



Organisation of Emergency Medical Service

Is the Emergency Medical Service used and managed as intended?

Report of the National Audit Office to the
Riigikogu
Tallinn, 13 January 2025

Summary of audit results

Did you know that...

ambulance calls are divided into four categories according to their severity, from A to D, where A stands for the lowest priority and D for the life-threatening condition of the person who needs help.

Main conclusions of the National Audit Office

The main observations of the ambulance audit of 2004:

- call-takers do not receive official feedback on the correctness of their actions, as data on the priorities of ambulance calls are not collected;
- approximately a quarter of the calls are not ambulance work;
- ambulances are used to transport non-urgent patients between hospitals;
- due to a shortage of call-takers with medical training, the severity of calls is often overestimated. At the same time, however, no-one supervises how the Emergency Response Centres process ambulance calls.

The list continues on the next page.

The purpose of the Emergency Medical Service (EMS) is to provide urgent care in situations where people's lives and health are at risk. In Estonia, the EMS is often not used for this purpose and therefore people may be left without life-saving assistance. There are several reasons for this: the severity of many ambulance calls is overestimated, ambulances are often used to transport non-urgent patients between hospitals, and some cases should actually be handled by general practitioners (GPs) or social workers. These problems in the field of EMS have long been unresolved because of a lack of clear leadership, fragmented tasks and responsibility.

The EMS is often not used for its intended purpose, as indicated by, among other things, the significant difference between the severity assessments of calls by the Emergency Response Centre and ambulance crews. The Emergency Response Centre assessed a third of calls as non-emergency (priority A and B calls), but the share of such calls according to the ambulance crews was two-thirds. Assigning higher severity levels to events is natural to a certain extent, but the significant differences in the assessments of the Emergency Response Centre and the crews suggest that the organisation of how calls are handled must be more systematically analysed.

Because of fragmented responsibility, many problems have long been unresolved. An ambulance is dispatched by the Emergency Response Centre, which is under the Ministry of the Interior, but the Health Board, which sets the rules for handling ambulance calls, is under the Ministry of Social Affairs. Cooperation between the ministries in handling ambulance calls has not been effective, for example, they have not managed to agree on the level of medical expertise required for the emergency call-takers. The Ministry of the Interior needs to take the lead in solving the problems in this matter. At the same time, the Ministry of Social Affairs and the Health Board should take the lead, in cooperation with the different agencies, in changing the rules for handling ambulance calls.

Hospitals too often use ambulances like taxis to transport non-urgent patients. In two-third of cases where patients were transported between hospitals, the priority was A or B, i.e. low. Hospitals should use other transport instead of ambulances for this, but ordering an ambulance is easy for hospitals and comes at no cost to them. However, for the system as a whole, the use of on call crews for scheduled transport is costly and in some regions, ambulances may therefore be unavailable at critical moments.

According to the doctors in the emergency medicine department, ambulance staff rarely make serious mistakes in treatment.

- Due to the lack of competence in the Health Board, it has not been possible to organise competitions for finding ambulance service providers or renew contracts.
- As a result, the management of the EMS is weak and several issues related to ambulance work have not been regulated.

Source: Audit of the National Audit Office “[Organisation of Primary Emergency Care](#)”

Nevertheless, ambulance staff need more in-depth feedback to ensure the quality of their work and to develop the EMS.

Ambulance staff do not receive meaningful and systematic feedback on whether the crew treated patients correctly. There is no agreement on what data can be used by hospitals to provide feedback to ambulance staff, and how detailed the data may be and how long they will be kept. There is a need for adequate and systematic feedback, supported by an appropriate IT solution in the e-Ambulance or elsewhere.

The Ministry of Social Affairs has failed to increase the integration between health services and between the health and social sectors in a way that supports the purposeful use of ambulances.

The bottlenecks in the health and social sectors are reflected in the EMS: people in need often call an ambulance (which is a significantly more expensive service) rather than go to their GP or social worker. They, however, will not find out about people’s need for help that concerns their line of work, because there is a lack of data exchange between the EMS and local authorities, GPs and hospitals.

The potential for expanding digital solutions in the ambulance sector is good. For example, it would be possible to expand the use of telemedicine and implement clinical decision-making support in the e-Ambulance to use the crews more efficiently and increase the quality of the service, but these innovations are not yet included in the plans of the Health Insurance Fund for the near future.

The Health Board has only partially performed its tasks of planning, organising and supervising the ambulance service. In each of these roles, the Board has been passive rather than focusing on the prevention and solving of problems. The information resulting from supervision is not used to update the ambulance sector.

All in all, as the Ministry of Social Affairs has not taken the leading role in the sector and not attempted to solve the bottlenecks in the EMS, the sector has developed in a self-directed manner. For a long time, the Ministry of Social Affairs has not had a clear view on what kind of EMS the Estonian state wants and is able to maintain. The sector has been without development directions for many years, the distribution of ambulance crews in service areas has not been analysed in sufficient depth to assess their optimality, and there has not been an open competition to select the best service provider in a service area for a long time.

Recommendations of the National Audit Office to the Minister of Health:

- Take the lead in the area of EMS and ensure that the Health Board and the Health Insurance Fund perform the obligations assigned to them by law.

