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The study of the composition of medical first aid kits, which buses, minibuses, and route taxis are equipped with

Today the issue of providing pre-medical aid to victims of road traffic accidents is acute, especially when it concerns road accidents involving buses, minibuses and route taxis. In recent years the number of road accidents with casualties or injuries has increased in Ukraine. The main causes of deterioration or loss of health among the injured are untimely or inadequate provision of pre-medical aid.

Aim. To study the composition of medical first aid kits, which buses, minibuses and route taxis are equipped with.

Materials and methods. In the course of the study, methods of analysis, synthesis, generalization, logical method, as well as the content analysis were used to examine the composition of medical first aid kits and conduct expert surveys. The expert method was applied to determine the relevance of the research problem and gather the opinions of bus drivers regarding the composition of medical first aid kits that should be available in buses, minibuses and route taxis. A total of 362 drivers were surveyed. It represents a statistically significant sample. The drivers' conclusions were substantiated and confirmed by the corresponding coefficients (concordance coefficient and Pearson coefficient).

Results. The domestic regulatory and legal framework regarding the composition of medical first aid kits, which buses, minibuses and route taxis are to be equipped with, has been analyzed. According to the current regulatory framework, namely DSTU 3961-2000 and Amendment No. 2 to the Order of the Ministry of Health of Ukraine No. 187 "On the Approval of the List of Medical Products in Medical First Aid Kits for Transport Vehicles", there are two types of medical first aid kits in Ukraine, depending on the number of passengers – AMA-1 and AMA-2. The composition of first aid kits in EU countries (such as Poland and Germany) and the USA has also been studied.

Conclusions. Based on the studies conducted, it has been determined that a medical first aid kit for buses according to the requirements of the Ukrainian legislation is mandatory and its contents must meet all the requirements for providing pre-medical aid. It has been found that the approved composition of medical first aid kits for buses is not complete and requires revision.

Keywords: *medical first aid kit; medicinal product; medical device; road traffic accident; pre-medical aid.*

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Дослідження складу аптечок домедичної допомоги, якими укомплектовані автобуси, мікроавтобуси та маршрутні таксі

Сьогодні гострою є проблема надання домедичної допомоги постраждалим унаслідок дорожньо-транспортних пригод, особливо якщо це стосується автобусів, мікроавтобусів та маршрутних таксі. В Україні останнім часом зростає кількість дорожньо-транспортних пригод з потерпілими або травмованими. Основними причинами втрати або погіршення здоров'я травмованих є несвоєчасне надання домедичної допомоги.

Мета – дослідження складу аптечок медичних, якими укомплектовані автобуси, мікроавтобуси та маршрутні таксі.

Матеріали та методи. Використовувалися методи аналізу, синтезу, логічний, узагальнення, контент-аналіз для вивчення складу аптечок медичних та експертного опитування. Експертний метод застосовувався для визначення актуальності досліджуваної проблематики та думок водіїв автобусів стосовно складу аптечок медичних, якими мають бути укомплектовані автобуси, мікроавтобуси та маршрутні таксі. Було опитано 362 водії, що є презентабельною вибіркою. Висновки водіїв є обґрунтованими, що підтверджено відповідними коефіцієнтами (коефіцієнтом конкордації та коефіцієнтом Пірсона).

Результати та їхнє обговорення. Проаналізовано вітчизняну нормативно-правову базу щодо складу аптечок медичних, якими укомплектовано автобуси, мікроавтобуси та маршрутні таксі. Відповідно до чинної нормативно-правової бази, а саме ДСТУ 3961-2000 зі змінами № 2 та Наказу МОЗ України № 187 «Про затвердження переліків лікарських засобів у медичних аптечках транспортних засобів», в Україні існує два типи аптечок медичних залежно від кількості пасажирів – AMA-1 і AMA-2. Досліджено склад аптечок ЄС, а саме Польщі та Німеччини, і США.

Висновки. На підставі проведених досліджень визначено, що аптечка медична для автобусів, згідно з вимогами вітчизняного законодавства, є обов'язковою, а її комплектація повинна відповідати всім вимогам щодо надання домедичної допомоги. Установлено, що затверджений склад аптечок медичних для автобусів неповний і потребує перегляду.

