OBIM PRUŽANJA PREVENTIVNIH USLUGA OD STRANE IZABRANIH LEKARA U PRIMARNOJ ZDRAVSTVENOJ ZAŠTITI, U REPUBLICI SRBIJI, U PERIODU OD 2013. DO 2017. GODINE

ORIGINALNI RAD

ORIGINAL ARTICLE

SCOPE OF PREVENTIVE SERVICES PROVIDED BY CHOSEN DOCTORS IN PRIMARY HEALTH CARE, IN THE REPUBLIC OF SERBIA, IN THE PERIOD BETWEEN 2013 AND 2017

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SAŽETAK

Uvod: U Republici Srbiji je, 2012. godine, uvedena kapitaciona formula, kao model plaćanja izabranih lekara po učinku, na osnovu broja opredeljenih pacijenata, broja ostvarenih poseta, finansijske vrednosti propisanih recepata, kao i na osnovu broja pruženih preventivnih zdravstvenih usluga, u ustanovama primarne zdravstvene zaštite iz Plana mreže.

Cilj: Cilj rada je analiza obima pruženih preventivnih zdravstvenih usluga, koji se koristi za procenu učinka i plaćanje izabranih lekara po kapitacionoj formuli, u ustanovama primarne zdravstvene zaštite, u Republici Srbiji, u periodu od 2013. do 2017. godine.

Metod: Analizirani su dostupni podaci Instituta za javno zdravlje Srbije „Dr Milan Jovanović – Batut" (IJZS „Batut"), u pogledu obuhvata određenih populacija preventivnim zdravstvenim uslugama. Konkretno, analizirana su 23 različita pokazatelja, odnosno preventivne usluge koje pružaju izabrani lekari u službama za zdravstvenu zaštitu odraslih, za zdravstvenu zaštitu dece i školske dece i za zdravstvenu zaštitu žena, u 166 ustanova primarne zdravstvene zaštite na koje se primenjuje model plaćanja po kapitacionoj formuli (158 domova zdravlja, tri zavoda za zdravstvenu zaštitu studenata i pet zavoda za zdravstvenu zaštitu radnika). Ispitivan je trend obuhvata pomenutim uslugama u periodu od 2013. do 2017. godine, kao i porast obima preventivnih usluga, baznim i lančanim indeksima.

Rezultati : Opadajući trend obuhvata korisnika zabeležen je za tri od 23 pokazatelja, i to su: obuhvat odojčadi ultrazvučnim pregledima radi ranog otkrivanja displazije kukova, obuhvat školske dece preventivnim pregledima u osmoj, desetoj, dvanaestoj i četrnaestoj godini života, i obuhvat odraslog stanovništva (preko 35 godina života) preventivnim pregledima. Sve ostale usluge imaju nepromenljiv trend u pogledu obuhvata ciljnih populacija, u periodu od 2013. do 2017. godine.

Zaključak: Iako većina posmatranih preventivnih zdravstvenih usluga ima stabilan trend obuhvata stanovništva, u posmatranom periodu je obuhvat korisnika daleko ispod preporučenog nivoa.

Ključne reči: primarna zdravstvena zaštita, izabrani lekar, preventivne zdravstvene usluge, kapitaciona formula

ABSTRACT

Introduction: In the Republic of Serbia, the capitation formula was introduced in 2012, as a payment for performance model for chosen medical doctors based on the number of patients, number of visits, financial value of prescribed prescriptions, as well as on the basis of the number of preventive health services provided in public primary health care facilities.

Aim: The aim of this paper is to analyze the scope of preventive health services provided, which is used to evaluate the performance and to pay selected doctors according to the capitation formula, in primary health care institutions, in the Republic of Serbia, in the period between 2013 and 2017.

Methods: The available data of the Institute of Public Health of Serbia 'Dr Milan Jovanović – Batut' (IPHS 'Batut'), in terms of the coverage of certain populations with health services, were analyzed, namely twenty-three different indicators, i.e., preventive services provided by chosen medical doctors in the area of health services for adults, children, and women's healthcare, in 166 primary health care institutions to which the payment model based on the capitation formula is applied (158 primary healthcare centers, three institutes for the health care of university students, and five institutes for the health care of workers). The trend of coverage of the above-mentioned services, in the period between 2013 and 2017 was examined, as well as the increase in the volume of preventive services, with fixed-base and chain indices.

Results: Three out of twenty-three different health services showed a declining trend, namely the coverage of infants with ultrasound examinations for early detection of hip dysplasia, coverage of schoolchildren with preventive examinations at the ages of 8, 10, 12, and 14 years, as well as coverage of the adult population (older than 35 years) with preventive services. All other services had a stable trend in terms of coverage of target populations in the period from 2013 to 2017.

Conclusion: Although most of the observed preventive health services had a stable trend of population coverage, their coverage was far below the recommended level, in the observed period.

Key words: primary health care, payment for performance, chosen doctor, preventive health services, capitation formula

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UVOD

U zdravstvenom sistemu, ulogu „čuvara kapije" imaju pružaoci primarne zdravstvene zaštite, pre svega lekari opšte prakse, pedijatri, ginekolozi i stomatolozi, i svaka analiza njihovog rada u odnosu na izražene potrebe korisnika omogućava da se bolje sagledaju pravci mogućeg daljeg razvoja. Prema podacima Inicijative za ostvarivanje primarne zdravstvene zaštite (engl. *The Primary Health Care Performance Initiative*), 80% zdravstvenih potreba tokom života građani bi trebalo da zadovolje na nivou primarne zdravstvene zaštite, a to je ujedno i pokazatelj dobre organizacije zdravstvenog sistema neke zemlje [1]. U poređenju pokazatelja nezadovoljenih zdravstvenih potreba, građani Republike Srbije su u nepovoljnijoj poziciji od građana Evropske unije (EU). Stopa nezadovoljenih potreba za zdravstvenim pregledima i lečenjem, u Srbiji, u 2016. godini, bila je 10,5%, dok je u EU ta stopa iznosila 5%, za istu godinu [2].

Od 2005. godine, prema Zakonu o zdravstvenoj zaštiti i Zakonu o zdravstvenom osiguranju, osigurana lica imaju pravo na izbor lekara u službama zdravstvene zaštite odraslog stanovništva, zdravstvene zaštite predškolske i školske dece, studenata, zdravstvene zaštite žena i stomatološke zdravstvene zaštite [3,4]. Ova regulativa, koja je unapređena 2019. godine [5,6], omogućava kontinuitet i sveobuhvatnost zdravstvene zaštite pacijenata i osiguranika od strane izabranog lekara, što i jeste cilj kvalitetne primarne zdravstvene zaštite [7,8]. Prilikom posete izabranom lekaru, pacijent ostvaruje kontakt sa zdravstvenim sistemom na primarnom nivou, a ako je to njegova prva poseta u kalendarskoj godini, pacijent dobija sveobuhvatni pregled, i započinje sa preventivnim uslugama i kurativnim lečenjem, kao i zdravstvenim vaspitanjem i savetovanjem, od strane svog izabranog lekara. Izabrani lekar, koji je upoznat sa zdravstvenim stanjem svog pacijenta, dalje koordinira potrebe za zdravstvenim uslugama za svog registrovanog pacijenta. Svakom sledećom posetom, izabrani lekar upotpunjuje svoje znanje novim informacijama o zdravstvenom stanju, životnim navikama i okolnostima u kojima pacijent brine o svom zdravlju, što je daleko bolje od prethodne prakse kada se pacijent, neretko, prilikom svake poste domu zdravlja, susretao sa drugim lekarom. Usluge izabranog lekara mogu se podeliti na dve osnovne grupe: 1) kurativne zdravstvene usluge i 2) preventivne zdravstvene usluge.

Od početka trećeg milenijuma, reforme zdravstvenog sistema Republike Srbije se ostvaruju uz kreditiranje Svetske banke [9]. Promene se uvode i u oblasti finansiranja pružalaca zdravstvenih usluga. Uopšteno gledano, plate u javnom sektoru se računaju na osnovu koeficijenata određenih za nivo stručne spreme i na osnovu

INTRODUCTION

In the healthcare system, the providers of primary healthcare services have the role of 'gatekeepers', which primarily applies to general practitioners (GPs), pediatricians, gynecologists, and dentists, and each analysis of their work in relation to the needs expressed by the service users, provides a better insight into the possible directions of further development. According to the data of the Primary Health Care Performance Initiative, patients should satisfy 80% of their healthcare needs at the level of primary healthcare, which is, at the same time, an indicator of good organization within the healthcare system of a country [1]. The comparison of indicators of unmet healthcare needs has shown that the citizens of the Republic of Serbia are in a less favorable position as compared to European Union citizens (EU). In Serbia, in 2016, the rate of unmet healthcare needs related to medical examinations and treatment amounted to 10.5%, while in the EU this rate was 5%, in the same year [2].

As of 2005, in keeping with the Law on Health Care and the Law on Health Insurance, insured persons have the right to choose their physician at the levels of healthcare for adults, healthcare for preschool children and schoolchildren, healthcare for university students, healthcare for women, and dental healthcare [3,4]. These laws, amended and improved in 2019 [5,6], ensure continuity and comprehensiveness of healthcare provided to patients and insured persons by the chosen doctors, which is, in fact, the goal of quality primary healthcare [7,8]. When visiting the chosen doctor, the patient comes into contact with the healthcare system at the primary level, and, if this is the patient's first visit in the given calendar year, the patient is provided a complete physical examination, and he/she begins with preventive services and curative treatment, as well as with health education and counseling provided by his/her chosen doctor. The chosen doctor, who is familiar with the health status of his/her patient, further coordinates the health services required by his/her registered patient. With every subsequent visit, the chosen physician improves his/her knowledge regarding the patient, by gaining new information on the health status, lifestyle, and circumstances wherein the patient takes care of his/her health, which is far better than the previous practice, when the patient often encountered a different doctor with every new visit to the community healthcare center. The services provided by the chosen physician can be divided into two groups: 1) curative health services and 2) preventive health services.

