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Contemporary Hazards for Drivers

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***Abstract*— A person driving a vehicle should be aware that they are responsible not only for their own safety and the safety of passengers during the trip but also for the safety of other road users – they must not pose a danger to them. One of the essential elements that can impact safety in land traffic is medical examinations. However, not all drivers are subject to periodic medical checks after obtaining their driving license. The mandatory medical examinations for drivers are required, among other things, by the employment relationship, the performance of tasks related to business activity, or the expiration of the validity of the relevant documents. Driver medical examinations aim to assess the physical and mental health of individuals engaged in vehicle operation. This allows for the detection of any health deviations that may affect the ability to drive a vehicle safely.**

Keywords— Safety, Risk, Danger, Accidents, Prevention

I. INTRODUCTION

In developing countries, all key elements of their proper functioning are based on transportation and communication. Rapid technological advancement and civilizational development have generated many positive aspects. Thanks to this evolution, road transport has become an essential aspect of the functioning of many sectors of the economy. However, it is important to remember that these solutions also generate many dangers related to the broad topic of traffic safety. The consequences of these dangers can lead to many accidents or disasters, communication paralysis, and are also linked to human casualties. In this regard, an important role is played not only by the drivers but also by the occupational health doctor conducting preventive examinations and the employer, whose responsibility is to monitor and eliminate hazards in the workplace. This article presents the most common causes and consequences of various traffic hazards that may be related to factors of nuisance, harmfulness, and danger present at the workplace. These factors are crucial in shaping safety issues and limiting exposure to risks for both drivers and bystanders.

II. AWARENESS AND SAFETY CULTURE AS A FACTOR INFLUENCING HAZARDS

Safety is an objective state that is a function of the level of threats and defensive potential. The state of safety is a function of many variables (it is a dependent variable influenced by many factors), which can be represented by the following formula:

$$S = f(Z1, Z2, \ldots Zn)\ (P1, P2, \ldots Pn)$$

where:

S – state of safety

Z1, Z2, … Zn – threat 1, threat 2, (...) threat n

P1,P2, … Pn – defensive potential in area 1, in area 2, (...) in area n

This definition of safety encompasses two concepts known as the negative approach or the positive approach. The negative approach refers to the absence of threats (lack of threat), while the positive approach refers to defensive potential (certainty of survival, the ability to engage in creative activity). Sources of threats – in the context of accident-related threats – may include primary forces, secondary and direct threats, and objective causal forces that threaten human safety, which can be presented in terms of:

1) Work environment.
2) Surroundings

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3) The person (driver), acting unintentionally or carelessly, thoughtlessly.
4) The person (driver) as a criminal, acting intentionally with the aim of depriving individuals or a social group of life.

An analysis of road accidents based on statistical data from the National Police Headquarters for 2023 shows that in 2023, 20,936 road accidents were reported to the police, occurring on public roads, in residential areas, or traffic zones. The vast majority of road accidents, 14,893 (71.1% of the total), occurred in built-up areas, resulting in 731 fatalities (38.6%) and 16,499 injuries (68.4%). Outside built-up areas, 6,043 accidents occurred (28.9% of the total), resulting in 1,162 deaths (61.4%) and 7,626 injuries (31.6%). Despite the fact that the majority of accidents occurred in built-up areas, As a result of accidents occurring outside built-up areas, more people were killed; in one out of every five accidents, a person died, while in built-up areas, it was one in every twenty. Among all types of road accidents, the most frequent were incidents classified as "collision of moving vehicles." In 2023, there were 11,107 such accidents, accounting for 53.1% of the total, resulting in 840 fatalities (44.4% of all fatalities) and 13,811 injuries (57.2% of all injuries). The next most common type of accident was "hitting a pedestrian." There were 4,787 such incidents (22.9%), resulting in 447 deaths (23.6%) and 4,609 injuries (19.1%). Among the factors that have a decisive impact on road safety (human – road – vehicle), the human factor is clearly the most important. Therefore, the behavior of different groups of road users affects the occurrence of traffic accidents. In 2023, road users (drivers, pedestrians, passengers) under the influence of alcohol were involved in 2,074 road accidents (9.9% of the total accidents), resulting in 290 fatalities (15.3% of all fatalities) and 2,263 injuries (9.4% of all injuries). Compared to the previous year, this represents 174 fewer accidents (-7.7%) and 304 fewer injured individuals (-11.8%), with a 22-person increase in fatalities (+8.2%). The most accidents caused by drivers under the influence of alcohol were due to speeding, failure to yield right of way, and improper overtaking. Drivers under the influence of other substances were responsible for 96 road accidents, in which 54 people died, 103 were injured, and 243 collisions occurred. The main causes of accidents according to the National Police Headquarters statistics are

