

Decision-making in Slovenian outpatient care:

Can financial incentives reduce patient waiting lists?

Valentina Prevolnik Rupel¹,
Marjeta Kuhar², Dorjan Marušič³

¹ Institute for Economic Research

² National Institute for Public Health

³ Health Centre Celjenje

Correspondence to:

Valentina Prevolnik Rupel
rupelv@ier.si

Abstract

Between 2015 and 2020 in Slovenia, many incentives were introduced by the main payer to increase access to outpatient health services and limit the fast-increasing number of patients waiting. Incentives oriented towards high productivity did not result in better access or improve the service mix produced. The introduction of incentives always came late in the year, because of the long process of reaching an annual general agreement, limiting their effectiveness. To increase access, the minimum number of first visits per provider needs to be defined; the amount that the provider receives for the first visit (the price) must also be increased, and the monitoring of service mix and the number of patients waiting is recommended.

Introduction

Inefficiencies in healthcare systems that result in long waiting times for doctor visits, and especially specialist visits, are challenges faced by many countries. In this article, we share the Slovenian experience relating to these challenges. Health services in Slovenia are financed through a mandatory insurance programme – the Health Insurance Institute of Slovenia (HIIS) – and voluntary health insurance premiums. An annual general agreement (GA), defined by stakeholders in the healthcare system (providers, users represented by HIIS, and the

regulator), specifies the volume and price of healthcare services to be reimbursed by the HIIS. Current payment mechanisms consist mostly of prospectively defined capped payments with retrospective realisation.

Outpatient specialist services feature highly in debates about financing, bundled payments, and shifting focus from inpatient to outpatient care; however, the effectiveness of financing and incentives in outpatient services is rarely analysed and presented. The services provided in outpatient care are paid on a fee-for-service basis, and the size of payment depends on the planned (and achieved) number of *points*. Each clinical specialty has a defined set of services (short visit, expanded visit, ultrasound, etc), and each service is assigned a cost weight expressed in the number of points. These points reflect the labour costs (medical specialists, nurses, administrative and laboratory staff), material costs, depreciation,

and healthcare service's informatisation costs. The number of services differs between specialities. For example, there are:

- 68 services in cardiology
- 79 in pulmonology
- 85 in orthopaedics
- 86 services in neurology.

The number of services has been increasing steadily; 16 new services have been added in the last decade.¹ In fee-for-service systems, financial rewards are directly connected to productivity, and the goal of providers in Slovenia has been to achieve the planned number of points defined in the annual plan.

We would expect the number of patients waiting for outpatient specialist services to be low because of the focus on high productivity. However, waiting times and the number of patients waiting for health services have been increasing constantly for the last 10 years (Figure 1).

The legal framework for monitoring waiting times was established in 2008 by the Patient



Rights Act² and the Regulation on maximum waiting times for individual health rights.³ The policy regulates the referral rules, cancellation of appointments, ranking of patients according to urgency, maximum waiting times, and the reporting rules. Maximum permissible times are defined that vary depending on assigned degrees of urgency, which are categorised into urgent, very fast, fast, and regular. The maximum permissible time is up to:

- 24 hours for urgent
- 14 days for very fast
- 3 months for fast
- 6 months for regular degree of urgency.

On May 1, 2011, the National Institute for Public Health (NIPH) published data on waiting lists for selected healthcare services for the first time. There were 24,819 patients waiting for 60 defined services. The list of 60 services was slightly changed on September 1, 2012, and then there were no further changes until May 1, 2016, when one more service was added to the list. In August 2018, the whole operational system of reporting was replaced, with changes made to the list of services, their coding, and the reporting methodology; 60 services from the previous system now correspond to 400 new services. The service code translator has not yet been officially published; however, the data could potentially be compared if it existed.

Between January 1, 2015, and January 1, 2020, the number of patients waiting for their first visit increased by 54%. On January 1, 2020, there were 403,811 patients on waiting lists, of whom 41% waited longer than the maximum permissible time. The majority, 71% of all patients, were waiting for outpatient specialist services, and the rest were waiting for diagnostic procedures or day care. The estimated financial value of services for patients on waiting lists was 120.4 million EUR, and the estimated value of service provision for patients waiting longer than the maximum permissible time was 44.7 million EUR.⁴⁻⁶

The aim of this study was to investigate the effect on waiting lists in three clinical specialties of introducing new health policies in the form of various financial incentives.

