

LETTER TO THE EDITOR

Numbers on injectable treatments in the Netherlands in 2016

Editor

Objective data on the number of cosmetic injectable treatments (botulinum toxin A and fillers) performed annually are lacking. These numbers would be helpful in establishing the importance of this area in medicine from a medico-social perspective and to determine the incidence of side-effect. Numbers on the number of treatments or global volumes used, provided by the American Society of Plastic Surgeons (ASPS) and the International Society of Aesthetic Plastic Surgery, are restricted to their members.^{1,2} No organization has been able to quantify the use of cosmetic injectable treatments nationally across all specialities. The objective of the current postal survey was to identify the physicians administering cosmetic injectable treatments and quantify the number of treatments given.

The sources that we used to identify the doctors performing cosmetic injectable treatments among the 86,588 medical doctors in the Netherlands were as follows: Google Internet Search, Dutch Archive Data Care Register and memberships lists of professional specialty associations. Doctors were primarily asked for the number of treatments performed in 2016. Should this number be unknown, and they were requested to give the number of BTX-A vials purchased or the number of zones treated. Depending on the manufacturing company, 2.5–5 zones can be treated with one vial. To recalculate other data to numbers of treatments performed, we assumed an average of 3.75 zones per vial. We also assumed an average of 1.5 zones per patient. In case of filler

treatments, it is estimated that an average of one syringe per patient is used and one syringe is used by a doctor on average one zone. So the numbers of vials used or zones treated were all regarded as one treatment. Doctors were asked to indicate whether their numbers were exact or an estimate. In case of an estimate, we assumed the uncertainty to be $\pm 20\%$.

The search yielded a total of 329 eligible doctors (0.0066%) who were sent a questionnaire by a notary public ensuring the anonymity of participants.

A total of 122 responded (response rate of 37%), of whom 60 (49%) provided exact numbers, 62 (51%) gave estimates. The patient male:female ratio was 1:6.4. The results are given in Tables 1 and 2.

The estimated number of injections performed in the Netherlands in 2016 with BTX-A was a little more than 250,000 and with filler almost 140,000. As both the Dutch Society of plastic surgeons and Dutch Society of cosmetic doctors recommend treating only persons between 18 and 70 years of age, a total of 5,742,227³ women and 5,781,707³ men were eligible for treatment. Combined with the male:female ratio and the fact that treatments with BTX-A and fillers are commonly given, respectively, twice and once yearly (Velthuis *et al.*, unpublished results), this would mean that in the Netherlands in 2016, one of every 53 women was treated with BTX-A and one of every 49 with fillers. For men, the number is one of 342 ($5,781,707 / (0.135 \times 125,000)$) with BTX-A and one of 305 ($5,781,707 / (0.135 \times 140,000)$) with fillers. As many, but not all patients, combine BTX-A and fillers treatments, the number of people undergoing injectable treatment (either BTX-A or fillers) is likely to be higher.

The financial expenditure on cosmetics in the Netherlands in 2016 approximates the West European average.⁴ Therefore, it

Table 1 Numbers of botulinum toxin A given by respondents ($N = 122$; 37%), recalculated to actual treatments and extrapolated to 100% response.

Botulinum toxin	Response (Calculating factor)	Number given	Number calculated	Number extrapolated to 100% ($\pm 20\%$)
Factual $N = 60$	Treatments ($\times 1$)	45,924	45,924	124,119
	Vials ($\times 3.75/1.5$)	6,740	16,850	45,541
	Areas ($\times 1/1.5$)	2,993	1,995	5,392
Estimate $N = 62$	Treatments ($\times 1$)	20,939	20,939	56,592 (45,274–67,910)
	Vials ($\times 3.75/1.5$)	2,982	7,455	20,149 (16,119–24,179)
	Areas ($\times 1/1.5$)	987	658	1,778 (1,422–2,134)
			Total	253,571 (237,867–269,275)

Table 2 Numbers of fillers given by respondents ($N = 122$; 37%), recalculated to actual treatments and extrapolated to 100% response.

Fillers	Response (calculating factor)	Number given	Number calculated	Number extrapolated to 100% ($\pm 20\%$)
Factual $N = 60$	Treatments ($\times 1$)	30.387	30.387	82.127
	Vials ($\times 1$)	4.020	4.020	10.864
	Areas ($\times 1$)	871	871	2.354
Estimate $N = 62$	Treatments ($\times 1$)	13.276	13.276	35.881 (28.705–43.057)
	Vials ($\times 1$)	2.328	2.328	6.292 (5034–7550)
	Areas ($\times 1$)	362	362	978 (782–1174)
			Total	138.496 (129.866–147.126)

can be argued that the attitude of the Dutch people towards medical cosmetic treatments is comparable to that in other Western European countries.

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2 International Society of Aesthetic Plastic Surgery. The International study on aesthetic/cosmetic procedures performed in 2016. 2016 <http://www.isaps.org/Media/Default/Current%20News/GlobalStatistics2016.pdf>

3 Dutch Bureau of Statistics. CBS. January 2016. <http://statline.cbs.nl/Statweb/selection/?VW=T&DM=SLNL&PA=03759ned&D1=2-3,6,9,12&D2=129-132&D3=0-4&D4=28&HDR=T&STB=G2,G3,G1>

4 Cosmetics Europe. Annual Report 2016. https://www.cosmeticseurope.eu/files/3414/9738/2776/CE_Annual_Report_2016.pdf

DOI: 10.1111/jdv.14877

References

- 1 American Society of Plastic Surgeons. National plastic surgery statistics: Cosmetic and reconstructive procedure trends. 2016 <https://www.plasticsurgery.org/documents/News/Statistics/2016/plastic-surgery-statistics-full-report-2016.pdf>