster medicine enrollment specialists to boost viability and efficiency to make the correct contract while likewise diminishing by and large enlistment costs.

Creation of Detached Applicant Connections to Upgrade Enrollment Procedures in medicine of catastrophes

Prior to leading hopeful evaluations, using candidate following programming that incorporates enrollment advertising capacities can be utilized to assemble and connect with ability pools of qualified latent possibility to source from when the need to enlist for exceedingly particular human services positions emerges in catastrophe medicine. Moore (12) mentions that by utilizing the utilization of continuous enlistment showcasing refreshes, including

authoritative news and ebb and flow of many different injuries under dangerous conditions.

According to literature and majority of the articles, the main points where the simulation programs should focus on improvement of non-technical skills in disaster medicine are listed in the table below recognized 14 center abilities (55). Preparing destinations that ought to be incorporated into the recreation work out (55-57). The general idea for that is to build up a preparation instrument to prepare various restorative debacle soft medical skills connected to preparing targets and to occasions installed in a reproduced preparing situation.

Assessment of immediate needs	Coordination procedures
Alert procedures	Disposition of dead
Hospital management	Medical care at reception centers
Mental health for victims, relatives, and rescuers	Medical transportation
Medical resources management	Public and environmental health
Protection and safety	Medical information management
Medical management at the site	Social Welfare

Table 2. The main points where the simulation programs should focus on improvement of non-technical skills in disaster medicine.(Tables are copyrighted by the author)

The purposes of simulation programs in disaster medicine

Simulation training in medical disasters is intended by most scholars in:

1) Provide restorative understudies with fundamental information and prologue to the claim to fame of Disaster Medicine and make the comprehension of the catastrophe administration framework (1-16).

2) Provide a stage for understudies from various financial, social, national, religious foundations to talk about their view of calamity disaster medicine's general and particular needs, particularly in helpful issues, and utilize the chance to break down therapeutic moral problems in a debacle settings(1-15,22)

3) Provide a stage for the participants of training for Disaster Medicine preparedness and to prepare therapeutic understudies utilizing distributed procedure by sharing information and abilities (1, 12-15)

4) Create a force of restorative understudies that are prepared to advocate for the need of preparing in misfortune drug and focused on activities on moral quandaries in a fiascos (42-50)

5) Inspire medicinal understudies to utilize the information familiar to keep adopting more about the Disaster (1-57)

6) Empower therapeutic understudies to do activities on calamity medication and humanitarian activities in their networks through many and different Programs on Emergency, Disaster Risk administration, and Humanitarian Actions Success Indicators are being developed.The medical educational simulation module additionally looked to audit restorative training modalities Lectures Oral introduction utilizing pictures, recordings and another sort of visual introductions proposed to convey center data, actualities and standards about the points and fill in as a prologue to the further advancement of learning and thoughts through different techniques. Workshops/Role-plays Interactive strategy where members talk about and additionally work in breakouts gatherings (1-57).

The above picture with mannequin for use in training in disaster medicine is courteous concession after written application to the company LIFECAST BODY SIMULATION

This technique offers a dynamic commitment of members and will empower them to build up a more profound comprehension of learning gave or/and create activity anticipates advance commitment in national or neighborhood level. The assorted variety of foundation of members will at last fill the need to challenge all members' beliefs, ideas, verifiable and other foundation planning to make new thoughts and ideas. Reproduction/Games Simulation is an imaginative instructive strategy which effectively includes members in a theoretical circumstance that depends on a rearranged "genuine world". Members are furnished with chances to apply their hypothetical learning in a protected and reasonable setting, create group working and basic reasoning aptitudes, and a systematic approach to critical thinking. Reproductions require broad questioning and inside and out an examination of the experience of the members following the finish of each movement (42,53,57).

Motion picture/Documentary Storytelling is an imperative piece of the learning background and offers knowledge into this present reality encounters. Amid the preparation, members will have the chance to see a few films/documentaries that will enable them to get the tales from the experts from the field or question their impression of the world. Introduction by members (1-16)

This is utilized for expanding interest, consideration, and inspiration of members and to guarantee the best use of multinational portrayals.

