

VISION ZERO

Occupational Accidents with Infection Risk: Staying Safe in Everyday Clinical Practice



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Safety. Health. Wellbeing.

developed by

 **issa**

Imprint

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Infection Risks in the Workplace: Why you should give this Topic some Consideration.

Work accidents involving an infection risk are a common occurrence in the healthcare sector but many go unreported. In some cases, staff are simply not aware that such incidents have to be reported in the facility as a work accident or refrain from doing so because they are short on time. The assumption that it was just a harmless incident not involving a health risk is another reason for such accidents not being documented.

Infection risks in the workplace are a topic which must be taken seriously: they have negative impacts on the health and well-being as well as the motivation and ability to work of the staff involved. As a result, both productivity and the work atmosphere can deteriorate.

Many staff in the healthcare sector are exposed to an increased risk of coming into contact with infection risks as part of their job. Show responsibility and implement measures that can:

- prevent infections,
- reduce the risk of a dangerous situation
- and – should something nevertheless happen – provide help quickly and reliably.

Training, clear guidelines and open communication are key initial steps when it comes to detecting and avoiding possible infection risks as early as possible.

Invest in occupational health and safety and address the issue regularly in instruction and training sessions.

Vision Zero's strategic approach can serve as a helpful guide.



Vision Zero – The 7 Golden Rules: For a Holistic Culture of Prevention in the Workplace

Launched in 2017, Vision Zero¹ is the joint global prevention initiative of the International Social Security Association (ISSA) and its 14 International Prevention Sections. It has already found its way into the European Union's Strategic Framework on Health and Safety at Work², which will guide the 27 Member States until 2027. Vision Zero is based on the message that accidents and work-related illnesses are not acceptable events but rather can be prevented with suitable preventative measures.

This demands a new way of thinking and a change in workplace culture that all involved parties must adopt and communicate among themselves. For this reason, Vision Zero is primarily aimed at the internal stakeholders in companies, especially managers, as well as all staff, works councils, safety officers and occupational health and safety experts.

The International Section of the ISSA on Prevention of Occupational Risks in Health Services, led by the German Social Accident Insurance Institution for the Health and Welfare Services (BGW), has declared its commitment to the Vision Zero campaign. It has developed this guide to help healthcare workers around the world to take sustainably effective preventative measures.

This is done on the basis of the Vision Zero strategy's 7 Golden Rules, which cover a wide range of preventative measures from risk assessment to good leadership and participatory models. The "How to reduce the infection risk significantly" section offers practical step-by-step guidance on how to do this.

¹ https://visionzero.global/sites/default/files/2017-11/4-Vision_Zero_Guide-Web.pdf
<https://visionzero.global/sites/default/files/2023-11/4-VZ-Labour%20inspection.pdf>

² <https://osha.europa.eu/de/safety-and-health-legislation/eu-strategic-framework-health-and-safety-work-2021-2027>

Vision Zero – Heading towards a Higher Degree of Protection

This guide was developed in the scope of Vision Zero, an international prevention strategy integrating the dimensions of safety, health and well-being at work at all levels.

Find out more about Vision Zero and become part of the community: visionzero.global

What is Considered an Infection Risk?

A potential infection risk from patients or people requiring care can be assumed in all professional situations involving the care and treatment of others.

There is an infection risk for the staff due to the possibility of contact with blood, bodily secretions and excretions.

Almost all staff in outpatient and inpatient settings come into contact with biological agents in the scope of their work that can be classified as bacteria, viruses, fungi and parasites.

Particular attention should be given to medical, care and therapeutic personnel.

In the case of the above-mentioned groups of people, their work mainly involves dealing with biological agents. Staff are often not aware of the potential infection risk in their day-to-day work or do not know the health status of the person with whom they come into contact. In light of the different routes of transmission and the varying severity of the illnesses caused by infections, appropriate measures must be implemented to prevent or at least minimise possible contamination or infection.



Root cause Analysis: How Staff can become Infected.

The infection risk of a situation is influenced by a number of factors. These include the **work conditions**, the design of the **work environment**, the **work-place atmosphere**, the **corporate culture** and the **management style**.

The type of **illness** and **personality traits** of a patient also play a considerable role.

In addition, **staff behaviour can also determine** whether a critical situation develops or not.