Methodology

The administrative data on the number of patients waiting for three selected outpatient specialties – orthopaedics, cardiology, and neurology – were obtained from a publicly accessible database at the NIPH.⁶ We calculated the number of patients waiting between January 1, 2015, and January 1, 2020. At the same time, we analysed the fund allocation mechanisms and financial incentives for the providers of outpatient health services to shorten the waiting lists between 2015 and 2019. The data on service

plans and production were officially obtained from administrative HIIS databases.⁷

The period 2015–2020 was chosen because of the many financial incentives introduced by HIIS during this time in an attempt to increase access to services. The waiting lists comprised mainly patients waiting for their first specialist visit after referral from primary care.

Our analysis focused on the three hospital specialties because of the large volumes of provided services and because the payment structure had not changed within the last decade.

Results

The total number of patients waiting for outpatient services in the three selected specialties was 28,516 on January 1, 2015, and increased by 34% to 38,328 patients by January 1, 2020. In the same period, the number of patients waiting longer than the maximum permissible time increased from 1,657 to 16,350, or by almost 10 times (Figure 2). This increase is much larger than the increase in the number of all the patients waiting. We saw some differences between specialties; in cardiology, where a long waiting time can have fatal consequences, the increase in the number of patients waiting was lower than in the other two specialties.

The first measure introduced in 2015 tried to implement more flexibility in the payment for first visits (Table 1). If providers provided more

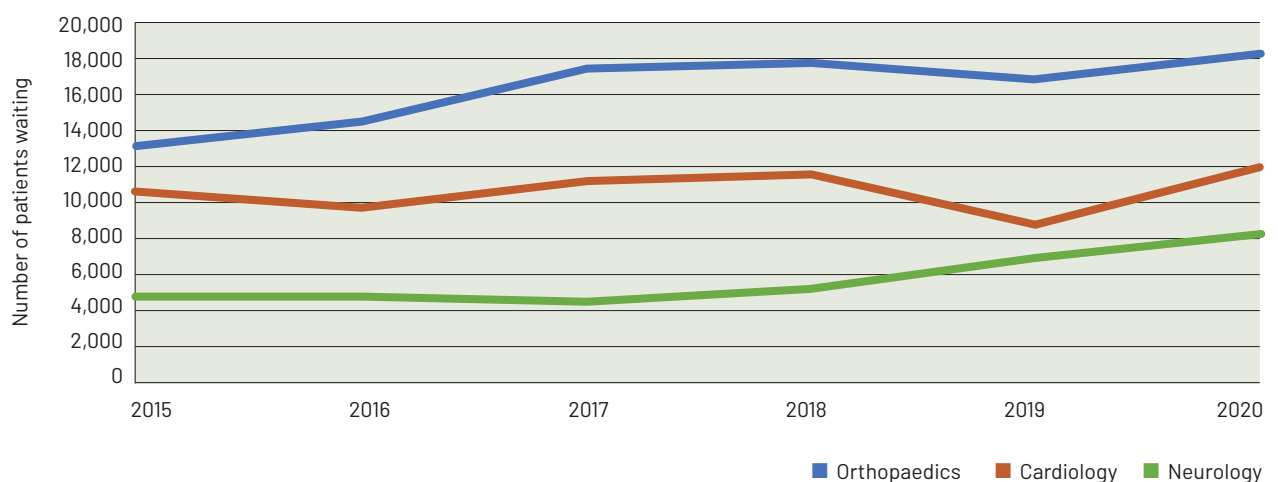


Figure 1. The number of all patients waiting for specialist outpatient services from January 1, 2015, to January 1, 2020

Source: Monthly Waiting Time Reports, National Institute for Public Health, 2015–2020.

