

# Mortality rate in Switzerland and Italy in the days of Covid-19

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I am an Italian national who has been living and working in Switzerland for the past six years. I have observed the evolution of the Covid-19 epidemics from the perspective of these two countries. In this short text I would like to offer some considerations about the numbers of Swiss and Italian casualties in the pandemic months.

## Swiss data

The Federal Bureau of Statistics of my country of residence publishes, at a weekly rate, data about deaths (**all casualties**, not just Covid-related ones) divided by sex, age (classes of 5 years until 80 years old) and region. From this index page:

<https://www.bfs.admin.ch/bfs/en/home/statistics/population.html>

I obtain two tables:

- **Deaths per week by 5-year age group, sex and major region, 2000-2019:** contains consolidated data for the first 20 years of the century.
- **Deaths per week by 5-year age group, sex and major region:** contains more recent data (until one week before the date of publishing), that are still subject to modification in the future. The table is updated weekly.

My intention in analyzing this data has been to find out how different the rate of deaths per week in this country has been in the pandemic months, compared to the previous years' seasonal cycle. I also wanted to observe, in plotted form, the differences in rate between different age classes.

From the available data, I can analyze any 5-year age range until 80 years old. The results I attach to this document focus on two age ranges: those who died at an age up to 69 years old, and those who died at an age of 70 or more.

I first computed the average number of fatalities per calendar week for the 20 years from 2000 to 2019. I then plotted that average alongside the data for each specific year until the present time. The pages contain two pairs of lines, one for each age group.

You can find these plots attached to the present document (App. **A**).

## Observations

The curve showing the mortality of people younger than 70 years old is:

- Much lower in value compared to the other one: the number of people who die each week under 70 is about five times lower than that of 70+ deaths.
- Practically constant in the seasonal cycle. In this country, about 200 individuals aged less than 70 die each week, with a regularity that brings a Swiss clockwork to mind. On the contrary, a marked seasonal cycle is evident in the other curve, with an increase in mortality rate in the winter months and a decrease in the summer months for those 70 or older.
- Practically constant along the past decades. The same 200 deaths per week for more than 21 years. The curve of 70+, on the other hand, shows abnormal mortality peaks for the winters of 1999-2000, 2004-05, 2008-09, 2014-15 and 2016-17, and a marked above-average irregularity at least from the fall of 2017, all of this happening before the pandemic months.

## Deductions

The first conclusion I reached by studying this data was a comforting one: as a 60-year-old resident in Switzerland, *my statistical risk of dying has not been higher than normal* in the whole pandemic period. This is in stark contrast with the insistent fears that media has been spreading with conformist monotony since February, 2020.

My second conclusion is that *the first wave of Covid-19 has been*, in this country, *comparable in terms of mortality* to the two abnormally lethal winters of 2015 and 2017. In those two winters, nobody had felt the need to freeze the world economy, and to try to impose an insufficiently tested medical treatment to large parts of the human population, most of them in good health.

## The second wave

The second wave has hit this country in mid-october, 2020. As you can see in the graph, it has caused a much higher number of casualties *in the aged population* than anything else that has hit this country at least since year 2000. For a period of about two months, the rate of 70+ casualties hovered around the level of 2000 per week, almost double of the 20-year average for those weeks.

The death rate rose suddenly in mid-October, and began decreasing, again quite rapidly, in the second half of December. By the end of the year, when the vaccination campaign eventually began, the rate of deaths was already lower than that of the first wave, and the rate of descent has not become more rapid after that fateful moment. I thus cannot see how any improvement in the situation could be associated to the effect of the vaccines.

On the other hand, I know for sure that on Monday, October 19th 2020, for the first time in this country the imposition to wear a face mask in shops and office spaces has become effective.

Face mask use had been made compulsory on public transport on July, 6th. I can associate to that first measure no positive consequence in the death rates. What is certain is that there is a

marked coincidence in time between the order to wear masks in shops and the very steep **rise** of second-wave casualties.

It is in all cases important to notice that the “second wave” has exhausted its effects a long time ago. *Since February, 2021, the weekly rate of deaths for both old and young people has constantly remained below-average.* During the past month, less people have been dying per week in Switzerland than at any moment during the past 21 years.

Nevertheless, in this country face mask use is still compulsory, and restaurants, that had been closed since last November, have been allowed only last week to serve clients sitting **only** at open-air tables, *provided clients accept to have their presence (name, surname, address, phone number) recorded.*

**But a pandemic that does not kill is not a pandemic.**

## WHO data

I was surprised at not hearing anybody mentioning the fact that, in this country, the second wave has been much more lethal for old people (and only for them), compared to the first one. The media seem to be dedicating most of their air-time to Covid-19, and I had expected such an evident fact to enter at some point into the discussion.

I had a look at the reports that the WHO publishes each week about the pandemic. These reports can be downloaded from this page:

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

These documents contain the number of Covid-related deaths reported by every country in the world to the WHO for the previous week. I found out that the number of Swiss Covid-19 deaths, during the two months of highest death toll for the elderly, counted for just over half of the over-average deaths.

In specific, I extracted these values, referring to November and December, 2020 (calendar weeks 45-53):

- **7875** 70+ deaths in excess of the average for years 2000-2019.
- **26** 0-69 deaths *less* than the average for years 2000-2019.
- **4417** Covid-related casualties communicated by the Swiss authorities to the WHO.

There is a discrepancy of more than **3400** people, who have died above the average, and whose death could not be associated to Covid-19. There seems to have been a geriatric illness that caused the death of thousands of individuals in November and December, 2020.

In App. **B** you can see a plot of this discrepancy along the weeks.

## Question

# What did these thousands of human beings die from?

## Italian data

The Italian national statistical institute (**ISTAT**) publishes data that is comparable with the Swiss material I used to produce the plots I described above. As of the publication date of this article, I was able to download from this URL:

<https://www.istat.it/it/archivio/240401>

a file called:

[Dataset-decessi-comunali-giornalieri-30marzo-2021.zip](#)

which contains records about deaths per day in every Italian municipality, per sex and tabulated for 22 age classes.

