

# Trends of Absenteeism in Croatia: A Longitudinal Study from 2000 to 2012

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## ABSTRACT

*The aim of this article is to determine the trends in absenteeism from 2000 to 2012 in Croatia and to examine if the observed trends could be related to the regulations implemented to keep the absenteeism on low level. In Croatia only family doctors keep the responsibility for sick leave and were always been targeted by many regulations to keep absenteeism on appropriate level. A study was observational and retrospective based on the official CHIF data available from the web-page. Although the average number of sick leave days had been bisected (from 30.58 to 15.08 days per patient) sick leave rate only slightly fell down (from 3.32% to 3.11%). It seems that the restrictive measures did not significantly affect the number of sick leave cases. Such a results and other European research studies indicates that without reduction of the institutional rights there will be no reducing of sick leave rates.*

**Key words:** sick leave, family doctor, regulatory measures, Croatia

## Introduction

The absence from the work because of disease or injury is not only medical; it is also a sociological and economic challenge for the entire society. In European countries, with their public health insurance systems and high social orientations, sick leave is regulated in different ways<sup>1,2</sup>. It is not easy to ensure the balance between an individual patient's need to not work during illness and the public's need to maintain productivity and keep costs under control<sup>3-5</sup>. Therefore, many stakeholders, such as firms, economists, lawyers, syndicates and medical personnel, are usually involved in the regulation of absenteeism.

In Croatia, for more than six decades, people have recognized sick leave as a main right of employment, and it has been well regulated. Sick leave could be issued because of workers' diseases or injuries, or because of disease in the workers' family, particularly children, a partner or other family members. But any absence from the workplace, independent of the reason and the duration of the absence, needed to be justified by a doctor's certificate. From 1993 until 2002, the pay that accrued during the workers' absence from work was reimbursed in the

amount of 80% of average wages; after 2002, the amount was reduced to 70% of the average wages<sup>6,7</sup>. Absence because of illnesses that lasted for 42 days would be reimbursed by the companies and enterprises in which the patient was employed. An absence because of diseases that exceeded 43 days and those caused by professional diseases and injuries as well as disease in the family would be reimbursed by the Croatian Health Insurance Fund (CHIF)<sup>8</sup>.

Before 1993, occupational medicine held a strong position in Croatia, and many companies had their own doctor. Besides the family doctors, occupational medicine also was responsible for issuing sick leave certificates. In introducing the free choice of primary health care doctors in 1993, only a family doctor (FD) kept the responsibility and the right to issue absenteeism certificates<sup>9</sup>. Therefore, FDs, having the main role, were always targeted by the many regulations mainly aimed at keeping absenteeism at an appropriate level.

Three kinds of regulation were gradually implemented from 1996 to 2012. The first was the monthly control

of FDs' certification revised by a special doctor-controller for the CHIF<sup>10</sup>. The second was an obligation to keep to the standard for the average number of sick leave days *per* diagnosis. The standard was issued by the Ministry of Health in 2003, and, with slight variations, it still functions<sup>11</sup>. If the patient needed prolongation of the sick leave, he or she would be referred to the special commission or controller named by the CHIF<sup>8</sup>. Also, after six to twelve months of continuous sick leave, the FDs' obligation was to refer a sick employee on medical expertise of his/her working abilities to the special commission named by the Croatian Retirement Assurance Institute (CRAI)<sup>8</sup>.

The third was the obligation of different FDs that came from the CHIF as a contractor<sup>12–16</sup>. According to the contract, FDs were obligated to provide monthly reports to the CHIF on the number and structure of patients on leave of absence and to adhere to the pre-defined average rate (in percentage) of such leaves. If not, restrictive measures could be introduced. In 2003, the average sick leave rate was defined at the level of 3.5%, in 2009, 2.6% and in 2011, 3.0%<sup>12–16</sup>. Restrictive measures included: written reports with explanations; then a warning; and finally, a financial punishment at 10% of the monthly reimbursement sum.

Few research studies related to absenteeism have been published since the beginning of the 2000s, and they are limited in scope, mostly dealing with health care workers or employees from private companies<sup>17–20</sup>. Therefore, this study aims to determine the trends in absenteeism from 2000 to 2012, and to associate the observed trends with implemented regulatory measures intended to keep absenteeism at a low level.

