

9<sup>th</sup> INTERNATIONAL CONFERENCE  
"TOWARDS A HUMANE CITY"  
Reshaping Mobility  
Novi Sad 19<sup>th</sup> and 20<sup>th</sup> October 2023

Robert Mrvčić<sup>1</sup>  
E-mail: robert.mrvacic@autotrolej.hr

Damir Pilepić<sup>2</sup>  
E-mail: damir.pilepic@gmail.com

Goran Tovilović<sup>2</sup>  
E-mail: gogo.tovilovic@gmail.hr

Mihael Seleš<sup>2</sup>  
E-mail: mseles129@gmail.com

<sup>1</sup> KD Autotrolej d.o.o.  
Školjić 15, Rijeka, Croatia

<sup>2</sup> Polytechnic of Rijeka  
Vukovarska ul. 58, 51000, Rijeka, Croatia

## TRANSPORTATION OF ONCOLOGICAL PATIENTS IN THE CITY OF RIJEKA

### Keywords

Oncology  
patients  
Patient  
transport  
Therapy  
Pilot project

### Abstract

The city of Rijeka is the first city in the Republic of Croatia that in April 2023 launched a pilot project of free transportation of oncology patients from their place of residence to the Clinic for Radiotherapy and Oncology KBC Rijeka. The project was initiated in cooperation with the Communal Company Autotrolej d.o.o. and Rijeka Clinical Hospital Center. Oncology patients are a particularly vulnerable group of people who very often go to therapy and go through a long process of treatment, and along with painstaking therapy, financial problems often occur, and transportation from home to therapy is a significant problem. The goal of starting a pilot project is to care for patients and to strive to maintain the therapy process continuously in order to primarily contribute to the quality of life and the fight against malignant diseases. MC Autotrolej Ltd., which provides public transport services in the area of the City of Rijeka and surrounding local self-government units, already has experience in transporting groups of citizens with reduced mobility, given that it has been transporting people with disabilities using specially adapted vans for years. The initiative to start a pilot project resulted in the satisfaction of all involved participants, which ultimately led to the second phase of the project and the transport of patients to radiotherapy, i.e., radiation, while in the first phase it was only possible to go to the Day Hospital of the Clinic for Radiotherapy and Oncology of Rijeka hospital center.

## **1. INTRODUCTION**

Municipal company Autotrolej for many years performs the service of the transportation of persons with disabilities within the territory of the City of Rijeka and its surrounding so it has an experience in the transportation of the most vulnerable group of patients. The pilot project of the transportation of oncological patients was developed in cooperation with the City of Rijeka and the Clinic for radiotherapy and oncology of the Rijeka hospital. With that, Rijeka became the first city in the Republic of Croatia that has ensured free transport to this group of patients. This project has started at the beginning of April 2023 and it has received positive reactions of the public sphere, as well as the patients. This project has started with the aim of facilitation of the course of the therapy for the patients that very often give up on it or they don't attend therapies regularly due to the financial situation or impossibility of the transport in the Rijeka hospital

## **2. THE DEVELOPMENT OF THE PILOT PROJECT OF THE TRANSPORT OF ONCOLOGICAL PATIENTS**

Unfortunately, the number of oncology patients is not decreasing, and the course of therapy itself is extremely exhausting for all patients. According to KBC Rijeka, between 55 and 60 patients from the area of the City of Rijeka receive oncology therapy daily. In many European countries, oncology patients are transported by taxi, while in the Republic of Croatia, transportation is still carried out independently. Many patients do not work during therapy, that is, they use sick leave if they are employed, which is an insurmountable problem in financing the cost of transportation by private car. At the same time, the City of Rijeka decided to launch a pilot project with MC Autotrolej d.o.o., which has been providing transport services for people with disabilities in the City of Rijeka for several years. The transport service is performed based on the list provided by MC Autotrolej d.o.o. delivered by the ordering coordinator of the Radiotherapy and Oncology Clinic of KBC Rijeka. Pre-bookings for transportation are made the day before in order to organize and schedule the transportation. In the first phase of the project, only the transport of patients undergoing therapy in the Day Hospital is included, and for this reason only two vehicles of MC Autotrolej d.o.o. are provided.