Ключові слова: *аптечка медична; лікарський засіб; медичний виріб; дорожньо-транспортна пригода; домедична допомога.*

Introduction. The situation on the roads of Ukraine today is quite difficult and is characterized by a significant number of traffic injuries, which cause is various problems, such as the unsatisfactory condition of roads and road surfaces, violations of traffic rules by drivers, speeding, etc. All this leads to a significant number of road traffic accidents (RTAs), which are often accompanied by injuries to road users and, in some cases, by fatalities.

It should be noted that in Ukraine in 2024, the number of RTAs increased by 9 % compared to 2023 [1]. In 2024, 3,202 people died in RTAs, 32023 were injured, and as of August 31, 2025, 16,423 RTAs with victims or injuries were registered: 1,663 people died and 17,107 were injured (Fig. 1) [2-5].

The largest number of deaths was recorded in Dnipropetrovsk, Lviv and Kharkiv regions, as well as in Kyiv. The highest rates among EU countries were in Romania (93 road accident victims per million inhabitants), followed by Bulgaria (81) and Latvia (78) [6].

An important point for preserving the life and health of those injured in a road accident is the timely provision of pre-medical aid. According to the current standards for providing emergency medical care, the arrival time of the brigade in cities is ten minutes, and in rural areas – 20 minutes [7]. However, it should be noted that in cases where road accidents occur in the highways remote from populated areas, the arrival time of the emergency medical team can increase to 30 minutes and sometimes longer.

According to official data [4-5], the first place among the factors of mortality of those injured in road accidents

is occupied by inaction or incorrect actions of eyewitnesses (70 %), injuries incompatible with life are in the second place (20 %), and the third place is occupied by the delay in the arrival of the emergency (ambulance) brigade (10 %), i.e., the death of a significant number of victims in road accidents is caused by non-serious injuries and incorrect actions of persons who provided pre-medical aid, while one of the factors in providing quality assistance is the presence of a medical first aid kit in the vehicle, which, according to the legislation, is a mandatory condition for the operation of any vehicle and can be used both when providing pre-medical aid in emergency cases (accidents) and in everyday life.

A number of publications on the issues under research are devoted to the study of the composition of medical first aid kits for cars, namely the works of Sahaidak-Nikitiuk R. V. [8-10], Semenchenko K. V.; the composition of a medical first-aid kit for rescuers – the works of Avetytsyan V. G., Senchikhin Yu. N., Kulakov S. V., Kulish Yu. A., Trygub V. V. [11, 12] and many others.

The **aim** of the article is to study the composition of medical first aid kits, which buses, minibuses and route taxis are equipped with.

Materials and methods. During the study, methods of analysis, synthesis, generalization, logical method, as well as the content analysis were used to examine the composition of medical first aid kits and conduct expert surveys. The expert method was applied to determine the relevance of the research problem and gather the opinions of bus drivers regarding the composition of medical first aid kits that buses, minibuses and route taxis should be equipped with. A total of 362 divers were

