Realization of Optimizing Procedures in the Conditions of the Selected Organization in Terms of Introducing Certified Disinfection

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Abstract: *The presented article on optimizing procedures can make a significant contribution to streamlining several steps, whether in terms of innovative, operational or complex coordination procedures and information in the field of certified disinfection of the interior of ambulances, but also in other areas of the national economy, such as the food industry. An important part of the article is the introductory introduction and the related sequence on the topic as well as the inter - innovative solution and the resulting verification as well as the control sequence of acquired knowledge and sequences. The information is given in the qualitative and developmental contexts, with an emphasis on achieving the highest possible effect for each of the optimized activities as well as on continual improvement within the general requirements and verification activities.*

Keywords: *optimizing, technology, certified disinfection, documentation*

INTRODUCTION

Modern technical and technological processes enable us to progressively accomplish innovations in technology and organizational succession [8, 16]. These steps need to be carefully monitored, based on the information gathered, to plan for possible improvements, whether in terms of qualitative or optimization bases, and subsequently to draw up an action plan to establish and verify the effectiveness of these procedures [10, 11, 12]. The article will present different types of assemblies with the help of high-quality information sources as well as professional connections to achieve high-quality solutions and process orientations [5, 6]. We will deal with the materials and methods used, their elaboration and the results obtained in order to increase the optimization and the quality of the processes in which the continuous sequence between the planned, controlled and implemented tools and the quality steps within the selected organization can contribute. We will state the used preparations and technologies, related processes and sequence with other process solutions, and the gradual elaboration of the results and the interrelationship of the mentioned information as a complex of processes.

Important issues related to this information are furthermore the results and discussions that in the given article will point us to usable benefits in terms of technical, technological and quality principles that can be further used for further improvement or further development of the quality tools such as the PDCA cycle as well as practical solutions in practice as part of the continuous improvement of organization processes [9, 13, 14, 15].

MATERIAL AND METHODS

In this part of the article, we will deal with material and methodical procedures, which have contributed significantly, to the compilation of this article in co-operation with specialized literature and quality information. We will deal with optimized disinfection technology for sanitary vehicles, which have significantly contributed, to the improvement of the quality of complex disinfection of ambulatory and cabin parts of ambulances. We will state the process sequences of the various technological processes, technologies and the necessary preparations for carrying out the certified disinfection of the sanitary vehicle interior. **Certified disinfection products used:** DEZISAN Profi is a concentrated liquid disinfectant designed for the certified disinfection of all washable surfaces, surfaces and equipment in medical facilities (also in the presence of people) as well as in sanitary vehicles of all types and their equipment and appliances, furthermore in food and public catering, in public transport, public spaces and their facilities. The preparation is for professional use and for certified disinfection. **Features:** in normal working concentrations does not damage any materials - it is non-corrosive. Treated surfaces do not change colour and properties. It does

not contain alcohol, aldehydes, phenols, and esters, no volatile or corrosive substances. It is non-flammable. It has no side effects. It is characterized by long-lasting antibacterial (G + and G-bacteria), antiviral (including Poliovirus, Adenovirus, BVDV virus, Vakcinie Virus) and antifungal (MM. Terrae, M. avium) effects. **Batching:** preventive disinfection of 20 ml of concentrate per 1 liter of water (2% solution) and disinfection of the infection deposit 50 ml concentrate to 1 liter of water (5% solution). The treatment results in a polymer layer that provides long-term protection against microorganisms. Do not wash the surface immediately after treatment. Minimum exposure time: 15 min. Water temperature does not affect the effect of the composition. Suitable for machine and hand disinfection. **Certified disinfection devices used:** Turbo ULV (ultra low volume) - ULV means extremely low power consumption. According to the definition of the World Health Organization, ULV means disinfection - the minimum use of a quantity of the preparation for certified disinfection.