### **2.1. Transport of patients in the Republic of Croatia**

As previously stated, free oncology patient transport is a novelty in the way of transporting patients. The majority of the public believes that transport can only be carried out by means of medical transport, which differs in many details. The right to medical transport has the right to immobile, difficult-to-move persons and persons for whom it is not advisable to move alone. In addition, the insured person has the right to medical transportation to the nearest contractual entity of the HZZO, which has a contract with the HZZO and can provide the requested health care. For medical transportation, it is necessary for the doctor of primary health care to issue an order

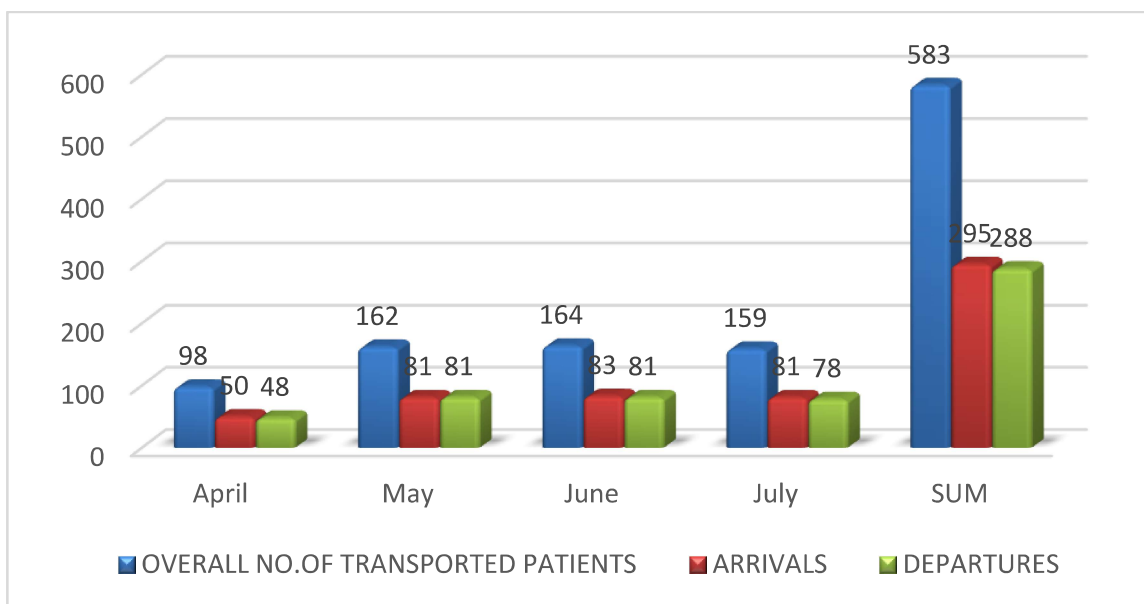
for medical transportation, which must include the name of the headquarters of the contractual entity of the HZZO and its name, whether it is a case of transportation within the place of residence or stay, to a contractual institution outside the place of residence (<https://hzzo.hr/obvezno-osiguranje/sanitetski-prijevoz>). When transporting oncology patients, a referral is not required, but the transportation process itself is agreed with the coordinator at KBC Rijeka, and the transportation is done "door to door". Transportation of oncology patients is organized in Zagreb and Glina, but not in the same way as in Rijeka. In 2018, the association "Nismo same" launched an initiative to transport cancer patients exclusively for therapy in cooperation with taxis. The service can be provided by women who are being treated for cancer in public health institutions in the area of the City of Zagreb and its immediate surroundings. The service can be ordered via a form on the website, via a message to an e-mail address, and via an SMS message. When performing the service, the user must sign the form she receives at the end of each ride, which serves as proof that she used the service. It is necessary to provide personal information to the association, and the transport can also be used by persons who are not at their residential address at the time of treatment and come to the transport by bus or train, after which taxis transport them to the hospital for treatment. In addition, information on the type of tumor, type of treatment, work status and family support must be reported to the Association. The service must be booked two days in advance in order to make a schedule and distribute the rides to the taxi vehicles in a timely manner. Transportation for female users is always contracted by the Association, while Radio Taxi Zagreb transports only those persons whose data it possesses and, in accordance with the contract, uses the most favorable route for the Association (<https://nismosame.com/naruci-taksi/> 1.7.2023).