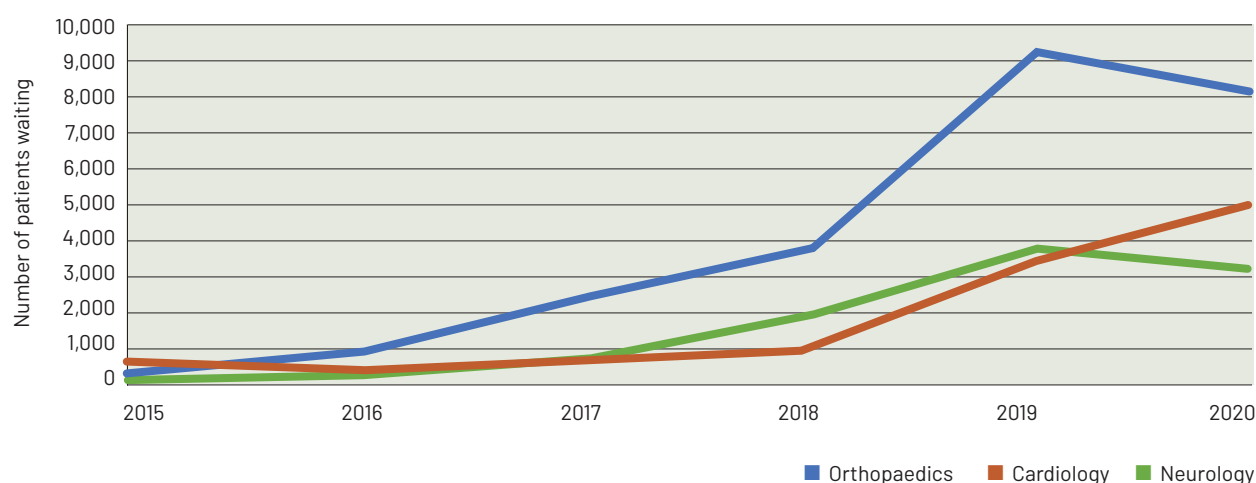


Figure 2. The number of patients waiting longer than the maximum permissible time for specialist outpatient services from January 1, 2015, to January 1, 2020

Source: Monthly Waiting Time Reports, National Institute for Public Health, 2015–2020.

first visits than planned, these were also paid for by the HIIS with the hope that providers would have greater incentive to perform more first visits and thus shorten the waiting lists.

We found that in 2015, when the providers were paid for 20% and later 10% of visits above the plan, the expected increase in number of first visits was not achieved in any specialty (Table 2). The reaction of providers to this incentive was minimal. The main reason was the retrospective nature of the measures: they were introduced in June and December 2015 and were valid for the whole year of 2015 – but the providers could not adjust quickly enough to achieve more visits when they only had 6 months or 2 weeks left in the year. The impact of the measure was, therefore, negligible.

HIIS then decided in 2016 to increase first visits further by paying for an unlimited number of them. However, except in cardiology, the number of first visits continued to decrease (Table 2), and the number of persons waiting continued to increase. The problem was again the retrospective nature of the incentive as it was introduced in June but valid for the whole year. In all three specialties, the number of points increased, indicating that the providers followed their primary goal (to achieve the planned number of points defined in the annual plan). While the number of visits decreased, providers performed more procedures per visit to reach the points outlined in the plan.

In 2017, the HIIS introduced another new measure that focused solely on points; they

decided to pay 20% of the points above the plan. As observed from Table 1, the number of points did increase and was higher than the plan, but it also resulted in fewer first visits because of the formula used by the HIIS to define the plan of first visits.*

In 2018, despite 3 years of additional measures and incentives, the planned and achieved numbers of first visits were lower (or the same for cardiology) than in 2015. The HIIS, therefore, decided to introduce a slightly different and potentially very efficient measure, where a minimum number of first visits was defined and specified separately for each medical specialty and each provider, alongside an additional payment of 20% of all points achieved above the plan. At the same time, the HIIS increased the

Table 1. Financial incentives introduced by HIIS to increase patient access, 2015 – 2019

Source: Health Insurance Institute of Slovenia, General Agreements (GAs) 2015–2019

GA or annex	Incentives	Acceptance date	Starting date (all retrospective)
GA 2015	Payment of 20% above the plan for first visits	6/24/15	1/1/15
GA 2015	Payment of 10% above the plan for first visits	12/16/15	1/1/15
GA 2016	All first visits paid	5/19/16	1/1/16
GA 2017	Payment of 20% above the points plan	6/21/17	1/1/17
GA 2018	All first visits paid, separate plan for first visits	1/31/18	1/1/18
GA 2018 Annex 1	Payment of 5% above the points plan	6/14/18	1/1/18
GA 2018 Annex 2	Payment of 20% above the points plan	10/18/18	1/1/18
GA 2019	Payment of 5% above the points plan	2/21/19	1/1/19
GA 2019 Annex 3	Payment of 15% of the excess in number of points	10/24/19	1/1/19

Table 2. Number of first visits (planned and realised), number of follow-up visits, and number of points (planned and realised) provided in three selected specialties, 2015–2019