ULV generator is a device that achieves the maximum effect with minimal consumption of Dezisan Profi. The device produces a soft fog (so-called cold fog) with a droplet size of 10 microns. Based on this certified disinfection technology, the product penetrates very quickly into all very small creases, corners, etc. The substance dries relatively quickly on disinfected surfaces and has a long-lasting effect. The benefits of this technology are in particular the efficiency of certified disinfection, high and long-term efficiency as well as a short application time cycle. Certification of products, i.e. the granting of the product conformity certificate with its specification according to the relevant standards is provided by legal or natural persons operating in the unregulated sphere accredited for the given area according to the cited norms. To these sequences, we will be accompanied by a conformity assessment process in the framework of certified and documented disinfection, where confirmation of conformity obtained by various processes, such as: mechanical testing, certification, demonstrated either compliance or non-compliance with the defined requirements. A declaration of conformity is the official declaration of the organization that carries out the conformity assessment in such a way that a particular product is fully in conformity with the prescribed conformity specifications. In accordance with these requirements also for disinfectants that are registered biocides, they are classified as certified products as they are certified by the Center for Chemicals and Preparations registered at the National Toxicology and Information Center tested according to ISO 17025.

RESULTS AND DISCUSSION

Within the results and expert discussion, we will highlight the important technological processes and benefits of these processes and their sequences. In the following picture, we can see a preparation, which is necessary to create a solution for performing an in-depth disinfection of the interior of ambulance vehicles, particularly in the ambulatory and particularly in the cabin part of the ambulance vehicle.

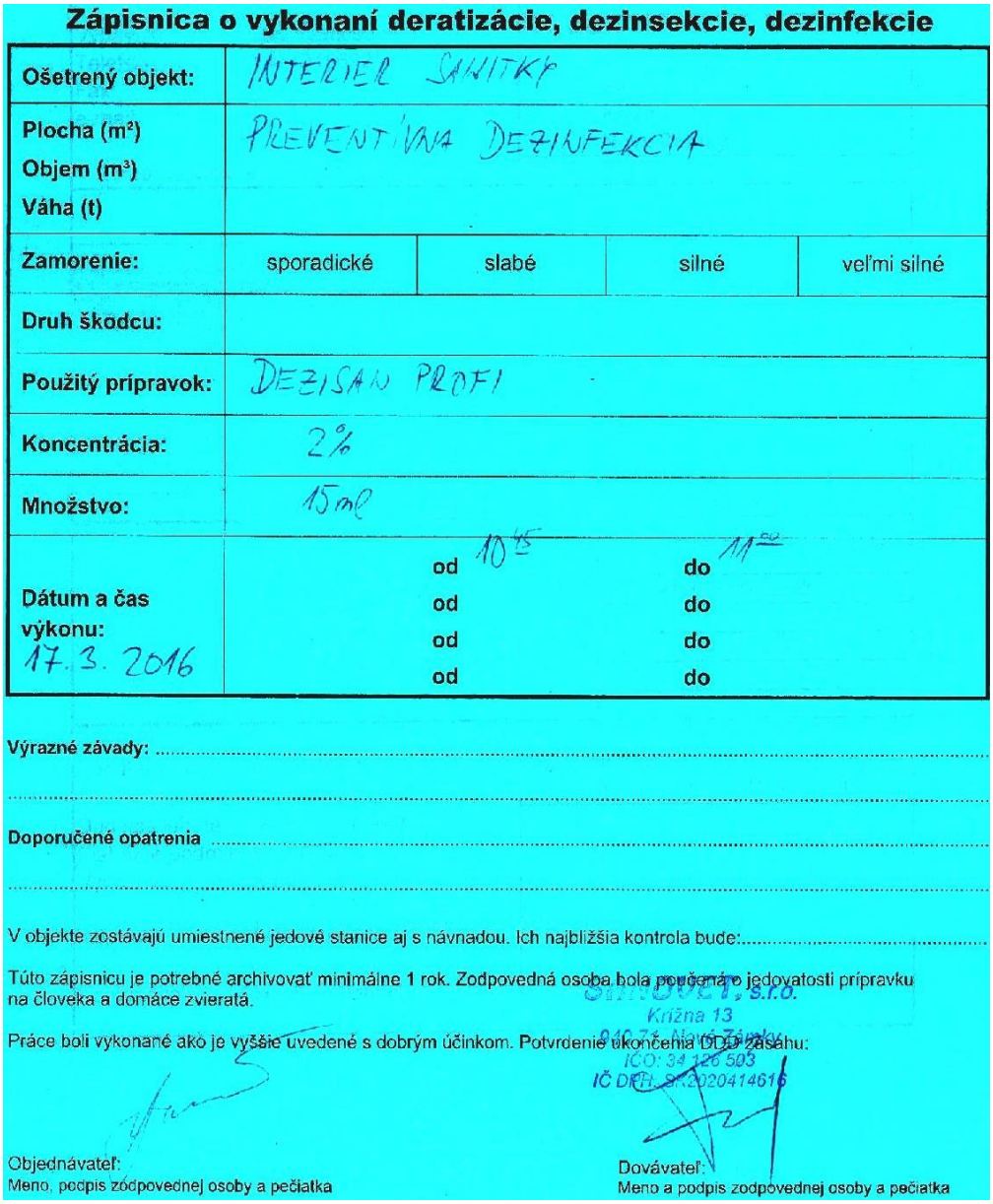
Fig. 1. Special preparation for mechanical disinfection of interior surfaces of an ambulance vehicle

