



The impact of spa therapy on ambulatory health care expenses of osteoarthritic patients: preliminary results of Ecotherm study

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Introduction

Despite the long history of spa therapy, the effect of thermal treatment on care consumption is still poorly known mainly because of methodological difficulties of rigorous evaluation of such an effect.

Osteoarthritis is a frequent and heterogeneous illness. As adverse events of treatments are not rare, some osteoarthritic patients try other treatments such as spa therapy, with the hope of reducing their consumption of drugs and of health care in general.

The aim of the Ecotherm study is to describe the cost of ambulatory health care expenses of patients before and after a spa therapy between 2006 to 2011 among the French state. Here, we focus on osteoarthritic patients, as they represent a large proportion of spa-goers.

Methods

The study is based on patients covered by Mutualité de la Fonction Publique Services (MFPS) Health Insurance Company from 2004 to 2012.

All patients older than 49 years, treated with a spa therapy during 2006-2011 period and who have not been treated by spa therapy since at least 2 years were selected and considered as « new spa-goers ».

The study focused on « osteoarthritic patients » defined as those, among new spa-goers, treated by a physiotherapist and/or a rheumatologist during the semester before the spa therapy.

Data came from MFPS database used to manage the reimbursement of health care expenses. Data were collected on a monthly basis: medical and paramedical fees, drugs expenses, biological and X-Ray fees. All expenses aggregated costs met by National Health Insurance Company (CNAMTS), Complementary Health Insurance Company and patients.

Statistical analysis were done using Stata v11.2 software. The expenses distribution were compared using the Wilcoxon matched-pairs signed-ranked test (P-value <0.05 was considered significant).

Results

During 2006-2012 period, 2.06% of patients covered by MFPS were treated with a spa therapy. The « new spa-goers » sample included 10,540 patients (20,728 spa therapy). Among them, 4,429 (42.0%) osteoarthritic patients (8,072 spa therapy) were selected.

The decrease of cost of ambulatory health care was significant (p<0.001) and lasting: it averaged

- 96.74 € the first quarter after the spa therapy,
- 88.79 € in the second quarter after the cure,
- a total decrease of 185.53 € the semester after the spa therapy (mean level of expenses was 1,714.86 € during the semester before and 1,529.33 € after the spa therapy).

This decrease (-10.8%) mainly concerned physiotherapists fees, drugs expenses, rheumatologists fees, X-Ray, general practitioners fees (Table 1).

Moreover, these decreases were greater among the 50-64 years old (-219.58 €, -13.7%) than among patients older than 64 years (-146.36 €, -7.9%) even if decreases were still significant. Again, decreases were more pronounced after the first spa therapy (-206.92 €, -12.8%) than after the followings spa therapy, but remained significant after the second spa therapy (-148.21 €, -8.5%).

We also can noticed a decrease of cost of ambulatory health care during the month in which occurs the spa comparing to the month before (-48.1%).

Table 1. Mean level of expenses of osteoarthritic patients (all ages) Semester before or after a spa therapy. France, 2006-2011.

	Semester before	Semester after	Difference (€)	Difference (%)	P-value
mean ambulatory health care expenses including:	1,714.86 €	1,529.33 €	-185.53 €	-10.8%	<0.0001
drugs	527.97 €	501.27 €	-26.70 €	-5.1%	<0.0001
general practitioners fees	187.11 €	173.78 €	-13.33 €	-7.1%	<0.0001
physiotherapists fees	224.95 €	131.18 €	-93.77 €	-41.7%	<0.0001
dentists fees	179.08 €	171.45 €	-7.63 €	-4.3%	0.3167
X-Ray	89.7 €	72.02 €	-17.68 €	-19.7%	<0.0001
psychiatrists fees	14.88 €	13.78 €	-1.10 €	-7.4%	0.0001
rheumatologists fees	37.03 €	21.40 €	-15.63 €	-42.2%	<0.0001
dermatologists fees	10.35 €	9.49 €	-0.86 €	-8.3%	0.0091
gyneacologists fees	10.96 €	10.96 €	0.00 €	0.0%	0.6002
neurologists fees	6.18 €	4.52 €	-1.66 €	-26.9%	0.0026
others expenses	426.64 €	419.49 €	-7.15 €	-1.7%	0.0011

Conclusion

Only few studies have evaluated the impact of spa therapy on the cost of ambulatory health care expenses. This study shows that in France, between 2006 and 2011, ambulatory health care expenses concerning osteoarthritic patients decrease during the semester following a spa therapy (-185.53 €, -10.8%). This decrease mainly concerned physiotherapists fees (-93.77 €, -41.7%) and drugs expenses (-26.70 €, -5.1%).

Strengths of the study are especially the long follow-up period of 9 years and the large number of osteoarthritic spa-goers (>4,000) which allow a very good statistical power.

This study has also weakness. The first one is that hospitalizations are not taking into account. The second is that variations of expenses are analysed only for spa-goers. Finally, in this study, spa-goers are all French state employees who have a specific Health risk insurance coverage, usually with higher reimbursement rates comparing to private health risk insurance.

These preliminary results will be completed by the second part of the Ecotherm research program will rely on the establishment of a control sample matched the population spa-goers (on variables including healthcare consumption). It will then be possible to study the effect of spa therapy on care consumption.