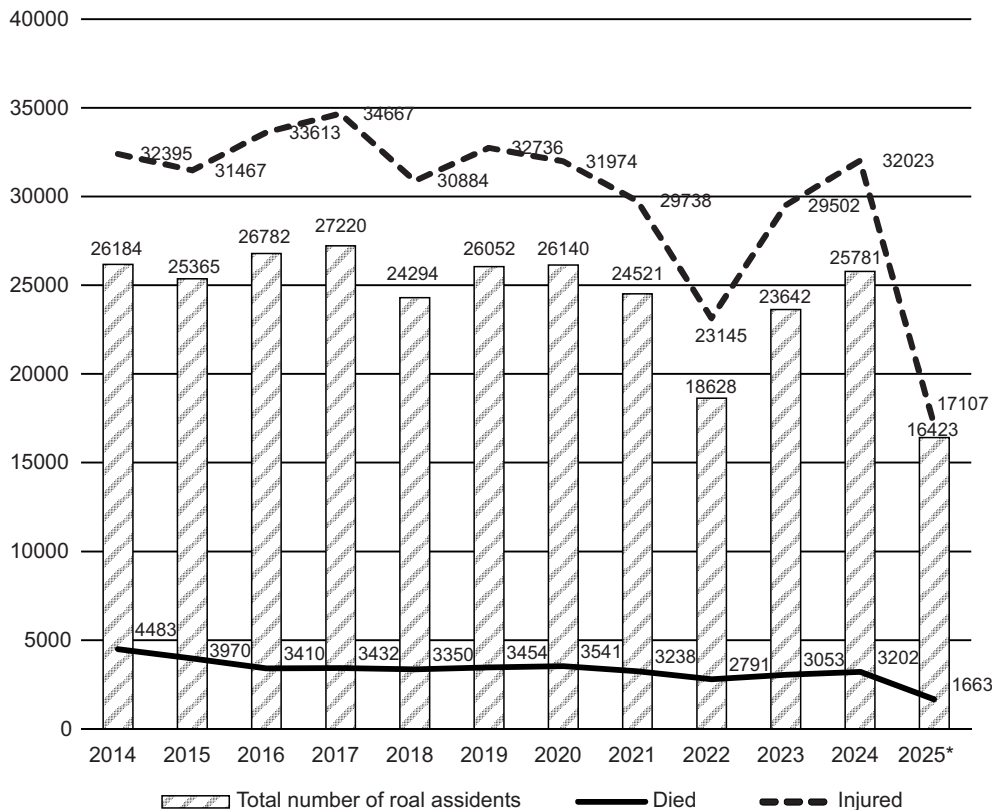


Fig. 1. The number of injured and killed in road accidents in Ukraine for the period of 2014-2025

interviewed. It represents a statistically significant sample. The minimum number of experts who participated in the surveys was determined taking into account the marginal permissible error. According to years of the driving experience, bus drivers were divided as follows: up to 5 years – 2.3 %; 5-10 years – 10.2 %; 10-20 years – 31.4 %; 20-30 years – 43.8 %; more than 30 years – 12.3 %. According to the driver qualification categories, 78 % of respondents were Class I drivers, and 22 % were class II drivers. The conclusions drawn from the drivers' responses were substantiated. The concordance coefficient equaled 0.9123, and the Pearson coefficient was 86.1. These values exceed the critical tabular value.

Results and discussion. According to DSTU 3961-2000 "Automobile First Aid Kit. General Requirements" with Amendments No. 1,2 [13], the automobile medical kit (AMA) is understood as a set of medical supplies intended to provide pre-medical aid to victims of road traffic accidents, as well as for use during vehicle operation in case of minor injuries.

According to the Order of the Ministry of Health of Ukraine No. 187 "On the Approval of the List of Medicines and Medical Devices for First Aid Kits", there are two types of AMA kits [14-15]: AMA-1 – a first aid kit for passenger cars (with up to 9 passengers) and trucks and AMA-2 – a first aid kit for passenger transport vehicles (with more than 9 passengers).

DSTU 3961-2000 with Amendments No. 2 "Automobile First Aid Kit. General Requirements" [13] also provides for two types of first aid kits: AMA-1 for passenger and freight vehicles, city and suburban buses with up to 9 passengers, including the driver, as well as wheeled tractors, combines and vans, and AMA-2 – (for intercity buses, freight vehicles and long-distance route taxis with up to 9 passengers). Each type of the first aid kit has two sets – set 1 (means for stopping bleeding, applying bandages in case of injuries), and set 2 (means for applying bandages in case of injuries and additional means). This standard also provides for the presence of two sets – emergency (for providing pre-medical aid to accident victims) and operational (both for providing pre-medical aid to accident victims and for everyday use) (Table 1).

Thus, the presence of AMA 2 is a mandatory condition for intercity buses and long-distance taxis with up to 40 passengers to operate. But a comparison of the composition of medical first aid kits provided for by the Order of the Ministry of Health of Ukraine No. 187 [15] and DSTU 3961-2000 with Amendments No. 2 [13] revealed their significant discrepancy (Table 2), namely the absence of medicines (antiseptic, analgesics and cardiac), a cord for fixing splints and collars for fixing the cervical spine, splints for the upper and lower extremities (available in accordance with DSTU [13]); elastic sterile and non-sterile bandages, sterile wipes, gel bandages and non-sterile cotton wool, anatomical tweezers (available in the order of the Ministry of Health of Ukraine No. 187 [14, 15]).

The absence in the first aid kit of such a drug as butorphanol tartrate, which belongs to the group NO₂A F01 opioid analgesics and regulated by the Order of the Ministry

of Health of Ukraine No. 187, is advisable since this drug belongs to prescription drugs and, accordingly requires certain storage conditions and requirements for purchase in a pharmacy.