- failure to adjust speed to road conditions – 44 accidents, 30 fatalities, 46 injuries
- improper behavior towards pedestrians – 15 accidents, 7 fatalities, 10 injuries
- failure to yield the right of way – 9 accidents, 3 fatalities, 8 injuries,
- improper overtaking – 8 accidents, 6 fatalities, 17 injuries
- improper passing – 6 accidents, 4 fatalities, 8 injuries.

In both 2023 and previous years, the highest number of accidents was recorded between 14:00 and 19:00, during the period of increased traffic intensity (38.0% of accidents). The fewest accidents were recorded between 00:00 and 05:00. It is also worth mentioning that in 2023, 365,991 traffic collisions were reported to the police. Compared to 2021, when 422,627 collisions were reported, this number decreased by 56,636 (-13.4%). However, compared to 2022, when 362,266 collisions were reported, the number increased by 3,725 (+1%). According to data from the Central Statistical Office, in the first quarter of 2024, 15,433 people were injured in workplace accidents, which is 7.9% more than in the first quarter of 2023. The number of injured workers per 1,000 employees (accident rate) also increased from 1.00 to 1.12. Analyzing traffic accidents based on statistical data from the National Police Headquarters and the Central Statistical Office, which directly monitors employee exposure and its consequences in the workplace, it shows that individuals involved in road incidents do not directly cause a causal relationship between the work being performed and the traffic accident during the course of their work.

- Safety culture as a factor in reducing the risk of road incidents.

The factors burdening the driver related to participation in road traffic are only one group of factors affecting driver performance. Another group consists of organizational factors related to the organizational culture and safety culture prevailing in the transport company, as well as the types of hazards arising from the specific nature of the transport operations. This category of conditions, specific to the hazards resulting from the company's characteristics and its safety culture, includes:

- Types of transport (passenger, freight)
- Length and specificity of routes (urban, suburban, domestic, international)
- Technical condition of vehicles (including vehicle ergonomics)
- Relations between drivers, supervisory staff, and service workers
- Work organization – working hours, shift patterns, work breaks, schedules, and timetables for trips, time pressure.

Safety culture, taking into account workplaces, consists of employees' attitudes towards safety matters, generally accepted norms of behavior in this regard, as well as the values attributed to safety, such as the protection of health and life. The Health and Safety Laboratory in the UK defines safety culture as the result of individual and group values, attitudes, perceptions of competence, behavior patterns, and the style and quality of safety management. In this understanding, a high safety culture is characterized by communication based on mutual trust, recognizing the importance and significance of safety, and trust in the effectiveness of preventive measures. The concept of safety culture is also defined as a set of social, organizational, and psychological factors that initiate actions to protect health and life, both at work and outside of it. This understanding of safety culture can be considered in relation to society as a whole, specific groups of people, organizations, or individual persons. Therefore, we can distinguish between the safety culture of society, businesses, and individuals.

The safety culture of society, determines the accepted norms of behavior in situations where life and health are at risk, as well as how dangerous behavior is evaluated by society, the attitude towards risk, and the value placed on life and health.

Experienced and responsible drivers, as well as employers in road transport companies, should share a sense of co-responsibility, including for the safety of other drivers and road users.