The following are example of factors which can have a negative impact:

Working conditions

- Working alone and working at night
- Time and deadline pressure
- Rigid procedures in work organisation, too little participation

Work environment/equipment

- Staff numbers are (too) high
- The noise level (detrimental to concentration) or temperature is too high
- Too little light, too little space, too few options for avoidance



- Unavailable/incorrect or inappropriate personal protective equipment (masks, gloves, barrier creams and skincare products, visors, smocks, safety goggles, etc.)
- Insufficient or incorrect waste disposal containers
- Inappropriate or incorrect instruments, but also new, unfamiliar instruments
- Disruptions and distractions caused by colleagues
- Injuries during surgery (e.g., when passing used instruments)

Patient traits

- Possible side effects of medication, alcohol or drug withdrawal
- Cognitive impairments (e.g., in patients with dementia)
- Communication limitations (e.g., tracheostomy tube)
- Unknown, non-communicated infectious diseases

Staff behaviour

- High level of stress
- Underestimation of possible risk potential
- Different awareness of risks depending on profession and degree of training (puncture- and cut-related injuries are more common during training/studies and subsequently mostly in emergency situations)



Examples from Medical Facilities

In the emergency room: A mother is sitting in the waiting area with her sick child. The child has red patches on its face and body and is trying to scratch itself because its skin is itchy. The mother is trying to keep the child calm, dabbing exposed skin surfaces and disposing of used tissues in a nearby bin.

In hospitals: An intravenous line is to be placed in a woman in preparation for treatment. When the doctor is almost done, the patient begins to feel unwell and faints. The patient's whole body twitches briefly and the doctor stabs herself in the finger with the cannula she has just used.

Therapists: A patient on the intensive care unit needs to practise speaking and swallowing again following a tracheotomy. The speech therapist inserts a speaking valve into the tracheostomy tube. The manipulation of the tube causes the patient to cough vigorously, with secretions landing on the speech therapist's face and clothing.

CCSD (Central Sterile Services Department) Surgical instruments are sent to the CSSD for reprocessing following an operation. The member of staff prepares the instruments for machine cleaning. The instruments are jumbled together in the tray. They have blood on them and some still have tissue adhering to them.

Cleaning & Maintenance: The cleaner removes a bin bag and ties the handles together. He then picks the bag up in both hands and feels a puncture in his palm.



Contact with Potentially Infectious Material

In the majority of healthcare facilities, there are already numerous measures in place to reduce the infection risks at work – including vaccinations, the use of safety instruments, established standard procedures and structured follow-up care concepts.

Nevertheless, it is crucial that all staff be aware of the potential infection risk in their daily working life. For example, all bodily secretions and excretions should be considered potentially infectious. Ultimately, exposure can lead to infection and result in a work-related illness.



Risk Reduction: How to Reduce the Infection Risk Significantly.

The following recommendations are based on the Vision Zero strategy's 7 Golden Rules. Observing them can help you to reduce or even completely eliminate the infection risk.

The 7 Golden Rules for Vision Zero

1. Take Leadership – Demonstrate Commitment
2. Identify Hazards – Control Risks
3. Define Targets – Develop Programmes!
4. Ensure a Safe and Healthy System – be Well-Organised
5. Ensure Safety and Health in Machines, Equipment and Workplaces
6. Improve Qualifications – Develop Competence
7. Invest in People – Motivate by Participation!



1 Take Leadership – Demonstrate Commitment

Managers in the healthcare sector who are competent in medical matters are often not fully aware of their occupational health and safety obligations. However, they are responsible in their areas of work for ensuring there are measures in place to prevent work accidents and work-related health risks.

For this reason, you should make sure you are qualified in occupational health and safety matters. Only then can you act responsibly towards your staff. Establish and communicate effective measures to prevent infections. This also includes a coherent first-aid concept.



2 Identify Hazards – Control Risks

If the risk assessment reveals that infectious material is being handled, the infection/transmission risk and the possible severity of resulting illnesses must be estimated. You can then derive and implement suitable preventative measures on the basis of this assessment. The risk assessment is thus a key instrument when it comes to identifying health risks and planning suitable preventative measures.

Start by identifying the factors for possible infection risks in the workplace. Then assess the risk and plan measures to minimise it. Check whether these measures are being implemented and adapt them accordingly if procedures change.



3 Define Targets – Develop Programmes!

No more work accidents involving an infection risk! That should be your ultimate goal.

To reach it, develop a strategic procedure for how you can reduce the infection risk in your company. This concept should include risk management, emergency management and the reporting procedures in the event of an accident involving a potential infection risk.

- Risk management involves the systematic identification and assessment of potential risks that could occur in certain areas of work or with certain patient groups. The goal is to identify risks early and to develop and implement corresponding preventative measures.
- Emergency management comprises the definition of which initial measures can be carried out internally and what form possible further medical treatment should take.
- Define clear and transparent reporting procedures.