### Materials and Methods

This study was observational and retrospective, based on the official CHIF data available from the webpage<sup>21</sup>. Besides other data, the annual CHIF reports, 2000–2012, contained the sick leave database on the FDs' monthly reports from all of Croatia. Based on these reports, it was possible to obtain the data on the average annual number of patients on sick leave, the annual number of sick leave days, the average duration (in days) of sick leave *per* patient and the rates, in total and separately, for sick leave on the employers' account (those less than 42 days) and those on the CHIF account (over 43 days). The sick leave rate was calculated by the incoming formula: sick leave rate = sick leave days x 100 / number of employed patients x number of working days.

The collected data were analyzed using Microsoft Excel 2010, through descriptive statistic methods. The results are displayed as line diagrams.

### Results

During the period observed, the number of employed persons in Croatia increased from 1,296,824 in 1995 to

1,582,261 in 2008, and then slightly decreased to 1,471,324 in 2012 (Figure 1).

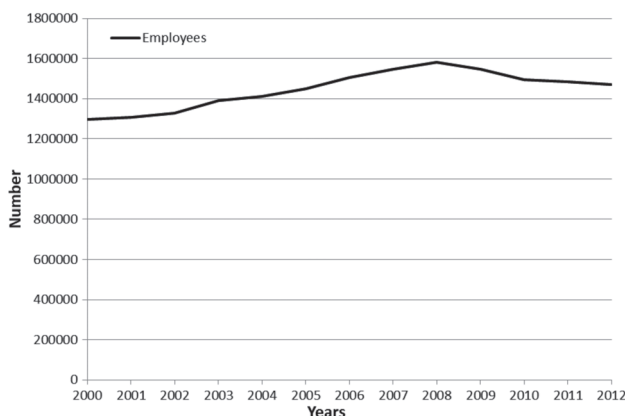


Fig. 1. Trends in the total number of employees in Croatia, 2000–2012.

The total sick leave rate varied between 3.3% in 2001 and 3.9% in 2007, and decreased to 3.1% in 2012. The sick leave rates under the responsibility of the CHIF were between 1.7 and 2.6%, with a slight decrease after 2007. The sick leave rates under the responsibility of the employers were always lower, with trends varying between 1.3 and 1.9%, with a slight decrease since 2007 (Figure 2).

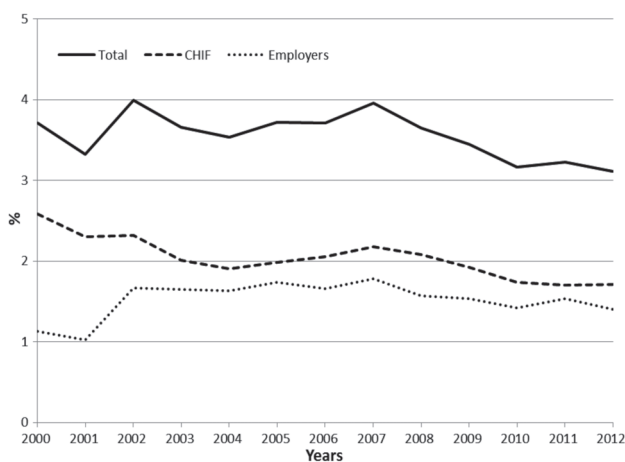


Fig. 2. Trends in the total rate of sick leave and rates of sick leave on the CHIF's and employers' accounts in Croatia, 2000–2012.

The total annual number of the sick leave days in 2000 was 28,950,974, then sharply decreased to 16,011,083 in 2002, followed by an increase to 19,196,911 sick leave days in 2007, and after that, the number decreased until 2012. The initial decrease from 2000 to 2002 was mainly characteristic of sick leave on the CHIF account (Figure 3).