Fig. 2. ULV generator type for cold mist generation to perform special certified disinfection in sanitary vehicles

When performing a certified disinfection, it is important to focus on the ambulatory and cabin parts of the sanitary vehicle, as this disinfection is highly effective for patient use as well as highly efficient and cost-effective (48 EUR with VAT / 1 certified disinfection). The effect of this disinfection is highly cost-effective, efficient and long-lasting, since spraying droplets of 10 microns forms a protective film on all surfaces that are not obtainable by manual disinfection. In connection with this information, we can mention other effective optimizing tools, for example: when introducing new tools and tools in ambulatory parts of sanitary vehicles, which after installation and introduction to the process are also disinfected with the ULV generator and Dezisan Profi disinfectant and thus eliminating the risk of possible occurrence or virus spread, and so on.

Fig. 3. ULV generator in the cold mist production process and long-term disinfection

After a certified disinfection by a certified organization, a record of the disinfection is printed, where the sanitized sanitary vehicle will be certified for 1 year. This highly efficient and safe technology delivers highly efficient results when disinfecting ambulances, with an emphasis on related information and context as one of the features of continuous improvement of processes within the selected organization.



Zápisnica o vykonaní deratizácie, dezinsekcie, dezinfekcie

Ošetrený objekt:	INTERIÉR SANITKY			
Plocha (m²) **Objem (m³)** **Váha (t)**	PREVENTÍVNA DEZINFEKCIA			
Zamorenie:	sporadické	slabé	silné	veľmi silné
Druh škodcu:				
Použitý prípravok:	DEZISAN PROFI			
Koncentrácia:	2%			
Množstvo:	15ml			
Dátum a čas výkonu: 17.3.2016	**od** 10:15 **od** **od** **od**		**do** 11:00 **do** **do** **do**	

Výrazné závady: .....

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Doporučené opatrenia .....

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V objekte zostávajú umiestnené jedové stanice aj s návnadou. Ich najbližšia kontrola bude:.....

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Fig. 4. Certificate of sanitary vehicle disinfection certified

In the context of the above-mentioned results and related objectives, due to the optimized procedures for certified disinfection as well as continuous improvement as a whole, we can conclude that the objective of continuous improvement of the quality management system is to increase the likelihood of reaching the satisfaction of customers and other stakeholders.