Data goes back to 2011, and is updated to March, 2021, but data regarding 2021 is incomplete. I was thus able to compute a 9-year average (2011-2019) and compare it to data for each year until 2020.

I include in this document (see App. **C**) the statistics relating to the four Italian regions that border with Switzerland (Valle d'Aosta, Piemonte, Lombardia and Trentino-Alto Adige). These four regions have a population of almost 15.5 million. This compares with a Swiss population of 8.5 million.

Some observations:

- In northern Italy, the age split of 70 years does not leave younger persons unaffected. To obtain an unchanged mortality curve in 2020 (for both waves), I must lower the split to 55 years.
- The first wave has hit northern Italy much harder than the second one. Swiss and northern Italian mortality rate values for the second wave are comparable, the same cannot be said for the first one.
- No recent data are available as of today, but it is evident that second-wave mortality in northern Italy has begun to drop much earlier than the arrival of the vaccines. There is even a tendency for the rate to start increasing once more at the beginning of the vaccination campaign.

It is difficult for me to understand why the Swiss and northern Italian data for the first wave can be so different. People in the two countries are similar, after all, and borders have never been able to stop viruses.

Only the differences between the policies adopted by the two countries can justify what is observed.

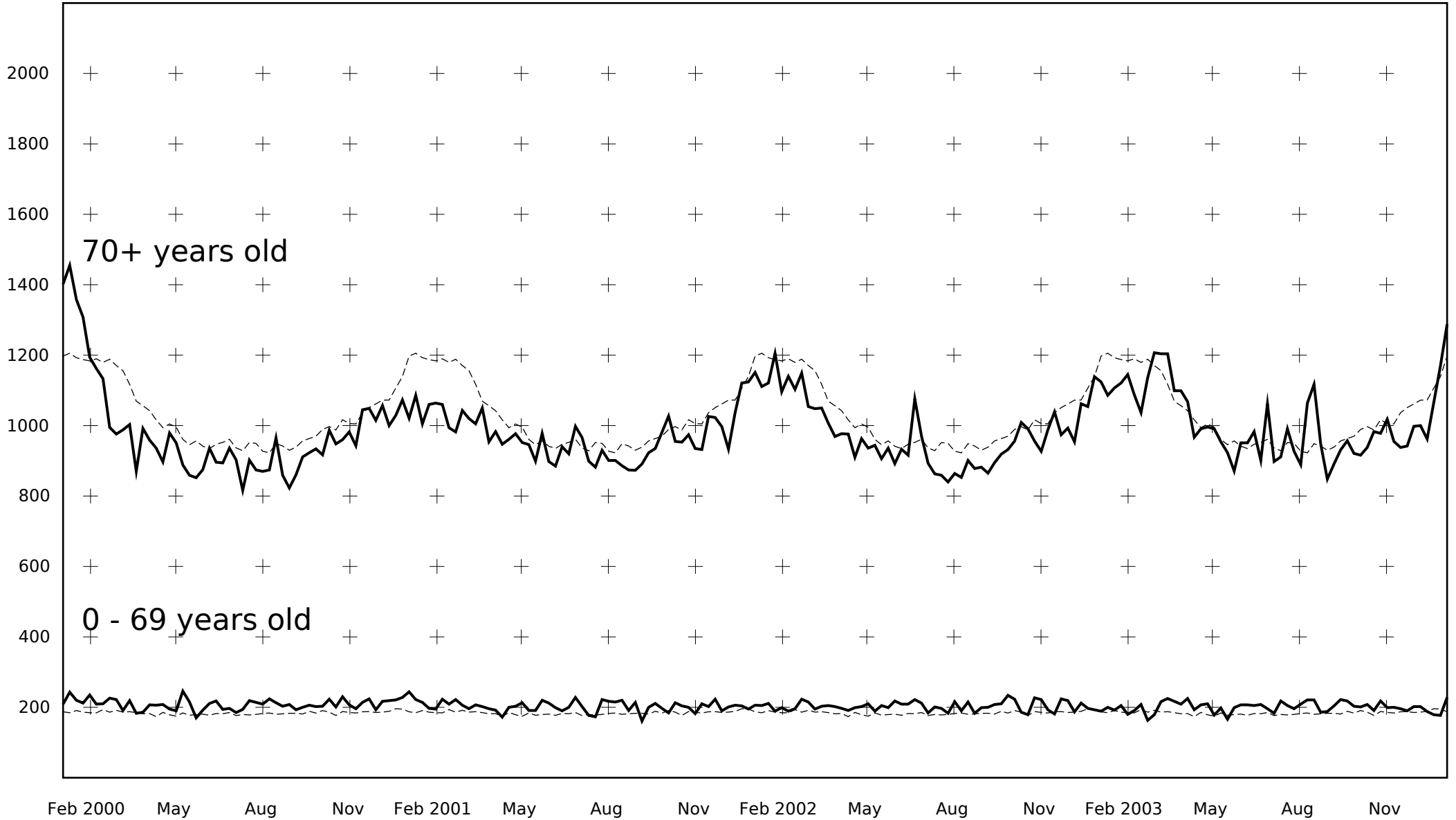
Specifically, the policies adopted by Switzerland *during the first wave* have been much more efficient than those adopted by Italy in avoiding large amounts of deaths. On the other hand, *during the second wave* the two countries appear to have adopted equally unsatisfactory policies.