The average duration of total sick leave *per* patient in 2001 was 30.6 days, decreasing to 15.1 days in 2012. The

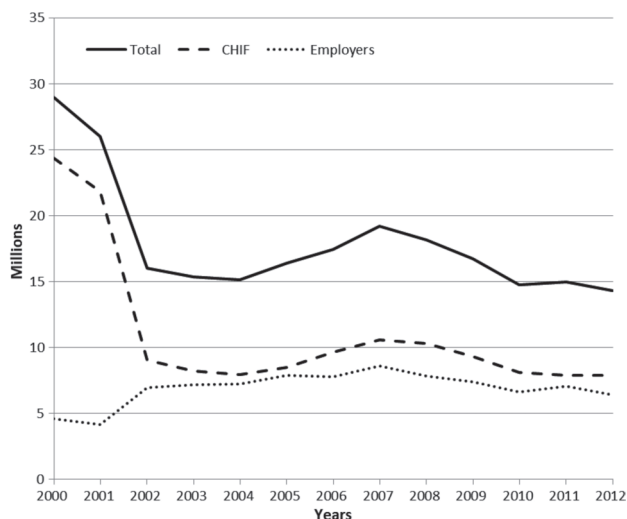


Fig. 3. Trends in the total number of days of sick leave and the number of days of sick leave on the CHIF's and firms' accounts in Croatia, 2000–2012.

trend of a decrease was especially present with sick leave on the employer's account, from 12.2 to 7.8 days. The sick leave on the CHIF account first increased until 2007, from 41.6 to 52.8 days, then decreased to 44.4 in 2012 (Figure 4).

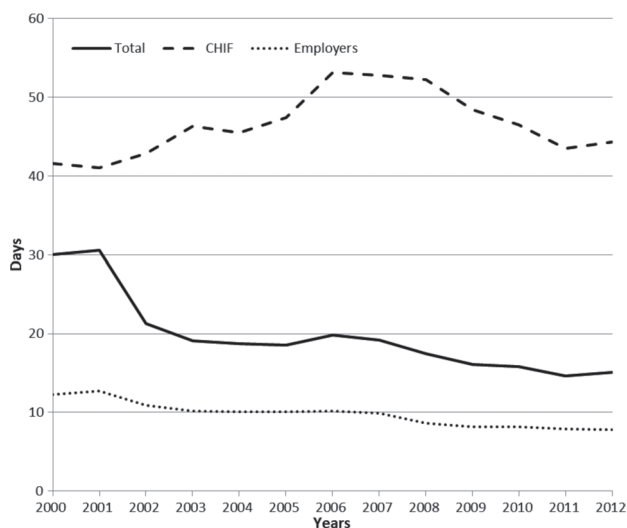


Fig. 4. The average duration (in days) of sick leave per patient in Croatia, 2000–2012.

In 2000, daily, 48,106 patients were on sick leave; this number increased until 2007, when, daily, 61,322 patients were on sick leave. Since then, with decreased trend to 45,735 patients in 2012. The daily number of patients on sick leave under the responsibility of the employer almost doubled: it increased from 14,686 in 2000 to 27,550 in 2012. At the same time, the daily number of patients on sick leave under the CHIF's responsibility was stable, with some oscillations (Figure 5).

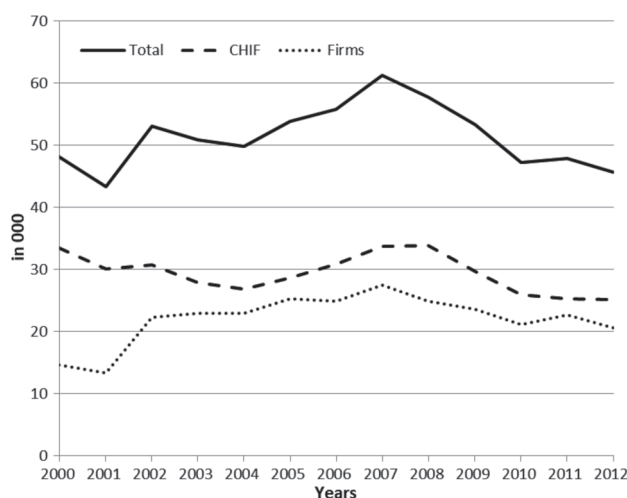


Fig. 5. The average number of employees, daily, on sick leave in Croatia, 2000–2012.

Regional variations in the duration and in the rates of sick leave were observed in Croatia. During the period under investigation, sick leave rates were always lower than 3.0% in some CHIF offices: Čakovec, Karlovac, Koprivnica, Sisak, Varaždin and Zadar. In other offices, the rates were always higher, between 3.5 and 4.0%.