Simulation programs that have already be used have pre and present tests that have already been sent on members for starters. The arrangement gives procedures to emptying, for example, the whole building (both on a level plane, and when pertinent, vertically) when the earth can't bolster satisfactory care, treatment, and administrations(45,53). The arrangement gives procedures to building up another way of care that has the abilities to save lives with the fewest losses and the best result when the typical technical skills can't bolster care, treatment, and administrations: Transporting patients, staff, and gear to the elective care site(s) Transferring to and from the elective care site(s) the necessities of patients (for instance, solutions, therapeutic records)Tracking of patients , correspondence between the healing facility and the elective care. It is crucial someone who occupies with disaster medicine to can communicate and work together with Medical understudies from various social, religious, financial, national foundations. Something that belongs to non-technical skills and no one university or curriculum program teaches you (2, 5,9-13). There is no requirement for past learning or past commitment on the point. Choice used to be done in view of the inspiration and chance of members to utilize the information and abilities in their networks. Expected number of members in most articles is 25 – 30 (1-53).

The national points of view and substance of the introductions enable them to recap and develop what they have realized Both specialized abilities or better technical skills (TS) and non-specialized aptitudes/ skills (NTS) are keys to guaranteeing quiet wellbeing in intense care rehearse and compelling emergency administration (1,16,45 0. These aptitudes are frequently educated and surveyed independently. We estimated that TS and NTS are not free of each other, and we planned to assess the connection amongst TS and NTS amid a recreated intraoperative emergency situation.

Simulation Training in a patient safe condition as also doctors and paramedics too, it energizes preparing for qualified training depends on apprenticeship time rare clinical and not only situations can be arranged and organized for therapeutic learners. The complex clinical circumstance may not present itself P doctors can be furnished with booked and normal restorative training in a non-

debilitating way. Rehearsing doctors pick up involvement in medicinal training now and then in a debilitating way at a real stuff and emergent situation. Assessment to get prompt input for intelligent reasoning. The likelihood of getting speedy criticism is low. A protection guarantee through awful negligence doesn't exist (1-3, 9, 15, 42, 53).

Simulation Training in disaster medicine can gain trainees from their disappointment in a conceivably safe condition. It might include "live patients" , " real earthquake conditions " and go on, in these moments their decisions may be in question and the same in shock or fear, in this way it gives no space for botches and therefore could improves their non-technical skills. Group and multidisciplinary preparing are empowered. Preparing is now and then individualized. Minimal effort preparing.

The most mentionednon-technical skills of disaster medical personnel according to the articles that selected (1-57)

System categories and elements

Task management	Prioritizing Providing and maintaing standards
Decision making	Revaluating Identifying options
Situation awareness	Recognizing and understanding
Team working	Exchange informations Using authority and assertiveness

Table3. It is copyrighted by the author

A Global way to deal with crisis reaction

Cataclysmic events and significant episodes make an irregularity in therapeutic administrations between the dire requirement for medicinal help and possible disaster fears. In this way, those doctors working in calamity situations should be outfitted with successful and proficient preparing, as a major aspect of a careful debacle activity plan.

The Disaster Medicine Simulation programs have a few points under its statement of purpose, including:

- Promotion and circulation of research, instruction, readiness, and preparing of doctors, in connection to catastrophe prescription
- The plan of a 'culture and dialect' encompassing debacle drug in Europe, subsequently encouraging institutionalized, cross-country reactions to those occasions which may prompt mass setbacks
- Stimulating contribution and expanding the level of instruction, preparing, and mind.

Simulation programs in disaster medicine attempts to guarantee that the wellbeing frameworks set up are adequate to secure the soundness of individuals, even in debacles and helpful emergencies. Along these lines, these programs investigates how doctors and restorative administrations can guarantee that lives are spared while passing's and wounds are restricted. In endeavors to upgrade the strength of the wellbeing framework in such special situations,simulation programs attempts to:

- Increase information;
- Increase ability and
- Alter the states of mind of wellbeing laborers.