## Appendices

### A Swiss data

# Weekly mortality in Switzerland - 2000-2003

Age division: 69 years

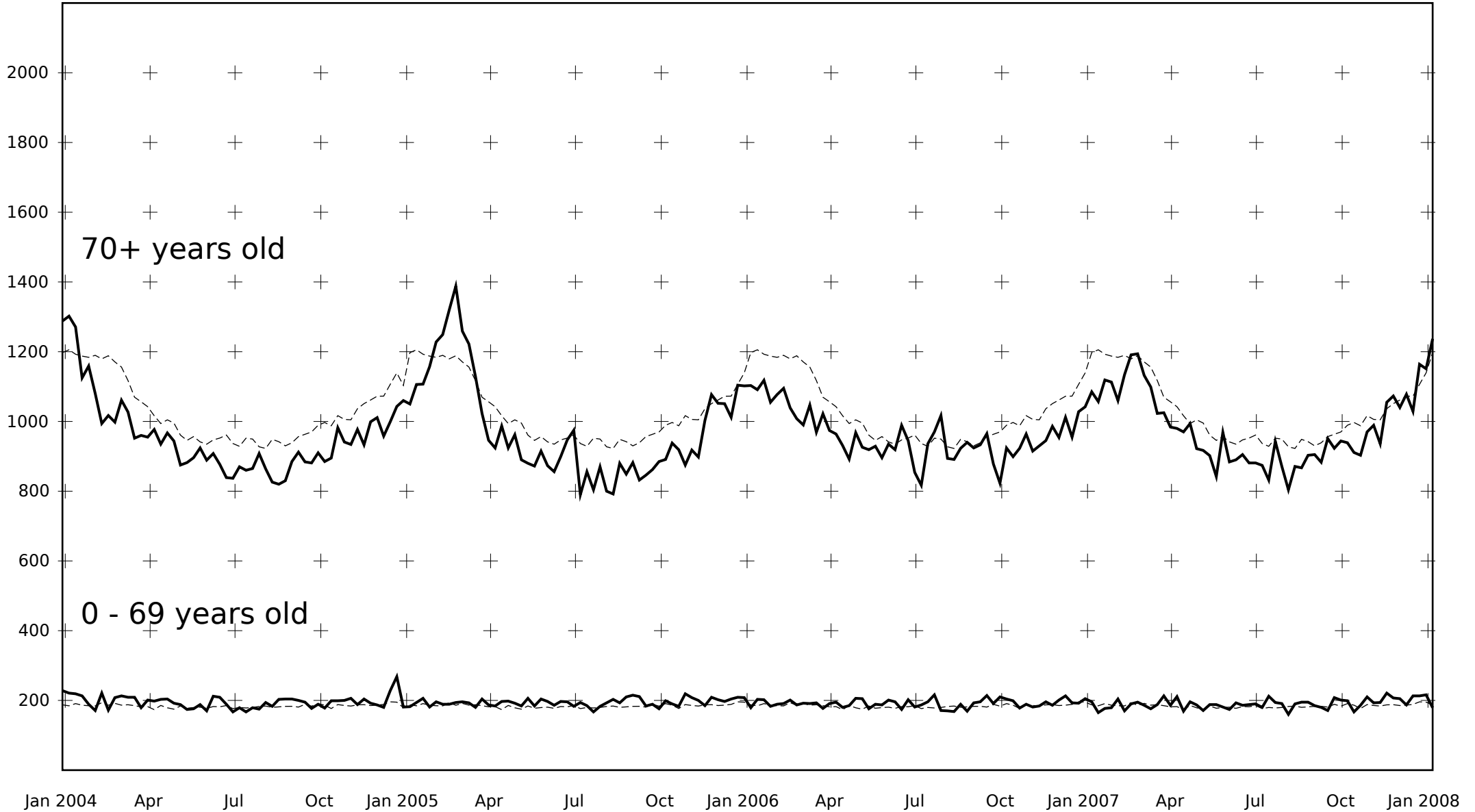


— Given week

- - - Average 2000-2019

# Weekly mortality in Switzerland - 2004-2007

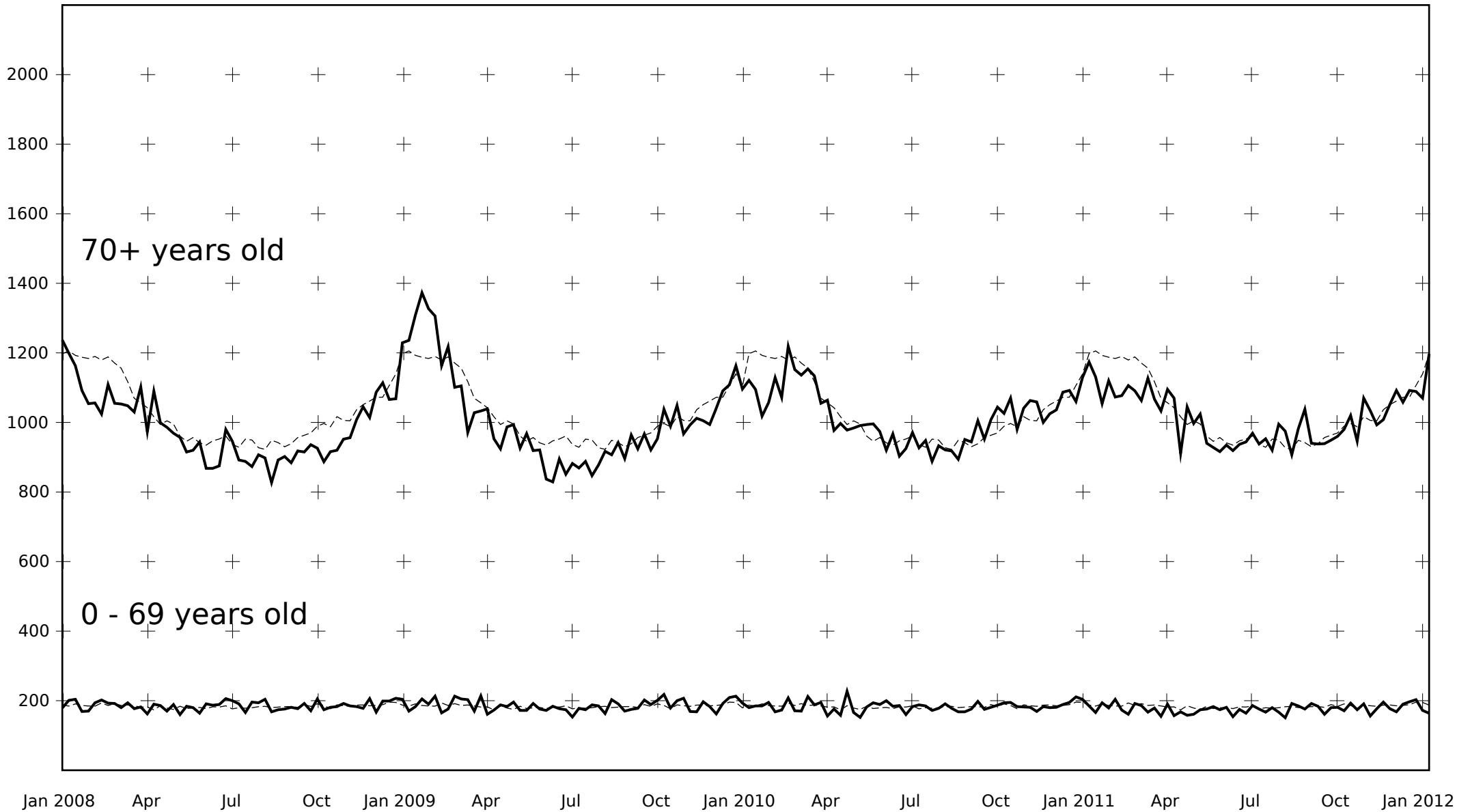