As of the beginning of the third millennium, the reforms of the healthcare system of the Republic of Serbia have been implemented with loans from the World Bank [9]. Changes have also been made in the domain of the financing of healthcare service providers. Generally

monetarnog iznosa osnovice različitih profesija [10]. Reformom je predviđeno da se osnovica zarade izabranih lekara u domovima zdravlja koriguje koeficijentom, tako da izabrani lekari imaju fiksni deo osnovne zarade i manji, varijabilni deo osnovne zarade. Naime, 2012. godine, u saradnji Ministarstva zdravlja (MZ) i Republičkog fonda za zdravstveno osiguranje (RFZO), za obračun zarada izabranih lekara u primarnoj zdravstvenoj zaštiti doneta je „Uredba o korektivnom koeficijentu, najvišem procentualnom uvećanju osnovne plate, kriterijumima i merilima za deo plate koji se ostvaruje po osnovu radnog učinka, kao i načinu obračuna plate zaposlenih u zdravstvenim ustanovama", kojom je definisana kapitaciona formula [11]. Prema ovoj uredbi, definisan je varijabilni deo plate, koji zavisi isključivo od radnog učinka, a koji je nezavisan od dodataka na osnovnu platu, sa namerom da se ovaj varijabilni deo menja kako bi se unapredio učinak izabranih lekara. Učinak lekara obračunava se na osnovu kriterijuma i merila, koji su definisani sa ciljem da finansijski podstaknu izabrane lekare da imaju što više opredeljenih pacijenata, da smanje propisivanje recepata, povećaju efikasnost, odnosno broj poseta i, što je najvažnije, povećaju kvalitet zdravstvene zaštite, pre svega u pogledu povećanja obima sprovođenja preventivnih mera. Na ovaj način su lekari i medicinske sestre u domovima zdravlja postali prvi, a i dalje jedini zaposleni u javnom sektoru, kojima radni učinak direktno utiče na iznos plate. Do danas, urađeno je nekoliko izmena Uredbe o korektivnom koeficijentu, ali je suštinska izmena kriterijuma i merila kapitacione formule sprovedena tek 2019. godine, u okviru Drugog projekta razvoja zdravstva Srbije [12].

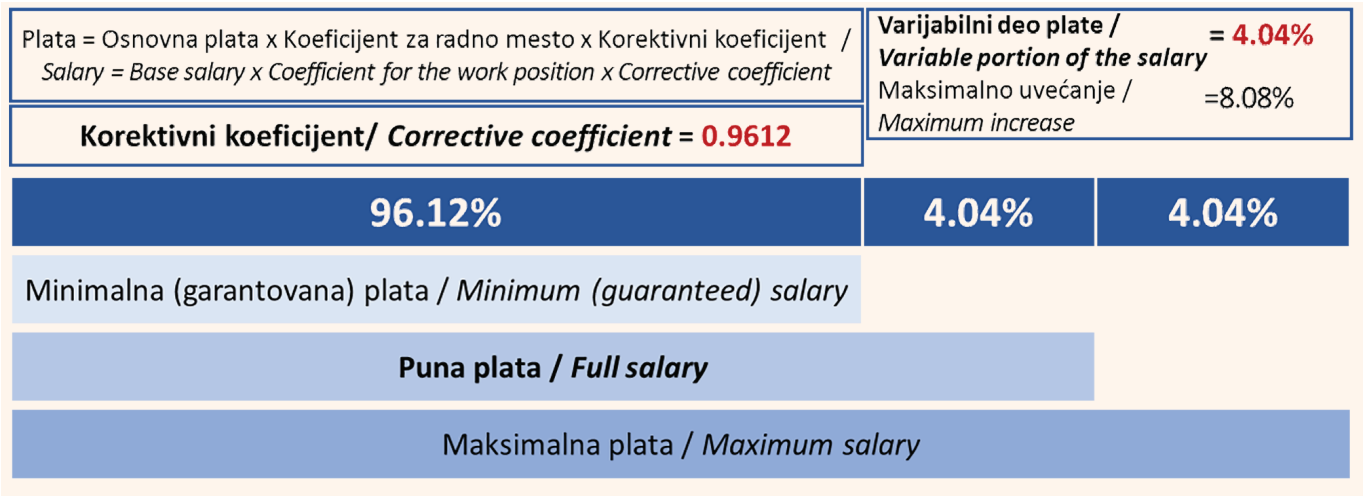
U ovom radu, rezultati istraživanja se odnose na period pre promene strukture kapitacone formule 2019. godine, a istraživanjem proveravamo da li je ovaj model plaćanja opravdao svoju ulogu u jačanju preventivnih zdravstvenih usluga, u periodu od 2013. do 2017. godine. U Republici Srbiji, pod preventivnim zdravstvenim uslugama podrazumevaju se preventivni pregledi po starosnim grupama, usluge vakcinacije i skrininga na bolesti kao što su dijabetes melitus, kardiovaskularna oboljenja, depresija, karcinom debelog creva, karcinom dojke i karcinom grlića materice, a čiji obim i sadržaj je propisan Pravilnikom [13]. Navedene zdravstvene usluge koriste se za izračunavanje učinka izabranih lekara u okviru modela plaćanja po kapitacionoj formuli, i zato su predmet posmatranja.

Struktura kapitacione formule u Republici Srbiji u periodu od 2012. do 2018. godine

Kapitaciona formula, kao metod za obračunavanje varijabilnog dela plate izabranih lekara, u zvaničnoj je primeni od 2013. godine, od stupanja na snagu Uredbe, koja propisuje da se osnovna plata izabranog lekara određuje

speaking, the salaries (wages) in the public sector are calculated on the basis of coefficients defined for the education level (level of qualifications) and the monetary value of the base for different professions [10]. The reform provides that the salary base of chosen doctors in community healthcare centers is corrected with a coefficient. Thus, the chosen physicians have a fixed portion of the base salary and a smaller, variable portion of their base salary. Namely, in 2012, through the collaboration of the Ministry of Health (MH) and the Republic Fund of Health Insurance (RFHI), for the purpose of calculating the salaries of chosen doctors in primary health care, the following decree, defining the capitation formula, was adopted: 'Decree on the Corrective Coefficient, the Highest Percentage Increase in the Base Salary, the Criteria and Weights for the Portion of the Salary that is Realized on the Basis of Performance, as Well as the Method of Calculation of the Salaries of Employees in Healthcare Institutions' [11]. According to this decree, the variable portion of the salary was defined as dependent solely on performance and independent of supplements to the base salary. The aim of introducing this variable portion of the salary was to improve the performance of chosen physicians. The performance of the physicians is calculated on the basis of criteria and weights defined with the aim of providing financial incentives for chosen doctors to have as many registered patients as possible, to reduce the number of prescriptions issued, to improve efficiency, i.e., the number of patient visits, and, most importantly, to improve the quality of healthcare, primarily with respect to the increase in the scope of the implementation of preventive measures. In this way, the doctors and nurses in community healthcare centers have become the first, and to this day the only employees in the public sector, whose performance directly affects the amount of their salary. To date, several amendments to the Decree on the corrective coefficient have been made, however, the essential change to the capitation formula criteria and weights was made only in 2019, within the Second Serbia Health Project [12].

In this paper, the research results refer to the period prior to the change in the structure of the capitation formula, in 2019, and the study aims to evaluate whether this payment model has proven its role in strengthening preventive healthcare services, in the period between 2013 and 2017. In the Republic of Serbia, preventive healthcare services include preventive examinations by age groups, vaccination services, and screening services related to diseases such as diabetes mellitus, cardiovascular diseases, depression, colon cancer, breast cancer, and cervical cancer. The scope and content of these services is defined by the Rulebook [13]. The above stated healthcare services are used to calculate the performance of the



Slika 1. Ilustracija zagarantovanog i varijabilnog dela plate izabranog lekara
Izvor: Drugi projekat razvoja zdravstva Srbije

Figure 1. Illustration of the guaranteed and variable portion of the salary of the chosen doctor
Source: Second Serbia Health Project

množenjem osnovice za obračun plate i korektivnog koeficijenta (Slika 1). Propisano je da korektivni koeficijent iznosi 0,9612, odnosno da varijabilni deo plate iznosi 4,04%, što znači da izabrani lekar može da ostvari maksimalno uvećanje osnovne plate od 8,08% [11].

U skladu sa Uredbom o korektivnom koeficijentu iz 2013. godine, izabranom lekaru koji je ostvario ukupnu kapitacionu ocenu nula (0) obračunava se samo zagarantovani deo plate (96,12%). Izabrani lekar sa ocenom pet (5), može da ostvari 100%, dok izabrani lekar sa ocenom deset (10) ostvaruje 104,4% zarade (Slika 1).

Na osnovu predefinisanih kriterijuma i merila kapitacione formule, svakom izabranom lekaru se na kvartalnom nivou određuje ukupna kapitaciona ocena. Ova ocena direktno utiče na varijabilni deo plate, odnosno na ukupnu zaradu lekara ali i medicinskih sestara, imajući u vidu da medicinska sestra dobija istu ocenu kao i lekar u čijem timu radi. Obračunavanje ocena sprovodi RFZO na osnovu podataka iz elektronske fakture i tabela sa ocenama, koje su javno dostupne na sajtu RFZO-a [14,15]. Elektronsku fakturu, o pruženim uslugama, medicinskom osoblju koje ih je pružilo, licima (osiguranicima) kojima je usluga pružena, kao i o utrošku lekova i medicinskih sredstava, dostavljaju zdravstvene ustanove na mesečnom nivou.

Osnovni kriterijumi kapitacione formule za vrednovanje rada izabranog lekara koji su važili u periodu od 2012. do 2018. su bili:

1. Registracija – broj pacijenata koji su se opredelili za izabranog lekara
2. Preventiva – broj preventivnih usluga koje je pružio izabrani lekar
3. Racionalnost – vrednost propisanih lekova na recept od strane izabranog lekara
4. Efikasnost – broj poseta koju je imao izabrani lekar

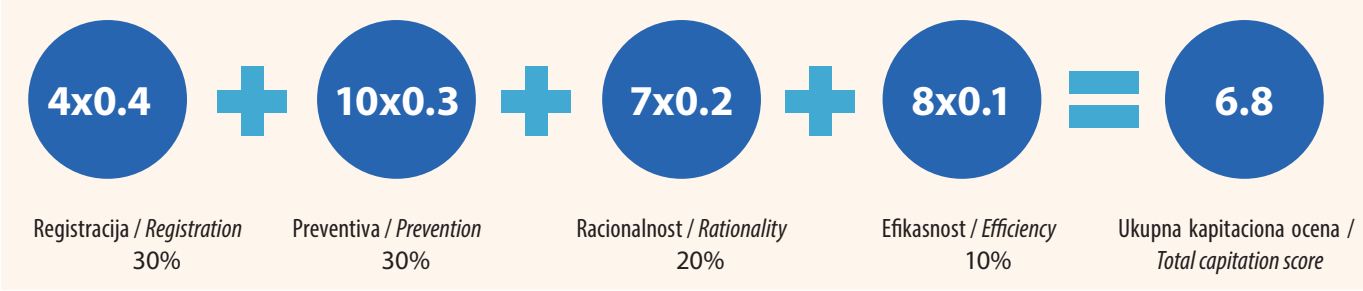
chosen physicians within the capitation formula payment model, which is why they are the subject of observation.

