

# Organization and Functioning of Primary Care for Women in Croatia: In Relation to the Health Care Reforms Introduced between 1995 and 2012

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## ABSTRACT

*The main aim of this study was to investigate trends in the organization and functioning of the HC service. The Croatian Health Service Yearbooks, from 1995 to 2012, served as the basis for the data. The results showed that the HC reforms aimed at the organization and functioning of primary care for women somehow compromised their accessibility. A general lack of around 100 gynecologists, the huge number of women on the lists, from 4,350 to 8,061 women, and excessively heavy daily consultations, between 23.8 and 28.4, were all observed. The location of the majority of gynecological practices in the big cities also makes the service inaccessible to women from the rural areas. A flow of service away from the public to the private providers was also observed. Since, the results of this study can be viewed only in terms of trends and more detailed research will be needed in future.*

**Key words:** primary health care, women, organization, health care reforms, Croatia

## Introduction

Primary Health Care (PHC) for women in Croatia is traditionally carried out by gynecologist as the leaders of teams. The »dispensers« for women have been for a long time the organizational unit of the health centers, responsible for the curative and preventive health care of women from local communities. In 1996, PHC services were privatized, including the gynecologists. They became individual contractors with the Croatian Health Insurance Found (CHIF)<sup>1</sup>. As private entrepreneurs, they were obliged to employ a nurse or other auxiliary staff as a team member. According to their contracts, they are responsible for carrying out health care for all the women on their lists, within the scope defined by the Plan and Program for Health Care Measures, the Croatian standard for the health care provision<sup>2</sup>. Every woman older than fifteen has the right to choose a gynecologist, and is then entered on his/her list. A certain number of gynecologists remained working within the health centers, as

employees, but with the identical contractual responsibilities toward the CHIF. Both groups of gynecologists are available to the women within the public health insurance, and therefore in this paper they are called »public gynecologists«.

The public gynecologists usually remained working at the same practice facilities, initially these were rented, and from 2010, a ten-year concession was taken from the local governments, the owners of the practice facilities<sup>3</sup>. Those gynecologists with privately owned practices were also able to obtain these concessions. However, only practices defined by the Network of Public Gynecological Practices, regardless of ownership, were allowed to enter into a concession contract. The Network of Public Gynecological Practices was first established in 1996, and the number of practices is mainly planned in relation to the geographical distribution of the number of woman older

than fifteen, and the geographical characteristics and local circumstances of the area<sup>4</sup>.

According to the Standards for the provision of health care for publicly insured citizens, as issued by the CHIF, the standard number of women *per* public gynecologist was first set at 8.000, and then 7.000, and more recently at a level of 6.000 women *per* gynecologist<sup>5</sup>.

In 2004, several another »mini« health care (HC) reforms were introduced. In addition to a capitation-fees reimbursement, an additional fee-for-service for some preventive procedures was introduced in 2004<sup>6</sup>. Gradually this was changed to be around 5–10% of the capitation fee<sup>7</sup>. In 2008, an additional fee-for-service reimbursement for certain diagnostic and therapeutic procedures was introduced, and this was gradually increased until 2012<sup>8</sup>. In order to keep the rising health care costs under control, an additional private health insurance was introduced<sup>9</sup>. But, the desired effect was not achieved. The higher level of patient participation fees, than it was before, called administrative taxes, and were introduced in 2005<sup>10</sup>. The PHC patients had to pay for every visit, for diagnostic procedures and prescriptions, as well as for secondary and tertiary level care. Only those patients who had additional health insurance did not have to pay these additional fees.

In addition to the group of gynecologists within the contractual relationship, there are other gynecologists who provide gynecological services on a completely private basis<sup>11</sup>. These patients are charged directly, whether they are publicly insured or not. In this paper these doctors are called »private gynecologists«.

Until now, there has been no research investigating the organizational and functional aspects of the PHC for women in Croatia. Therefore, this study was undertaken with the major aim of investigating trends in public gynecological practices, the educational structure of professionals, the number of women *per* team, as well as the structure of the practices. The second aim was to estimate whether the obtained trends can be related to the HC reforms mentioned.

## Materials and Methods

The study is observational and longitudinal, based on routinely collected data. The main source of data collection was the Croatian Health Service Yearbooks, issued by the Croatian Institute of Public Health, from 1995 to 2012<sup>12</sup>. The data were collected in the manner they were presented in the Yearbooks: separately for public and private gynecological practices; on an annual basis; and for the whole of Croatia, as well as for the Counties.