Through co-working with different foundations, colleges, open and private offices, and legislative and nongovernmental associations, simulation programs with the goal of supporting the flexibility of wellbeing frameworks. Besides, the middle uses to look into tasks to expand the level of instruction around catastrophe medicine (23, 42, 50-57).

The utilization of reenactment in teaching wellbeing experts empowers students to rehearse essential aptitudes in a domain that takes into account blunders and expert development without gambling quiet security. As Illgen (16) said the fitting utilization of reenactment in an expert instruction program enables understudies to sharpen their clinical aptitudes and soft skills without risk of hurting the patient amid the procedure learning In spite of the fact that advocates of recreation attest that the utilization of simulation programs for training in disaster medicine in wellbeing callings instruction advances quiet security, others contend that to date there is inadequate research to connect reenactment to expanded patient wellbeing (52). Notwithstanding what some vibe is an absence of firm confirmation relating reenactment to understanding well-being, there is proof that reproduction preparing has upgraded student fulfillment and security in other high-chance fields?(42-57)

The commonsense uses of non-technical skills from the research results(1-57)

Earthquake	Airplane accident on / near airport
Flooding	Explosion
Windstorms	Chemical accident
Tornado	Nuclear accident
Volcanic eruption	Hospital fire
Mass gathering	Chemical terrorism
Major road traffic accident	Radiological terrorism
Rail accident	Terrorist explosion

Table 3 (It's copyrighted by the author)

Simulated situations that involving training in disaster medicine based mostly cases were accustomed enable participants to place non-technical skills into apply and interrogation was conducted victimization specific frameworks (different according the investigators but with many commons issues between them) to debate and supply feedback on behavioral aspects of performance. The interrogation was additionally accustomed to investigate underlying psychological feature processes. Odufefko(4) believes that more courses

command throughout specialist registrar coaching gave more chance to practice soft skills and to review and learn from the performance. All participants from all almost articles same they might worth more coaching and 100 percent indicated that the course would build them amendment some side of their application. The foremost common areas known for amendment were higher communication, reviewing aloud, and improved team collaboration. Current follow up can verify the implementation of perceived changes in clinical applications (4,9,12-42).

Recurrent comments from the courses urged that a lot of the things that participants found most difficult were those involving the interaction with alternative specialties and dealing as a part of a team concerned in revitalization. Mistakenly many scholars believe that the specialized seminars for addressing urgent clinical situations, some of which will be mentioned in the text below, also develop non-technical skills (14-16,42).

Management of the acutely unwell or scraped patient within the hospital room presents several clinical challenges, particularly as this typically involves a quickly forming (and changing) team with employees from multiple medical and surgical disciplines. This surroundings shares several of the attributes of alternative high risk domains in that:

- problems are unwell structured
- information could also be incomplete or conflicting
- situation is quickly ever-changing or evolving
- there could also be multiple conflicting goals
- time pressure could also be intense
- Consequences of error are grave.

These groups bring with them their own specialty specific information and technical skills and will convey differing cultural approaches. Courses like Advanced Life Support (ALS) and Advanced Trauma Life Support (ATLS) are developed in an endeavor to confirm that each one members of those “acute”

groups operating to constant tips or framework. They believe heavily on teaching of data and clinical skills. Whereas aspects of cooperation and leadership are acknowledged, specific non-technical skills don't seem to be addressed on such courses. Observations created throughout resuscitations within the clinical surroundings demonstrate that ALS coaching doesn't enhance leadership performance. Recent work has incontestable that, despite having adequate information and coaching, groups managing pathology in an exceedingly machine were unable to follow tips with success with the key obstacles being those of poor leadership and lack of specific task distribution. The presence of clear leadership within the hospital room has been shown to guide to improved adherence to ATLS frameworks and additional fast formulation of definitive plans (42-50). The simulation is meant to develop collaboration, negotiation and communication skills. Some students recognize the importance of leadership, in each negotiating and act concerning their patient with one another and with the Emergency Services Communications and Hospital Response groups. However a stunning variety of the teams according to the results of articles we considered, want team structure and method. Reasons for this were explored within the examination and enclosed the novel pressured surroundings and also the students' need to act quickly to assist their patients. By taking part in cooperation students learnt the importance of 'prioritizing and 'constant communication—debrief team each time scenario changes', several students mentioned however they mirrored throughout the simulation on difficulties they were having and experimented with differing roles and structures(13,19,42-55).