	No. of first visits (planned)	No. of first visits (realised)	No. of follow-up visits	Points (planned)	Points (realised)	No. of first visits (realised/ planned) as percentage	Visits (follow-up/ first)	No. of points per visit
Cardiology								
2015	50,174	48,551	147,169	3,950,820	3,801,165	96.8	3.03	19.4
2016	48,813	48,923	148,528	3,810,532	3,844,380	100.2	3.04	19.5
2017	48,398	48,800	142,699	3,803,317	3,881,774	100.8	2.92	20.3
2018	48,563	50,729	137,554	3,818,933	3,881,979	104.5	2.71	20.6
2019	76,072	52,862	133,020	3,937,509	4,048,606	69.5	2.52	21.8
Orthopaedics								
2015	104,578	98,723	85,317	1,585,015	1,291,305	94.4	0.86	7.0
2016	109,650	96,602	88,600	1,516,722	1,273,570	88.1	0.92	6.9
2017	106,982	97,341	89,080	1,505,127	1,297,553	91.0	0.92	7.0
2018	103,109	91,276	85,153	1,460,839	1,247,562	88.5	0.93	7.1
2019	113,465	93,753	89,819	1,482,507	1,373,983	82.6	0.96	7.5
Neurology								
2015	42,248	39,033	32,256	2,418,462	2,359,742	92.4	0.83	33.1
2016	34,450	10,878	32,727	2,339,447	2,445,315	31.6	3.01	56.1
2017	32,485	26,710	30,591	2,312,721	2,409,178	82.2	1.15	42.0
2018	36,267	27,762	28,378	2,356,657	2,420,869	76.5	1.02	43.1
2019	27,606	30,339	28,513	2,308,696	2,408,161	109.9	0.94	40.9

Source: Health Insurance Institute of Slovenia database, 2015–2019

price (by increasing the point value) of first visits by 10%. All first visits were paid. This measure went into effect in January 2018 and had the potential to substantially reduce the number of patients waiting.

However, the minimum number of first visits was calculated according to an undisclosed formula, which resulted in increased plans for first visits according to the national average, but which were impossible to achieve for most providers (except for tertiary clinical centres). There was widespread opposition to the proposal among healthcare providers and, by June 2018, Annex 1 to GA 2018 had already abolished the obligation of minimum first visits. The number of achieved points again became the only incentive and obligation for the providers.

Discussion

Although outpatient services represented 12% of the total expenditure for healthcare services in Slovenia in 2019, there is currently no published analysis of the effectiveness of the financial mechanisms in outpatient care. From our analysis of specialist outpatient services in three clinical areas, it is clear that the quantity of services provided per team is too low despite the possibility to achieve more points and thus receive more funds. However, the question of the structure of the planned package remains open. Long waiting lists indicate too few first visits.

The incentive of financing points above the agreed annual plan is, for Slovenia, not only ineffective but actually damaging.

The decision-making about the introduction of incentives should be based on carefully analysed data. The incentive of financing points above the agreed annual plan is, for Slovenia, not only ineffective but actually damaging. The providers chose to achieve the planned number of points by increasing the number of procedures (e.g., ultrasound) per visit. For example, the first visit in cardiology had an almost five-times lower value than the request for an ultrasound of the heart. In such a situation, the decision by providers not to opt for

more first visits but to produce more services per visit is understandable. The analysis showed that the number of all specialist visits (first and follow-up) decreased continuously: between January 1, 2015, and January 1, 2020, the number of visits in the three specialties decreased by 5%. At the same time, the number of points increased by 5%, indicating an increase in the number of services per visit. Curbing the number of services per visit would require an analysis of the added value of the services provided and the measurement of

* The plan of points is fixed as described in the introduction. When HIIS defines the plan of first visits for each provider or team, the fixed plan of points is divided by the average realised number of points per first visit. Logically, if the provider provided fewer first visits or more points in the previous year, this would result in more points per first visit and fewer planned first visits. This core flaw in the system reduced accessibility and diminished the effectiveness of all the incentives that were introduced with the aim to increase the number of first visits and shorten waiting lists.



patient-reported and clinician-reported outcomes.

The incentive to pay for points above the plan should have had a positive impact on the number of first visits and hence given higher access to healthcare. However, because of the formula used, increasing the number of points resulted in fewer planned first visits. The payment for additional first visits barely compensated for this flaw and did not increase the number of first visits to the level required.

The incentive to focus on financing all first visits was equally ineffective in these circumstances, where the providers did not even achieve the planned number of first visits; it also sent a mixed message to the providers, especially in combination with the relatively low price for the first visit. The benefit of the incentive simply could not outweigh the additional effort required to catch up or exceed the planned number of first visits, and so was not adopted by the providers.