## **2.1. Transport of patients in the Republic of Croatia**

In addition to Zagreb, oncology patients are transported to therapy in Glina, where the Association of St. Agata Glina organized the transport of patients for chemotherapy, radiation and controls. The transport is carried out by the members of the Association from the area of Glina and its surroundings, and the cost of fuel is financed by applying for tenders or through donations. The vehicle in which the transport is carried out was donated, which makes it much easier for the patients to get to the most common destination, which is Zagreb. At the beginning of July 2023, the transportation of oncology patients began to be carried out in Opatija in such a way that a pilot project of free transportation of oncology patients in Rijeka was launched with the joint cooperation of the City of Opatija, the company Opatija 21 and KBC Rijeka. Considering the arduous treatment for malignant diseases, transportation by private car is often too much for the patients, and this project has made it significantly easier to get to and from the hospital on your own. The transport service is provided by the company Opatija 21 based on the list delivered from the Clinic for Radiotherapy and Oncology KBC Rijeka between 8 am and 3 pm. By rebalancing the budget in May, PGŽ launched a program for transporting oncology patients to therapy from local self-government units in the county. The public call for cities and municipalities will be announced by the end of July.

## 2.2. Statistics on transportation of oncology patients in the City of Rijeka

In the first phase of the pilot project, which began work at the beginning of April 2023, patients were provided transportation to the day hospital where they received therapy, and after the evaluation of the first phase, the project entered the second phase from the beginning of May, where the free transportation service expanded. Patients are now able to be transported to the Radiotherapy and Oncology Clinic of KBC Rijeka, that is, patients can perform radiotherapy according to the radiation schedule. According to the available data, the statistics of the transportation of oncology patients from the beginning of the project to the end of June are shown below



Graph 1. Transportation of oncology patients in the period from April to July

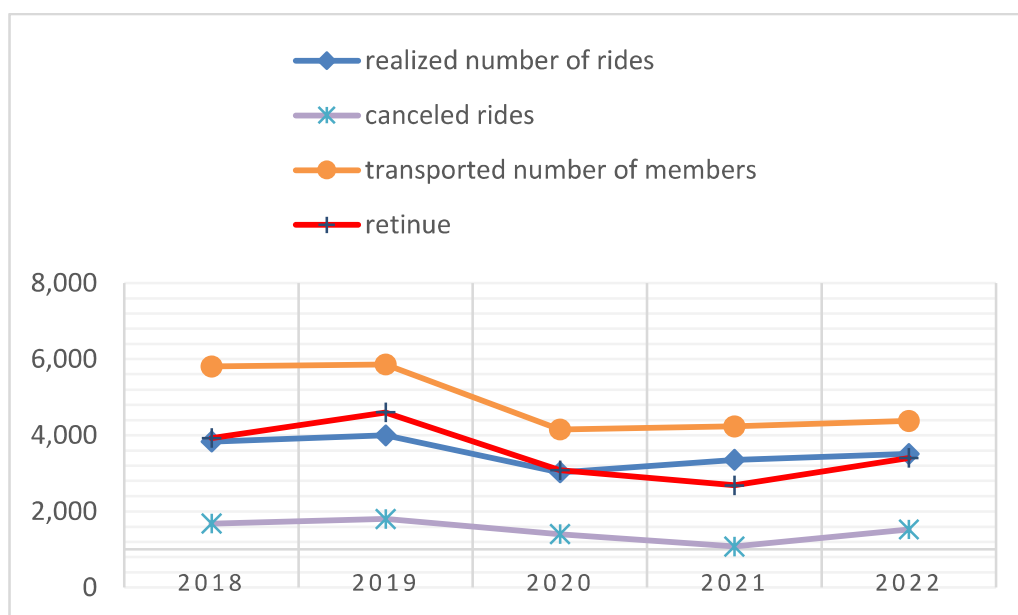
Source: internal data of MC Autotrolej d.o.o.

The transport of patients is carried out with two vehicles, and it is evident that 583 patients actively used the transport. The table does not indicate companions, but only oncology patients. The City of Rijeka, for the year 2023, has provided EUR 65,000.00 in the budget through the Administrative Department for Health, Social Protection and Improving the Quality of Life. The funds are intended for all transportation costs, i.e. for the maintenance of vehicles used to transport patients (obligatory technical inspection, vehicle insurance, fuel, spare parts), telephone costs, work clothes and driver's salary, and part of the dispatcher's salary, i.e. everything is regulated by the Contract. For all incurred expenses, MC Autotrolej d.o.o. issues monthly invoices to the City in the actual amount, and the stated amount is refunded. Obligation of MC Autotrolej d.o.o. is also the submission of

written reports to the competent Department on the use of transport in order to prepare half-yearly and annual reports.