The safety culture of an organization (business), refers to the characteristic state of awareness of most employees, their perception of hazards, the functioning of formal and informal norms of behavior in danger situations, as well as organizational and technical achievements that influence the inclusion of safety in managing the organization, planning tasks, supervising employees, and evaluating, discussing, and explaining the circumstances and causes of incidents, accidents, and disasters. Experienced and responsible drivers, as well as employers in road transport companies, share a sense of co-responsibility for all employees of the company – therefore, the key role is played not only by profits and financial situations but, most importantly, by safety and life.

The safety culture of an individual, determines their personal views and values regarding their own life and health. It reflects individual attitudes toward existing risks, the perceived degree of evaluation of risky behaviors, the behavioral patterns adopted in situations of danger and risk, as well as the recognized level of norms and regulations. Considering the specificity of factors influencing the effectiveness and safety culture of drivers, various forms of intervention can be organized for both drivers themselves and all employees of road transport companies. Safety culture development programs include two types of interventions:

- universal – conducted regardless of the initial assessment of the safety culture level, covering elements such as: employee training and workshops aimed at improving communication.
- argeted – dependent on the initial assessment of the safety culture and psychosocial working conditions, as well as the diagnosis of current problems.

By considering and modifying the knowledge, attitudes, values, skills, and behaviors of each employee, we impact the individual level. On the other hand, shaping safety culture at the enterprise level can influence areas such as:

- Management involvement
- Employee participation
- Open and honest communication
- Relations between employees and the sense of belonging
- Health and safety education
- Motivation for safe behaviors
- Engaging more financial, material, and human resources to reduce employee turnover and increase the level of identification with the company
- Raising awareness of the role of social support in dealing with mental stress at work
- Creating organizational mechanisms that facilitate the transfer of social support, both from colleagues and supervisors.

It should be remembered that both forms of intervention, both individual and organizational, are interdependent.

Social aspects of road safety culture. As mentioned in the previous analysis, safety culture can be considered at several levels: societal, organizational, and individual for each person. In the profession of a driver, as in no other, there is a close dependency and feedback loop between the mentioned levels of safety culture, as the driver's work is related to participation in public road traffic. Deep-rooted attitudes, values, and characteristic behaviors in society influence drivers performing their duties outside the company that employs them. This results in additional difficulties and burdens that impact the safety of workers. The specificity of the driver's profession also lies in the fact that the attitude towards their own safety often affects the safety of others: passengers, pedestrians, drivers of other vehicles – all road users. The main condition for safe driving is limiting the factors that cause stress and the ability to manage it. The issue of road safety can also be analyzed in the context of the specific threats associated with amateur driving as well as the threats specific to the profession of a driver. The safety factors on the road are significantly influenced by the road situation itself, in which four basic components affecting safety can be distinguished: the driver, the vehicle, the road, and the environment, along with other road users. According to available literature and statistical data, it is clear that the key element affecting safety is the person themselves, and their behavior can be influenced by the various factors presented above.

Factors influencing safety during vehicle operation: hazardous, harmful, and burdensome for drivers. Negative factors affecting drivers can impact individuals in various ways. Definitions of hazardous and harmful factors are provided in the Polish Standard PN-80/Z-08052 "Hazardous and harmful factors occurring in the work process."

- A burdensome factor is one that does not pose a threat to life or health but reduces work comfort and can negatively affect the employee's performance (burdensome working conditions may cause, for example, discomfort or excessive fatigue).
- A harmful factor is one whose impact may deteriorate the employee's health (it may also lead to the development of an occupational disease).

A hazardous factor is one that may cause injury, sudden deterioration of health, or death of the employee (e.g., injuries related to machines and equipment used at work).

Depending on the nature of their effect, hazardous and harmful factors in the work process are divided into four main groups: physical, chemical, biological, and psychophysical.

