

# The CBS underestimates excess mortality

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## 1 Introduction

This artikel shows that the Dutch Central Bureau of Statistics (CBS) overestimates expected mortality because of covid and underestimates excess mortality.

## 2 The CBS underestimates excess mortality

In the report ‘Kernprognose 2019-2026’ (KP19) from December 2019 the CBS estimates the expected mortality for 2021 to be 155.232 (CBS, 2019). This was pre-pandemic. These are usually reliable estimates by the CBS. The CBS adjusts these estimates yearly. Without grave disturbances these adjustments are marginal. I use this estimate as base.

In 2020 approximately 21.000 people died from covid. I estimate that 8.000 of these 21.000 would have lived for another year and would have died in 2021\*. Hence for 2021 I lower the estimated mortality from KP19 for 2021 with 8.000 to 147.232. This then is the expected mortality with covid as the only disturbing factor.

In the report ‘Bevolkingsprognose 2020-2070’ (BP20) from December 2020 the CBS estimates the expected mortality for 2021 at 154.887 (CBS, 2020). This is 345 less then the estimate of 155.232 from KP19 and 7.655 more than the expected mortality with covid as the only disturbing factor. According to the CBS the change from covid (here: 8.000) is included in this estimate. Hence the estimate from the CBS contains a second disturbing factor of the size 7.655. From this we get table 1.

Table 1: Expected mortality 2021

	CBS	Only covid
Expected mortality KP19	155.232	155.232
- Died in 2020 from covid	8.000	8.000
- Second disturbance BP20	<u>7.655</u>	—
<u>Aanpassing</u>	<u>345</u>	<u>8.000</u>
Expected mortality	154.887	147.232

It is the second disturbance of 7.655 in BP20 that gives an overestimation of the expected mortality by the CBS. Excess mortality is calculated as real mortality minus expected mortality (CBS, n.d.). The estimate from the CBS then underestimates the excess mortality with this 7.655. Mortality in 2021 was 170.972 and this gives table 2.

Table 2: Excess mortality 2021

	CBS	Only covid	Difference
Real mortality	170.972	170.972	0
<u>Expected mortality</u>	<u>154.887</u>	<u>147.232</u>	<u>7.655</u>
Excess mortality	154.887	147.232	7.655

According to the CBS without the pandemic the estimate of the expected mortality in BP20 would increase accordingly. This would be equal to  $154.887 + 8.00 = 162.887$ . Compared to the estimate of 155.232 from KP19 this is a remarkable increase. The CBS has not (yet) explained this increase.

### 3 Conclusion

The CBS seems to underestimate the excess mortality. Note that with another estimate than 8.000 the reasoning remains the same. For calculating a possible underestimation of excess mortality in another country one can use the appropriate numbers for that specific country.

\* : In 2020 approximately 21.000 people died from covid. These included many very old people who would have died in 2021 without covid. I estimate this group to be 8.000. With another estimate, say 6.000, the reasoning remains the same. With so many older people who have died an estimate of 1.000 or 2.000 is not realistic. Hence the estimate, although not precise, has to be significant. Therefore it is relevant.

## Literatuur

CBS (2019, 16 december). *Prognose bevolking; kerncijfers, 2019-2060*. <https://www.cbs.nl/nl-nl/cijfers/detail/84645NED>



The screenshot shows the StatLine interface for the topic 'Prognose bevolking; kerncijfers, 2019-2060'. It includes a table with columns for 'Prognose' and 'Overledenen' (deceased), and rows for the years 2021 and 2022. The source is cited as 'Bron: CBS'.

		Onderwerp ▼
		Prognose(-Interval) ▼
		Overledenen
		Perioden ▼
		aantal
Prognose	2021	155 232
	2022	157 173

Bron: CBS

CBS (z.d.). *Vragen en antwoorden over de sterftecijfers*. <https://www.cbs.nl/nl-nl/faq/corona/medisch/vragen-en-antwoorden-over-de-sterftecijfers>

CBS (2022, 23 juni). 3. *Beschrijving (over)sterfte en doodsoorzaken in 2020 en 2021*. <https://www.cbs.nl/nl-nl/longread/rapportages/2022/sterfte-en-oversterfte-in-2020-en-2021/3-beschrijving-over-sterfte-en-doodsoorzaken-in-2020-en-2021>

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