

a thigh injury with severe bleeding, loss of consciousness, a chest injury with the development of a tension pneumothorax, shock-related hemodynamic parameters, and a head injury with external bleeding. The stage checklist included a detailed assessment of the quality of the relevant skills and only one item evaluating adherence to the CABCDE algorithm.

Results

Analysis of the checklists revealed a roughly equal level of proficiency in the specific skills required for the procedures. Deviations from the algorithm's sequence were identified in 50% of cases; however, the judges for this stage reported that in the remaining checklists they were unable to mark an error regarding the sequence of the algorithm's execution, since one team member was following the algorithm while the other was performing procedures in a random order (transport immobilization, wound dressings), including those that should not be used at this stage (the "cap" dressing, which is practically impossible to apply if the victim is lying on the ground, takes time and "working hands," and also hinders the work of subsequent stages of medical care). A survey was conducted among the competition participants. 100% of respondents from the teams working at this stage expressed their lack of understanding regarding the incorrectness of the actions in precisely this way, since, nominally, all the necessary skills had been demonstrated.

Thus, the checklist created a bias toward individual skills at the expense of the algorithm and teamwork within the algorithm. This imbalance revealed a decrease in the speed of performing the algorithm's priority steps (temporary control of severe bleeding, upper airway protection, respiratory function protection, establishing peripheral access, and initiating infusion therapy) even when one team member knew the algorithm. Consequently, when dealing with a large number of casualties — even as few as two — the impact of this error will increase exponentially and prevent effective triage. Given that the primary causes of high-kinetic multiple trauma are traffic accidents, explosions, and other emergencies, managing multiple trauma in many cases is primarily associated with a large number of casualties and the need for triage — which cannot be accomplished without teamwork within the context of the SAVSDE algorithm, where the leader can minimize the number of procedures to the necessary minimum and delegate tasks to other team members.

Conclusions

Training for emergency medical teams in managing multiple trauma should include adaptive exercises involving multiple simulated patients, since simulating all conditions requiring prehospital interventions on a single simulated patient does not convey the necessity of following the algorithm and does not sufficiently train the team leader's role. When evaluating during competitions and other forms of skill assessment, judges should be able to assess separately the quality and speed of skill execution, the necessity of a particular intervention in the context of the task, and teamwork for each step of the CABCDE algorithm.

The sequence of the algorithm lends itself best to training and evaluation precisely during a triage demonstration, when the team's actions are reduced to the absolute minimum for each casualty.

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A COMPREHENSIVE METHODOLOGY FOR DEVELOPING CLINICAL COMPETENCIES IN POSTGRADUATE EDUCATION: CASE-BASED TRAINING FOR EMERGENCY SITUATIONS

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Abstract. This paper presents a comprehensive methodology for training primary care professionals in how to respond to emergency situations involving the risk of occupational exposure to HIV, HBV, and HCV. It examines the structure of a comprehensive training session that integrates an initial assessment, a theoretical component, and highly realistic case-based training. Particular attention is paid to debriefing as a tool for analyzing critical errors and reinforcing sustainable clinical competencies.

Scientific specialty: 3.2.3. Public Health and Health Care Organization, Sociology, and History of Medicine.

Relevance

In recent years, there has been a steady and progressive increase in the number of healthcare workers seeking post-exposure prophylaxis (PEP) following occupational accidental exposures: over a 6-year period, this number has more than quadrupled. In nearly two-thirds of incidents, the HIV/HBV/HCV status of the source of potential infection remains unknown, creating high epidemiological uncertainty. In stressful situations, healthcare professionals often make critical errors when performing actions intended to reduce their individual risk of infection, which necessitates the implementation of effective training methods during postgraduate education.

Objective

To optimize the process of developing sustainable competencies in the prevention of occupational transmission of bloodborne infections among primary care health professionals through the implementation of a comprehensive case-based training methodology for emergency situations.

Materials and Methods

We analyzed the implementation of a comprehensive, integrated training session lasting 4 academic hours on the topic "Prevention of HIV Infection in the Primary Health Care System" for specialists at outpatient and polyclinic health care organizations.

The training session design included four sequential and interconnected stages:

1. Pre-assessment: an initial anonymous test for participants (10 questions), conducted as a self-assessment without immediate collection or evaluation of results.
2. Theoretical module: lecture-discussions using presentations titled "10 Facts About HIV: True or False,"

"HIV Diagnosis: Screening, Testing, Examination, Counseling, and Organization of Medical Care," and "HIV Prevention: PEP, PrEP, and PPMR."