The structure of the capitation formula in the Republic of Serbia in the period between 2012 and 2018

The capitation formula, as a method of calculating the variable portion of the salary of chosen doctors has been in official use since 2013, from the moment that the Decree on the corrective coefficient came into force. The Decree stipulates that the base salary of the chosen doctor is determined by multiplying the base for calculating the salary with the corrective coefficient (Figure 1). It is prescribed that the corrective coefficient shall amount to 0.9612, i.e., that the variable portion of the salary shall amount to 4.04%, which means that the chosen physician can achieve a maximum increase in base salary of 8.08% [11].

In keeping with the Decree on the corrective coefficient from 2013, for a chosen physician who achieves a capitation score of zero (0), only the guaranteed portion of the salary (96.12%) is calculated. A chosen doctor who scores five (5) can achieve 100% of the salary, while a chosen physician scoring ten (10) achieves 104.4% of the salary (Figure 1).

According to predefined capitation formula criteria and weights, the capitation score is calculated for every chosen doctor, each quarter. This score directly affects the variable portion of the salary, i.e., the total salary of the doctor, but also of the nurses, as a nurse receives the same score as the doctor in whose team the nurse is working. The calculation of the scores is performed by the RFHI, on the basis of data from the electronic invoice and the tables with scores, which are freely available on the RFHI website [14,15]. The electronic invoice,



Slika 2. Ilustracija obračuna ukupne kapitacione ocene

Figure 2. Illustration of the calculation of the total capitation score

Za svaki od četiri kriterijuma, izabranom lekaru se, na osnovu učinka, dodeljuje ocena od nula (0) do deset (10). Za kriterijum „registracija" (40% ukupne kapitacione ocene), za kriterijum „preventiva" (30% ukupne kapitacione ocene), i za kriterijum „efikasnost" (10% ukupne kapitacione ocene), ocena se određuje u odnosu na prosečnu ocenu za pojedinačnu zdravstvenu ustanovu u odgovarajućoj oblasti rada. Za kriterijum „racionalnost" (20% ukupne kapitacione ocene), ocena se određuje u odnosu na prosečnu vrednost u Republici Srbiji, u odgovarajućoj oblasti rada (opšta medicina, pedijatrija, ginekologija i stomatologija). Ukupna kapitaciona ocena se dobija sabiranjem ocena za kriterijume, koje su prethodno ponderisane faktorima učešća u ukupnoj oceni, kao što je prikazano na Slici 2.

CILJ RADA

Cilj rada je analiza obima pruženih preventivnih zdravstvenih usluga, koje se koriste za procenu učinka i plaćanje izabranih lekara po kapitacionoj formuli, u ustanovama primarne zdravstvene zaštite na koje se primenjuje ovaj model plaćanja u Republici Srbiji, u periodu od 2013. do 2017. godine, imajući u vidu da je formalno uticaj na plate počeo od maja 2013. godine, a da podaci IJZS-a za 2018. godinu nisu javno dostupni.

MATERIJALI I METODE

Jedinice posmatranja

U istraživanju je posmatran rad izabranih lekara u tri službe ustanova primarne zdravstvene zaštite, u 166 ustanova primarne zdravstvene zaštite na koje se primenjuje model plaćanja po kapitacionoj formuli (158 domova zdravlja, tri zavoda za zdravstvenu zaštitu studenata i pet zavoda za zdravstvenu zaštitu radnika) u Srbiji: služba za zdravstvenu zaštitu dece i školske dece, služba za zdravstvenu zaštitu odraslih i služba za zdravstvenu zaštitu žena. U okviru pomenutih službi posmatrani su sledeći pokazatelji rada izabranih lekara, a koji su ujedno i deo kapitacione formule:

1) Služba za zdravstvenu zaštitu dece i školske dece

on services rendered, the medical staff who provided the services, the persons (ensured persons) who received the services, as well as on the consumption of drugs and medical supplies, is submitted to the RFHI by healthcare institutions, on a monthly level.

The basic capitation formula criteria for evaluating the work of the chosen doctors, applied in in the period between 2012 and 2018, were as follows:

1. Registration – number of patients who registered with the chosen doctor
2. Prevention – number of preventive services provided by the chosen doctor
3. Rationality – value of the medication prescribed by the doctor
4. Efficiency – number of patient visits to the doctor

For each of these four criteria, the chosen doctor is, based on performance, awarded a score between zero (0) and ten (10). For the criterion 'registration' (40% of the total capitation score), for the criterion 'prevention' (30% of the total capitation score), and for the criterion 'efficiency' (10% of the total capitation score), the score is calculated in relation to the average score for an individual healthcare institution in the related medical area. For the criterion 'rationality' (20% of the total capitation score), the score is calculated in relation to the average value in the Republic of Serbia, in the related medical area (general medicine, pediatrics, gynecology, and dental medicine). The total capitation score is calculated by adding up the scores for the criteria, which are previously weighted by factors of participation in the total score, as shown in Figure 2.

AIM

The aim of this paper is to analyze the scope of preventive health services provided, which is used to evaluate the performance and to pay selected doctors according to the capitation formula, in primary health care institutions where this payment model is applied, in the Republic of Serbia, in the period between 2013 and 2017, at the same time bearing in mind that, formally, the impact of the capitation formula on salaries started in May 2013, as well as that IPHS data from year 2018 are not publicly available.

- Obuhvat odojčadi ultrazvučnim pregledima radi ranog otkrivanja displazije kukova
- Obuhvat predškolske dece (druga godina života) preventivnim pregledima
- Obuhvat predškolske dece (četvrta godina života) preventivnim pregledima
- Obuhvat predškolske dece (šesta/sedma godina života) preventivnim pregledima
- Obuhvat školske dece (osma, deseta, dvanaesta i četrnaesta godina života) preventivnim pregledima
- Obuhvat školske dece (šesnaesta i osamnaesta godina života) preventivnim pregledima
- Obuhvat vakcinacijom protiv tuberkuloze (BSŽ)
- Obuhvat vakcinacijom protiv difterije, tetanusa i velikog kašlja (DTP)
- Obuhvat vakcinacijom protiv dečije paralize (OPV)
- Obuhvat vakcinacijom protiv hepatitisa B (HB)
- Obuhvat vakcinacijom protiv oboljenja koja izaziva hemofilus influence tipa B
- Obuhvat vakcinacijom protiv malih boginja, zauški i crvenke (MMR)

2) Služba za zdravstvenu zaštitu odraslih
- Obuhvat odraslog stanovništva (od 19. do 34. godine života) preventivnim pregledima
- Obuhvat odraslog stanovništva (preko 35. godine života) preventivnim pregledima
- Obuhvat odraslog stanovništva (od 18. godine života) skriningom za rano otkrivanje depresije
- Obuhvat odraslog stanovništva (od 35. godine života) skriningom za rano otkrivanje dijabetesa
- Obuhvat odraslog stanovništva (žene od 45. do 69. i muškarci od 36. do 69. godine života) skriningom za rano otkrivanje kardiovaskularnih bolesti
- Obuhvat odraslog stanovništva (od 50. do 69. godine života) skriningom za rano otkrivanje karcinoma debelog creva

3) Služba za zdravstvenu zaštitu žena
- Obuhvat žena (15+ godina života) preventivnim ginekološkim pregledima
- Obuhvat žena (od 25. do 69. godine života) skriningom za rano otkrivanje karcinoma grlića materice
- Obuhvat žena (od 49. do 69. godine života) skriningom za rano otkrivanje karcinoma dojke
- Obuhvat žena (od 15. do 49. godine života) preventivnim pregledima u vezi sa planiranjem porodice
- Obuhvat trudnica preventivnim pregledima u prvom trimestru

Kao parametar za ocenu kvaliteta rada izabranih lekara u domovima zdravlja, u odnosu na pokazatelje definisane u ovoj analizi, korišćeni su dokumenti RFZO-a, i to „Pravilnik o sadržaju i obimu prava na zdravstvenu zaštitu iz obaveznog zdravstvenog osiguranja i o participaciji za 2017. godinu", jer on propisuje

MATERIALS AND METHODS

Analyzed units

The study investigated the work of chosen physicians employed in three different primary healthcare departments, in 166 primary health care institutions to which the payment model based on the capitation formula is applied (158 primary healthcare centers, three institutes for the health care of university students, and five institutes for the health care of workers) in Serbia, namely: the department of preschool children and schoolchildren healthcare, department of adult healthcare, and the department of women's healthcare. Within the above-mentioned departments, the following indicators of the chosen doctors' work, which are also a part of the capitation formula, were observed:

1) Department of preschool children and schoolchildren healthcare
- Coverage of infants with ultrasound examinations for early detection of hip dysplasia
- Coverage of preschool children (at the age of two years) with preventive examinations
- Coverage of preschool children (at the age of four years) with preventive examinations
- Coverage of preschool children (at the ages of six and seven years) with preventive examinations
- Coverage of schoolchildren (at the ages of eight, ten, twelve, and fourteen years) with preventive examinations
- Coverage of schoolchildren (at the ages of sixteen and eighteen years) with preventive examinations
- Coverage with vaccination against tuberculosis (BCG)
- Coverage with vaccination against diphtheria, tetanus, and pertussis (DTP)
- Coverage with vaccination against polio (OPV)
- Coverage with vaccination against hepatitis B (HB)
- Coverage with vaccination against diseases caused by Haemophilus influenzae type b
- Coverage with vaccination against measles, mumps and rubella (MMR)

2) Department of adult healthcare
- Coverage of the adult population (between the ages of 19 and 34 years) with preventive examinations
- Coverage of the adult population (above the age of 35 years) with preventive examinations
- Coverage of the adult population (as of the age of 18 years) with screening for the early detection of depression
- Coverage of the adult population (above the age of 35 years) with screening for the early detection of diabetes
- Coverage of the adult population (women between the ages of 45 and 69 years and men between the ages of 36 and 69 years) with screening for the early detection of cardiovascular diseases

obim ostvarivanja prava osiguranika na preventivne usluge (određuje broj usluga koje osiguranik može da ostvari u određenom vremenskom periodu), kao i dokument grupe domaćih stručnjaka „Stručno metodološko uputstvo za sprovođenje Uredbe o nacionalnom programu zdravstvene zaštite žena, dece i omladine", u kome se, na osnovu Vodiča dobre kliničke prakse, daju preporuke o broju usluga zdravstvene zaštite žena, dece i omladine na godišnjem nivou [13,16].