According to the Announcement of the Minister of Health dated February 6, 2023, regarding the publication of a consolidated text of the Regulation of the Minister of Health on the research and measurement of harmful factors for health in the work environment (Journal of Laws 2023, item 419), factors are monitored based on the applicable regulations in the work environment. Based on Article 227 § 1 of the Labor Code of June 26, 1974, the employer is obligated to apply measures to prevent occupational diseases and other health issues related to the work performed, specifically:

maintaining in a constant state of efficiency devices that limit or eliminate harmful environmental factors in the workplace

and devices used to measure these factors,- conducting, at their own cost, tests and measurements of harmful health factors, registering and storing the results of these tests and measurements, and making them available to employees.

III. IMPACT OF SELECTED FACTORS ON THE HUMAN BODY

Noise. We are all exposed to noise, as it is omnipresent in our environment. Unfortunately, it is a fact that loud sounds negatively affect our health. They are dangerous not only to the auditory system but also to other bodily systems. Although they cannot be completely eliminated, effective protection against them is possible. In 2020, the European Environment Agency published a report indicating that one in five Europeans is exposed to long-term noise that is harmful to health. Noise pollution ranks second – right after air pollution – among the greatest environmental threats. Noise is defined as any unpleasant, unwanted, troublesome, and annoying sounds. These can originate from various sources: traffic, industrial, and municipal. We are exposed to them everywhere, even at home. It is important to remember that troublesome noise is not only sounds but also vibrations and mechanical oscillations that are not audible (infrasound at low frequencies and ultrasound at high frequencies). Although we cannot hear them, they still affect the body. What is considered troublesome noise depends on personal sensitivity, but also the distance from its source. Importantly, loud sounds affect the human body, even when they are not subjectively perceived as unpleasant or bothersome.

The intensity of various sounds is as follows:

- Whisper– 10 decybels,
- Conversation – 40-60 decybels,
- Child's scream– 80 decybels,
- Vacuum cleaner – 60 decybels,
- Lawnmower - 80 decybels,
- Quiet street (without traffic)– 30 decybels,
- Street traffic– 80-90 decybels,
- Fireworks – 120 decybels.

It should be remembered that noise intensity does not increase linearly, but logarithmically. Therefore, it cannot be assumed that a child's scream is twice as loud as a regular conversation. The threshold of pleasure is considered to be 100 decibels, while the pain threshold is 130 decibels. In the work environment, noise levels up to 85 decibels are considered acceptable. However, it should be remembered that long-term traffic, industrial, or workplace noise impacts human health even at around 70 decibels. The effects of loud sounds are felt by the entire body. Organic damage occurs at 75 decibels. Regular exposure to noise can lead to a deterioration in overall health. Too low or too high sounds negatively affect the psyche, even when they are not excessively loud. Symptoms include irritability, nervousness, aggression, and even mental disorders. Additionally, there are problems with concentration, memory impairment, reduced cognitive function, inability to focus, and sleep disturbances. This happens because, under the influence of noise, the nervous system becomes overloaded. The effects of noise also include:

- Disorders of the circulatory system (increased blood pressure, narrowing of blood vessels),
- Disorders of the digestive system (increased risk of peptic ulcer disease in the stomach and duodenum),
- Recurring headaches,
- Metabolic disorders,,
- Hormonal disorders (excessive secretion of stress hormones),
- Reduced immunity

