

# An Interpretation of Preventive Care Spent in Italy and a New Opportunity after COVID-19 Pandemia

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## ABSTRACT

Covid-19 pandemic killed many older age people in Italy. Based on Italian Sanitary System, most of the deads have many chonical diseases. It can be a correlation between chronic diseases and preventive care. In fact preventive care is indispensable to reduce future sanitary spent in Italy, especially based on aging forecasts. So, sanitary decisions must be directed in preventive care, for future generations.

**Keywords:** Covid-19; Preventive care; Diabetes; Hypertension

## INTRODUCTION

As of 31/10/2020, 11:06 GMT, Coronavirus disease is a pandemic virus disease that has resulted in >46.0 million cases and >1.19 million deaths [1]. In Italy as of 30/10/2020, Covid-19 has resulted in 647674 cases and 38321 deaths [2].

## METHODS

This study considerers ISS (Istituto Superiore di Sanità, National Sanitary System) data about Covid-19, mortality range and chronic disease, and an analysis about the spent in prevention care in Internet database [3] and in CREA database of University of Tor Vergata [4].

## DATA ANALYSIS

Reporting Italian Sanitary System data of October 4 2020, Hypertension is the most concomitant pathology in Covid-19 deaths, followed by ischemic cardiomyopathy, type-2 diabetes, and atrial fibrillations. The most concomitant pathologies have cardiovascular origin (shown in Table 1) [5]. Average of age is 80 years (men 79, women 85), median is 82 years. 62.6 % people of total of the deaths have three or more chonical pathologies.

Pathologies	% women	% men	% total
Hypertension	67,2	65,0	65,8
Dementia	28,5	15,0	19,9

Type 2 diabetes	27,4	30,7	29,5
Atrial fibrillation	24,8	22,6	23,4
Ischemic cardiomyopathy	22,7	31,0	28,0
Chronic renal failure	19,0	21,3	20,5
Heart failure	18,1	14,3	16,0
Active Cancer in the last five years	16,5	16,9	16,8
Chronic Obstructive Polmunar Disease	13,2	19,3	17,1
Stroke	11,3	10,2	10,6
Obesity	10,3	10,4	10,4

**Table 1:** Major Concomitant pathologies in Italian Covid-19 deaths.

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Italy spent 8.8 % of GDP (Gross Domestic Product) in health care and 0.4 % in preventive care in 2018 (only 4.6 % of total health care spending) (Tables 2 and 3) [3,4].

Number of Pathologies	% women	% men	% total
No Pathologies	2,4	4,5	2,8
One Pathology	12,2	14,3	13,6
Two Pathologies	19,4	20,5	20,1
Three or more Pathologies	65,8	60,7	62,6

**Table 2:** % of deaths for concomitant pathologies.

	% of GDP in health care	% of GDP in health care change 2008-2018	% of total public spent 2006	% of total public spent 2016
Austria	10,3	0,6	2,1	2,0
Belgium	10,4	1,0	2,2	2,9
Czech Republic	7,4	1,1	2,0	3,1
Denmark	10,4	0,9	2,4	3,0
Estonia	6,4	0,7	2,5	2,4
Finland	9,1	1,1	1,8	1,4
France	11,2	0,7	2,8	2,2
Germany	11,2	1,1	-	1,8
Greece	7,8	-1,5	2,1	2,0
Hungary	6,6	-0,5	4,0	2,6
Ireland	6,9	-2,2	-	2,2
Italy	8,8	0,3	3,5	4,7
Latvia	5,9	0,2	3,3	3,1
Lithuania	6,8	0,75	2,2	3,0
Luxembourg	5,4	-1,1	2,2	2,4
Netherlands	9,9	0,5	3,3	3,0
Poland	6,3	-0,1	2,6	3,0
Portugal	9,1	-0,3	1,5	1,0

Slovak Republic	6,7	-0,2	2,6	0,7
Slovenia	7,9	0,1	3,8	2,4
Spain	8,9	0,6	3,3	2,8
Sweden	11,0	2,7	2,9	3,1
United Kingdom	9,8	2,1	-	5,1
Average	8,4	-	-	3,0

**Table 3:** % of GDP spent in health care in Europe in 2018 and in preventive care in 2006 and 2016.

## DISCUSSION

Hypertension is the most prevalent cardiovascular pathology, estimated at 26,4 % of all adult population in 2000 and with a forecast of 29,2 % in 2025 in the World; in Europe prevalence is estimated in a range of 36%-52% [6-8].

Data from the International Diabetes Federation estimate that more than 387 million people worldwide are diagnosed with this disease and by 2035 this number will rise to 592 million people, with a prevalence of 629 million of diabetes patients with 20-79 years by 2045 [9,10]. The economic burden from diabetes care is estimated in USD (USA Dollars) 776 billion by 2045. In Italy, from ISS data (Progetto Cuore), prevalence of diabetes is 10 % in men and 7 % in women (and 8 % of men and 4 % of women in a limit condition); in age range 65-74 prevalence of diabetes is 20 % in men and 15 % in women (12 % of all women in menopause are diabetic); prevalence of metabolic syndrome is 23 % in men and 21 % in women [11-14].

Prevalence of overweight people in the Americas is estimated at 64.2 % and at 59.6 % in Europe in 2015, and obese people is estimated at 28.3 % in the Americas and at 22.9 % in Europe. In Italy, according to the report "Osservasalute 2016" (ISS data), overweight people (older 18 years) are estimated at 35.3 % and obesity is estimated at 9.8-9.9 % in 2015 [15-17].

In Italy health care spent is 8.8 % of GDP in 2018 (CREA Tor Vergata data, shown in Table 3); this data is better of European average but minor than many States of West Europe; furthermore, Sanity Report of January 2019 evidence that Italy is only the eighth State in UE for per capita spent in Euros (88,4 € for person; United Kingdom spends 145,2 € for person) [18].

Covid-19 showed the importance of prevention about hypertension, diabetes and obesity. Prevention like sport activities (in Italy reporting ISS and CONI, Italian Olympic Committee, data, over 23 million of people, 39.1 % of total of population, does not physical activity during the week in 2017 [19]), no smoke and no alcohol, healthy eating are necessary to reduce future costs about ISS, to improve aging of people and reduce chronicle sick time in old age. We also remember future forecasts of age of population (in Italy people older 65 years are estimated at 33.1 % in 2065 [20]).

## CONCLUSION

Spent of preventive care in Italy is similar to the rest of Europe (in percentage of GDP), but not in per capita expenditure. Italian pathologies situation and older age prospective demonstrate an insufficient use of these resources. So, it is necessary reconsider the interventions in preventive care and rebuilt a new programming after Covid-19 pandemic. In fact Covid-19 pandemic shown a weakness of Italian oldest people, established by a largest number of death respect the rest of Europe, despite measures like an almost complete lock down for people.

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