Not all student teams were ready to specialize in the non-technical skills, instead focusing on technical clinical problems that excluded the patient. For example a trainee reports '…it was a rare chance on behalf of me to get on the opposite facet of health care. It absolutely was usually terribly unoriented and occasionally worrying as I may hear everything around Maine however was helpless to try and do anything'(42-57).

The surprises and resource constraints engineered into the state of affairs were valued and indicated that the exercise was effective, for a minimum of some, in

delivery attention to situational awareness, one in every of the secondary learning outcomes(42-57)

Most new generations of simulation retain the generic components of the first course in shows however utilizes the hi-fi machine to recreate situations typical of the hospital room. The situations develop in real time and involve participants in their own specialty role (42.56). The course adopts the construct that team state of affairs awareness is vital to smart teamworking35 and uses the situations to explore shared mental models. This can be done victimization {the state of affairs|things|matters|true|the case} Awareness world Assessment Technique method by "freezing" the situations before resolution of the clinical state of affairs and victimization probe inquiries to establish the individual participants' level of situation awareness. Measures of the patients' presenting history and malady severity score, amendment in physiology throughout the situation, perceived roles and responsibilities of team members, and clinical priorities at the tip of the situation are created and accustomed compare mental models across members of the team. Samples of smart sharing or divergence of mental models are used because the basis for interrogation victimization video to explore the underlying team processes (1,3-13,42).

Credit: Image courtesy of Sandia National Laboratories(3)

Preliminary observations demonstrate that or so half-hour of groups' are terribly competent however, as Hoff et al found, the additional competent groups demonstrate nearer sharing of mental models. Wherever groups don't work well along, there's continually a breakdown in some side of shared mental models. Most issues occur with declarative models —either in what's happening to the patient (disparity of stories concerning presentation may be extreme) or in what was expected of alternative specialists after they arrived. This relates to perception of roles and is influenced by the actual fact that trainees can "do things differently" (3-51)

Having same that, the foremost marked example of complete separation of mental models could come from some teams wherever team members understand each other and vital false assumptions could be created. Wherever procedural models break down, it's most typically as a results of previous failure of declarative models. Repeated issues in team coordination are associated with leadership problems. Team state of affairs awareness within the revitalization space is over the total of matters awareness of the individual team members (13,15,17-25).

Identity and conduct tests

As a valuable proportion of group working potential and basic leadership, the most widely recognized identity test is the Myers Briggs Type Indicator (MBTI) which is controlled to more than 3.5 million individuals for every annum(42– 45). The measure depends on Jung's hypothesis of mental sorts which portrays an attention on the outside universe of individuals, things and experience (extroversion) and the interior universe of internal procedures and reflections (self-preoccupation). Of potential use to restorative group improvement is Catell's Personality Factors Test (16PF),which recognizes a gathering of practices that describe an identity compose, yet in addition incorporates a thinking capacity measure (19-43).

Estimating identity is enlightening, albeit restricted, in that identity winds up settled at an early age. More helpful maybe is a proportion of favored conduct which empowers both individual and group knowledge (33-36).

Key Interpersonal Relations Orientation – Behavior (FIRO-B) is one such instrument which estimates zones of relational needs (both communicated and needed) distinguished as consideration, control and warmth. Social inclinations can likewise be mapped as a group profile (12, 19,26).

These apparatuses have potential in the crisis mind field depending the requirements of the ED. Some can be utilized as proportions of potential or of individual, initiative or group execution that might be appraised without anyone else, subordinates or companions, through review or direct evaluations of observational execution. While choosing an instrument it isn't just imperative to think about the legitimacy, dependability and plausibility of the measure however the foci required (4-23).