Information about the number of gynecological practices, the job status of team members (full-time or part-time) and their level of education (gynecologist, other doctors, college or high-school educated nurses, and others), was collected. The total number of women over fifteen with a right to choose a personal gynecologist, the number of women on the gynecologists' lists, and the

number of women annually receiving care were also collected. In addition, information about the number of visits and examinations was collected.

The percentages of women over fifteen who chose personal gynecologists in relation to the total number of women over fifteen years, and the percentages of women annually receiving care in relation to the number of women on the lists were calculated. The average number of women on the gynecologists' lists was also calculated in such a way that two gynecologists with part-time jobs were reckoned as one with a full-time job.

Based on data giving the number and locations of the public gynecologist practices under the CHIF contract in 2013, and within the Network of practices, a calculation of geographic distribution was performed<sup>4</sup>.

The same data related to private gynecologists were also collected, except for the years 1995 and 1996, when these data were missing from the yearbooks.

The collected data were analyzed using Microsoft Office Excel and Access. The results are presented graphically in terms of frequency, and trends are displayed as line charts.

## Results

According to the Census of 2011, 1 900 851 women over fifteen had the right to choose a personal gynecologist. Due to the standard of 6 000 women *per* gynecologist, this meant that 316.8 gynecological teams were needed in Croatia. But, according to the Network, 326 gynecological teams were planned. The results are presented in two parts, firstly those relating to public gynecologists, and secondly those for private gynecologists.

### *Organization and Functioning of the Public Gynecological Service*

The number of public gynecologists continued to increase until 2002, and then was almost stable until 2011, when it again slightly increased. In 1995, there were 148 public gynecologists and in 2012 there were 228. The majority were in full-time jobs with some in part-time jobs. The number of public gynecologists with part-time jobs decreased from 66 in 1995 to only 18 in 2012. No gynecologists were located in the villages, and only 10 were located in small cities, with the majority being located in the larger cities (Figure 1).

Although almost all the doctors were gynecologists, there have always been a few basic medical doctors, or those from other specialities. High school educated nurses were in the majority. A smaller proportion were college educated nurses, with a continuous decreasing trend, from 32 in 1995 to only 8 nurses in 2012 (Figure 2).

Of the total number of women, around 80% of them chose a personal gynecologist, with variations from 71% to 81% during the follow-up period. However, a smaller number of women annually receive care (50–60%), with a rapidly decreasing trend since 2007. In 2012, only 32% of women received gynecological care. The average number

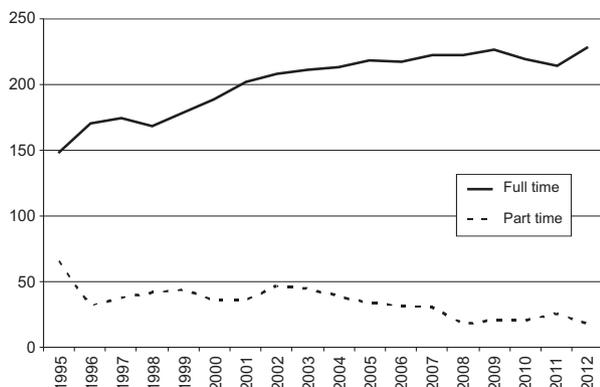


Fig. 1. Trends in the total number and the number of full-time and part-time jobs for public gynecologists in Croatia, 1995–2012.

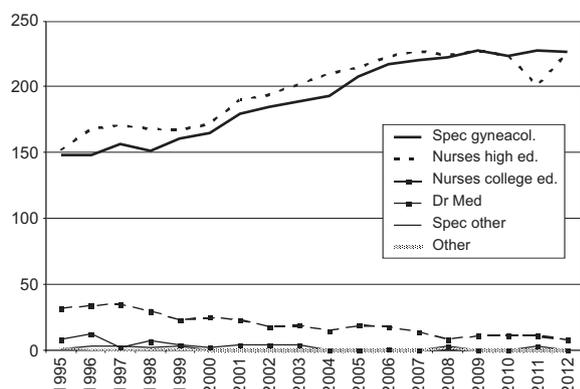


Fig. 2. Trends in Croatia regarding the educational levels of members of public gynecological teams 1995–2012.

of women *per gynecologist* decreased, from 8,194 in 1995 to 6,043 in 2002, followed by a stable trend. In 2012 it was 6,566 women *per gynecologist* (Figure 3).

