

# A Role of Family Doctors in Taking Care of Men's Health

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## ABSTRACT

*The aim of this study was to investigate, based on routinely collected data, the scope of family doctors work in the field of men's health. Based on the Croatian Health Service Yearbook in the period from 1995 to 2012, we collected the morbidity data related to male urogenital disorders. The total number of urogenital disorders almost doubled, but the number of diagnoses related to the men increased fourfold, mostly among the oldest patients. The number of prostate hyperplasia increased fivefold, again among the oldest people. The morbidity from other male-specific diseases increased threefold, mostly in the age group 7–19 years. In spite of the increase in the number of newly diagnosed cases of prostate cancer, the percentage of the deaths stabilized after 2001. Men's health problems are frequent sees and with an upward trend. We are not sure if this means deterioration of men's health, or just indicates the problem of »overdiagnosis«.*

**Key words:** men's health, prostate hypertrophy, prostate cancer, family medicine, Croatia

## Introduction

Women's health has long since been recognized as a public health priority, most likely due to the reproductive role women play in a country's demographic rejuvenation. Unfortunately, men's health on the other hand, is not seen as a priority, even though there are many indicators of serious consequences of diseases and inequality when it comes to the male gender<sup>1,2</sup>. The increase in the number of cases of male sterility and the key role men have in safeguarding the health of children and women may incite interest<sup>3,4</sup>. Unlike the comprehensive approach to promoting women's health, strategic documents pertaining to promoting men's health are only just in the process of being defined in even the most developed countries, whereas they are rarely a subject of concern in undeveloped ones<sup>5,6</sup>.

To the best of our knowledge, there has been no systematic discussion of men's health in family medicine (FM). Furthermore, there is more primary care physicians (PCPs) involved in promoting women's health: gynecologists, family doctors (FDs) and visiting nurses. On the other hand, FDs are the only PCPs involved in treating the adult population including the male gender, but not even then from the male aspect. This prompted us to investigate what it actually is that FDs routinely do in

order to promote men's health. The aim was to investigate the indicators of FDs' work in the field of men's health, based on the routinely collected data. The obtained results could serve as the basis for defining a strategy how to promote men's health on the level of FM.

## Materials and Methods

Croatian Health Service Yearbook, Croatian National Institute of Public Health, from 1995 to 2012, served as the basis for collecting data<sup>7</sup>. The International Classification of Diseases (ICD-10) was used in order to register morbidity. Morbidity has been registered as the groups of diseases, whereas morbidity within an individual group has been registered as a separate disease and, in some cases, as a group of diseases. Diseases of male gender organs were registered under code group N (diseases of the genitourinary system) in the yearbook. Prostatic hypertrophy was registered separately (N40). All other diseases of male sex organs (N41-N51) were presented as one sub-group, comprising all other prostate diseases, diseases of the testicles and seminal duct, penis diseases, all other inflammatory disorders not classified elsewhere.

re, as well as physically-caused impotence and male infertility. Although prostate cancer has not been classified as a separate morbidity category, the data can be found in a special section of the yearbook, in the malignant diseases registry.

Chronic diseases morbidity is recorded by recording patient's first visit to a family practice in a calendar year as morbidity. All the following visits are not recorded as morbidity. Morbidity in chronic patients, in our case suffering from prostatic hyperplasia (N40) denotes the number of patients suffering from the disease. Somehow, it indicates the prevalence of the disease in the given population, the population in our case being patients who visited family practices during that year. In the case of acute diseases, the first visit to a doctor's office is recorded as morbidity, while follow-up visits remain unrecorded. It needs to be noted that in case of acute diseases the end of treatment must be recorded. Every patient visit for the same disease afterwards is recorded as a new case of morbidity<sup>8</sup>. Therefore, in cases of the acute diseases, it is rather the incidence not the prevalence rate. Since 2008, when the entire system of primary health care was computerized, morbidity has been automatically recorded on the same way for both acute and chronic diseases.

Data were collected on total morbidity in all code group N, and separately on prostate hypertrophy (N40) and other diseases of male sex organs (N41-N51). The morbidity data in relation to the patients' age were collected in the way they are presented at the yearbooks: 0–6 years, 7–19 years, 20–64 years and over 65 years. There were also data collected on morbidity of diseases of female sex organs recorded in FM for the purpose of comparison. Additionally, data were collected on the incidence rate of prostate cancer and the number of deaths, while calculating the percentage of the death every year with regard to the number of newly diagnosed diseases in that calendar year.

The collected data were analysed using Microsoft Office (Excel) software. The results are presented in the form of frequency, and the trends are displayed graphically as line charts.