Vibrations. A very significant factor in the biological impact of vibrations is the phenomenon of resonance. In a person exposed to vibration, injuries may occur in specific organs or parts of the body (damage to the elastic connections of the organs). When the ability of organs, muscles, and other tissues, as well as peritoneal fluid and gases within the organs (acting as vibration dampers), is insufficient to completely dampen the resonant vibrations of internal organs, mechanical injuries occur. If certain parts of the body are exposed to vibration, it is referred to as local vibration, while the vibration of the entire body caused by working machines and equipment (e.g., vibrating seats, work platforms, etc.) is called whole-body vibration. When the body is subjected to vibrations at frequencies characteristic of certain organs or the body's natural frequency, those organs enter into resonant vibrations, causing unpleasant subjective sensations. Resonance of the head is particularly dangerous, as it causes intense irritation of the vestibular organ, known as the labyrinth, which results in many unpleasant subjective sensations. The specific structure of the first and second cervical vertebrae causes the head, when exposed to vibration (especially at low frequencies), acting along the vertical axis of the body, to make rotational movements, leading to angular accelerations that stimulate the labyrinth and result in the appearance of symptoms associated with "motion sickness." Prolonged exposure to vibrations causes general fatigue, with the most noticeable effect being a reduction in attention span, the need for more frequent and longer breaks in mental and physical activities, and slower responses to light and sound stimuli. Vision impairment is particularly noticeable at frequencies of 25-40 Hz, which leads to difficulties or errors in reading sensor and clock readings, narrowing of the field of view, delayed perception, and misidentifying colors, ultimately increasing the risk of accidents. Prolonged exposure to mechanical vibrations often results in irreversible changes in various organs and systems (vibration disease). Symptoms of the disease are individual and are most commonly associated with the specifics of the profession. Muscle pain under pressure may occur, which can still be reversible. In the full manifestation of the disease, the characteristic feature is vascular disorders, which manifest as paroxysmal contractions of capillaries and arterioles, mainly after sudden contact of the hands with cold, as well as disturbances in the functioning of many organs and anatomical systems. The pathological changes are now permanent. The patient complains of severe headaches and chest pains. There is

ischemia in crucial organs such as the brain and heart, leading to dysfunction and morphological changes in these organs. Generally, at this stage, it is no longer possible to fully cure the disease.

Exhaust fumes from vehicles – including those powered by diesel engines. Exhaust contains many substances that are harmful to the human body. Some of them, at higher concentrations, can even lead to fatal poisoning. Below is an overview of the toxic effects of individual components of exhaust fumes on the human body.

Alcohol and substances acting similarly to alcohol. The issue of driving under the influence of alcohol has been of particular interest in recent years, especially among those taking actions to improve road safety. Drivers operating vehicles under the influence of alcohol are a problem faced by nearly all countries, so it is not a problem unique to Poland. Despite harsher penalties, the number of drivers under the influence of banned substances remains visible. It is intriguing why and under what circumstances some drivers decide to drive after drinking alcohol, while others do not. The reasons must primarily be sought in internal human factors, specifically in personality traits, which serve as behavior regulators relatively independent of the patterns present in one's surroundings, and in the system of norms (disregard for legal norms and regulations, yielding to the persuasion of others, and lacking the ability to refuse drinking and driving). Moreover, the low level of knowledge about the effect of alcohol on driving performance (lack of skills in calculating the amount and type of alcohol consumed in relation to its concentration and the rate of metabolism) increases the likelihood of risky behavior. Although correct and socially approved behaviors are possible despite a lack of knowledge. Another factor is the subjective probability of being stopped by the police for drunk driving. A low assessment of this probability may result in the lack of sufficient deterrent to prevent driving under the influence of alcohol. Experiences from other countries show that educational actions are an effective way to influence drivers driving under the influence. However, currently, one of the preventive measures, based on available literature, is that such individuals are required to undergo psychological testing. On the other hand, for people driving under the influence of narcotics, there is a lack of detailed executive regulations. Narcotics, commonly known as drugs, and their use for non-medical purposes is another modern social problem. Drugs, along with alcohol, tobacco, painkillers, sleeping pills, anabolic steroids, and inhalants, are classified as psychoactive substances. A psychoactive substance is "one that, by acting on the brain, alters mood, thought processes, or behavior." Essentially, narcotics can be divided into three basic types.

- Substances that depress the central nervous system (opium, morphine, heroin, barbiturates).
- Substances that affect the central nervous system (cocaine, crack, amphetamines).
- Substances that cause disturbances in the central nervous system (cannabis – marijuana, hashish, LSD-25, psilocybin, inhalants).

Symptoms of drug use are primarily visible in appearance (eyes, nose, mouth, skin) and the overall physical health condition (e.g., frequent colds, chronic cough, stomach pain, headaches, chest pain, seizures, eating disorders, balance issues, agitation or motor uncoordination, etc.) and psychological state (e.g., difficulty concentrating, memory lapses, depression or elevated mood, delusions, hallucinations, anxiety attacks, etc.).