## Age division: 69 years



— Given week  
- - - Average 2000-2019

# Weekly mortality in Switzerland - 2008-2011

Age division: 69 years

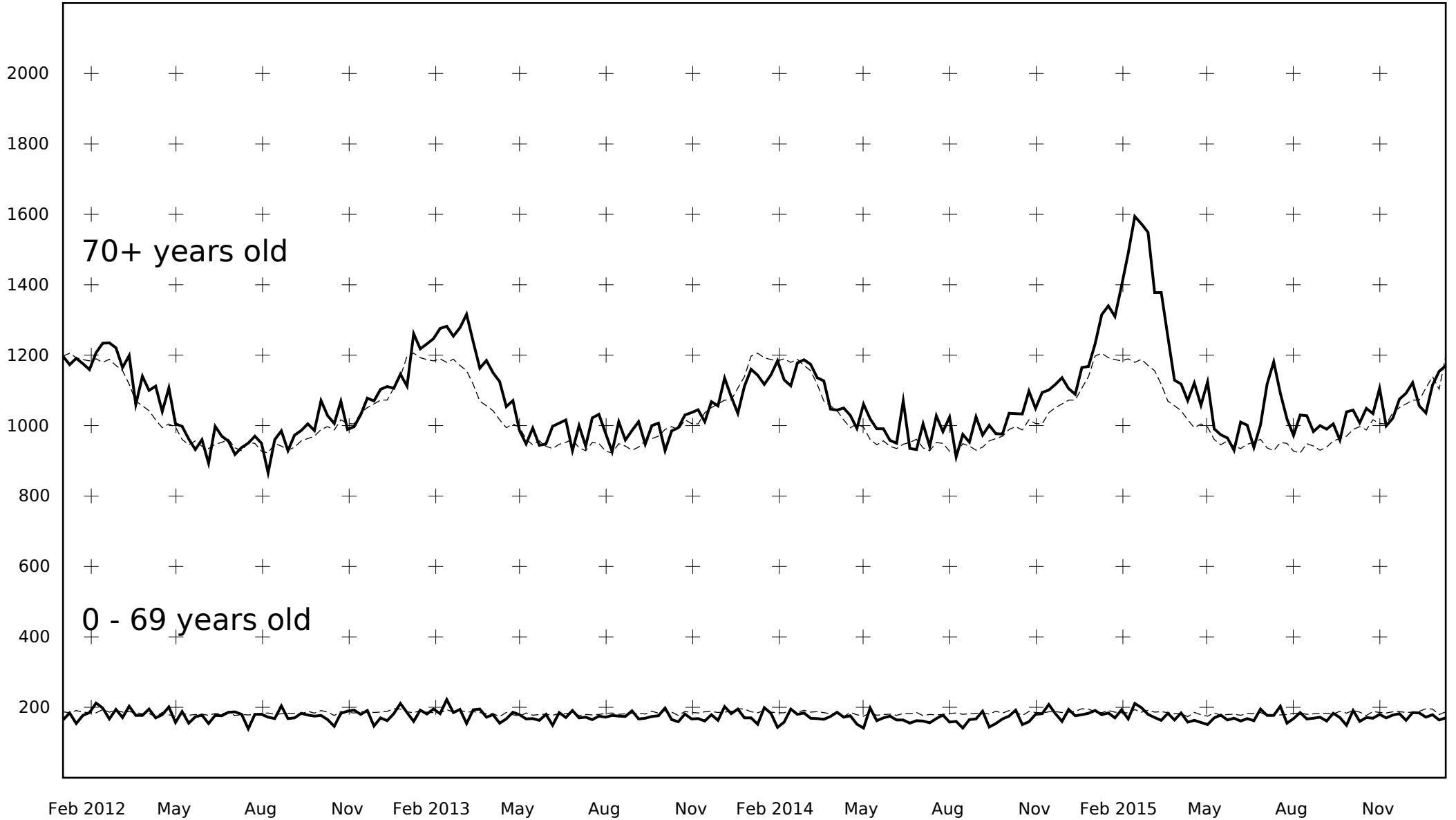


— Given week  
- - - Average 2000-2019



# Weekly mortality in Switzerland - 2012-2015

Age division: 69 years