## Results

According to the yearbooks urogenital diseases were recorded frequently in FM. The trend was relatively stable. In 1995 they were the fourth, and in 2012 the fifth most common diseases group<sup>7</sup>.

In the time period under observation, the total number of urogenital diseases almost doubled, the number of diseases specific to the male gender increased 3.9 times with 38,064 diagnoses recorded in 1995, and 150,071 recorded in 2012 (Figure 1).

There was an increase in the share of male diseases in total urogenital morbidity, going from 9.8% recorded in 1995 to 20.4% in 2012. At the same time there has been a

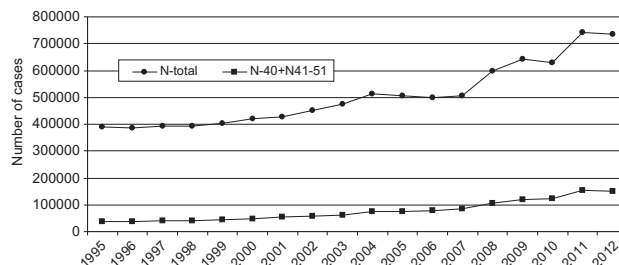


Fig. 1. Trends in total number of urogenital and male organs diseases recorded in family medicine in Croatia, 1995–2012.

decrease in share of female gender diseases, from 23.2% in 1995 down to 17.7% in 2012 (Figure 2).

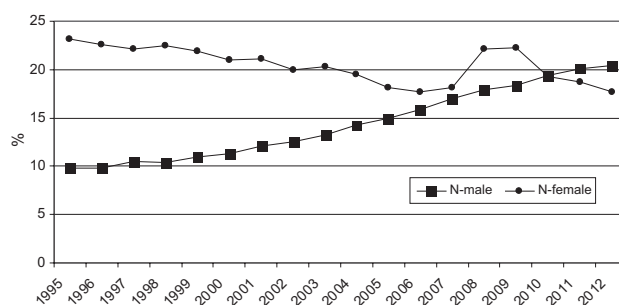


Fig. 2. The shares of the diseases related to the male and female gender (shown in %) in the total morbidity of urogenital diseases recorded in family medicine in Croatia, 1995–2012.

During observed period, the number of diagnoses of prostatic hypertrophy increased in 4.8 times, from 20,804 diagnoses in 1995 to 99,376 diagnoses recorded in 2012. The biggest increase was noted in people aged 65 and older (5.5 times) (Figure 3).

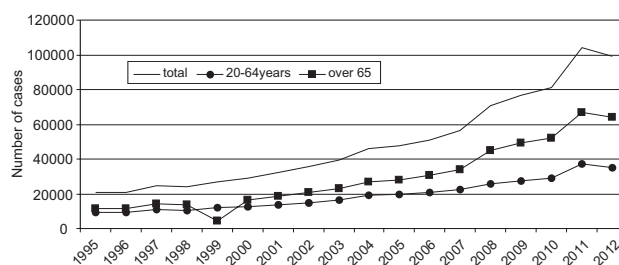


Fig. 3. Morbidity trends in prostate hypertrophy (N40) and structure of morbidity in relation to the men's age recorded in family medicine in Croatia, 1995–2012.

The morbidity from other males' diseases (N41-N51) tripled, from 17,260 diagnoses recorded in 1995, up to 50,693 diagnoses in 2012. The number of diagnoses in the 7–19 years' group increased 4.6 times (Figure 4).

On the Table 1, the incidence of prostate cancer was displayed, as well as the number and percentage of the deaths per 100 000 citizens in Croatia, from 1995 to 2012.

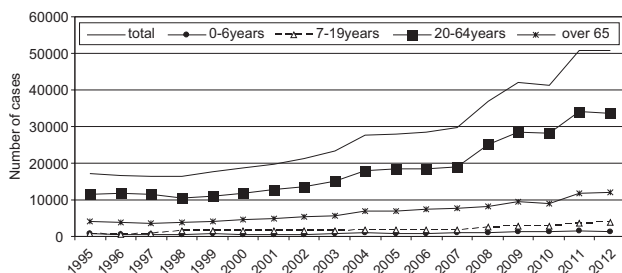


Fig. 4. Morbidity trends in other males' diseases (N41-N51) and structure of morbidity in relation to the male age recorded in family medicine in Croatia, 1995–2012.