In Europe, the medical car first aid kit is equipped according to the DIN 13164 standard developed by the German Institute for Standardization, which meets the requirements of the Vienna Convention on Road Traffic [16] and EU directives on medical products. The composition of the European style AMA includes: bandages and dressings (bactericidal plasters (14 pcs.), adhesive plaster on a roll (5 m × 2.5 cm) (1 pc.), sterile gauze bandages (45 × 29 cm) (1 pc.), sterile gauze bandage (5 × 10 cm) (1 pc.), non-sterile gauze bandage (5 × 10 cm) (2 pcs.), sterile gauze bandage (7 × 14 cm) (1 pc.), sterile gauze wipes (16 × 14 cm) (1 pc.), elastic bandages (various sizes) (2-3 pcs.), disinfectants and hemostatic agents (wipes soaked in alcohol (2 pcs.), hemostatic wipes (8 × 10 cm) (2 pcs.), personal bandages (special bandages with compress) (various types and quantities), tools (medical scissors (1 pc.), medical gloves (nitrile/latex, non-sterile), (4 pairs), additional equipment (rescue thermal blanket (1 pcs.), pre-medical aid (instructions), first aid kit storage bag (1 pc.). Moreover, the bandages used in European first-aid kits have inserts made of fleece fabric of various sizes. A distinctive feature of the AMA of the DIN 13164 standard from the first aid kit equipped according to the Order of the Ministry of Health of Ukraine No. 187 is the presence of tourniquets for stopping blood, a cord for fixing tires, 5 % iodine solution, 10 ml, 02 % butorphanol tartrate, 2 ml, in a syringe tube, 1 % nitroglycerin in capsules (0.0005), film (valve) for artificial lung ventilation, hypothermic portable container package, 20 % sodium sulfasyl, 1 ml in a syringe tube; and from AMA, according to DSTU 3961-2000, – tourniquets to stop bleeding, gel bandage in case of burns, cotton wool, film (valve) for artificial ventilation of the lungs.

For Poland, the AK-10, AK-15 type first aid kit and the ABD type first aid kit of the DIN 13157 standard are typical. They include adhesive plaster (6 × 10 cm) (8 pcs.), cm roll of plaster (5 m × 2.5) (1 pc.), a set of plasters (small, 10 pcs. and different, 10 pcs.), elastic bandage (4 m × 6 cm) (3 pcs.), elastic bandage (4 × 8 cm) (3 pcs.), disposable gloves (2 pairs), gauze bandage (60 × 80 cm) (2 pcs.), non-woven scarf (20 × 30 cm) (10 pcs.), individual bandage (8 × 10 cm) (3 pcs.), individual bandage (10 × 12 cm) (2 pcs.), compress (10 × 10 cm) (6 pcs.), eye compress (5 × 7.5 cm) (2 pcs.), triangular gauze bandage (96 × 96 × 136 cm) (1 pc.), knitted bandage (4 m, size 2) (1 pcs.), thermal blanket 160 × 210 cm (1 pcs.), scissors 19.5 cm (1 pc.), foil bag (2 pcs.), pre-medical aid manual [17]. In some cases, these first aid kits are equipped with a device for artificial respiration. The composition of the first aid kit complies with EU standards.

In England, standard Evolution first aid kits (manufactured by Safety First Aid Group) are used. They are divided into kits for 1-10, 11-20 and 21-50 people. The first aid kit for 1-10 people (K10B) contains: first aid instructions (1 pc.), sterile waterproof plasters (20 pcs.), sterile

Table 1

The classification and composition of a car medical first aid kit according to DSTU 3961-2000 with Amendments No. 2 [13-15]

Set	Medical First Aid Kit	AMA-1	AMA-2
		Emergency	
Set 1			
1 Hemostatic agents to stop bleeding, bandage in a case of trauma			
A tourniquet for bleeding control		1	3
An elastic bandage (5 m × 10 cm), packaging		1	2
A sterile gauze bandage (5 m × 10 cm), packaging		2	6
A sterile gauze bandage (7 m × 14 cm), packaging		1	4
Non-sterile gauze bandage (5 m × 5 cm), packaging		1	4
Non-sterile gauze bandage (7 m × 14 cm), packaging		1	4
Chlorhexidine or (its substitutes wipes) (6 × 10 cm), Antimicrobial gel-based dressings, packings			
Polyhexamethylene guanidine hydrochloride or (its substitutes) (10 × 50 cm), packaging		2	9
Hemostatic wipes with Furaginum or (its substitutes) (6 × 10 cm), packaging		2	9
Sterile wipes (6 × 10 cm), packaging		6	12
Sterile dressing package, packaging		1	4
2 Additional supplies			
Paramedic scissors (19 cm)		1	1
A notebook and a ballpoint pen			1
Set 2			
1 Additional supplies for bandaging in case of trauma			
Medical bandages made of any fabric (50×50 cm)		1	3
Gel dressing for burns, packaging		1	4
2 Additional supplies			
Nebulizer (a valve) for artificial lung ventilation		1	4
Medical polyethylene gloves No. 8, set		1	4
A thermal blanket (160 × 210 cm)		1	4
Paramedic scissors (19 cm)			1
Anatomical tweezers		1	1
Safety pins		2	6
Operating			
		AMA-1	AMA-2
1 Hemostatic agents to stop bleeding and bandage in case of trauma			
Non-sterile gauze bandage (5 m × 5 cm), packaging		2	2
Non-sterile gauze bandage (7 m × 14 cm), packing		2	2
Medium sterile gauze wipes, packaging		1	1
Non-sterile cotton, 50 g, packaging		1	2
Adhesive tape (5 m × 5 cm), roll		1	3
Bactericidal plaster (2.3 × 7.2 cm), packing		4	10