Speed. The human ability to perceive the surroundings and react to sudden events is inversely proportional to the speed of the car. Key factors influencing the allowable speed include: terrain (curves, elevations, slopes), road visibility (surface type, ruts, time of day, lighting), condition and load of the vehicle, weather conditions (rain, snow, wind, road icing), and traffic density. A crucial factor that impacts driving at an appropriate speed is the psychophysical condition of the driver, their experience, and the ability to react quickly to changing situations on the road. Driving above the legal speed limit is considered one of the behaviors that can lead to an accident, made as a result of conscious decisions. Particularly young drivers, by driving at excessive speeds, express their emotions, want to impress others, and strengthen their self-esteem. A driver driving cautiously must observe everything happening on the road, correctly interpret the information coming from the surroundings, make a decision, and implement it. The time needed to make a decision depends on the driver's competence as well as the vehicle's speed. When driving too fast, the driver has less time to react in sudden, unexpected situations (less time to perceive and process information from the environment, make a decision, and act). High speed is associated with the driver's tendency to overestimate the distance between themselves and an obstacle. The more stimuli, the greater the likelihood of the driver making an error. As speed increases, the driver's field of vision narrows (the space covered by the stationary eye), which ultimately means they can perceive less and take in fewer pieces of information (at high speeds, the brain does not receive enough environmental cues needed to assess distance, or there is not enough time to process them). According to Australian research, the risk of an accident leading to bodily injury doubles with every 5 km/h increase in speed. Therefore, the higher the speed at the time of the accident, the more severe the consequences for its participants. Analyzing the data, at a speed of 65 km/h in a zone with a speed limit of 60 km/h, the risk of an accident leading to bodily injury is twice as high.

Cell phone use. Nowadays, owning and using a mobile phone is a convenience useful for maintaining both social and business contacts. Polish law prohibits using a phone while driving that requires holding the handset or microphone in hand. Article 45, paragraph 2, point 1 of the Road Traffic Act states that a driver may only talk on a mobile phone if the car is equipped with a hands-free or headset set. However, any conversation by the driver through a mobile phone, regardless of whether they are holding the handset or using an external set, distracts the driver’s attention from what is happening on the road and increases the risk of an accident. The human mind has limited processing capabilities. When performing multiple tasks simultaneously, each one receives less attention. The more

complex these tasks are, the greater the chance they will be disrupted. Using a mobile phone while driving causes several complications, including:

- problems with controlling the vehicle (distraction caused by simply looking at the phone when it rings, removing the hand from the steering wheel to press the answer button – this also applies to hands-free sets);
- problems with attention concentration, information processing, and consciously assessing the situation on the road – the difference between a simple and a complicated conversation affects the level of distraction – the more complicated the conversation, the higher the likelihood that the driver will miss a dangerous situation on the road;
- diverting the driver's gaze from the road caused by reaching for the phone, finding the right buttons on the keypad, or reading text messages on the display;
- focusing on the sounds from the phone instead of the surroundings, especially when the quality of the phone call is poor..

IV. CONCLUSION

According to the European database on workplace accidents (ESAW 2005), about 40% of fatal workplace accidents are road accidents (excluding accidents related to commuting to and from work). This is a problem that carries a significant burden and responsibility for human life, as well as the associated economic costs. The European Agency for Safety and Health at Work (EU-OSHA) highlights important changes in the transport sector, which result in changes to the nature of drivers' work, including, among others:

- a steadily increasing number of women being employed in the profession of driving.
- the aging of the professional driver group (the number of people aged 50-64 is rising).
- the growing share of immigrant workers and simultaneous exposure to various types of occupational risk factors, particularly risks related to the impact of physical, psychosocial, and organizational elements of the work environment.
- the expanding scope of a driver's duties: in addition to driving the vehicle, tasks also include loading and unloading goods, selling tickets; for "fleet" drivers, driving the vehicle is an additional work duty beyond the tasks resulting from the position held.

