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International Contact Lens Prescribing in 2013

Our survey for 2013 includes information on more than 21,000 fits in 31 markets.

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Every year since 2001, we have reported data from an international survey of contact lens prescribing in *Contact Lens Spectrum*. This work, which first started in the United Kingdom, has now recorded information about more than 250,000 contact lens fits in 54 countries.

Our approach is simple. We ask contact lens prescribers (optometrists, opticians, or ophthalmologists, depending on the country) to record information about the first 10 contact lens fits that they perform after the start of the survey period each year. Each fit is then weighted to reflect the volume of fits performed by each practitioner. Information is collated

at our two survey offices in Manchester, United Kingdom and Waterloo, Canada. For this report of contact lens prescribing in 2013, we report data for 21,673 lens fits in 31 markets around the world.

Lens Wearer Demographics

Contact lenses are predominantly prescribed to females (63% of all fits) (Table 1). There is some variation among markets, with this value less than 50% in Spain and Nepal compared to as high as 75% in Bulgaria.

The average age of patients at lens fitting is higher than what's often presumed, at 32.0 years worldwide. However, significant differences are apparent among countries. The more

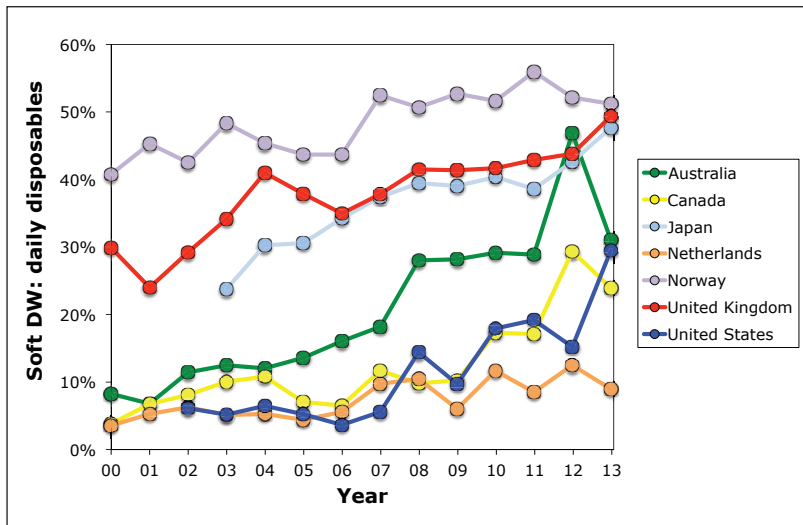


Figure 1. Daily disposable contact lens prescribing over time in seven major markets.

established contact lens markets in western Europe and North America have mean ages at fitting of about 35 years or older, while, in 2013, this parameter was 40.4 years for Sweden. On the other hand, markets in eastern Europe and Asia usually feature younger wearers, with the average age at fitting of 27.7 years, 26.3 years, and 24.8 years for Bulgaria, Indonesia, and South Korea, respectively.

Most fits around the world are to existing contact lens wearers, with only 36% reported as “new fits,” and most people are fitted on a full-time basis (four days per week or more of wear), with only 10% of patients fitted for part-time wear.