Izvor podataka za istraživanje su bile publikacije Instituta za javno zdravlje Republike Srbije „Dr Milan Jovanović – Batut" (IJZS „Batut") i to „Analiza planiranog i ostvarenog obima i sadržaja prava osiguranih lica na primarnu zdravstvenu zaštitu", za period od 2013. do 2017. godine [17-21].

Za obradu podataka korišćene su deskriptivne i analitičke statističke metode. Podaci su prikazani u procentima, a za analizu promene parametara preventivnih zdravstvenih usluga u petogodišnjem periodu, korišćena je analiza trenda. Statistička značajnost je prihvaćena na nivou $p < 0,05$. Za statističku obradu podataka i grafičko prikazivanje su korišćeni *SPSS 21* (*IBM*) i *Excel* (*MS Office*). Ispitivan je trend obuhvata pomenutim uslugama u periodu od 2013. do 2017. godine, kao i porast obima preventivnih usluga, baznim i lančanim indeksima.

REZULTATI

Obim pruženih odabranih preventivnih zdravstvenih usluga, u Republici Srbiji, u periodu od 2013. do 2017. godine, menjao se na sledeći način:

- U odnosu na 2013. godinu, obuhvat odojčadi ultrazvučnim pregledom kukova je, u 2017. godini, pao za 20% (Grafikon 1).
- Izuzev populacione grupe predškolske dece u šestoj/sedmoj godini života, gde postoji porast obuhvata od 8,89%, u 2017. godini, u odnosu na baznu 2013. godinu, kod dece predškolskog uzrasta od dve i četiri godine, zabeleženo je smanjenje obuhvata uslugom preventivnog pregleda za 2,5% odnosno 5,7% (Grafikon 2).
- Pad od 8,6% u obuhvatu preventivnim pregledom prisutan je i kod školske dece (osma, deseta, dvanaesta i četrnaesta godina života), u 2017. godini, dok se u grupi školske dece uzrasta šesnaest i osamnaest godina, beleži povećanje obuhvata od 16,7%, u 2015. i 2017. godini (Grafikon 3).
- Iako bazni indeks u 2017. godini iznosi nula, u odnosu na 2013. godinu, lančani indeksi pokazuju smanjenje obuhvata BSŽ vakcinom, iz godine u godinu. Pad u obuhvatu beleže i sve druge vakcinacije koje se ispituju u ovom radu, izuzev vakcinacije protiv hemofilus influence tipa b, koja beleži malo povećanje od

- Coverage of the adult population (between the ages of 50 and 69 years) with screening for the early detection of colon cancer

3) Department of women's healthcare
   - Coverage of women (15+ years) with preventive gynecological examinations
   - Coverage of women (between the ages of 25 and 69 years) with screening for early cervical carcinoma detection
   - Coverage of women (between the ages of 49 and 69 years) with screening for early breast cancer detection
   - Coverage of women (between the ages of 15 and 49 years) with preventive family planning examinations
   - Coverage of expectant mothers with preventive examinations in the first trimester

As a parameter for the assessment of the quality of the work of chosen doctors in community healthcare centers, in relation to indicators defined in this analysis, RFHI documents were used, namely the 'Rulebook on the Content and Scope of the Rights to Healthcare Pertaining to Compulsory Health Insurance and on Patient Co-pay for the Year 2017', as it prescribes the scope of the rights exercised by insured persons regarding preventive services (it defines the number of services that the insured person is entitled to within a certain period of time), as well as the document written by a group of Serbian experts, 'Expert Methodological Instructions for Implementing the Decree on the National Health Care Program for Women, Children and Youth', wherein, based on the National Good Clinical Practice Guideline, recommendations are made regarding the annual number of healthcare services provided to women, children and youth [13,16].

The source of the data for the present study were publications issued by the Institute of Public Health of Serbia 'Dr Milan Jovanović – Batut' (IPHS 'Batut'), namely the 'Analysis of the Planned and Realized Scope and Content of the Rights of Insured Persons to Primary Healthcare', for the period between 2013 and 2017 [17 – 21].

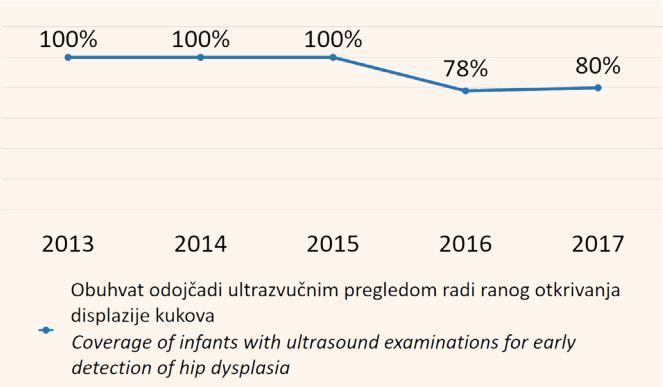
Descriptive and analytical statistical methods were used for data processing. The data are presented in percentages, while trend analysis was used for analyzing the change of parameters related to preventive healthcare services in the five-year period. The threshold of statistical significance was $p < 0.05$. SPSS 21 (IBM) and Excel (MS Office) were used for statistical data processing and graphical representation. The trend of coverage of the above-mentioned services, in the period between 2013 and 2017 was examined, as well as the increase in the volume of preventive services, with fixed-base and chain indices.

0,53%, u 2017. u odnosu na 2013. godinu. Najveći pad u odnosu na 2013. godinu beleži obuhvat MMR vakcinom (-12,53%), u 2016. godini, ali je slika nešto bolja, za 5,2%, u 2017. godini (Grafikoni 4 i 5).

- Preventivni pregledi odraslog stanovništva, u 2017. godini, beleže pad za 16,7%, odnosno čak 50% u populacionoj grupi odraslih preko 35 godina, u odnosu na 2013. godinu (Grafikon 6).
- Obuhvati ciljnih populacionih grupa skrininzima beleže značajna povećanja, kada se posmatraju bazni indeksi. Naime, obuhvat skriningom za rano otkrivanje dijabetesa, u odnosu na 2013. godinu, beleži porast od 200%, u 2017. godini, dok u istoj godini, obuhvat skriningom za rano otkrivanje KVS oboljenja beleži porast od 50%, a obuhvat skriningom za depresiju porast od 100%. Izuzetak je obuhvat skriningom za rano otkrivanje karcinoma debelog creva, koji je opao za 28,6% (Grafikon 7).
- Obuhvati žena preventivnim ginekološkim i preventivnim pregledima u vezi sa planiranjem porodice su u padu. Beleži se pad od 10%, odnosno 33,3%, u 2017. godini (Grafikon 8).
- Skrining za rano otkrivanje karcinoma dojke ima nepromenjen obuhvat u 2017. godini, u odnosu na 2013. godinu, dok skrining za rano otkrivanje karcinoma grlića materice beleži pad od 11% (Grafikon 9).
- Obuhvat trudnica preventivnim pregledom u prvom trimestru, u 2017. godini, beleži porast od svega 3,3%, u odnosu na 2013. godinu (Grafikon 10).

Obuhvat odojčadi ultrazvučnim pregledima radi ranog otkrivanja displazije kukova

Analizom trenda o obuhvatu novorođenčadi ultrazvučnim pregledima radi ranog otkrivanja displazije kukova, utvrđeno je da opada, od 2015. godine, ali pad nije statistički značajan ($y = -0,062x + 1,102$; $p = 0.068$).



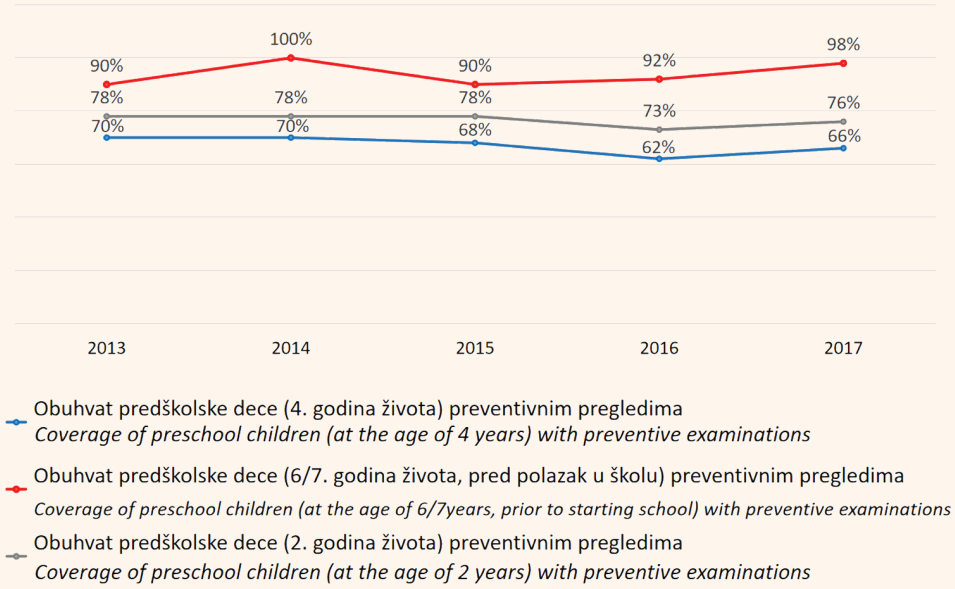
Grafikon 1. Obuhvat odojčadi ultrazvučnim pregledom radi ranog otkrivanja displazije kukova

Graph 1. Coverage of infants with ultrasound examinations for early detection of hip dysplasia

RESULTS

The scope of provided selected preventive healthcare services, in the Republic of Serbia, in the period between 2013 and 2107, changed in the following manner:

- As compared to the year 2013, the coverage of infants with ultrasound examinations of the hips dropped by 20%, in 2017 (Graph 1).
- Except for the population group of preschool children aged six/seven years, where there was a rise in coverage of 8.89%, in year 2017, as compared to the base year 2013, in preschool children aged two and four years, a drop in the coverage with preventive examinations of 2.5% and 5.7%, respectively, was registered (Graph 2).
- An 8.6% drop in the coverage with preventive examinations was registered in schoolchildren as well (aged eight, ten, twelve, and fourteen years), in 2017, while in the group of schoolchildren aged sixteen and eighteen an increase of 16.7% in the coverage was registered, in years 2015 and 2017 (Graph 3).
- Although the fixed-base index was zero, in 2017, as compared to 2013, the chain index showed a decrease in coverage with the BCG vaccine, with each following year. A drop in coverage was recorded for all other vaccines analyzed in this study, with the exception of the vaccination against Haemophilus influenzae type b, for which a slight increase was recorded, namely 0.53%, in 2017, as compared to 2013. The greatest drop, when compared to 2013, was registered for the coverage with the MMR vaccine (-12.53%), in 2016, however, the situation somewhat improved in 2017, by 5.2% (Graphs 4 and 5).
- A drop of 16.7% was registered in the coverage with preventive examinations of adults, in 2017, with this drop being as much as 50% in the adult population group aged 35 years and above, as compared to 2013 (Graph 6).
- The coverage of target population groups with screening examinations registered a significant increase, when base indices are observed. Namely, the screening coverage for early detection of diabetes increased by 200% in 2017, as compared to 2013. Screening coverage for the early detection of cardiovascular diseases increased by 50%, also in 2017, while the coverage of screening for the early detection of depression increased by 100%, in the same year. The exception was coverage with screening examinations for early detection of colon cancer, which dropped by 28.6% (Graph 7).
- The coverage of women with preventive gynecological examinations and preventive family planning examinations dropped. A drop of 10%, i.e., 33.3%, respectively, was registered, in 2017 (Graph 8).