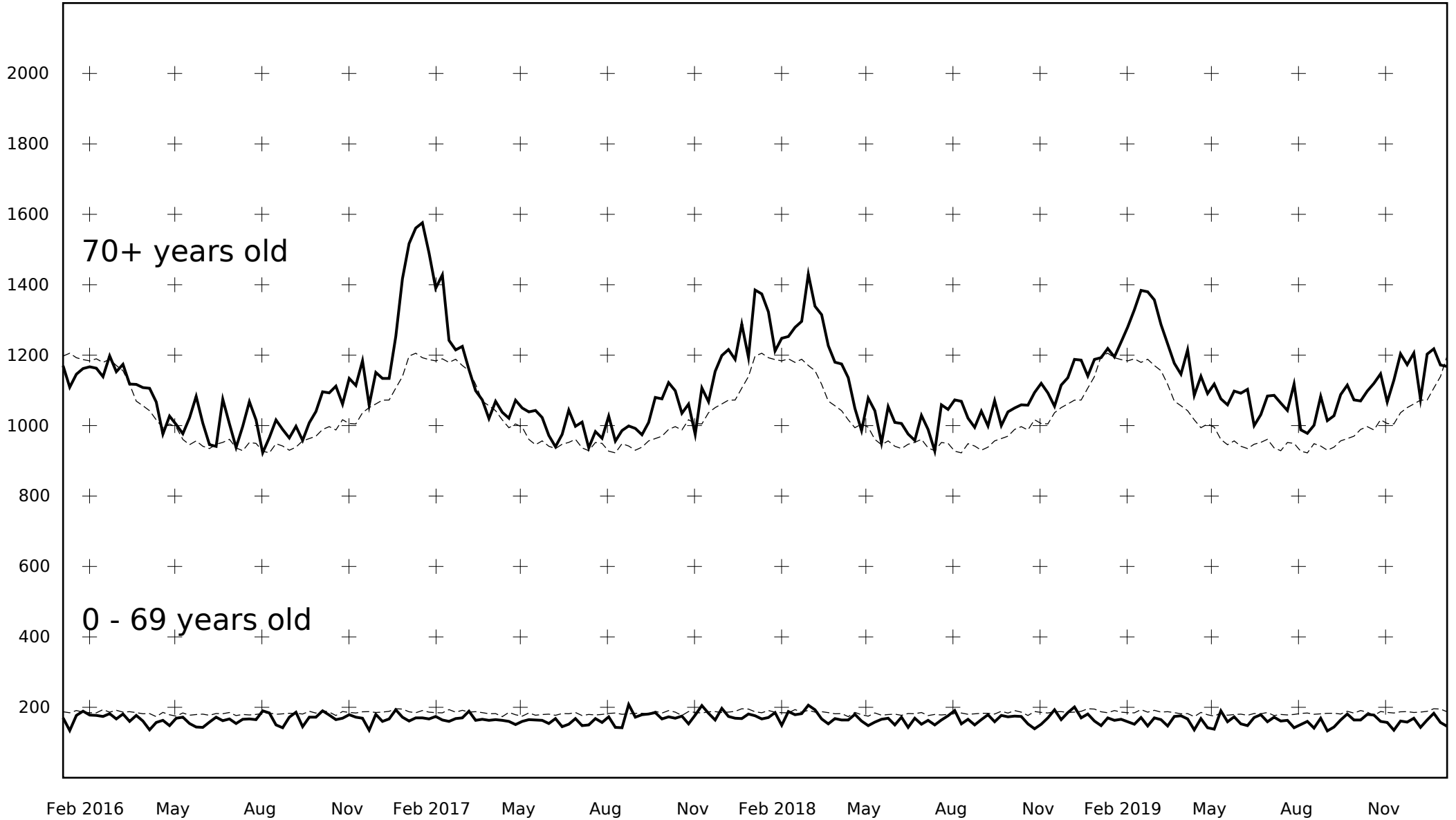


— Given week

- - - Average 2000-2019

# Weekly mortality in Switzerland - 2016-2019

## Age division: 69 years

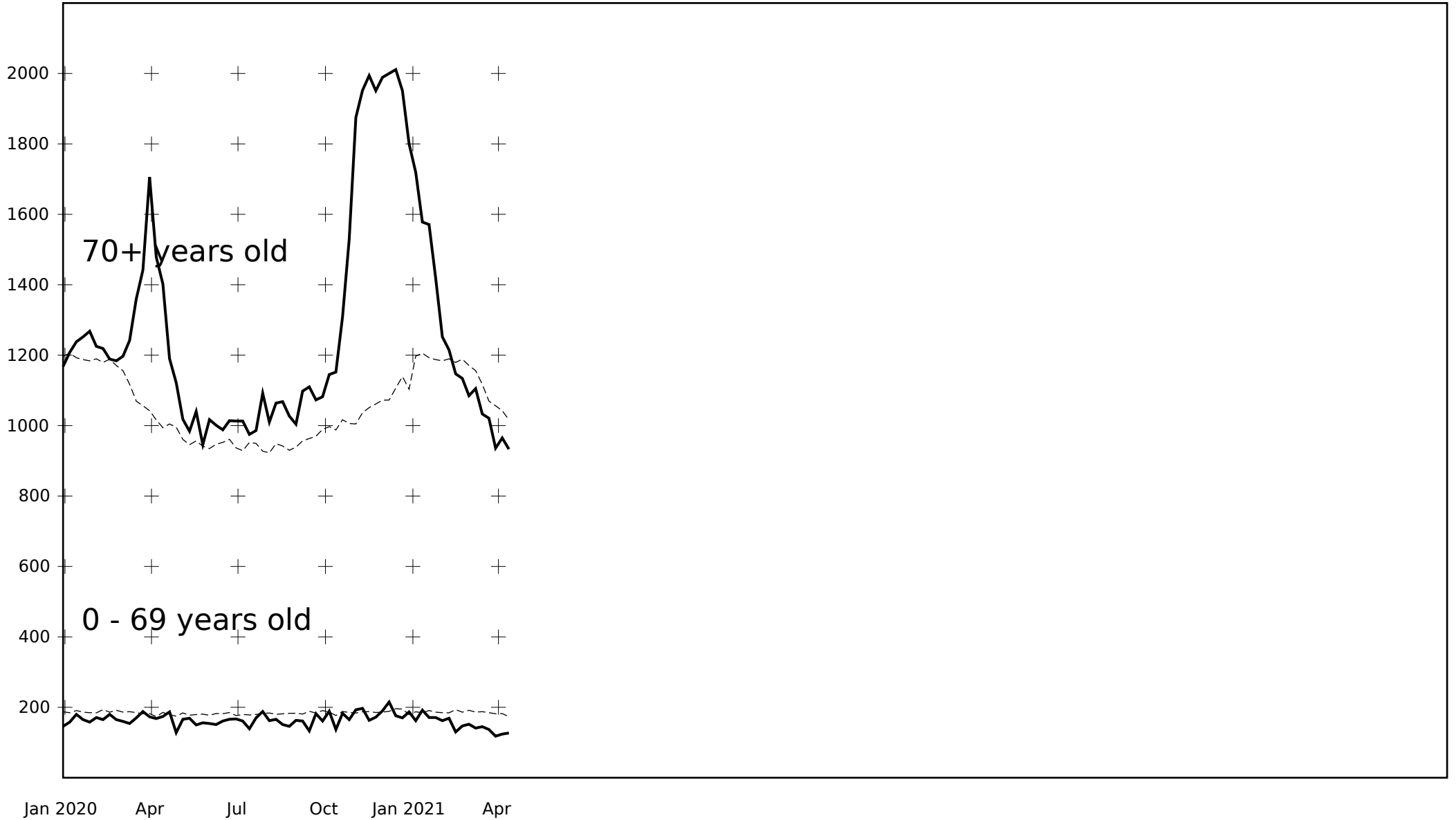


— Given week

- - - Average 2000-2019

# Weekly mortality in Switzerland - 2020-2021

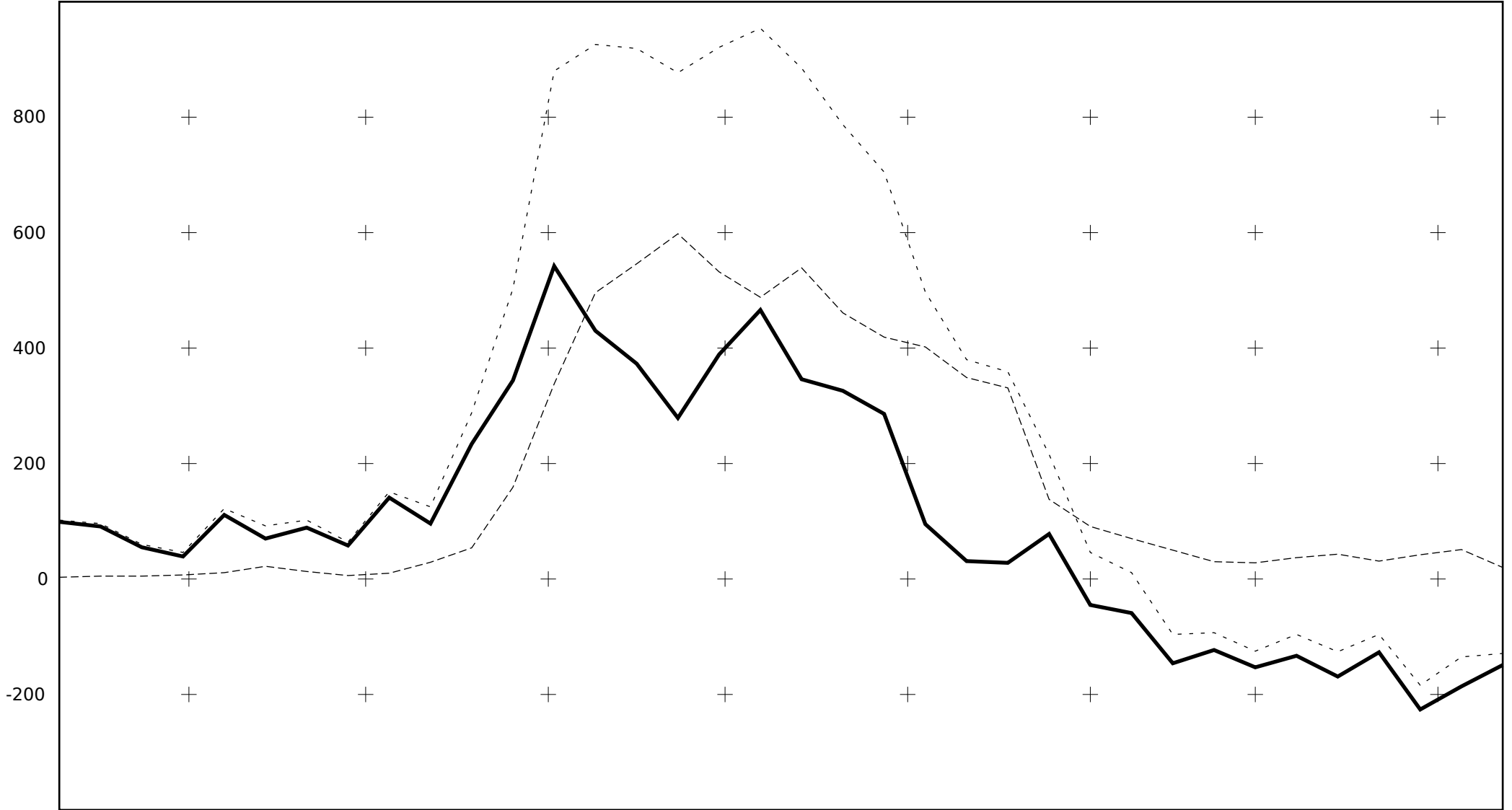
## Age division: 69 years



— Given week  
- - - Average 2000-2019

## B Discrepancy between mortality increase and Covid-19 deaths

# Switzerland, "second wave": discrepancy between mortality due to Covid and difference between total mortality and 2000-2019 average