The main issue in the transport sector today is the serious health problems faced by drivers. The most common issues include lower back pain, obesity, frequent infections, digestive and cardiovascular diseases, and musculoskeletal disorders. The main causes of health problems among drivers are related to their work environment, including poor work organization, its static nature, air conditioning, significantly higher exposure to noise and vibrations compared to the general workforce, improper body posture during work, repetitive tasks, harmful fumes and smoke, transportation of hazardous substances, as well as cuts and burns. It turns out that 45% of fatal accidents in transport result from being struck by moving objects, including other vehicles, while the primary cause of accidents resulting in more than one day of incapacity to work is physical strain related to the musculoskeletal system (48%). The health problems faced by drivers are also caused by bad habits and lifestyle choices, such as not using ergonomic solutions in the vehicle, improper posture when getting in and out, lack of physical activity, unhealthy diet, alcohol abuse, and smoking. Another problem is the working conditions of drivers related to their working hours, which include irregular working hours, the need to work on weekends, and extended work hours, disrupting the balance between work and personal life, limiting the ability to maintain a healthy diet, and organizing appropriate breaks and physical exercises during trips. Driver fatigue is another issue in the road transport sector. It arises from high job demands, which result from the significantly expanded scope of drivers' work, constant time pressure, and monotony, especially on long-distance transport. Despite years of efforts to improve road safety through preventive actions such as social campaigns, educational and re-education programs, and the implementation of EU programs in road safety, our roads are still not sufficiently safe.

Year after year, road accidents continue to cause numerous human tragedies. Every day, many people lose their lives on Polish roads due to recklessness, inexperience, disregard for regulations, or driving under the influence of psychoactive substances. Every road user should be aware that their attitude and behavior affect road safety. It is important to have the necessary knowledge, the ability to anticipate traffic events, composure, and the skill to quickly and accurately assess situations. However, whether a driver behaves cautiously or recklessly on the road, whether they adhere to the rules or ignore them, depends entirely on their choice. A conscious driver will understand that skills develop and change unevenly throughout life. They will be aware of the impact of weather, the body's susceptibility to changes in atmospheric pressure, the importance of stress, fatigue, and rest, the effects of chemicals, including exhaust fumes, noise, vibrations, medications, alcohol, or other substances on their driving performance. They will realize that momentary distraction, such as talking on the phone, perception disturbances due to fatigue, or nervousness and haste resulting from their current life situation, put safety at risk and can lead to an accident.

Therefore, a significant challenge remains for the drivers themselves, employers, as well as psychology and broadly understood transport medicine in Poland. The actions that specialists will take, the methods they will use, and, most importantly, what the future amended regulations will mandate, will determine how to influence and attempt to change these inappropriate behaviors, which will undoubtedly be no easy task.

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Polska Norma PN-80/Z-08052 -Niebezpieczne i szkodliwe czynniki występujące w procesie pracy

Obwieszczenie Ministra Zdrowia z dnia 6 lutego 2023 r. w sprawie ogłoszenia jednolitego tekstu rozporządzenia Ministra Zdrowia w sprawie badań i pomiarów czynników szkodliwych dla zdrowia w środowisku pracy (Dz.U. 2023 poz. 419)

Ustawa z 26 czerwca 1974 r. Kodeks pracy tj. Dz. U. z 2023 r. poz. 1465, z 2024 r. poz. 878.

Rozporządzenie Ministra Gospodarki i Pracy z dnia 5 sierpnia 2005 r. w sprawie bezpieczeństwa i higieny pracy przy pracach związanych z narażeniem na hałas lub drgania mechaniczne Dz. U. 2005 poz. 1318

Obwieszczenie Marszałka Sejmu Rzeczypospolitej Polskiej z dnia 11 maja 2023 r. w sprawie ogłoszenia jednolitego tekstu ustawy - Prawo o ruchu drogowym tj. Dz.U. 2023 poz. 1047