Grafikon 2. Obuhvat predškolske dece (druga, četvrta, i šesta/sedma godina života) preventivnim pregledima

Graph 2. Coverage of preschool children (at the age of two, four, six/seven years) with preventive examinations

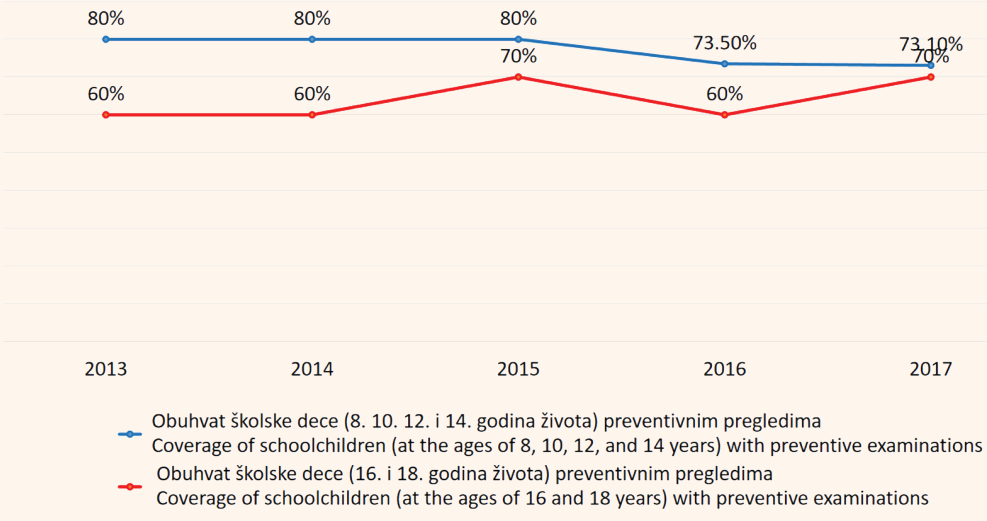
Obuhvat predškolske dece (druga, četvrta i šesta/sedma godina života) preventivnim pregledima

U pogledu obuhvata predškolske dece (druga godina života) preventivnim pregledima, rezultati pokazuju da nema statistički značajne promene, od 2013. do 2017. godine ($y = -0{,}009x + 0{,}793$; $p = 0{,}236$). Nema statistički značajne promene obuhvata predškolske dece (četvrta godina života) preventivnim pregledima, od 2013. do 2017. godine ($y = -0{,}016x + 0{,}72$; $p = 0{,}139$). Isti rezultat je dobijen i analizom trenda obuhvata predškolske dece (šesta/sedma godina života, pred polazak u školu) preventivnim pregledima, od 2013. do 2017. godine ($y = 0{,}008x + 0{,}916$; $p = 0{,}661$).

- The coverage with screening examinations for the early detection of breast cancer was unchanged in 2017, as compared to 2013, while the coverage with screening for the early detection of cervical cancer dropped by 11% (Graph 9).
- The coverage of expectant mothers with preventive examinations in the first trimester registered an increase of only 3.3%, in 2017, as compared to 2013 (Graph 10).

Coverage of infants with ultrasound examinations for early detection of hip dysplasia

Trend analysis of the coverage of infants with ultrasound examinations for early detection of hip dysplasia



Grafikon 3. Obuhvat školske dece u osmoj, desetoj, dvanaestoj, četrnaestoj godini i u šesnaestoj i osamnaestoj godini života preventivnim pregledima

Graph 3. Coverage of schoolchildren (at the ages of eight, ten, twelve, fourteen, sixteen, and eighteen years) with preventive examinations

Obuhvat školske dece (osma, deseta, dvanaesta, četrnaesta, šesnaesta i osamnaesta godina života) preventivnim pregledima

Za razliku od mlađe dece, kod dece školskog uzrasta (osma, deseta, dvanaesta i četrnaesta godina života) postoji statistički značajan trend pada obuhvata, od 2015. do 2017. godine (y = - 0,0203x + 0,8341; p = 0,050). Rezultati analize pokazuju da nema statistički značajne promene u posmatranom periodu (y = 0,02x + 0,58; p = 0,308) za stariju decu školskog uzrasta (šesnaesta i osamnaesta godina života).

Obuhvat vakcinacijom protiv tuberkuloze, difterije, tetanusa, velikog kašlja i dečije paralize

Analizom trenda vakcinacije protiv tuberkuloze (BSŽ), utvrđeno je da nema statistički značajne promene trenda vakcinacije, od 2013. do 2017. godine (y = 0,0003x + 0,9763; p = 0,843). Za vakcinaciju protiv difterije, tetanusa i velikog kašlja (DTP) takođe je utvrđeno da nema statistički značajne promene trenda vakcinacije, od 2013. do 2017. godine (y = - 0,0052x + 0,9664; p = 0,222), kao ni za vakcinaciju protiv dečije paralize (OPV), (y = 0,0007x + 0,9455; p = 0.683).

Obuhvat vakcinacijom protiv hepatitisa B, hemofilusa influence tipa b i protiv malih boginja, zauški i crvenke

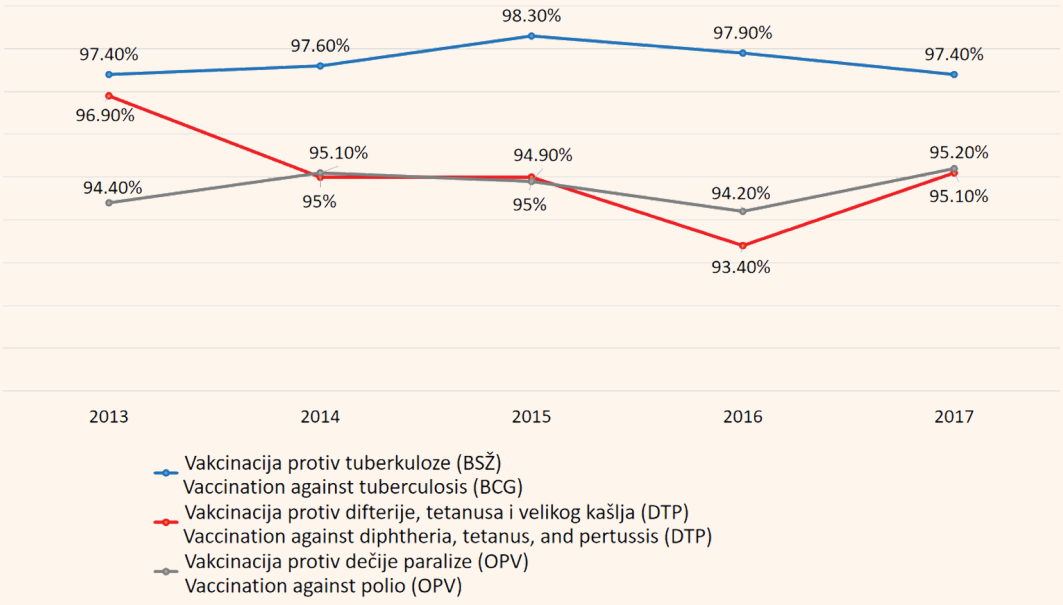
Analizirajući trendove vakcinacije protiv hepatitisa B i vakcinacije protiv hemofilusa influence tipa b, utvrđeno je da nema statistički značajne promene trenda za pomenute vakcinacije, od 2013. do 2017. godine (vakcinacija protiv hepatitisa B: y = - 0,0054x + 0,9396; shows a decrease, as of 2015, however, this drop is not statistically significant (y = - 0.062x + 1.102; p = 0.068).

Coverage of preschool children (at the age of two, four, six/seven years) with preventive examinations

With regards to the coverage of preschool children (at the age of two years) with preventive examinations, the results show that there was no statistically significant change, between 2013 and 2017 (y = - 0.009x + 0.793; p = 0.236). There was no statistically significant change in the coverage of preschool children (at the age of four years) with preventive examinations, between 2013 and 2017 (y = - 0.016x + 0.72; p = 0.139). The same result was obtained when trend analysis was applied to the coverage of preschool children (at the age of six/seven years, prior to starting school) with preventive examinations, between 2013 and 2017 (y = 0.008x + 0.916; p = 0.661).