Differences among the Counties were observed in all variables: For example, in 2011, the lowest percentages of women who chose a personal gynecologist were in Splitsko-dalmatinska (49.8%) and Osječko-baranjska

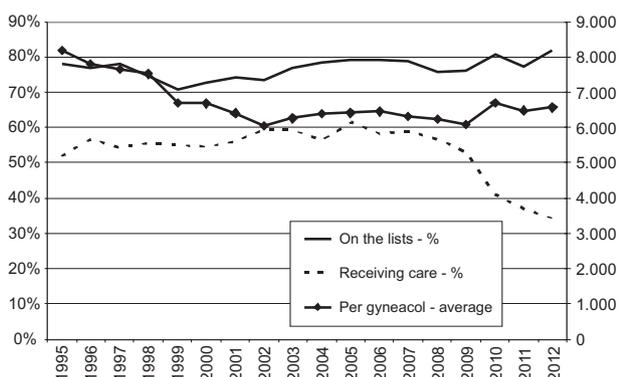


Fig. 3. Trends in the percentage of women over fifteen on the public gynecologists' lists, the percentage of women annually receiving care, and the average number of women per gynecologist in Croatia, 1995–2012

Counties (57%), and the highest percentages were in the City of Zagreb (98.9%) and in Požeško-slavonska County (95.2%). The lowest percentage of women receiving care was in Požeško-slavonska (18.6%) and in Šibensko-kinjska (22.7%), and highest percentage was in the Zagrebačka and Međimurska Counties (around 49%). The number of women *per gynecologist* was smallest in Karlovačka (4350.3 women) and in Ličko-senjska (4420.0 women), and highest in Požeško-slavonska (8061.0 women) and the City of Zagreb (7667.2 women).

The number of visits to public gynecological practices and the number of examinations increased steadily until 2006, and then sharply decreased. The average number of visits *per gynecologist* varied, from 5951.1 visits in 1995 up to 7114.2 visits in 2006, and down again to 6258 visits in 2012. The average number of visits *per woman* receiving care was between 1.4 and 2.8, and the average number of examinations was between 1 and 1.4 *per year*. Counting on around 250 working days *per year* in Croatia, the average numbers of visits *per gynecologist, per day*, was between 23.8 and 28.4 (Figure 4).

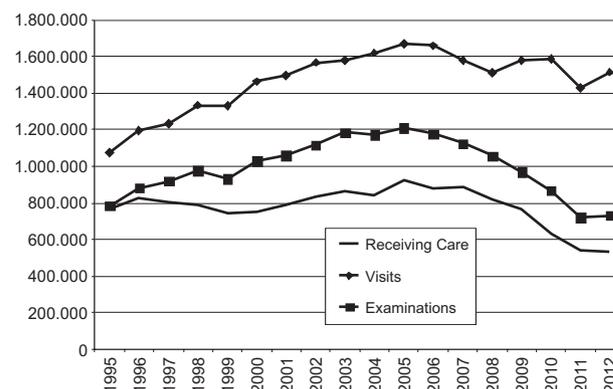


Fig. 4. Trend in the number of women receiving care, and in the number of visits and examinations in public gynecological practices in Croatia, 1995–2012.

### Organization and Functioning of Private Gynecological Services

In 1997 there were 70 private gynecologists in full-time and 10 in part-time jobs. However, the number of those in full-time jobs steadily decreased, so that by 2006 it was less than those in part-time jobs. There was a significant increase in the number of those with part-time jobs, relative to those in full-time jobs (Figure 5). Other specialists were also working in private gynecologists practices. However, in approximately 50% of practices, no nurse was employed. During the follow-up period, this percentage decreased, so that in 2012 approximately 26% of practices had no nurse employed.

The number of women under the care of the private gynecologists, and also the number of visits and examinations, was stable until 2006. After that, the numbers increased rapidly, so that by 2012 there were more than three times as many (Figure 6).