For instance, the Leadership Practices Inventory (13) consolidates classes, for example, 'demonstrating the way' and 'empowering the heart' which might be excessively wide an order for the private examination of crisis conduct, while Team Excellence and the Leader Behavior Description Questionnaire (LBDQ)(13-15) utilize a more engaged miniaturized scale way to deal with the

estimation of group practices. The connection between NTS classifications and the TS agenda score had factually huge relationships, with running from 0.31 to 0.45.

Table-top simulation: during this kind of simulation the intellectual and communicative setting, however not the physical one is replicated. As a rule, table-top simulations permit a combination of face to face teaching with the addition of some sensible exercises which offer the learners with the likelihood of swing their gained information into restricted follow. Largely, these simulations ar scenario-based (1,19). During this type of teaching the degree of reality will be varied to elucidate period of time problems similar to lack of communication. Studies on the consequences of table prime simulation on student perception of disaster preparation and management has shown that compared to field operation exercises, this technique provides higher potentialities to link the results of exercises to acceptable changes in terms of coaching, equipment, supplies, and plans and conjointly provides extra advantages for communications, coordination, assignment of responsibilities, and post-event mitigation priorities. Rudolph (51) uses one example for such coaching model is MIMMS (Major Incidents Medical Management and Support). MIMMS has been and is employed as a coaching course in several countries and is a method of standardizing the key incident management. However, it's primarily been healthcare-oriented and lacks the period of time ideas with relevance consumed time for various live similar to swing IV-line or stabilization of the cervical spine. it's correct for showing the scene organization Associate in Nursing to disaster medicine to an extent however the organization of the hospital will be designed up, however the probabilities of interactive coaching of alternative components of the chain of response to major incidents is restricted (51-55) .

Computer-based simulation: during this kind of simulation there may well be no human interaction. However, the tactic will be improved if every or restricted range of scholars has their own pedagogue. During this technique

accent material, simulation exercises and programmed learning ar given to the scholar while not the presence of a tutor or trainer. Subtle e-learning programs may supply semi-AI responses (an intelligent response system), recommend routes to explore, and management the speed of learning betting on the student's input. In follow, the scholar solely needs a laptop of given power. A less technologically-mediated system would come with internet-broadcast lectures, films, or demonstrations, and also the provision of labor (e.g. written papers) to a personality's teacher .The strength of the system is that each student has the chance to find out at her/ his own pace and time. Sufficiently subtle programming will judge students, guide them, and supply all necessary materials. Course materials will simply be updated. There's no limitation in range of participants, as they use their own house and time to catch up with the teachings (52-54). Learners have therefore time to rigorously replicate and supply proof for his or her feedback. The weaknesses of the system ar the large resources it wants and also the long time it takes to develop initial course. Alternative points to contemplate ar isolation and loneliness of scholars while not human contact with teacher, that results in less motivation and slower progression and lower learner satisfaction. There are several tries to form this sort of simulation accessible for coaching with restricted success. The general expertise so far indicates that operating with this sort of coaching doesn't fulfill the demand for interactive involvement of scholars (52-55,57).

Real-time simulation: during this kind of simulation over five hundredth of the course stress is on the crisis resource management and totally different aspects of the crisis similar to personnel, resource and time management ar trained in specific things. The nucleus of the course is realistic simulations followed by careful debriefings. Simulation coaching will be supplemented by extra modalities similar to videotapes and role-playing to reinforce the supreme learning (52-55,57). Simulation strives for prime degree of realism and so is conducted with workers and participants usually set at their normal operating setting. Situations have interaction participants in acceptable interactions and enhance cooperation, vertically in own organization and horizontally together

with alternative organizations. These situations aim to ascertain inter-individual and inter-disciplinary interaction by asking and receiving helps. Workers could rotate among {different totally different completely different} stations to find out every positions potentialities and limitations to achieve different views (13-42).

Examination are crystal rectifier by one or a lot of instructors with special coaching or expertise and might be performed in whole cluster or separately to explore aspects of behavior and emphasize constructive critique and offers participants chance to find out from one another and to do and train to find out. Coaching is intense and possible and also the range of instructors will be adjusted to range of participants and also the structure of the course. According to Schon (52) this kind of coaching will be conducted by mistreatment figurants or patient cards.