Based on the results of this analysis, the approach for 2021 has been changed. The planned number of first visits will be based on the achieved number of first visits in the previous year plus the number of patients waiting longer than the maximum permissible time. Needs defined in this way have then been divided across the available teams in each medical specialty. The increase in the first visit price will be combined with the defined minimum number of first visits per provider. Teams with patients waiting longer than the maximum permissible time and at the same time providing fewer first visits than planned will lose part of their budget, reflecting the difference between the planned and

The benefit of the incentive simply could not outweigh the additional effort required to catch up or exceed the planned number of first visits, and so was not adopted by the providers.

achieved number of first visits.

The current optimisation of access to specialist outpatient services follows the needs of the population and is related to demographic and epidemiological trends and clinical developments. In the future, it will be necessary to increase or adapt the number of medical teams based on the age structure of the population and the disease burden. Financial incentives should be introduced to produce more first visits with

a commitment to achieving at least the national average, combined with the monitoring of waiting lists and, finally, encouraging standard treatments for patients with comparable diagnoses.

Conclusion

The incentives in outpatient care between January 1, 2015, and January 1, 2020 in Slovenia were all oriented towards higher accessibility but instead resulted in steeply increasing numbers of patients waiting for first visits. The incentives introduced by the HIIS were unsuccessful, because they were incorrectly oriented towards higher productivity of outpatient services, rather than incentivising an appropriate structure of outpatient care. The current incentives, in the form of a separate plan for first visits and higher prices for first visits, should reduce the number of patients waiting and ensure faster access to outpatient care for patients.

Acknowledgements

This research was supported by the Slovenian Research Agency (Grant No. P5-0096).

Conflicts of interest

The authors declare no conflicts of interest.

References

1. HIIS, General Agreements for the years 2015–2019, Health Insurance Institute of Slovenia, Ljubljana, 2016–2020.
2. Patients' Rights Act. Zakon o pacientovih pravicah (ZPacP). [Official Gazette of the Republic of Slovenia], No 15/2008, 55/17 and 177/20 [cited 2021 April 21]. Available from: <http://pisrs.si/Pis.web/pregledPredpisa?id=ZAKO4281>.
3. Pravilnik o naročanju in upravljanju čakalnih seznamov ter najdaljših dopustnih čakalnih dobah. [Rules on ordering and managing waiting lists and maximum allowable waiting periods]. Official Gazette of the Republic of Slovenia, No 3/2018, 201/2020 and 103/21 [cited 2021 April 21]. Available from: <http://www.pisrs.si/Pis.web/pregledPredpisa?id=PRAV13238>.
4. Simčič B, Kuhar M, Marušič D. Nedopustno čakajoči – dosežen je novi rekord! Razsežnosti problema pravočasne zdravstvene obravnave. [Waiting longer than maximum permissible time – a new record is achieved! The aspects of the problem of in-time healthcare services]. Dnevnik, 6.10.2018; 68 (231): 14–15. Available from: <https://www.dnevnik.si/1042842229>.
5. Kuhar M, Simčič B, Marušič D. V labirintu e-čakalnih dob, čakajoč na virtualno obravnavo. Delo – Sobotna priloga. [In the labyrinth of e-waiting times, waiting for virtual services]. 2018 Sep 8;12–13. Available from: <https://www.delo.si/novice/slovenija/v-labirintu-e-cakalnih-dob-cakajoc-na-virtualno-obravnavo/#!logout>.
6. NIPH, Analiza stanja na dan 1.1.2020 1.6.2020 in 1.1.2021 [Analysis of Situation on 1.1., 1.6.2020 and 1.1.2021], National Institute of Public Health of Slovenia, Ljubljana, 2021 [cited 2021 July 08]. Available from: <https://www.nijz.si/sl/publikacije>.
7. HIIS, Internal Database. Health Insurance Institute of Slovenia, Ljubljana, 2021.



Author information

Valentina Prevolnik Rupel, PhD, is a professor and researcher at the Institute for Economic Research in Ljubljana. She worked as an advisor to the Minister of Health and the Director of the Health Insurance Institute of Slovenia. She has also worked as an international consultant and is extensively published and cited.



Prim. Dorjan Marušič, MSc, has served as a Medical Hospital Director, Minister of Health for Slovenia, and a member of the Expert Panel on Effective Ways of Investing in Health at DG SANCO. He has worked as a consultant in many countries in Europe and Asia and is extensively published and cited.



Marjeta Kuhar, MSc, has worked in healthcare since 1993, and has worked as a researcher and consultant in the areas of accessibility and strategic purchasing in healthcare at the Institute of Public Health of the Republic of Slovenia since 2020.