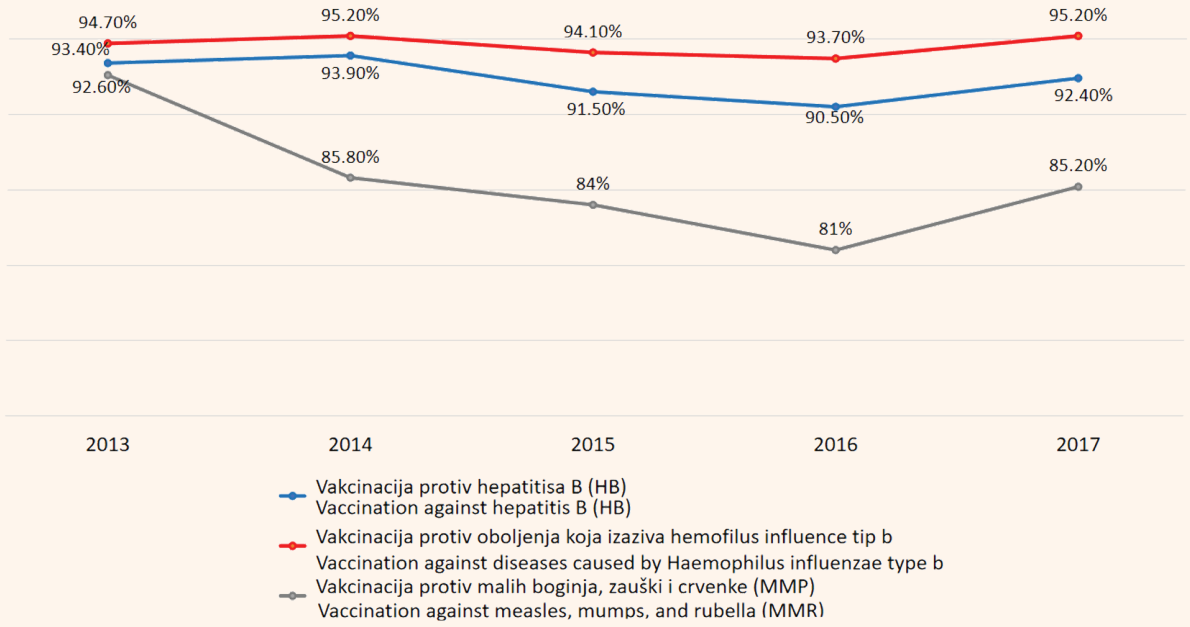
Coverage of schoolchildren (at the ages of eight, ten, twelve, fourteen, sixteen, and eighteen years) with preventive examinations

As opposed to the younger population, in schoolchildren (at the ages of eight, ten, twelve, and fourteen years), a statistically significant decreasing trend in coverage was observed, between 2015 and 2017 (y = - 0.0203x + 0.8341; p = 0.050). Analysis of the results show that there was no statistically significant change in the observed period (y = 0.02x + 0.58; p = 0.308) when it comes to older school children (at the age of sixteen and eighteen years).



Grafikon 4. Obuhvat vakcinacijom protiv tuberkuloze, difterije, tetanusa, velikog kašlja i dečije paralize

Graph 4. Coverage with vaccination against tuberculosis, diphtheria, tetanus, pertussis, and polio



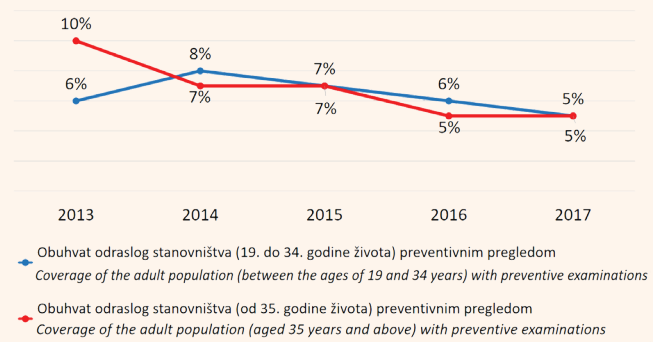
Grafikon 5. Obuhvat vakcinacijom protiv hepatitisa B, hemofilusa influence tipa b i protiv malih boginja, zauški i crvenke

Graph 5. Coverage with vaccination against hepatitis B, Haemophilus influenzae type b, and against measles, mumps and rubella

$p = 0{,}267$); (vakcinacija protiv hemofilusa influence tipa b: $y = -0{,}0005x + 0{,}9473$; $p = 0{,}850$). Kada se sagledaju rezultati analize trenda vakcinacije protiv malih boginja, zauški i crvenke, zaključak je da nema statistički značajne promene trenda, od 2013. do 2017. godine ($y = -0{,}0196x + 0{,}916$; $p = 0{,}165$).

Obuhvat odraslog stanovništva preventivnim pregledima

Posmatrajući obuhvate odraslog stanovništva uslugama preventivnih pregleda, zaključeno je da kod populacije odraslog stanovništva, između 19. i 34. godine života, nema statistički značajne promene trenda obuhvata, od 2013. do 2017. godine ($y = -0{,}004x + 0{,}076$;



Grafikon 6. Obuhvat odraslog stanovništva od 19. do 34. godine života i od 35. godine života preventivnim pregledima

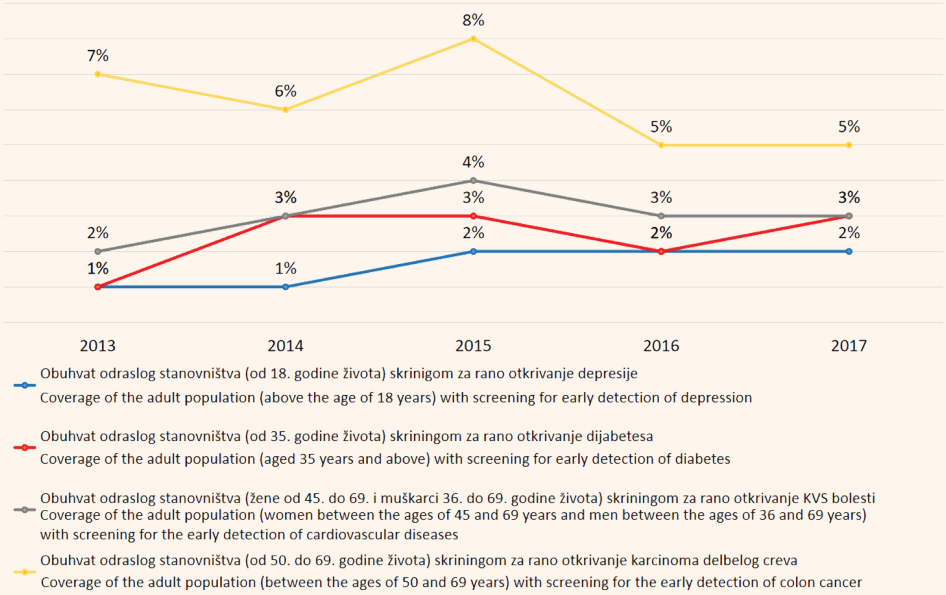
Graph 6. Coverage of the adult population (between the ages of 19 and 34 years and aged 35 years and above) with preventive examinations

Coverage with vaccination against tuberculosis, diphtheria, tetanus, pertussis, and polio

Trend analysis of the coverage with vaccination against tuberculosis (BCG), demonstrated that there was no statistically significant change in the vaccination trend, between 2013 and 2017 ($y = 0.0003x + 0.9763$; $p = 0.843$). It was also determined that, for vaccination against diphtheria, tetanus, and pertussis (DTP), there was no statistically significant change in the vaccination trend, between 2013 and 2017 ($y = -0.0052x + 0.9664$; $p = 0.222$), as was the case with the vaccination against polio (OPV), ($y = 0.0007x + 0.9455$; $p = 0.683$).

Coverage with vaccination against hepatitis B, Haemophilus influenzae type b, and against measles, mumps and rubella

Trend analysis of vaccination against hepatitis B and vaccination against Haemophilus influenzae type b, showed that there was no statistically significant change in the trend for the above-mentioned vaccinations, between 2013 and 2017 (vaccination against hepatitis B: $y = -0.0054x + 0.9396$; $p = 0.267$); (vaccination against Haemophilus influenzae type b: $y = -0.0005x + 0.9473$; $p = 0.850$). The examination of trend analysis results related to the vaccination against measles, mumps, and rubella, leads to the conclusion that there was no statistically significant change in the trend of vaccination, between 2013 and 2017 ($y = -0.0196x + 0.916$; $p = 0.165$).



Grafikon 7. Obuhvat odraslog stanovništva skrininzima za rano otkrivanje depresije, dijabetesa, kardiovaskularnih bolesti i karcionoma debelog creva

Graph 7. Coverage of the adult population with screening examinations for the early detection of depression, diabetes, cardiovascular diseases, and colon cancer

p = 0,332), dok kod odraslog stanovništva starijeg od 35 godina postoji statistički značajan pad obuhvata preventivnim pregledima, od 2013. do 2017. godine (y = - 0,012x + 0,104; p = 0,024).

Obuhvat odraslog stanovništva skrining pregledima

Analizom trenda obuhvata odraslog stanovništva skrining pregledima pokazano je da nema statistički značajne promene trenda obuhvata ni kod jednog skrining programa u posmatranom periodu:

- Za obuhvat stanovništva starijeg od 18 godina skriningom za rano otkrivanje depresije, utvrđeno je da postoji promena koja je blizu konvencionalnog nivoa statističke značajnosti (y = 0,003x + 0,007; p = 0,058).
- Za obuhvat stanovništva starijeg od 35 godina skriningom za rano otkrivanje dijabetesa, utvrđeno je da nema statistički značajne promene trenda, od 2013. do 2017. godine (y = 0,003x + 0,015; p = 0,358).
- Za obuhvat odraslog stanovništva (žene od 45. do 69. i muškarci od 36. do 69. godine života) skriningom za rano otkrivanje kardiovaskularnih bolesti, utvrđeno je da nema statistički značajne promene trenda, od 2013. do 2017. godine (y = 0,002x + 0,024; p = 0,450).
- Za obuhvat odraslog stanovništva (od 50. do 69. godine života) skriningom za rano otkrivanje karcionoma debelog creva, utvrđeno je da nema statistički značajne promene trenda, od 2013. do 2017. godine (y = - 0,005x + 0,077; p = 0,278).