Simulation coaching mistreatment figurants or "Field Exercises". This model is incredibly resource overwhelming and therefore expensive. It typically wants great deal of figurants to check all levels in an exceedingly disaster management system and disturb the continued and daily medical aid activities.b. Simulation coaching mistreatment patients 'card is one kind of simulation system which might be accustomed train and judge the total chain of response (Scene, transport, hospitals, command and communication) and coordination between totally different parts of the chain and also the obtained results (outcomes). The coordination is by expertise one in all the foremost vital components of the response and its failure is often mentioned because the main reason for non-optimal outcome (42-56).

Is Simulation the Best Choice in training of disaster medicine (1-57)?

Instructional plan ought to be founded on learning targets, student needs, wellbeing concerns, asset usage Virtual patients frequently used to educate clinical thinking Technology-improved reenactment is regularly for procedural preparing. How Do We Optimally Implement Simulation Education? More research to elucidate how to pick amongst sum and non-sum approaches Cost-viability research to decide the genuine and correlation estimation of sum

instruction. How Do We Optimally Implement Simulation Education? Near viability research should center on what works in reenactment – for which gathering of people – for what conditions – and at what cost. Assignment investigation should center on basic activities and can help decide the level of devotion important for the sort of preparing. How Do We Optimally Implement Simulation Education for training in disaster medicine? Watchful choice and sequencing of occasions encompassing the recreated errand Appropriate personnel improvement and bolster Institutional promise to reproduction (33).

Teamwork is central to the acquisition of non-technical skills (NTS), that are delineated as 'the psychological feature, social and private resource skills that complement technical skills, and contribute to safe and economical task performance, they're believed to be an important element of preparation for follow(42-56).

While simulation suites square measure currently commonplace, significantly in medium to high resource countries, several medical students receive restricted simulation experiences to develop their non-technical skills. Educators typically believe that the legitimacy and fidelity of simulation got to replicate the complexness of the ability being learned which hi-fi is critical for teaching advanced skills like cooperation, styles that square measure resource and time intensive aren't property for delivery to giant cohorts. Nevertheless there's very little proof on the dimensions at that simulation is often productive (12-46). At a similar time, it's familiar that interactive giant cluster teaching will manufacture smart learning outcomes. Studies comparison high and low fidelity simulations have shown stripped will increase in learning, as long as a 'baseline authenticity' is obtained (19) .

Fidelity exists in 2 major planes; 'engineering' (physical) and psychological, the latter being a lot of powerful in reassuring effective learning, once essential crucial parts exist within the situation. Despite engineering triumphs reminiscent of computerized voices and harm wounds, simulations of lack 'sociological fidelity'. this manner of fidelity takes account of the mixing of an advanced vary of skills, attitudes and behaviors, that need a firm understanding

on however factors reminiscent of imbalances of authority and influence, impact on collaborating and negotiating processes (these are advanced technical activities in their own right) (16-42).

An opportunity to analyze a number of these problems arose within the style and implementation of an outsized category learning and teaching activity, framed as a simulation of a natural disaster, so as for medical students to develop the non-technical skills essential to health care team operating (3-5).

We have incontestable the satisfactoriness and academic effectiveness of a large-class teaching model for people trainees learning the non-technical skills of collaboration, negotiation and communication during a simulated disaster drugs context. Our findings are of interest to medical faculties in disaster prone areas, as well as inside low resource countries, and as a possible intervention for learning the non-technical skills that square measure required for patient safety (51, 58).

Conclusion

A series of substantial and reliable non-specialized expertise measures are accessible as soft skills, but only two articles have been used in the real-world crisis crisis and have developed the simulation as a non-technical skill training tool only. There is a requirement to extend the assessment of cooperative skills to enhance a more meaningful understanding of team performance and to enhance the well-being of crisis tolerance that will be developed through a simulation program alone.