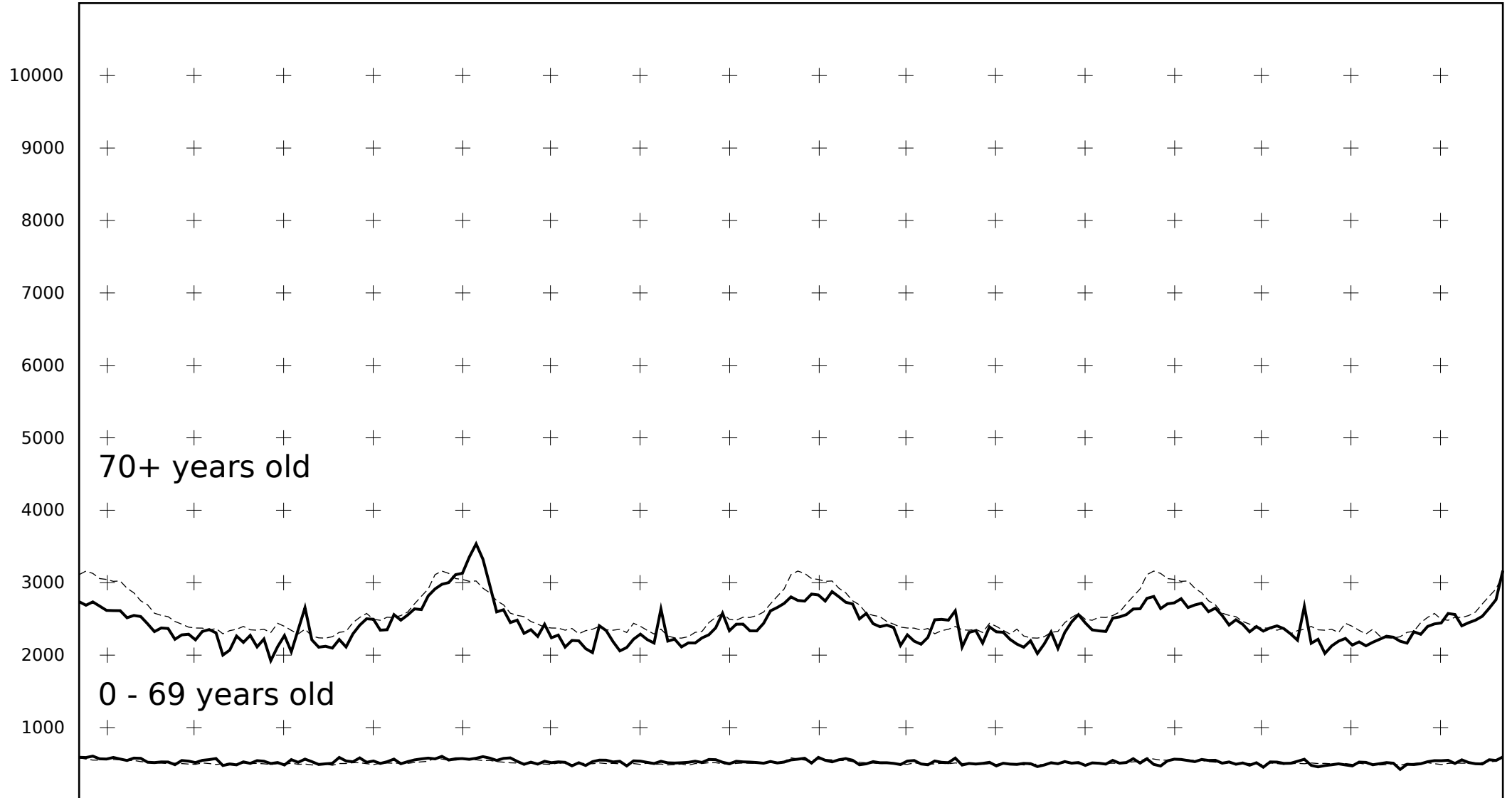


- Weekly mortality due to covid (data provided to WHO)
- ..... Difference between total mortality in given week and 2000-2019 average
- Discrepancy