Continuous improvement is a repetitive action to increase the ability to meet requirements, is one of the basic principles of comprehensive quality management (TQM) and is one of the important principles underlying the requirements of quality management systems. Continuous improvement is an important part of achieving and maintaining competitiveness and should become a permanent goal for every organization. Therefore, the aforementioned basic model of continuous improvement is the Deming PDCA (Plan - Do - Check - Act) cycle. This cycle consists of the four phases in which the process of improving or making changes should take place. This is a cycle that does not end and should be repeated to ensure continuous improvement. In the following figure, we will show a general sequence of securing sterile surfaces and devices to ensure disinfection and subsequent sterility in terms of aseptic processing risks.

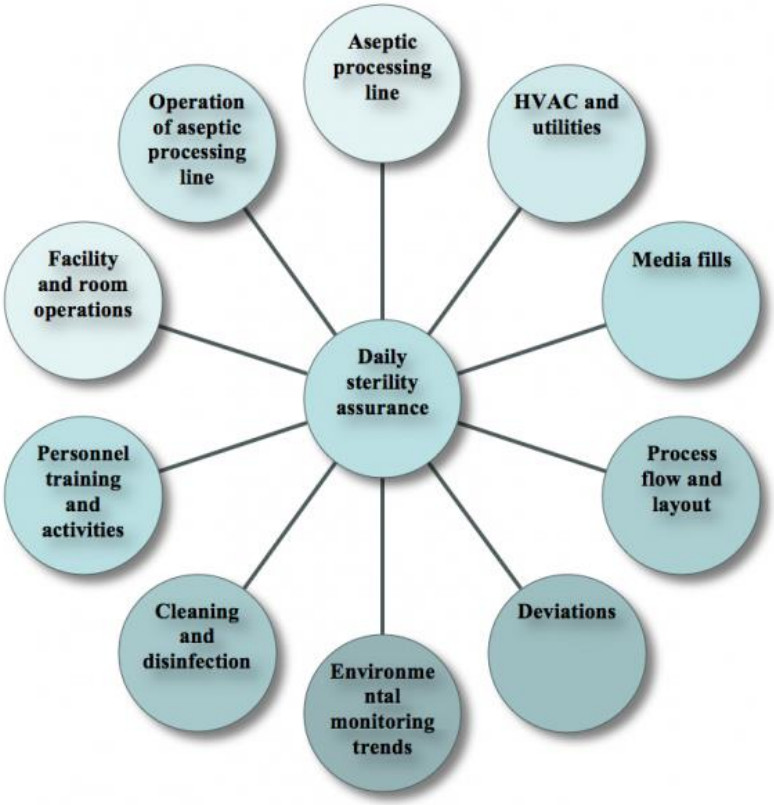

Fig. 5. Aseptic processing risks

On the basis of these important results and the information provided, they constitute a significant set-up and guidance for further continuous improvement also in the possible further builds of the mentioned PDCA cycles in cooperation with other tools of quality management systems, environment and work safety as optimization tools within the overall IMS (Integrated Management System) of the selected emergency health service organization.

CONCLUSION

This article presents important guidance on how to improve and increase the optimization and effectiveness of disinfection procedures not only in emergency health services but also in different sectors and orientations within the market structure of the national economy. With these technologies, certified technologies and the subsequent certification of their performance are important as they have a major impact on the safety and time required for disinfection in comparison with the manual disinfection technology for the interior of ambulances, as well as for workplaces such as hospitals as well as use in the food processing industry and other. To assemble this technology using a disinfectant that was tested by the manufacturer according to ISO 17025, a PDCA cycle in the form of P (plan to implement a certified disinfection) - D (make a certified test of the certified disinfection and its effectiveness) – C (control inter-disinfection operations and the resulting efficiency of tested ambulances) - A (conduct and, after approval, allow the continued use and monitoring of the technology). After rigorous verification, the technology was introduced in the selected organization as a preventive disinfection as well as an in-depth certified disinfection of sanitary vehicles to achieve high efficiency and optimization of disinfection of sanitary vehicles not only in terms of high level and comprehensive coordination of disinfection results, but also to increase overall efficiency, quality and process optimization as a whole.

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