Many papers refer to non-technical skills training, but do not focus exclusively on it. Always include or compare technical skills. This review inter alia demonstrated that TS and NTS are related and are not free of each other amid disaster emergent medicine. The idea of this relationship still can’t seem to be tended to. This examination gives the premise to future investigations assessing the impact of NTS preparing on the execution of TS, and whether NTS are non specific and transferable between emergencies that require distinctive TS.

A large category teaching activity, framed as a simulation of a natural disaster is an appropriate and effective activity for medical students to develop the non-technical skills of collaboration, negotiation and communication, that area unit essential to team operating. The look may well be important in medical colleges in disaster prone areas, as well as among low resource countries, and as a possible intervention for learning the non-technical skills that area unit required for patient safety. Generally knowledge indicated the satisfactoriness and effectiveness of an outsized category simulation of natural disaster in demonstrating non-technical of skills of collaboration, negotiation and communication as learning outcomes There square measure variety of implications for medical and health educators want to develop massive scale disaster simulations to produce teaching and learning around team skills. Effectiveness analysis aims to spot academic interventions that may add a spread of settings. Specially understanding however refinements to the academic style is created, and prices managed thus health educators is also ready to adapt this model for fulfillment with their own students. While there square measure extremely protocoled emergency responses ready to be with success rehearsed by groups in sound reproduction simulation settings, most health care work isn't routine and sometimes chaotic. ‘To act effectively in complicated things, team members have to be compelled to listen to all or any potential sources of knowledge, and integrate that info into team action’.

These options and also the criteria mentioned within the methodology section of this study match the required coaching during a multidisciplinary atmosphere, within which students area unit deeply engaged in skills coaching by associate degree attempt} to unravel issues in an atmosphere that's the same as those to be encountered in world [55-56]. One such coaching that has already gained interests in European countries is MRMI (Medical Response to Major Incidents), that relies on MacSim (Mass Casualty Simulation). It fulfills all criteria planned within the literature for a fascinating simulation training; it provides feedback by instructors, creates opportunities for repetitive observe, is integrated within the academic syllabus, presents a spread of problem levels, permits multiple learning methods, provides a spread of clinical eventualities,

ensures a secure and educationally ancillary learning atmosphere, provides each team- and personalized learning, has outlined outcomes and is scientifically valid

Instructions for future research on the subject

Guidelines for future research on the subject

Current careful practice requires; specialized and non-specialized skills, confirm the practice, emphasize deep-rooted commitment, control of results and a strong governance and education structure in the field of medical disaster. Finally, these necessities have to be combined with various individual and specialized qualities, including correctness, proven ability, and empathic, quiet focused care through simulation programs. Research is currently focused on the means by which the absence of non-specialized skills causes tolerant defamation, as the general reasoning is that it weakens the specialized execution.

We found that input acceptance and sustainable adaptation to occasional unpleasant actions in the work environment had beneficial effects on specialized execution. On the other hand, large amounts of frustration of exhaustion and cooperation were clearly linked to the specific error.

Being a dignified specialist is different from being a decent "hand combination" is tied to a decent cooperative person who co-ordinates and discusses well with patients and their associates and pledges them to achieve their maximum potential.

For guidance for effective transfer from aviation to alternative work arrangements such as health care and medicine of mass disasters, it must be strictly designed to address the non-technical skills required for specific this this area. It is not sufficient to require training materials and easily delete "pilot" and replace it with "nurse" or "anesthetist". Medicine, and more so, the unknown environment of urgency presents significant deviations in specialized and national cultures that exert powerful influences on acceptable behaviors, compared to pilots, since simulation programs were first used and created for

them. It is completely wrong simply disaster medicineto replicate the simulation programs that created for pilots

Well grounded development of behavioral markers to be used in disaster medicine have fashioned the premise for development of many coursesby simulation addressing team skills , whereas NTS emphasizes the individual skills of a specific specialty inside a team, initial experiences that smart team performance goes on the far side the contributions of the people and additional work, particularly around team state of affairs awareness, and shared mental models in these difficult things is guaranteed. We conjecture that TS and NTS are related and are not autonomous of each other amid emergency circumstances.

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