3. Simulation-based case training (PEP module): a practical component integrated into the lecture series on HIV prevention. The training group was divided into subgroups of 2–3 people. Two scenarios were simulated: performing an intravenous injection — using arm simulators filled with artificial blood — and applying a skin suture to skin simulators. The training was conducted at six simulation stations, categorized by the HIV status of the source of infection. During the procedure, an "emergency" trigger was activated: a needle prick that punctured the glove and damaged the soft tissues of the hands. Participants were required to immediately implement the algorithm for initial response measures, complete the necessary documentation, and determine the post-exposure prophylaxis (PEP) regimen. The training was structured around a rotation of roles between "active participant" and "observer."
4. Debriefing: an analysis of errors, conducted first within subgroups ("hot debriefing") and then in a whole-group discussion. Following the simulation session, the class concluded with theoretical modules on pre-exposure prophylaxis (PrEP) and prevention of vertical transmission (PPMR).

The list of technical equipment included: arm simulators for intravenous injections, skin manikins, surgical instruments, suture material, containers for Class B waste disposal, a sink with an elbow-operated antiseptic dispenser, as well as solution manikins (3% hydrogen peroxide, Septocide, 5% iodine, 20% sodium sulfacil, and adhesive bandages).

Results

During the initial self-assessment, the baseline rate of correct answers was 50–60%. The highest number of incorrect answers was recorded in questions regarding the therapeutic window for initiating PEP, "on-demand" PrEP, and the effectiveness indicators of PPMR.

During the simulation phase, when the "emergency" trigger was activated, up to half of the trainees made errors in their initial actions: they violated the proper technique for removing gloves, attempted to wash them, forcibly squeezed blood out of the wound, and used an alcohol-based antiseptic without justification. None of the participants spontaneously used a band-aid. Organizational deficiencies were observed: lack of awareness regarding the need to notify a supervisor, the algorithms for rapid testing of the source and oneself in the workplace, and difficulties in filling out the emergency log.

At stations with an "unknown HIV status of the source," participants experienced the greatest difficulties with emergency testing and selecting PEP regimens. At stations with a "negative HIV status," instances of failure to report the incident were recorded.

Discussion

The results demonstrate the negative impact of stress on professionals' competencies: even in a safe simulated emergency situation, healthcare workers are prone to making critical errors when implementing post-exposure prophylaxis measures.

The phenomenon of "false security" was identified at simulation stations where the source was HIV-negative. Upon receiving this briefing, trainees lowered their level of epidemiological vigilance, ignoring the associated risks of HBV or HCV infection.

The practice of conducting "hot debriefings" in subgroups revealed a specific barrier: trainees acting as observers were often unable to adequately assess the actions, causing the horizontal debriefing to devolve into a chaotic exchange of opinions.

The subsequent group debriefing allowed the trainees to verbalize, analyze in detail, and correct typical errors, thereby transforming theoretical knowledge into sustainable clinical competencies.

Conclusions

A comprehensive interactive methodology combining a game-based theoretical component in a self-assessment format with scenario-based simulation is an effective tool for mitigating occupational risks of bloodborne infection. The use of simulation stations differentiated by epidemiological status allows for the effective modeling of conditions of "epidemiological uncertainty" and "false security," as well as the automation of the post-exposure prophylaxis algorithm, thereby minimizing the risk of errors caused by stressful situations.

Practical experience with comprehensive training sessions supports the need to develop and implement validated, structured checklists into the educational process to objectively assess the level of competency development among postgraduate students.

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THE POTENTIAL OF THE "SIMULATED PATIENT" METHOD IN BUILDING TRUST AND CHANGING PERCEPTIONS OF A SUBJECT'S SOCIOPSYCHOLOGICAL CHARACTERISTICS IN THE "PHYSICIAN-PATIENT" DYAD
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Abstract. In this study, we found that communicative competence includes interrelated personality components: competencies, motivational attitudes, and value orientations, through which the perception of the communication partner (the patient) occurs. In particular, we identified a relationship between social trust, goodwill, communication conditions, and interaction skills. At the same time, training using the "simulated patient" method does not affect the trainees' value orientations; however, it can alter the perception of the communication partner (the patient) and make that perception less challenging for the physician.

Scientific specialty: 3.2.3. Public Health and Health Care Organization, Sociology, and History of Medicine.

Relevance

Currently, researchers face the challenge of motivating students to apply the communication skills they have acquired in their future professional practice.