eye bandages with bandage (2 pcs.), triangular bandages (4 pcs.), safety pins (6 pcs.), sterile bandages with a pad (medium) (6 pcs.), sterile bandages with a pad (large) (2 pcs.), wet wipes (10 pcs.), disposable gloves (1 pair). The content of the kit for 11-20 people (K20B) is: first aid instructions (1 pc.), sterile waterproof plasters (40 pcs.), sterile eye bandages with bandage (4 pcs.), triangular bandages (6 pcs.), safety pins (12 pcs.), sterile bandages with pad (medium, 12 × 12 cm) (9 pcs.), sterile bandages with pad (large, 18 × 18 cm) (3 pcs.), wet wipes (10 pcs.), disposable gloves (10 pairs). The medical first aid kit for 21-50 people (K50B) contains: first aid instructions (1 pc.), sterile waterproof plasters (60 pcs.), sterile eye bandages with bandage (6 pcs.), triangular bandages (8 pcs.),

safety pins (12 pcs.), sterile bandages with a pad (medium, 12 × 12 cm) (12 pcs.), sterile bandages with a pad (large, 18 × 18) (4 pcs.), wet wipes (20 pcs.), disposable gloves (3 pairs).

For the USA, the LEMdicalkit [18] is characterized by the following contents: 40 adhesive bandages (1 × 3), 2 adhesive dressings (2 × 3), 4 fabric oval pads (2 × 4), 1 gauze roll (1.5 × 5 yds), 4 sterile gauze pads, 12 sterile gauze squares (3 × 3, 2 packs), 1 non-adhesive pad (3 × 4), 1 roll of gauze (3 × 5 yds), 2 combine dressings (5 × 9), 1 pack of biological wipes (wet wipes), 4 pairs of nitrile disposable gloves, 2 hand sanitizing wipes (foil packed), 9 antiseptic hand wipes, 1 emergency action card, 5 dressings, 5 personal cleansing sponges (individual), 2 medium

Table 2

Comparison of the composition AMA-2 approved
by the Order of the Ministry of Health of Ukraine No. 187 and DSTU 3961-2000