## Discussion

The results obtained indicate that during the follow-up period, no overall differences in observed trends appeared in sick leave rates. It seems that sick leave rates were related more to the number of employees than to the FDs' contractual obligations. The sick leave rates fell only slightly (from 3.3 to 3.1%). During the follow-up period, the rates (1.7–2.6%) were higher in sick leave on the CHIF account than for that in the employer's account. (1.3–1.9%). But the total number of sick leave days sharply decreased from 2000 to 2002 and, after that, increased until 2007 and then decreased only slightly. The sharp decrease was mainly characteristic of sick leave on the CHIF account. This sharp decrease could be explained by two kinds of measures. During 2000, the Croatian Retirement Assurance Institute (CRAI) performed medical examination on 20,994 persons on long-term sick leave and ascertained total working disability in 11.7% of the cases and partial disability in 12.1%<sup>22</sup>. During 2001, the results were almost the same: examination was performed for 26,193 persons, and total disability was found in 12.1% of the cases and partial disability in 8.0%<sup>23</sup>. During 2000 and 2002, around 40% of employees on long-term sick leave received a disability pension. Also, in 2002, the reimbursement sum for sick leave patients diminished from 80% to 70% of average wages, and additionally, sick leave was required to be determined within 30 days of patients' losing their jobs<sup>7</sup>.

The average annual duration of total sick leave days per patient is only one parameter of a stable trend of a decrease, from 30.6 days in 2001 to 15.1 days in 2012.

Trends of a decrease were observed in both types of sick leave: a continuous decrease in sick leave days on the employer account and, since 2007, a decrease in sick leave days on the CHIF account. But the number of patients, daily, on sick leave increased, especially on the employer account, meaning that more people were on a shorter sick leaves; therefore, the sick leave rate remained stable.

A few Croatian researchers considered that the measures directed toward a decrease in the duration of sick leave had to be wider than the restrictive measures for FDs. Šiljaković and Kereta assumed that, besides other measures, shortening the waiting period for diagnosis and consultations with specialists must be implemented to shorten the duration of sick leave<sup>24</sup>. Šarić and Šarić also put the accent on the medically unjustifiable implementation of the standard<sup>25</sup>. Brkić and Tiljak concluded that sick leave was used more frequently by employees in the public sector where jobs are more stable<sup>26</sup>. The rate of sick leave, according to these authors, was more connected with employment stability.

It is not easy to compare Croatian situation to that in other countries because of different sick leave monitoring methodologies. In Croatia, overall sick leave is systematically monitored by the CHIF, even for those under the employers' responsibility because of the FDs' obligation to report monthly on all sick leaves. In other European countries, sick leave monitoring varies from systematic monitoring in public services and state enterprises to unreliable monitoring in private firms and corporations. Research conducted by Mercer, a consulting firm, in 2011 showed that 82% of employers register sick leave, but only 35% of them record only the causes and 27% record only sick leave expenses<sup>27</sup>. However, the trend in the annual number of sick leave days *per* patient is of a decrease in this study; it is still much more higher from those in European countries. In 2009, Mercer conducted research in 24 European countries and in 800 firms and corporations; it showed that the average number of sick leave days *per* employee annually was 7.4 days. The largest number of annual sick leave days *per* employee was recorded in Bulgaria, 22 days, and far fewer in Portugal, 11.8 days, the Czech Republic, 10.8 days, Norway, 10.2 days, Spain, Italy and Germany, up to 7 days, and Turkey, the lowest, with 4.8 days<sup>27,28</sup>. Our results show that during the same period, in 2009, the average number of sick leave days *per* employee was 16.8, decreasing to 15.1 in 2012. The significantly higher average number of sick leave days in Croatia could be explained only by more systematic monitoring. However, average duration of sick-leave *per* one patient on the employer account came to 7.8 days what correspond to European figures. When take in mind that prolonged illness and disabling disease demand more complex approach and team work, weak involvement of occupational health teams can be reason for longer duration of total sick leave in Croatia.

It seems that the restrictive measures, primarily oriented to the FDs did not bring any results, while the rights of the employees remained the same as it was in Croatia. We registered a sharp decrease in sick leave days only when the reimbursement to the patients was re-

duced from 80 to 70% of the average monthly salary and when around 40% of employees on long-term sick leave received a disability pension.