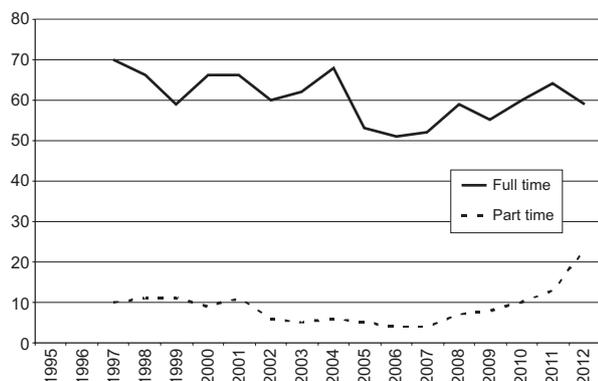


Fig. 5. Trends in the number of private gynecologists in relation to job status in Croatia, 1997–2012.

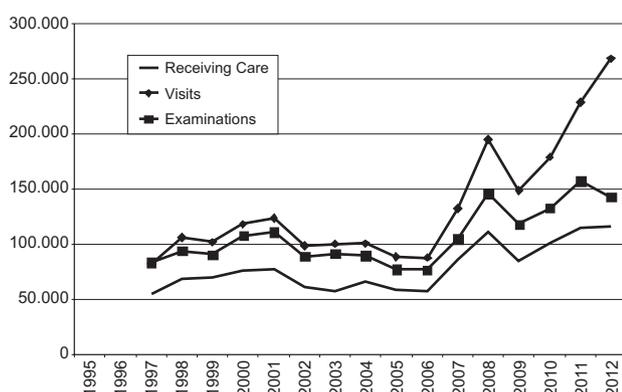


Fig. 6. Trends in the number of women receiving care, and in the number of visits and examinations in private gynecological practices in Croatia, 1995–2012.

## Discussion

Study results indicate that the HC reforms, implemented between 1995 and 2012, did not contribute to better accessibility of the public gynecological service in Croatia. In fact, some results indicate that the service may even have become less accessible. This is related to the lower number of public gynecologists, and the high number of women *per* gynecologist and the high number of daily visits. The plan was to have 326 gynecologists, but in 1995 there were 148, and in 2012, there were 228; this means that there is a shortfall of 100 gynecologists (20–30% too few). In addition, although 20% of women did not choose a personal gynecologist, the average number of women *per* gynecologist was still higher than that defined as the standard. The standard was 6,000 women *per* gynecologist, but in 2012, it averaged 6,566 women, with regional variations from 4, 350 to 8,061. Consequently, the number of daily visits and examinations was high, and the waiting time obviously became longer and longer.

Furthermore, almost all the gynecological practices are established in the larger cities. Those practices that were established in the smaller cities, with part-time gy-

necologists, are closing down, making the service even less accessible. The decreasing trend in the number of women receiving care, and in the number of visits and examinations since 2006, may be connected to the public gynecological services being less accessible. Special attention should be paid to regional disparities, as observed in all variables and parameters and also seen in the study by Smoljanovic<sup>13</sup>. Regional disparities could not be explained by this study, and therefore new, far more complex research is needed<sup>14,15</sup>.

It is not easy to draw comparisons with the results from other research because of differences in the organization of public gynecological services<sup>16–18</sup>. It is also difficult to draw comparisons with neighboring countries with similar organizational structure, because this type of research is lacking. But some comparisons are possible: For instance, the number of women *per* gynecologist defined by the national standard is 6,500 in Serbia and 5,000 in Slovenia<sup>18,19</sup>. In Serbia, a low number of women receive care annually in the public service: In 2007, preventive check-ups were performed on only 10% of women, and family planning activities with only 5% of women<sup>19</sup>. There is also a lack of gynecologists in Slovenia: They found that there is a decreased interest in working in primary care, with the lack of facilities and practices being the main reason for the lack of gynecologists<sup>20</sup>. Croatia also suffers from a lack of facilities and practices. The practices planned by the Croatian Network, do not all exist in reality, in some areas there are just no facilities. According to the organizational structures, the Counties and local communities are responsible for the provision of primary health care, including physical provision for the health service structures<sup>3</sup>. However, there has always been a lack of decentralized financial resources. It is possible for a gynecologist to enter the Network as a private owner of a facility; but, the costs will be more than the earning possibilities determined by the CHIF contract. Therefore, the possibility of meeting public needs through private-public investment still needs to be explored in Croatia.