Medical products and medicines	Order of the Ministry of Health of Ukraine No. 187		DSTU 3961-2000		
	AMA-1	AMA-2	emergency		operating AMA-1 / AMA-2
			AMA-1 set 1/set 2	AMA-2 set 1/set 2	
<i>1. Means for stopping bleeding, applying bandages for injuries</i>					
Tourniquet to stop bleeding	1 unit	3 units	1 unit	3 units	–
Chlorhexidine wipes 6 × 10 cm	2 units	9 units			
Hemostatic wipes with Furaginum (6 × 10 cm)	2 units	9 units	2 units	9 units	–
Sterile dressing package	1 unit	4 units	1 unit	4 units	–
Adhesive plaster (5 cm × 5 m), a roll	1 unit	3 units	–	–	1 unit / 3 units
Antibacterial plaster (2.3 × 7.2) cm	4 units	10 units	–	–	4 units / 10 units
Medical dressing scarf (50×50 cm)	1 unit	3 units	/ 1 unit	/ 3 units	–
Tire fixing strap	–	10 m	–	–	–
Sterile gauze bandage (5 m × 10 cm)	1 unit	6 units	1 unit	2 units	–
Elastic bandage (5 m × 10 cm)	–	–	1 unit	2 units	–
Sterile gauze bandage (7 m × 14 cm)	–	–	1 unit	4 units	–
Non-sterile gauze bandage (5 m × 5 cm)	–	–	1 unit	4 units	2 units / 2 units
Non-sterile gauze bandage (7 m × 14 cm)	–	–	1 unit	4 units	2 units / 2 units
Sterile wipes (6 cm × 10 cm)	–	–	6 units	12 units	–
Medium sterile gauze wipes	–	–	–	–	1 unit / 1 unit
Gel dressing for burns	–	–	/ 1 unit	/ 4 units	–
Non-sterile cotton wool, 50 g	–	–	–	–	1 unit / 2 units
Polyhexamethylene guanidine hydrochloride (or their substitutes) (10 × 50 cm)	–	–	2 units	9 units	–
<i>2. Antiseptic means</i>					
Iodine Solution, 5 %, 10 ml	1 bottle	2 bottles	–	–	–
<i>3. Painkillers and heart mediations</i>					
Butorphanol tartrate, 0.2 %, ml in a syringe tube	2 units	6 units	–	–	–
Nitroglycerin, 1 %, in capsules (0.0005)	20 caps.	40 caps.	–	–	–
<i>4. Additional means</i>					
Paramedic scissors (19 cm) with blunt ends	–	–	1 unit / –	1 unit / 1 unit	–
	1 unit	2 units	–	–	–
Medical gloves No. 8 made of polyethylene	1 pair	4 pairs	/ 1 pair	/ 4 pairs	–
Film (valve) for artificial lung ventilation	1 unit	4 units	/ 1 unit	/ 4 units	–
Hypothermic portable pack-container	–	4 units	–	–	–
Sodium sulfacyl, 20 %, 1 ml in a syringe-tube	2 units	4 units	–	–	–
Safety pins	6 units	12 units	/ 2 units	/ 6 units	–
Thermal blanket (160 × 210 cm)	–	4 units	/ 1 unit	/ 4 units	–
Collars for the cervical spine fixation, set	–	4 sizes for adults; 1 child size	–	–	–
Elastic splints of the SAM SPLINT type					
– for upper limbs		4 units	–	–	–
– for lower limbs		6 units	–	–	–
Portable device for artificial lung ventilation of the AMBU type	1 unit	1 unit	–	–	–
Notebook with a ballpoint pen	–	–	–	1 unit	–
Anatomical tweezers	–	–	/ 1 unit	/ 1 unit	–
<i>5. Instructions for using AM tools</i>	1 unit	1 unit	–	–	–
<i>6. First aid kit case</i>	1 unit	1 unit	–	–	–

butterfly closures, 2 flat masks No. 95, 2 cotton swabs sterile (3, 2 packs), 4 antimicrobial hand wipes, 1 surgical silk tape (1 × 10 yds), 1 triangular bandage (40 × 40 × 54), and 2 safety pins, 4 Triple Antibiotic Unit Dose, 1 MiniViaKit (tweezers and 2 safety pins), and 1 pair of EMT scissors (5.5). The advantages of this kit include the placement of the medical supplies in a waterproof airtight bag that keeps the contents dry, allowing easy access and reuse.

In addition to the AMA kit mentioned above, the PersonalPlus™ first aid kit is also used in the USA. It contains 6 adhesive bandages (1 × 3), 6 fingertip bandages, 2 knuckle bandages, 2 eye pads (sterile), 1 oval adhesive bandage (2 × 4), 2 non-adhesive pads (2 × 3),

5 butterfly closures, 1 roll of gauze (2 × 5 yds, non-sterile), 2 sterile gauze sponges (2 × 2, 2 packs), 1 CohesiveWrap (1 × 5 yds), 1 plastic adhesive tape (0.5 inch), 1 pair of large nitrile gloves, 2 StingWipes, 3 antiseptic towelettes, 2 Tripple Antibiotic Unit Doses, 2 Acetaminophen (analgesic, 325 mg, single dose, 2 capsules), 1 standard tongue depressor (sterile, 2 packs), 1 MiniViaKit (tweezers and 2 safety pins), 1 single-edge razor blade, 1 finger scalpel (non-sterile, No. 10), 1 emergency action card and 1 pencil.

A comparative analysis of the contents of first aid kits used in intercity buses and long-distance route taxis is presented in Table 3.