## C Italian data

# Weekly mortality in the Italian regions that border with Switzerland - 2011-2014

## Age division: 69 years

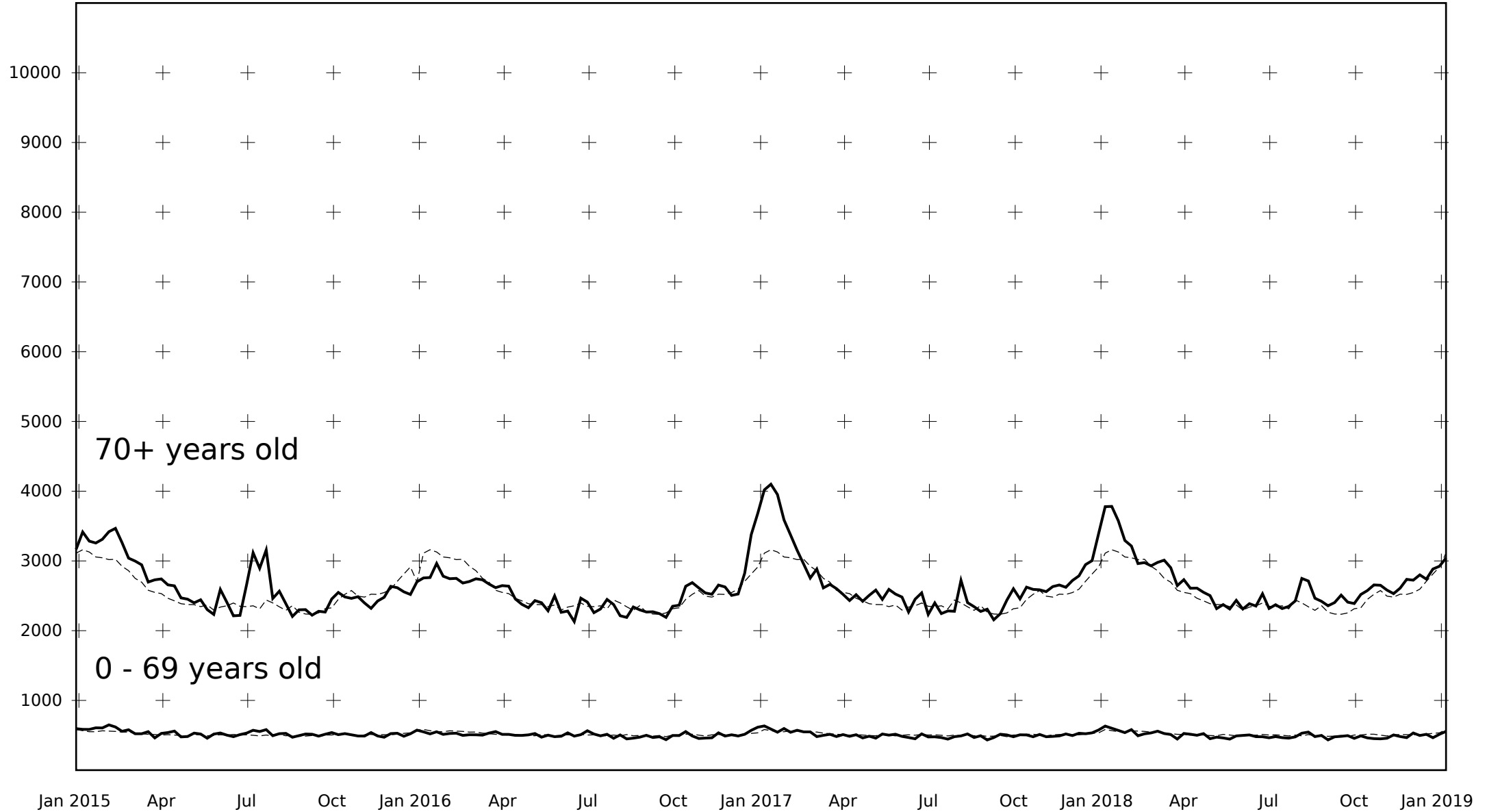


Feb 2011 May Aug Nov Feb 2012 May Aug Nov Feb 2013 May Aug Nov Feb 2014 May Aug Nov

— Given week  
- - - Average 2011-2019

# Weekly mortality in the Italian regions that border with Switzerland - 2015-2018

## Age division: 69 years



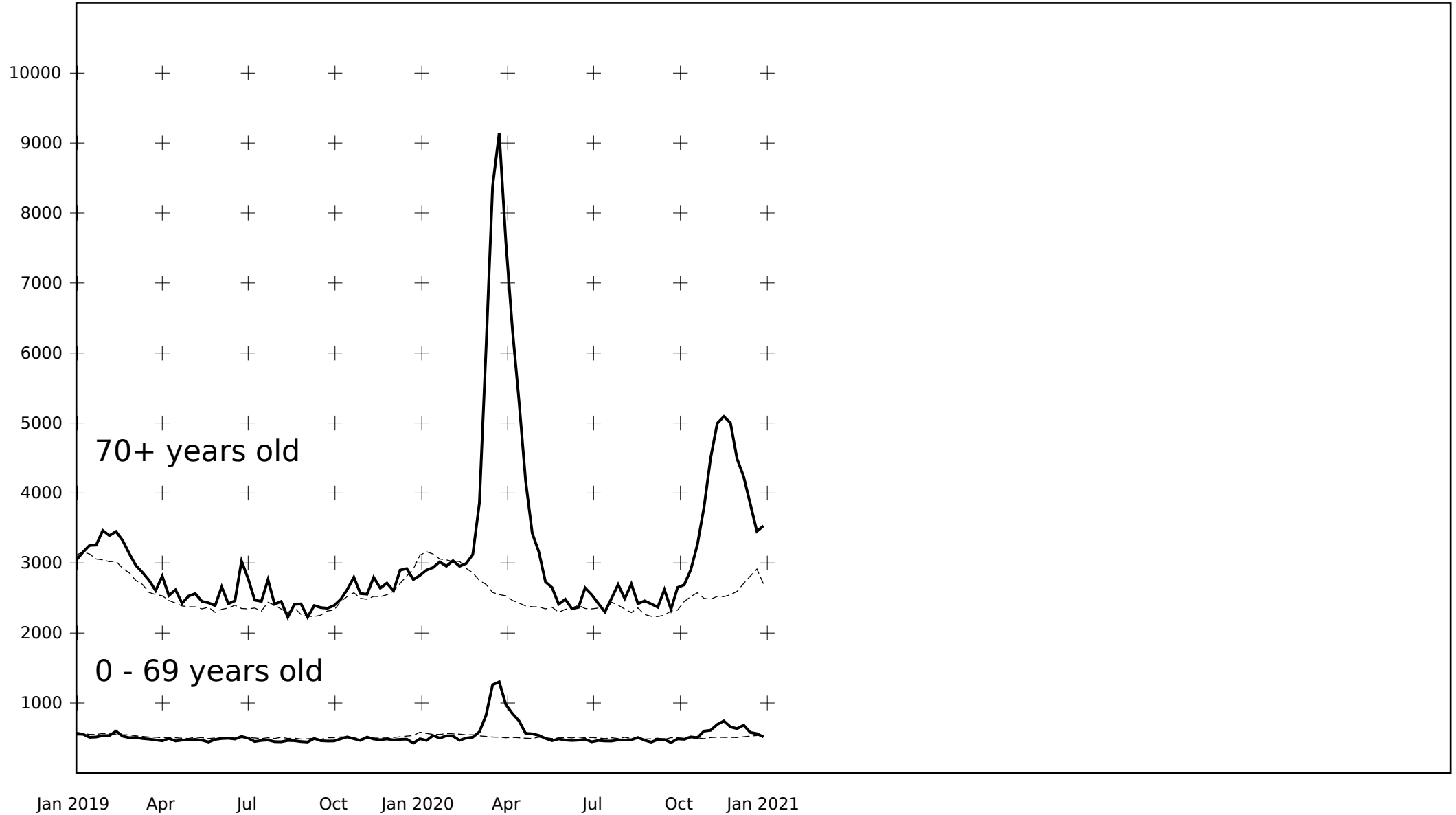
— Given week

- - - Average 2011-2019



# Weekly mortality in the Italian regions that border with Switzerland - 2019-2020

## Age division: 69 years



— Given week  
- - - Average 2011-2019