The under-usage of care provided by the public service cannot be explained by the existence of the private service. The number of visits in the private gynecological services was generally too small to account for the lack of use of public services. But attention should be paid to the corresponding trends: While the number of women under the public health care sharply decreased after 2006, at the same time it sharply increased in the private services. This move from public to private services might be as a result of the inaccessibility of the public service. The phenomenon is also of interest from a general public health perspective: the flow of human and financial resources from the public to the private sector. Besides problems of accessibility, other valued services added by the private service should be considered, such as a broader scope of intervention, better doctor-patient communication, among other factors<sup>21,22</sup>. From another perspective, the quality of care provided by private services in Finland was not of such high standard, as should be ac-

ceptable for primary care for women<sup>23</sup>. A phenomenon that is specific to Croatia is that the annual gynecological examination, organized by companies and enterprises for the women they employ, is mostly performed by gynecologists in private service. This systematic examination usually includes ultrasound, and we are witnessing many examples of over-diagnosis and over-treatment. This can also contribute to the under-usage of public service care in and of the vested state resources. Almost nothing is known about this phenomenon, and future research is needed.

The study is the first to investigate the possible influences of the HC reforms on the organizational structure and functioning of the gynecological service in Croatia. Additional value lies in the fact that it is based on official statistical data, often used for planning at national and local levels. Furthermore, the data are collected consistently, which allows for comparisons over a long period of time. However, the quality of the data restricts the conclusions that can be drawn on certain aspects of the organization and functioning of the gynecological service. Therefore, the results of this study can be viewed only in terms of trends, and are not suitable for deeper analysis. Furthermore, inconsistencies in the data as shown in the yearbooks are most likely due to the methods used for recording and reporting, and these should be improved.

Despite its limitations, the study results could serve as a basis for future planning. This could be done by introducing evidence-based motivational interventions, either internally or externally, or in combination, to encourage gynecologists to enter the primary care service, with possibilities for enlarging the scope of the services offered, and to be partially included in hospital or outpa-

tient care, and to include a wider range of team members in the delivery of services<sup>24–26</sup>. However, there are other models for service delivery, such as those based of the woman's right to choose any primary care physician, including family doctors, who know them better than others, and who can provide longitudinal and comprehensive health care<sup>27–29</sup>. As it enters the EU, Croatia is facing a range of challenges in harmonizing with other countries, and the issue of reproductive and female health will become even more important<sup>30</sup>.

## Conclusions

Results showed that HC reforms involving the organization and functioning of primary care for women did not bring about improvements in accessibility. In fact, there are indications that accessibility has been compromised, such as the lack of gynecologists, the huge number of women on gynecologists' lists, the huge numbers of daily appointments, and the location of practices mainly in the big cities. These could be among the reasons for the flow of services from public to private HC providers. Since the results of this study can be viewed only in terms of trends, and further, more complex research is needed.

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## ORGANIZACIJA I FUNKCIONIRANJE PRIMARNE ZDRAVSTVENE ZAŠTITE ŽENA U HRVATSKOJ U ODNOSU NA PROMJENE U ZDRAVSTVENOM SUSTAVU U PERIODU 1995–2012

### SAŽETAK

U periodu od 1995. do 2012. godine je uvedeno nekoliko promjena u sustav primarne zdravstvene zaštite, uključujući i zaštite žena (PZZŽ), bez znanstvene evaluacije. Cilj studije je bio istražiti trendove kretanja nekih elemenata organizacije i funkcioniranja PZZŽ. Studija je temeljena na rutinski prikupljenim podaci, Hrvatskih zdravstveno-statističkog godišnjaka, za razdoblje od 1995–2012. godine. Rezultati su pokazali da promjene u sustavu zdravstva nisu dovele do povećane dostupnosti te djelatnosti. Nedostatak ginekologa, prosječno veći broj žena na listi ginekologa od standarda i velik broj posjeta i pregleda ukazuju na smanjenu dostupnost. Osim toga, ginekološke ordinacije su uglavnom smještene u većim gradovima, što djelatnost čini nedostupnijom seoskim ženama. Također je uočena pojava »bije-ga« žena iz javne u privatnu ginekološku djelatnost. Rezultati studije se mogu promatrati samo s aspekta trendova, pa su, za detaljnu analizu, potrebna dodatna istraživanja.