Table 3

Comparison of the contents of AMA -2 used in intercity buses and long-distance route taxis

Medical products and medicines	USA	Poland	England	AMA-2	AMA-2
				Ministry of Health of Ukraine No.187	DSTU 3961-2000
1	2	3	4	5	6
Sterile gauze bandage					+
Non-sterile gauze bandage					+
Adhesive tape on a spool		+		+	+
Sterile waterproof plasters			+		
Bactericidal plaster				+	+
Set of plasters		+			+
Sterile dressing package				+	+
Adhesive bandage	+				
Moleskin	+				
Non-adhesive pads	+				
Oval pad	+				
Adhesive wrap	+				
Pads made of sterile gauze	+				
Elastic bandages	+	+		+	+
Personal dressings (special dressings with a compression pad)	+	+			
Triangular bandage	+	+	+	+	+
Splint fixation cord				+	+
Sterile dressings with a pad (3 pcs)			+		
Wet wipes			+		
Antiseptic wipes	+				
Individual cleansing sponges	+				
Individual dressing	+	+			
Tourniquet for stopping bleeding				+	+
Wipes with chlorhexidine				+	+
Hemostatic wipes with Furaginum (3 pcs)				+	+
Sterile eye dressings (3 pcs)		+	+		
Elastic latex bandage	+				
Polyhexamethylene guanidine hydrochloride (or its substitutes)					+
Triangular bandage	+				
Medical scissors	+	+		+	+
Gel dressing for burns	+				+
Medical gloves	+	+	+	+	+
Flat masks	+				

Continuation of Table 3

1	2	3	4	5	6
Film (valve) for artificial lung ventilation				+	+
Portable hypothermic package-container				+	
Sodium sulfacyl, 20 %, 1 ml in a syringe-tube				+	
Sterile cotton tampons	+				
Triple Antibiotic, single dose	+				
Surgical suture strip	+				
Iodine solution, 5 %, 10 ml				+	
Butorphanol tartrate, 0.2 %, 1 ml in a syringe-tube				+	
Nitroglycerin, 1 %, in capsules				+	
Anatomical tweezers	+				+
Rescue thermal blanket		+		+	+
Foil bag		+			
Safety pins	+	+	+	+	+
Cervical spine immobilization collars, set				+	
Elastic splints of the SAM SPLINT type				+	
Portable device for artificial lung ventilation (Ambu-type)				+	
Bag for storing the first aid kit		+	+	+	
Emergency action card / notebook with a ballpoint pen	+				+
Instructions				+	

Based on the survey conducted among urban bus and minibus drivers, it has been found that only 8.7 % of respondents consider it necessary to have a first aid kit in a vehicle according to the AMA standard (Fig. 2a), while 37 % of drivers do not consider it necessary although this is not related to their lack of understanding of the need to comply with safety rules regarding the storage of both first aid kits and medicines located in the vehicles compartment or trunk. However, despite a certain percentage of drivers who do not support the need for the first aid kit in transport, more than 50 % of drivers reported using them in their professional activity (Fig. 2b). Importantly, most buses (64.5 % of respondents)

are still equipped with AMA kits. However, when asked about proper completion of medical first aid kits, only 9.3 % of respondents stated that they had an additional first aid kit.

The study of the contents of first aid kits, which buses are equipped with, revealed a number of problems and shortcomings related to this issue (violations of expiration dates, storage locations, completeness of the kits, availability of necessary medicines, etc.).

The main focus when compiling a new list of medical supplies to be included in the AMA kit, which is intended for use in cases of significant blood loss before the arrival of an emergency medical team, should be