**TABLE 1**  
PROSTATE CANCER INCIDENCE, NUMBER AND PERCENTAGE OF DEATHS PER 100 000 CITIZENS IN CROATIA, 1995–2011

Year	Number of new cases	Number of deaths	% of dead
1995	513	411	80.1
1996	560	410	73.2
1997	610	417	68.4
1998	631	354	56.1
1999	613	444	72.4
2000	694	427	61.5
2001	935	466	49.8
2002	1128	478	42.4
2003	1218	488	40.1
2004	1353	601	44.4
2005	1247	591	47.4
2006	1507	636	42.2
2007	1529	604	39.5
2008	1583	637	40.2
2009	1691	641	37.9
2010	1783	694	38.9
2011	1786	723	40.5

During the period under observation, the number of newly diagnosed prostate cancer cases increased for more than three times. There was also an increase in the number of patients' dying from prostate cancer. In spite of the increase in the number of newly diagnosed cases of prostate cancer, the percentage of the deaths stabilized after 2001 and has since been in the around of 40%.

## Discussion

Results of the research indicate that urinogenital diseases are frequently present in FM; in 1995 they were the fourth, and in 2012 the fifth most common diseases. However, the total morbidity of the diseases of the urinary tract almost doubled, and the number of cases of diseases specific to the male gender quadrupled during the observed period. Most patients were middle aged, which is understandable given that they are the most nu-

merous group of patients in total populations. An increase was noted in all age groups; 2.4 times in ages 7–19, and 2.7 times in patients aged 65 and older. The explanation that the rising morbidity, both total and of diseases of the male sex organs, is due to people being four times sicker is not likely. It is far more probable that it is a matter of an increased number of established diagnoses, most likely as a result of patients and physicians being more aware of the gravity of these diseases on the one hand, and the lowering of diagnostic criteria on the other.

The number of diagnoses of prostatic hypertrophy grew 4.8 times in the observational period, with the biggest increase recorded among people aged 65 and older (5.5 times), which is understandable given that it is a disease typical for older male population. Nevertheless, there has also been a rise among middle aged patients (3.8 times). The availability and habit of using the I-PSS questionnaire as a screening test, digital rectal examination, urine analysis and ultrasound allow us to easily diagnose hyperplasia<sup>9</sup>. The starting treatment with an alpha blocker as the first medicine in conservative treatment of benign prostatic hypertrophy also falls under the scope of FDs' work, and could be the reason why this diagnosis is given more often. Whether it is a matter of overdiagnosis is a subject that needs to be explored.

The total morbidity of other diseases of male sex organs (N41-N51) has tripled, while it has gone up 4.6 times in the 7–19 age groups. It is probably a matter of an increase in the number of diagnoses due to the raised awareness of the patients themselves who visit their physicians more often. This is particularly notable among patients aged 7 to 19 who visited the doctor significantly more often for other genital diseases, including other inflammatory and sexually transmitted diseases. Bigger sexual freedom, failure to use prophylactics and awareness of the importance of seeking doctor's advice probably caused the increase in diagnoses. Certain anomalies (phimosis, paraphimosis, varicocele) are noticed and dealt with at that age. Inflammatory conditions of the prostate increase in number in middle age, when sexual problems and problems to do with male infertility stop being taboos in the FD's office. There has been a rise in awareness of male infertility being related to urogenital infections and concern with offspring<sup>10</sup>. Patients also seek help for sexual dysfunction. According to research of Watson and associates, 10% of patients treated by FDs have some sexual problems, be they physical or psychological<sup>11</sup>. A third of the grown male population in France has some problems with sexual dysfunction, which is affecting middle aged males more and more<sup>12</sup>. Štulhofer's research shows that 5.8% of men under the age of 39 in Croatia suffer from sexual dysfunction, 80% of which are physically-, and 20% psychologically-caused<sup>13</sup>. The FDs play a big role in diagnosing the cause of dysfunction, since they are familiar with the comorbidity of their patients and are able to guide them towards treatment more easily.

It appears that »early« prostate cancer detection with the PSA in the general population led to a rise in the

number of patients, but not to a fall in mortality rates, especially not since 2002. A great number of patients had to visit their physicians more often, experience fear and uncertainty, aggressive diagnostic examinations due to false positive PSA results. Many patients also had to undergo »unpleasant« treatments for prostate cancer which would never have been discovered nor have had any bearing on their quality of life of life expectancy<sup>14,15</sup>.

There has also been data collected on morbidity of diseases of female sex organs recorded in family medicine for the sake of comparison. While the number of male gender disease registered in FM increased, the number of diseases related to the female gender decreased. This can be explained by the fact that some gynecological diseases have been exempted from the FD's scope of work and fall exclusively under the domain of gynecologists.

The research results indicate that the FDs are involved in the men's health matters. Since the FD is the

only primary care physicians responsible for men's health, their knowledge, skill and willingness are crucial<sup>16,17</sup>. Men's health could be better cared for by improving the system of recording health problems, thereby gaining a better insight into the existing state. There is a need to investigate the men's personal medical records, to look at the specific diagnoses or procedures done in the field of men's health. It should not be difficult because the medical records are kept in electronic form.