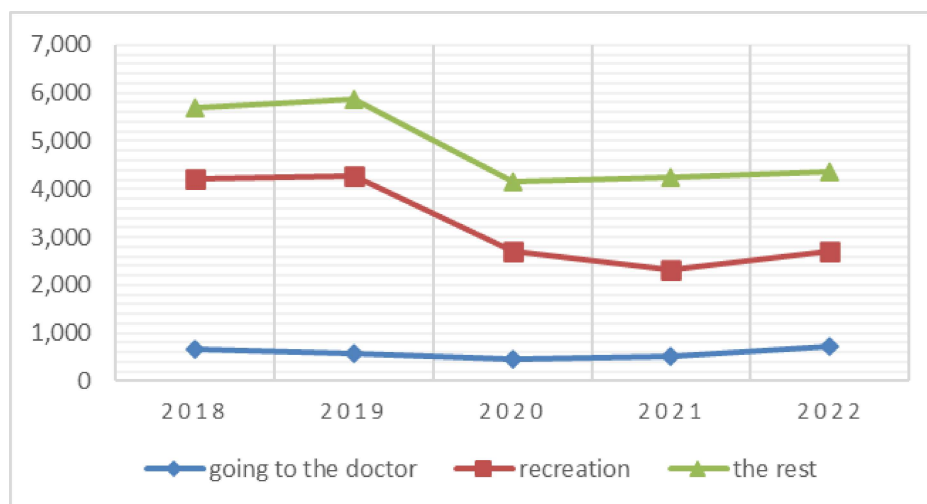
### 3. TRANSPORTATION OF PEOPLE WITH DISABILITIES IN THE CITY OF RIJEKA

MC Autotrolej d.o.o. is also the organizer of transportation of persons with disabilities in specially adapted vans owned by the City of Rijeka. Transport users are persons with disabilities residing in the area of the City of Rijeka who move with the help of wheelchairs and persons with difficulty in mobility. Transportation can only be used by persons included in the list of transportation users. For persons who do not reside in the area of the City of Rijeka, a transport contract is concluded between MC Autotrolej d.o.o. and local self-government units in whose territory the person resides and pays the agreed amount per kilometer. Transportation is only available in the area of the City of Rijeka, with the possibility of transportation to health institutions outside the area of the City of Rijeka, namely: Thalassotherapia Opatija, Thalassotherapia Crikvenica, Orthopedic Clinic Lovran, Psychiatric Hospital Lopača. When transporting people with disabilities, it is very important that drivers are familiar with assistance operations, i.e. setting up ramps on a specially adapted van. It is important to secure passengers with seat belts and help them when getting in and out of the vehicle and adjust the speed not only to the road conditions but also to the condition of the persons being transported. The following shows data on transportation from 2018, while transportation began in 1998.



Graph 2. Transportation of persons with disabilities from 2018 to 2022

Source: internal data of MC Autotrolej d.o.o.



*Graph 3: Trips by purpose*

*Source: internal data of MC Autotrolej d.o.o.*

From 2021, the transport of disabled persons is carried out with a maximum of two vehicles, while three specially equipped vans owned by the City of Rijeka are available. Graphs 2 and 3, show data from 5 years ago. It can be seen that the number of transported persons was lower in 2020 due to the Covid pandemic and the impossibility of regular transportation. In addition to persons with disabilities, the transport can also be used by their companions, who are also shown in the list.

## 4. CONCLUSION

Transportation of seriously ill persons, specifically oncology patients, has not yet been resolved at the level of the entire Republic of Croatia. Many patients encounter difficulties when performing therapy, primarily financial problems that are an obstacle to regular therapy. The example of the City of Rijeka is an excellent example for other cities that the problem of transportation can be solved and thus provide support to all patients. Of course, the projects need to be developed while monitoring the wishes and needs of all users, of which the plan is to purchase new vans/passenger vehicles that would be exclusively intended for the transport of patients. In addition to the help of the cities in the Republic of Croatia, it is necessary for the competent ministry to start finding a way to co-finance and facilitate the course of therapy itself, while it is planned for the Primorje-Gorski Kotar County to start co-financing the project.

## REFERENCES

- [1] Internal Data of KD Autotrolej d.o.o.
- [2] [www.novilist.hr](http://www.novilist.hr) (12. 7. 2023.)
- [3] <https://nismosame.com/naruci-taksi/> (1.7.2023.).
- [4] <https://hzzo.hr/obvezno-osiguranje/sanitetski-prijevoz> (1. 7. 2023.)