These findings are not surprising, because research from many other countries shows that sick leave is a very complex issue to be solved by measures targeting only physicians. In research conducted among FDs in Scotland in 2004, Hussey reported that FDs often found that their roles in the sickness certification process were unclear and conflicting. It has been suggested that FDs have a »dual role« as the patient's doctor and as the medical expert for the social insurance office. The difficulties in the handling various roles that the FD plays lead to concern about poor practices and despair as a whole<sup>29</sup>. Aamland and colleagues gave evidence that FDs in Scandinavian countries recommend sick leave by considering mostly the health of the patient, but they also empathized with and had faith in the patient. Also, it was pointed out that any further FD training had no positive effect on the sickness rate<sup>30</sup>. Any potential for changing the sick leave certification system needs to focus on reducing the potential doctor-patient conflict, clarifying the roles of all stakeholders and improving access to specialists and rehabilitation services, concluded Wynne-Jones and colleagues<sup>31</sup>.

The strengths of this study come from its being based on official data, collected from the whole of Croatia and presented the same way during the follow-up period. Twelve years of a follow-up period is long enough to determine trends over time. But trends are not sufficient for a deeper understanding of the problem of absenteeism in Croatia, especially if we take in account the prevailing attitudes of the Croatian people toward the sick leave as the main right in the workplace. Therefore, new research is needed in family medicine because of its main role in sick leave certification procedures. Special effort should be done on getting insight in revised social role of employment (and un-employment) as consequence of socio-cultural change in countries which shifted from governmental planned economies to free economy system.

Besides the limitations, the study's results might bring some ideas to policymakers to pay more attention to additional measures to lower the sickness absence. In Norway, a new approach to sickness absence was introduced with the following ideas: a closer monitoring of cases; an emphasis on the benefits of not using sick leave or of an early return to work; FDs' support from occupational health services and social insurance; and measures focused on the working-environment and stress management. Also, a comprehensive training program for physicians was launched, and physicians' »sickness absence certificates« were replaced by a »work ability certificate«, but there was no significant reduction in the sick leave rate<sup>3</sup>. Similar programs were introduced in Sweden<sup>5</sup>, Denmark<sup>32</sup> and the United Kingdom<sup>2</sup>, and there was no considerable effect on the rate of sickness. In a report from Spurgeon, interventions such as management training, accurate recording and monitoring of absence, early management contact with absent individuals, return-to-work interviews and a review of an individual

case, »are not evidence based with respect to the reduction of sickness absence«<sup>33</sup>. Therefore, in 1997, the European Foundation for the improvement of living and working conditions proposed comprehensive measures for reducing sickness absence rates, promoting early return to work, preventing early retirement and promoting employment of functionally impaired people<sup>34</sup>.

## Conclusion

The results obtained show that although the average number of sick leave days was decreasing, the sick leave rate fell only slightly, meaning that the restrictive mea-

sures primarily oriented to the FDs do not significantly affect sick leave parameters. The experiences from European countries in the introduction of complex sick leave measures might be also helpful in the Croatian context.

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## **TRENDOVI KRETANJA BOLOVANJA U HRVATSKOJ: LONGITUDINALNA STUDIJA OD 2000. DO 2012.**

### **S A Ž E T A K**

Cilj ovog rada je bio utvrditi kretanje bolovanja u Hrvatskoj u periodu od 2000. do 2012. godine i procijeniti jesu li uočeni trendovi povezani s promjenama u regulativi bolovanja, osobito s mjerama usmjerenim na liječnike obiteljske medicine. Studija je observacijska i retrospektivna, a temeljena je na podacima iz godišnjih izvještaja Hrvatskog zavoda za zdravstveno osiguranje. Iako se prosječan broj dana bolovanja po pacijentu prepolovio, stopa bolovanja je neznatno pala, s 3,3% u 2000. godini, na 3,1% u 2012. godini. Izgleda da mjere usmjerene na liječnike obiteljske medicine s ciljem smanjenja stope bolovanja nisu imale učinka. Naime, broj dana bolovanja se izrazito smanjio od 2000. do 2002. godine kada je oko 40% pacijenata na dugim bolovanjima bilo penzionirano i kada je naknada za bolovanje smanjena. Ovim istraživanjem su se mogli pratiti samo trendovi broja zaposlenika na bolovanju, broja dana bolovanja i stope bolovanja, ali za dublju analizu problema bolovanja u Hrvatskoj bila bi potrebna daljnja istraživanja.