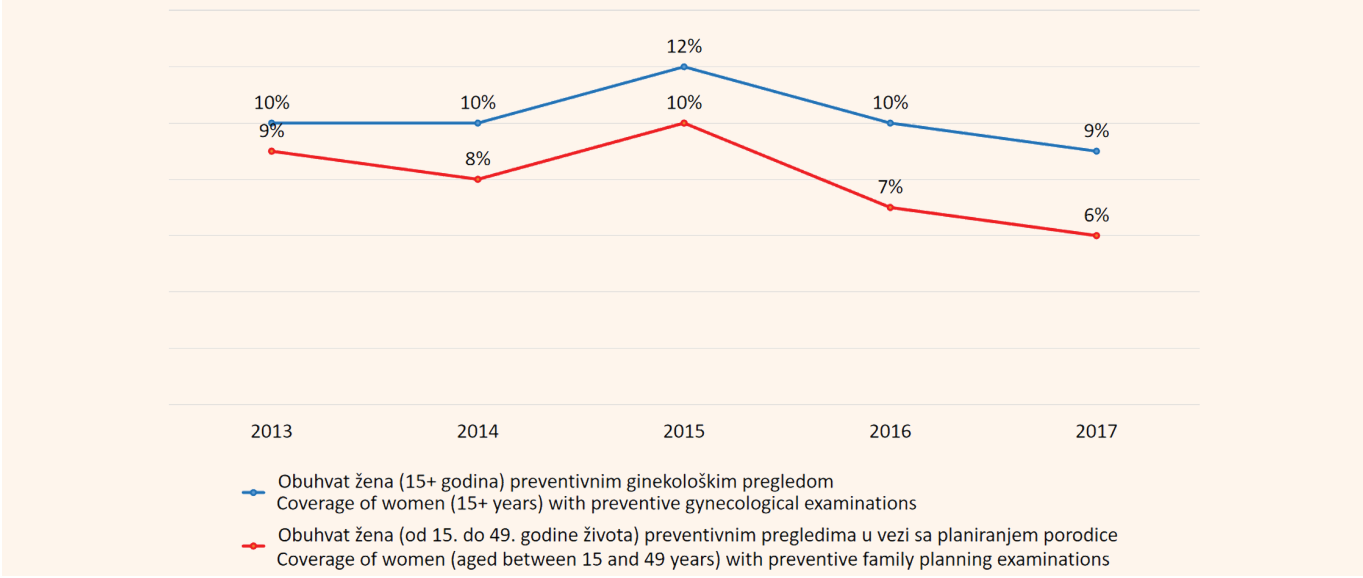
Coverage of the adult population with preventive examinations

When coverage of the adult population with preventive examinations is observed, the conclusion is that, in the population aged between 19 and 34 years, there was no statistically significant change in the coverage trend, between 2013 and 2017 (y = - 0.004x + 0.076; p = 0.332), while, in the adult population above the age of 35 years, there was a statistically significant decrease in coverage with preventive examinations, between 2013 and 2017 (y = - 0.012x + 0.104; p = 0.024).

Coverage of the adult population with screening examinations

Trend analysis of the coverage of the adult population with screening examinations shows that there was no statistically significant change in the trend of coverage with any of the screening programs, in the observed period, specifically:

- For the coverage of the adult population above the age of 18 years with screening for early detection of depression, it was found that there was a change which was near the conventional threshold of statistical significance (y = 0.003x + 0.007; p = 0.058).
- For the coverage of the adult population aged 35 years and above with screening for early detection of diabetes, no statistically significant change in the trend was observed, between 2013 and 2017 (y = 0.003x + 0.015; p = 0.358).
- For the coverage of the adult population (women between the ages of 45 and 69 years and men between the ages of 36 and 69 years) with screening

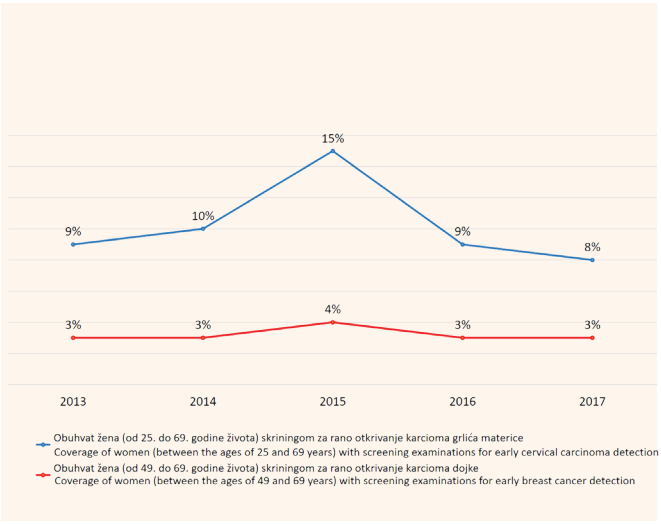


Grafikon 8. Obuhvat žena (od 15. godine života) preventivnim ginekološkim pregledima i obuhvat žena (od 15. do 49. godine života) preventivnim pregledima u vezi sa planiranjem porodice

Graph 8. Coverage of women (aged 15 years and above) with preventive gynecological examinations and the coverage of women (aged between 15 and 49 years) with preventive family planning examinations

Obuhvat žena preventivnim ginekološkim pregledima i preventivnim pregledima u vezi sa planiranjem porodice

U posmatranom periodu, od 2013. do 2017. godine, nije zabeležena statistički značajna promena trenda obuhvata žena (od 15. godine života) preventivnim ginekološkim pregledima ($y = -0{,}002x + 0{,}108$; $p = 0{,}638$). Analizom trenda obuhvata žena preventivnim pregledima u vezi sa planiranjem porodice, utvrđeno je da nema statistički značajne promene, od 2013. do 2017. godine ($y = -0{,}007x + 0{,}101$; $p = 0{,}188$).



Grafikon 9. Obuhvat žena skrininzima za rano otkrivanje karcinoma grlića materice i karcinoma dojke

Graph 9. Coverage of women with screening examinations for early cervical carcinoma detection and for early breast cancer detection

for the early detection of cardiovascular diseases, no statistically significant change in the trend was observed, between 2013 and 2017 ($y = 0.002x + 0.024$; $p = 0.450$).

- For the coverage of the adult population (between the ages of 50 and 69 years) with screening for the early detection of colon cancer, no statistically significant change in the trend was observed, between 2013 and 2017 ($y = -0.005x + 0.077$; $p = 0.278$).

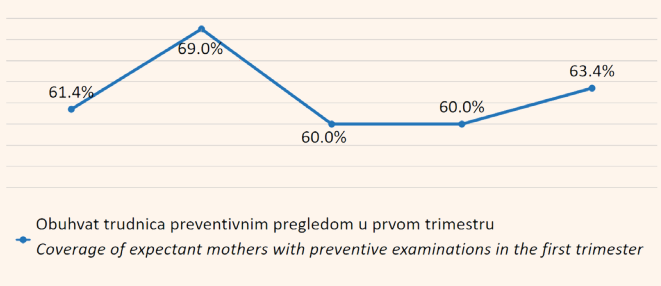
Coverage of women with preventive gynecological examinations and with preventive family planning examinations

In the observed period, between 2013 and 2017, no statistically significant change in the trend of the coverage of women (15+ years) with preventive gynecological examinations was observed ($y = -0.002x + 0.108$; $p = 0.638$). The trend analysis of the coverage of women with preventive family planning examinations showed no statistically significant change, between 2013 and 2017 ($y = -0.007x + 0.101$; $p = 0.188$).

Coverage of women with screening examinations for early cervical carcinoma detection and for early breast cancer detection

The coverage of the target population of women with screening programs for early cervical carcinoma detection and for early breast cancer detection showed no statistically significant change in the trend, between 2013 and 2017, specifically:

- Screening for early cervical carcinoma detection ($y = -0.003x + 0.111$; $p = 0.783$)



Grafikon 10. Obuhvat trudnica preventivnim pregledima u prvom trimestru

Graph 9. Coverage of expectant mothers with preventive examinations in the first trimester

Obuhvat žena skrining pregledima za rano otkrivanje karcinoma grlića materice i karcinoma dojke

Obuhvati ciljnih populacija žena skrining programima za rano otkrivanje karcinoma dojke i karcinoma grlića materice ne beleže statistički značajnu promenu trenda, od 2013. do 2017. godine:

- Skrining za rano otkrivanje karcinoma grlića materice (y = -0,003x + 0,111; p = 0,783)
- Skrining za rano otkrivanje karcinoma dojke (y = 0,032; p = 1,000).

Obuhvat trudnica preventivnim pregledima u prvom trimestru

Nije zabeležena statistički značajna promena trenda obuhvata trudnica preventivnim pregledima u prvom trimestru, od 2013. do 2017. godine (y = - 0,005x + 0,6426; p = 0,734).

DISKUSIJA

Istraživanje je pokazalo stabilan trend obuhvata ciljnih populacija preventivnim zdravstvenim uslugama, ali su vrednosti ispod preporučenih. Prema podacima IJZS-a, u 2017. godini, beleži se obuhvat 80% odojčadi preventivnim ultrazvučnim pregledom kukova. Međutim, već pominjani Pravilnik o sadržaju i obimu prava, kao i Stručno metodološko uputstvo, propisuju da je optimalan obuhvat za ovu uslugu 100%, imajući u vidu njen značaj za dalji kvalitet života dece [13,16]. Isto tako, preporučene vrednosti obuhvata dece preventivnim pregledima je najmanje 95%, dok su postignuti rezultati ispod ove vrednosti. Izdvaja se samo obuhvat predškolske dece (šesta/sedma godina života, pred polazak u školu) preventivnim pregledima, čija je vrednost obuhvata u posmatranom periodu blizu preporučene. Kako je izveštaj lekara o preventivnom pregledu deteta deo obavezne dokumentacije za upis u osnovnu školu, očekivano je da ova usluga i bude široko rasprostranjena u dečijoj populaciji. Deca školskog i srednjoškolskog uzrasta imala su obuhvate

- Screening for early breast cancer detection (y = 0.032; p = 1.000).

Coverage of expectant mothers with preventive examinations in the first trimester

No statistically significant change in the trend of the coverage of expectant mothers with preventive examinations in the first trimester was registered, between 2013 and 2017 (y = - 0.005x + 0.6426; p = 0.734).