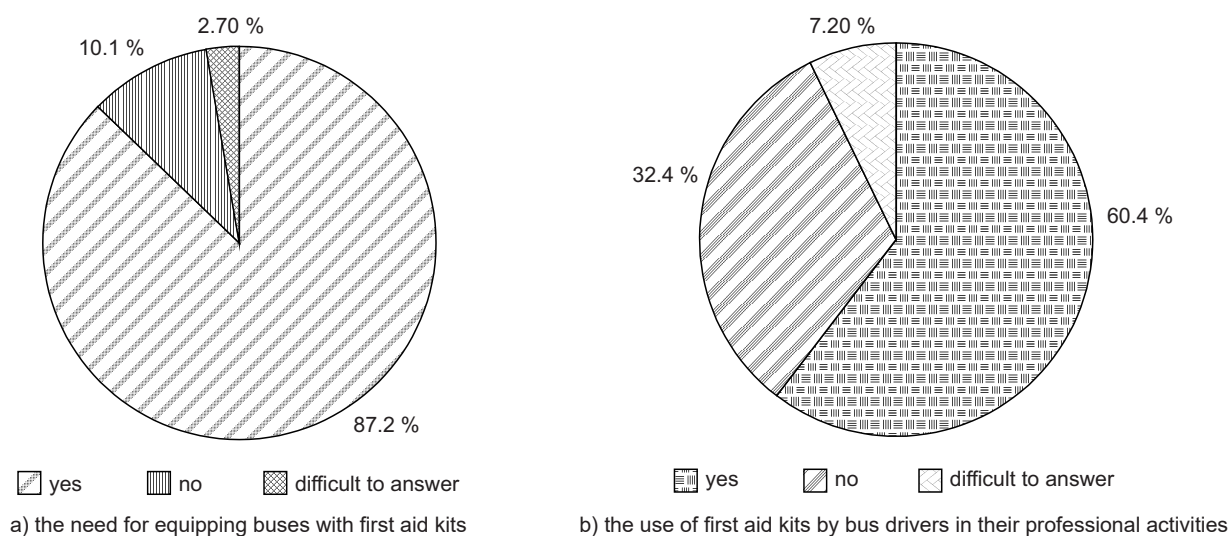


Fig. 2. Opinions of bus drivers regarding the presence of AMA-2 first aid kits in vehicles and their practical use

on blood-stopping agents since severe bleeding before the arrival of emergency aid is the main cause of death among victims of road traffic accidents. Therefore, the kit equipped according to the DSTU requirements is planned to include a wide range of sterile and non-sterile bandages of various sizes, adhesive plasters and other medical supplies.

Conclusions and prospects of further research.

Thus, summarizing the results, it can be concluded that the medical first aid kit for vehicles in accordance with the requirements of national legislation – namely DSTU 3961-2000 “Automotive Medical First Aid Kit. General Requirements. With Amendments No. 1, 2” and the Order of the Ministry of Health of Ukraine No. 187 “On Approval of the Lists of Medicinal Products in Medical First Aid Kits of Vehicles” – is mandatory, and its contents must comply with all requirements for the provision of pre-medical (first) aid.

It has been determined that a mandatory condition for allowing intercity buses and long-distance route-taxis with a passenger capacity of up to 40 persons to operate is the availability of an AMA-2 automotive medical first aid kit. At the same time, it should be noted that discrepancies exist in the contents of medical first aid and kits stipulated by the Order of the Ministry of Health of Ukraine No. 187 and DSTU 3961-2000 with Amendments No. 2, namely the absence of medicinal products (antiseptic, analgesic and cardiac drugs), splint fixation straps, cervical spine immobilization collars, splints for the upper and lower limbs; elastic, sterile and non-sterile bandages; sterile wipes; gel dressings; non-sterile cotton wool; and anatomical tweezers.

Differences in the composition of AMA-2 automotive medical first aid kits for buses in Ukraine and Europe have been identified. In Europe, automotive medical

first aid kits are equipped in accordance with DIN 13164, exclusively with medical supplies (bandages and dressings, including bactericidal plasters, adhesive tape on a spool, sterile gauze dressings, sterile and non-sterile gauze bandages, sterile gauze wipes, elastic bandages, disinfectant and hemostatic agents, personal dressings, medical scissors, medical gloves, as well as additional items (rescue thermal blanket, instructions and a storage bag).

A distinguishing feature of the domestic automotive medical first aid kit (equipped according to the Order of the Ministry of Health of Ukraine No. 187) is the presence of tourniquets for bleeding control, splint fixation straps, 5 % iodine solution (10 ml), 0.2 % butorphanol tartrate (1 ml in a syringe-tube), 1 % nitroglycerin in capsules, a film (valve) for artificial lung ventilation and a portable hypothermic package-container, 20 % sodium sulfacyl, 1 ml, in a syringe tube; according to DSTU 3961-2000 – tourniquets to stop bleeding, a gel bandage in case of burns, cotton wool, film (valve) for artificial ventilation of the lungs.

Based on the survey of bus and minibus drivers regarding the use of AMA kits in their professional activities (87.2 % surveyed respondents), it has been found that the approved list is incomplete and requires additional medicines and medical supplies (87.2 % surveyed respondents); however, it is not always possible to add them manually to the manufacturer's first aid kit. Considering the standard size of the first aid kit case (9.3 % surveyed respondents), 96 % of respondents stated that they had an additional personal first aid kit. The data obtained indicate that the manufacturers of AMA-2 kits need to review the contents of their kits.

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