4 Ensure a Safe and Healthy System – be Well-Organised

Consider which changes could make the work environment safer. To do so, assess the work organisation and check whether the following aspects are clearly defined in your area:

- Are your staff well trained in their areas of work?
- Are appropriate instructions and training provided at regular intervals?
- Are sufficient training sessions provided when new instruments or equipment is introduced?
- Are training sessions and instructions up to date and do they correspond to the areas of work? Generally speaking, different measures are required in geriatrics than in acute care surgery.
- Establish standards for common processes, for example how to pass a scalpel during surgery, how instruments are positioned on the operating table and how dressings and bandages are changed.
- Check whether you reach all members of staff with the measures.

- Establish a procedure to follow in the case of a work accident involving an infection risk, including the medical treatment of the person involved. This encompasses, among other aspects, wound care, updating vaccinations, checking immune status and, if necessary, post-exposure prophylaxis in the case of an infection risk involving HIV.
- Repeat the assessment of the work organisation at regular intervals and adapt the measures as necessary.

Assess the work environment and conditions:

- Offer vaccinations corresponding to the infection risk in the respective workplace.
- Design workspaces in such a way that it is possible to concentrate on work. For example, they should be light enough (including during late and night shifts), offer sufficient space and quiet and have a balanced indoor climate.
- Provide your staff with suitable, indication-specific personal protective equipment (e.g., protective gloves).
- Ensure that sufficient workwear is available for changing.
- Provide suitable disinfectants, barrier creams and skincare products for the respective work areas.

Assess the working hours:

- Ensure the work organisation is well structured and schedule sufficient staff on the roster and shift rotas to avoid stressful situations.



5 Ensure Safety and Health in Machines, Equipment and Workplaces

Technical preventative measures make the work environment safer. Check which equipment and instruments are right for your facility. Examples include:

- easy-to-use safety instruments and
- safe waste disposal containers for used sharp and pointed instruments.



6 Improve Qualifications – Develop Competence

Enable your staff to recognise situations involving infection risks. Raise awareness of the infection risks always present in daily working life.

Help your staff to develop the ability to act calmly and competently even in demanding situations and emergencies. Ensure that new staff receive sufficiently long and professional induction in their area of work. Check whether long-term staff are also implementing the latest training content in their daily working lives.



7 **Invest in People – Motivate by Participation!**

Motivate your workforce by including your staff in all health and safety matters in the company.

Your staff know the procedures and structures in their workplace the best – utilise this knowledge when making decisions. This requires an open communication and error culture, considerate treatment of each other and the inclusion of staff in decisions regarding infection prevention. This includes among other things changes to procedures, the introduction and use of new cannula/tube systems and the procurement of new gloves.

Make infection prevention a management issue! It should be possible to discuss matters relating to it at all times.



Procedure for an Infection Incident To Ensure Everyone Acts Quickly and Prudently.

1. Immediate Measures

Immediate measures must be taken directly after the injury/contamination.

- For an injury with an open wound: promote blood flow but do not apply pressure (min. 1 minute) and disinfect thoroughly with an antiseptic (approx. 10 minutes), alternatively rinse with water and possibly soap.
- For contamination with undamaged skin: remove infectious material and disinfect intensively with a skin disinfectant.
- For contamination involving mucous membranes or the eyes: rinse intensively with the closest suitable thing available, e.g., water or isotonic saline solution.

2. Immediately Subsequent Measures

- Report the incident to management (doctor on duty or team leader).
- Relieve injured staff of their duties to ensure they receive medical treatment.

- If possible, draw blood from the index case (serological blood test):
 - a. Anti-HIV 1/2
 - b. Anti-HCV, if positive then HCV-RNA
 - c. HBsAg
 - d. Anti-HBc
- Serological blood test of exposed person:
 - a. Anti-HIV 1/2
 - b. Anti-HCV
 - c. Anti-HBs
 - d. Anti-HBc
- Subsequent treatment as per doctor's orders.

3. Follow-Up Care

After a work accident involving an infection risk, antibody tests for HIV and HC (hepatitis C) should be performed during the healing process. The recommended intervals are 6, 12 and 26 weeks after the infection incident in order to detect any subsequent antibody production. It is also important to clarify whether the case involves a work-related illness.

In the case of more serious injuries, the member of staff should only return to work once they have completely recovered in order to prevent infection of the wound.

Prevention Pays Off for Everybody

A structured approach to preventing work accidents involving an infection risk is indispensable when it comes to protecting your staff. It not only complies with legal requirements but also boosts the ability to act in your facility. Targeted prevention helps to minimise infection risks effectively and reduces associated staff absences.

Investments in sustainable preventative measures thus pay off in the long run – for your staff, for the reputation of your facility and for the quality of care.

Join the Vision Zero campaign today!

www.visionzero.global
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The Vision Zero Guide has been prepared by the International Social Security Association (ISSA) and its Special Commission on Prevention in consultation with a wide range of enterprises and experts.

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