Main
recommendations of
the National Audit
Office

- Improve the integration between health services, including ambulance and family medicine, and between the health and social sectors. Prepare the legislative changes and plan the IT developments necessary for this.
- Stop using on call ambulance crews in to transport non-urgent patients so that they do not burden the EMS. Establish procedures for hospitals that regulate the transport of non-urgent patients.

Recommendations of the National Audit Office to the CEO of the Health Insurance Fund:

- Organise an open competition to select the emergency medical care service providers.
- Review the ambulance quality indicators and make sure that all relevant aspects of emergency medical service provision are measured and that the necessary data for all indicators can be collected and analysed.

Recommendations of the National Audit Office to the Director General of the Health Board:

- Monitor annually the assessment of the severity of calls by the Emergency Response Centre and ambulance crews and analyse whether changes are needed in the way calls are handled.
- Review the number of ambulance service regions, their location and the distribution of crews by service region in cooperation with the Health Insurance Fund and make changes if necessary.
- Make supervision of emergency medical care providers systematic and review the legislation that regulates ambulance services to make sure it is up to date and relevant.

Responses of
auditees

The Minister of Health noted that the audit recommendations are helpful in organising the emergency medical care system and confirmed that the Ministry is preparing the development directions of the EMS along with an action plan. The draft also provides for the creation of an EMS steering group, as this will allow the Ministry to have a better overview of the activities of the Health Board and the Health Insurance Fund in the field of EMS. The documents should be finalised in Q1 2025. The development directions and action plan provide clear guidance to the parties involved for the systematic development of the EMS, including medical transport. In order to better integrate the social and health sectors, the Ministry plans to prepare an analysis and proposals for an integrated model for organising the services by May 2025. The necessary IT developments are planned as part of the implementation of the e-health strategy.

The CEO of the Health Insurance Fund agreed with the main conclusions made in the audit and confirmed that the Health Insurance Fund will continue supporting the field of EMS also in the future. The

Health Insurance Fund will launch an open competition for ambulance service providers in the second half of 2025. The Health Insurance Fund will continue developing the quality indicators in 2025. This is an ongoing process. The Health Insurance Fund will also be investing in new digital solutions, including in the development of telemedicine capacity.

The Ministry of the Interior noted that the curriculum of call-takers is being updated and that discussions on the future direction of call-taker training are ongoing. The Ministry of the Interior confirmed that it will take into account the suggestion to jointly discuss with the Minister of Health how the dispatch of ambulances could be supervised in the future. The Ministry of the Interior also expects the Emergency Response Centre and the Health Board to update the manual for handling ambulance incidents, focusing on the standard cases which was most often assessed differently by ambulance crews and the Emergency Response Centre.

The Director General of the Health Board agreed that comparing the difference in priority assessments made by the Emergency Response Centre and the ambulance crew leaders is a good way to improve cooperation between agencies and is considering making the provision of assessments by crews mandatory. At the same time, the Health Board finds that the analysis and conclusions made by the National Audit Office on the basis of the assessments of ambulance crew leaders are too simplistic. The Director General also explained that periodic data analyses (in 2014, 2019 and 2024) have been used as the basis for the number, location and distribution of the service areas of ambulance crews, and the conclusions and need for changes will be covered in the Health Insurance Fund's 2025 public competition for finding ambulance service providers. The Director General agreed that until the introduction of the new risk forecasting approach in 2022, ambulance supervision was mostly reactive to complaints. Regarding the assessment of whether the legislation in the field of EMS is up to date and relevant, the Director General of the Health Board stated that the Board has been cooperating continuously with the ambulance service providers and the Emergency Response Centre.

Comment of the National Audit Office: A comparison of the assessments of the Emergency Response Centre and the ambulance crews was a tool to clarify whether the assessments of the priorities of incidents are the same or different. This comparison gives an indication of whether or not the triage arrangements need further analysis and modification. The comparison is apt because the call manual and the ambulance crews rely on the same document in their work¹. In addition,

¹ Government of the Republic Regulation No 119 "Procedure for Cooperation between Ambulance Service, Hospitals, Rescue Agencies and Police Agencies, the Defence Forces and the Health Board as Regards Emergency Aid" of 20.12.2018. Annex 1.

the efficiency of the use of ambulance resources has been repeatedly analysed in specialist literature using the same method.

During the audit it was not possible to clarify the exact basis of the analysis of the current distribution of ambulance service regions and the location of crews carried out by the Health Board in 2012 or factors that were assessed. The Health Insurance Fund analysed the arrival times of ambulance crews in 2019 and 2024. The analyses of the Health Insurance Fund did not include other important factors, such as the ambulance workload and the capability of the hospitals of the Hospital Network Development Plan to provide health services.

It is also important to note that it is not clear from the actions and explanations of the Ministry of Social Affairs, the Health Board and the Health Insurance Fund who, how and when decided to change the service regions and the location of the crews as a result of the aforementioned analyses. Given that ambulance is a vital service and that a large amount of money is spent on providing EMS, decisions on the distribution of service regions and the location of crews must be documented and the basis for the choices made must be unambiguously clear.