DISCUSSION

This study has shown a stable trend of the coverage of target populations with preventive healthcare services. However, the values in the observed period were below the ones recommended. According to IPHS data, in 2017, the coverage of infants with preventive ultrasound hip examinations was 80%. However, the aforementioned Rulebook on the Content and Scope of the Rights to Healthcare as well as the Professional Methodology Instructions, prescribe that the optimum coverage for this service is 100%, bearing in mind its significance for the future quality of life of the children [13,16]. Also, the recommended value of the coverage of children with preventive examinations is no less than 95%, while the results achieved were below this mark. The exception was only the coverage of preschool children (at the age of six/seven years, prior to starting school) with preventive examinations, which was near the recommended value in the observed period. As the doctor's report on the preventive examination is a part of compulsory documentation submitted at elementary school enrolment, it was to be expected that this service would be widely covered in the children population. Children of elementary and high school age had a coverage with preventive examinations of 73.1% and 70%, respectively, which is well below the recommended minimum of 95%. Since the vaccines prescribed by the Calendar of Mandatory Immunization are compulsory, it goes without saying that the recommended coverage is 100%, i.e., very close to 100%, when cases where there is a contraindication to a vaccine are taken into account. However, apart from the BCG vaccine, which registered a coverage of 97.4%, in 2017, the remaining vaccines registered a coverage of around 95% (DTP vaccine: 95.1%; OPV vaccine: 95.2%; vaccine against pneumonia caused by Haemophilus influenzae type b: 95.2%; vaccine against hepatitis B: 92.4%). The divergence from the recommended coverage with the MMR vaccine is especially prominent, since, in 2017, it was as low as under 90% (more precisely 85.2%), which leads us to acknowledge the influence of the so called 'anti-vaccination movement' and to conclude that the medical and educational efforts of chosen doctors did not achieve the desired effect [22].

preventivnim pregledima od 73,1% i 70%, oba značajno ispod preporučenog minimuma od 95%. S obzirom na to da su vakcine propisane Kalendarom obavezne imunizacije obavezne, podrazumeva se da su preporučeni obuhvati 100%, odnosno vrlo blizu 100%, ukoliko se uzmu u obzir i slučajevi kada postoji kontraindikacija za primenu vakcine. Međutim, izuzev BSŽ vakcine, koja, u 2017. godini, beleži obuhvat od 97,4 %, ostale vakcine beleže obuhvat od oko 95% (DTP vakcina: 95,1%; OPV vakcina: 95,2%; vakcina protiv pneumonije izazvane hemofilusom influence tipa b: 95,2%; vakcina protiv hepatitisa B: 92,4%). Posebno se ističe odstupanje od preporučenog obuhvata MMR vakcinacijom, koji se, u 2017. godini, nalazi čak ispod 90% (tačnije 85,2%), što dovodi do zaključka da tzv. „antivakserska kampanja" ipak ima uticaja i da zdravstveno-vaspitni rad izabranog lekara nije doneo očekivane rezultate [22].

Mali obuhvati preventivnim pregledima u službi za zdravstvenu zaštitu žena, a posebno trudnica, ukazuju da se možda žene u Republici Srbiji sve više okreću privatnom sektoru ili zanemaruju preventivne preglede, te tako skoro 40% žena nije obavilo preventivni pregled kod izabranog ginekologa tokom trudnoće (tek 63,4% trudnica je obuhvaćeno preventivnim pregledima, u 2017. godini). Obuhvat žena starijih od 15 godina preventivnim pregledima je ispod preporučenih 20% – u 2017. godini je iznosio 9%. Kada se analiziraju skrining programi za ciljne populacije žena, skriningom za rano otkrivanje karcinoma dojke je, u 2017. godini, bilo obuhvaćeno 3% žena, a skriningom za rano otkrivanje karcinoma grlića materice je bilo obuhvaćeno 8% žena. Preporuke su 50%, odnosno 30% žena predviđenog starosnog doba.

Služba za zdravstvenu zaštitu odraslog stanovništva beleži obuhvate, koji u posmatranom periodu imaju stabilan trend, ali koji su ispod preporučenih vrednosti. Tako je, 2017. godine, svega 5% odraslih bilo obuhvaćeno preventivnim pregledima. Posebno se ističe odstupanje od preporučenih vrednosti obuhvata skrining programima. Preporuka za skrining za rano otkrivanje depresije je 33%, dok je, u 2017. godini, svega 2% odraslog stanovništva dobilo ovu zdravstvenu uslugu. Isto tako, 33% je preporuka i za obuhvat skriningom za rano otkrivanje dijabetesa, međutim, u 2017. godini, on je urađen kod svega 3% odraslih. Iste godine je svega 5% ciljne populacije bilo obuhvaćeno skriningom za rano otkrivanje karcinoma debelog creva, što je čak deset puta manje od preporučene vrednosti, dok je 3% ciljne populacije uradilo skrining za otkrivanje kardiovaskularnih bolesti, za koje postoji preporuka za obuhvat od 20%.

Na osnovu podataka IJZS-a, u Republici Srbiji, opšta stopa mortaliteta je porasla sa 9,2 na 1.000 stanovnika, 1969. godine, na 13,2 na 1.000 stanovnika, u 2018. godini. Gotovo svaka druga osoba umre od

The low coverage with preventive examinations at the department for women's healthcare, and especially for the care of expectant mothers, indicate that, perhaps, women in the Republic of Serbia are turning more and more to the private sector or are neglecting to have preventive examinations, as almost 40% of women did not visit their chosen gynecologist for a preventive examination during their pregnancy (only 63.4% of expectant mothers were covered by preventive examinations in 2017). The coverage of women above the age of 15 years with preventive examinations was below the recommended 20%, and in 2017, it was 9%. When screening programs for target populations of women are observed, in 2017, 3% of women were covered with screening for early breast cancer detection, while 8% of women were covered with screening for the early detection of cervical cancer. The recommendations are 50% and 30%, respectively, amongst women within the defined age range.

The department for the healthcare of adults registered coverage of services which had a stable trend in the observed period, but which was below the recommended values. Thus, in 2017, only 5% of adults were covered with preventive examinations. The coverage with screening programs particularly deviated from the recommended values. The recommended coverage for early detection of depression is 33%, while, in 2017, only 2% of the adult population received this service. Similarly, 33% is the recommended coverage with screening for early diabetes detection, however, in 2017, it was carried out in as little as 3% of adults. In the same year, 5% of the target population was covered with screening for the early detection of colon cancer, which is ten times less than the recommendation, while a total of 3% of the population was screened for cardiovascular diseases, while the recommendation is that 20% should be covered with this service.

Based on IPHS data, in the Republic of Serbia, the overall mortality rate has increased from 9.2 per 1,000 population, in 1969, to 13.2 per 1,000 population, in 2018. Almost every second person dies from cardiovascular disease, while every fifth person dies of a malignancy, which are preventable diseases and can be successfully treated, if diagnosed on time. This is, in fact, achieved through preventive examinations and screening programs [23].

The question remains as to why the payment for performance model, which is believed to be the best for financing and stimulating the increase in the efficiency of primary healthcare, did not fulfil its goals in the Republic of Serbia. One of the potential reasons is obviously the fact that the variable portion of the salary, which is affected by the capitation formula, is a mere

kardiovaskularne, a svaka peta od maligne bolesti, koje se mogu prevenirati i uspešno lečiti ukoliko se na vreme otkriju, a što se upravo postiže kroz preventivne preglede i skrining programe [23].

Postavlja se pitanje, zašto model plaćanja za učinak, za koji se smatra da je najbolji za finansiranje i podsticanje povećanja efikasnosti primarne zdravstvene zaštite, u Republici Srbiji nije ispunio ciljeve. Kao jedan od potencijalnih razloga, nameće se činjenica da je varijabilni deo plate na koji utiče kapitaciona ocena svega 4,04%, što verovatno ne predstavlja dovoljnu motivaciju za lekare da se bore za visoke kapitacione ocene. Drugi potencijalni razlog leži u samoj strukturi kapitacione formule, odnosno njenim kriterijumima i merilima. Zbog toga je kapitaciona formula, 2019. godine, unapređena ključnim izmenama za transformisanje kriterijuma „preventiva" u kriterijum „kvalitet". Način na koji je ova izmena sprovedena najbolje se može objasniti na primeru pokazatelja kvaliteta kod skrininga za rano otkrivanje dijabetesa. Prema staroj, u ovom radu opisanoj formuli, vodila se evidencija o broju usluga skrininga za otkrivanje dijabetesa, koje su lekari pružili u posmatranom periodu. Kako je u pitanju samo kvantitativno merenje, lekari su bili motivisani da pruže što više ovih usluga, ali ne i da ih pruže što većem broju pacijenta, već su usluge uglavnom pružane stalnim pacijentima, koji ih redovno posećuju, zbog čega je IJZS beležio male obuhvate.

Nova kapitaciona formula meri procenat opredeljenih pacijenta jednog lekara kojima je pružena usluga skrininga. Potencira se povećanje obuhvata, što bi trebalo da motiviše lekare da bolje organizuju svoj rad i dopru do više pacijenata, jer na taj način ostvaruju bolju ocenu, a to dalje pozitivno utiče na dostupnost, kvalitet i obuhvat stanovništva zdravstvenim uslugama. Očekuje se da će nova kapitaciona formula doprineti porastu trenda obuhvata preventivnim zdravstvenim uslugama u narednom periodu i generalno kvalitetu primarne zdravstvene zaštite, kao što je to bio slučaj u Estoniji [24]. Uz povećanje varijabilnog dela, na koji ima uticaj, efekat kapitacione formule bi bio značajno veći.

ZAKLJUČAK

Iako većina posmatranih preventivnih zdravstvenih usluga beleži stabilan trend obuhvata, to se ne može smatrati zadovoljavajućim rezultatom, s obzirom na to da se obuhvati koji se godinama održavaju nalaze ispod nacionalno preporučenih vrednosti i onih koje su primećene u drugim evropskim zemljama. Zato postoje velika očekivanja od nove, unapređene kapitacione formule.

Sukob interesa: Nije prijavljen.

4.04%, which probably does not represent enough of an incentive for doctors to strive towards higher capitation scores. The second potential reason lies in the structure of the capitation formula itself, i.e., in its criteria and weights. This is why, in 2019, the capitation formula was improved with key changes necessary for transforming the criterion of 'prevention' into the criterion 'quality'. The way that this change was implemented can best be explained through the example of quality indicators related to screening for the early detection of diabetes. According to the old formula, described in this paper, the records were kept as to the number of screening examinations related to early detection of diabetes which the doctors had provided during the observed period. As this is only quantitative measurement, the doctors were motivated to provide as many of these services as possible, but not to provide them to as many patients as possible, rather the services were provided to the same patients, who visited the doctor regularly, which is why the IPHS recorded a small coverage.

The new capitation formula measures the percentage of patients registered with a doctor who have received a screening service. An increase in coverage is being pushed forward, which is aimed at motivating doctors to better organize their work and reach more patients, as this is the way that the doctor will achieve a better score, which further has a positive effect on accessibility and quality of healthcare services and on achieving a wider coverage of the population with healthcare services. It is expected that the new capitation formula will contribute to an increase in the trend of coverage with preventive healthcare services, in the coming period, as well as promote the quality of primary healthcare, as was the case in Estonia [24]. With an increase in the variable portion of the salary, which the capitation formula affects, the impact of the capitation formula would be significantly greater.

CONCLUSION

Although most of the analyzed preventive healthcare services have demonstrated a stable coverage trend, this cannot be considered a favorable result, since the coverage of the different services, which has been maintaining the same levels throughout the years, is below the nationally recommended values as well as below the values observed in other European countries. This is why much is expected of the new and improved capitation formula.

Conflict of interest: None declared.

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