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## REFERENCES

1. SALINAS J, MCCORMICK JB, RENTFRO A, HANIS C, HOS-SAIN MM, FISHER-HOCH SP, Am J Mens Health, 5 (2011) 332. DOI: 10.1177/1557988310379390. — 2. DŽONO-BOBAN A, DEPOLO T, VRCIĆ KEGLEVIĆ M. Činjenice (neke) koje upućuju na potrebu stvaranja strategije za unapređenje zdravlja muškaraca. In: Proceedings (Zbornik radova XXI kongresa obiteljske medicine, Split 2014). — 3. HIRSH A, BMJ, 327 (2003) 669. DOI: 10.1136/bmj.327.7416.669. — 4. BONHOMME JJ, Am J Mens Health, 1 (2007) 335. DOI: 10.1177/1557988306297261. — 5. JAMES E, LEONE JE, ROVITO MJ, Am J Mens Health, 7 (2013) 243. DOI: 10.1177/1557988312469659. — 6. PORCHE DJ, Am J Mens Health, 7 (2013) 5. DOI: 10.1177/1557988312467665. — 7. HRVATSKI ZAVOD ZA JAVNO ZDRAVSTVO, Hrvatski zdravstveno-statistički ljetopisi, Zagreb, 1996-2013. — 8. DEČKOVIĆ-VUKRES V, KUZMAN M, RODIN U, STEVANOVIĆ R, Upute za primjenu izvještajnih obrazaca za primarnu i specijalističko-konzilijarnu zdravstvenu zaštitu (Hrvatski

zavod za javno zdravstvo, Zagreb, 1999). — 9. BOSCH JK, HOP WC, KIRKELS WJ, SCHRODER FH, BR J Urol, 75 (1995) 622. — 10. PARAZAJDER J, Medicus 15 (2006) 299. — 11. WATSON JP, DAVIES T, BMJ, 315 (1997) 239. — 12. GULLANOF, CHEVRET-MEASSON M, TSATSARIS A, REITZ C, MURINO M, THONNEAU P, Europ Urol, 42 (2002) 382. — 13. ŠTULHOFER A, BAJIĆ Ž, Croat Med J, 47 (2006) 114. — 14. VICKERS AJ, SJOBERG DD, ULMERT D, VERTOSICK E, ROOBOL MJ, THOMSON I, HELJNSDIJK EAM, DE KONING H, ATORIA-SWARTZ C, SCARDINO PT, LILJA H, BMC Med, 12 (2014) 26. DOI: 10.1186/1741-7015-12-26. — 15. LOEB S, BJURLIN MA, NICHOLSON J, TAMMELA TL, PENSON DE, CARTER HB, CARROLL P, ETZIONIAT R, Eur Urol, 65 (2014) 1046. DOI: 10.1016/j.eururo.2013.12.062. — 16. PORSHE DJ, Am J Mens Health, 6 (2012) 441. DOI: 10.1177/1557988312459340. — 17. PORSHE DJ, Am J Mens Health, 6 (2014) 5. DOI: 10.1177/1557988313513458.

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## ULOGA LIJEČNIKA OBITELJSKE MEDICINE U ZAŠTITI ZDRAVLJA MUŠKARACA: RUTINSKI PRIKUPLJENI PODACI

### SAŽETAK

Cilj rada je bio istražiti pokazatelje o radu liječnika obiteljske medicine (LOM) u zaštiti muškog zdravlja. Izvor podataka su bili Hrvatsko zdravstveno-statističkih ljetopisi u periodu od 1995 do 2012. godine. Ukupni pobol od bolesti urogenitalnog trakta se skoro udvostručio, a bolesti povezane za muški spol su se povećale četiri puta. Porast je zabilježen u svim dobnim skupinama. Broj dijagnoza hipertenzije prostate je porastao za 4,8 puta, najveći rast je zabilježen kod muškaraca u dobi 65 i više godina (za 5,5 puta), ali je porastao i u srednjoj dobnj skupini (za 3,8 puta). Ukupni pobol od ostalih bolesti muških spolnih organa (N41-N51) je trostruko porastao, a najviše u populaciji od 7–19 godina (za 4,6 puta). Usprkos porastu incidencije karcinoma prostate, broj smrtnih slučajeva se ne smanjuje, nego je stabilan od 2001. godine. Pitanje je je li ovaj progresivni rast broja zabilježenih dijagnoza posljedica stvarnog pogoršanja muškog zdravlja ili prekomjernog dijagnosticanja.