Country	Total fits	Mean (\pm SD) age	% female	% new fits	% part time (\leq 3days)
Austria (AT)	310	35.4 \pm 14.9	69%	20%	2%
Australia (AU)	458	38.2 \pm 15.9	66%	36%	24%
Bulgaria (BG)	747	27.7 \pm 9.3	75%	35%	1%
Canada (CA)	1080	34.7 \pm 15.2	66%	29%	19%
China (CN)	160	28.4 \pm 6.7	72%	31%	16%
Czech Republic (CZ)	370	30.0 \pm 13.6	63%	58%	22%
Germany (DE)	708	35.0 \pm 14.0	62%	33%	6%
Denmark (DK)	660	37.5 \pm 15.2	62%	48%	2%
Spain (ES)	1026	31.9 \pm 14.7	46%	55%	8%
France (FR)	1320	34.7 \pm 15.4	69%	41%	5%
Greece (GR)	370	33.9 \pm 13.1	56%	40%	8%
Hungary (HU)	470	27.9 \pm 11.7	61%	53%	9%
Indonesia (ID)	231	26.3 \pm 9.5	73%	53%	9%
Israel (IL)	1230	29.2 \pm 11.5	62%	28%	11%
India (IN)	90	29.5 \pm 11.1	70%	28%	4%
Iceland (IS)	62	27.1 \pm 14.3	52%	35%	35%
Japan (JP)	4290	29.0 \pm 13.9	68%	43%	13%
South Korea (KR)	370	24.8 \pm 7.2	75%	20%	10%
Lithuania (LT)	760	27.2 \pm 9.9	30%	24%	21%
Netherlands (NL)	1280	36.2 \pm 15.8	66%	32%	3%
Norway (NO)	768	36.3 \pm 15.3	58%	27%	6%
Nepal (NP)	221	24.3 \pm 7.7	48%	32%	0%
New Zealand (NZ)	945	35.8 \pm 15.8	63%	39%	20%
Poland (PL)	140	31.5 \pm 11.5	78%	43%	3%
Portugal (PT)	220	31.0 \pm 12.2	59%	43%	10%
Russia (RU)	660	27.3 \pm 10.1	38%	46%	3%
Sweden (SE)	450	40.4 \pm 16.0	64%	30%	16%
Slovenia (SI)	190	31.7 \pm 14.4	59%	21%	8%
Taiwan (TW)	556	26.0 \pm 9.0	76%	10%	0%
United Kingdom (UK)	781	36.8 \pm 15.9	63%	53%	23%
United States (US)	750	34.7 \pm 15.6	64%	25%	5%
Overall	21673	32.0 \pm 14.3	63%	36%	10%

Table 1. Demographic information for the 31 countries surveyed.

Country	Rigid (non OK)	OK	DD hydrogel	DD Si-H	Other DW hydrogel	Other DW Si-H	Soft EW
AT	23%	7%	7%	7%	17%	39%	0%
AU	5%	0%	17%	10%	10%	50%	7%
BG	7%	0%	2%	2%	12%	64%	14%
CA	4%	1%	16%	6%	14%	56%	4%
CN	2%	0%	30%	1%	38%	23%	6%
CZ	4%	0%	13%	10%	15%	55%	3%
DE	26%	1%	10%	7%	19%	37%	1%
DK	7%	1%	39%	8%	9%	27%	9%
ES	10%	3%	15%	7%	24%	40%	2%
FR	16%	2%	7%	10%	7%	57%	1%
GR	5%	0%	7%	3%	29%	50%	6%
HU	2%	1%	8%	11%	18%	54%	5%
ID	3%	0%	29%	3%	54%	12%	0%
IL	12%	0%	24%	7%	27%	26%	4%
IN	8%	0%	12%	0%	34%	45%	0%
IS	0%	0%	37%	0%	4%	59%	0%
JP	17%	0%	30%	9%	20%	23%	0%
KR	15%	0%	15%	5%	48%	14%	2%
LT	0%	0%	17%	6%	8%	50%	19%
NL	18%	5%	2%	4%	15%	54%	1%
NO	6%	0%	23%	12%	4%	29%	27%
NP	20%	0%	0%	0%	73%	7%	0%
NZ	16%	1%	21%	9%	5%	46%	2%
PL	19%	0%	2%	3%	0%	74%	2%
PT	5%	0%	9%	14%	17%	55%	0%
RU	1%	0%	5%	5%	18%	57%	13%
SE	1%	1%	31%	7%	11%	36%	14%
SI	50%	0%	0%	9%	2%	32%	7%
TW	3%	5%	51%	0%	42%	0%	0%
UK	7%	1%	30%	13%	8%	37%	4%
US	5%	1%	17%	8%	6%	54%	9%
Overall	12%	1%	18%	8%	16%	41%	5%

Table 2. Breakdown on all lens fits into seven key categories of lenses. (See Table 1 for country abbreviations.)

	AT	DE	ES	FR	IL	JP	NL	NP	NZ	SI	TW	UK	US	Overall	
Rigid lenses for new fits	23%	25%	11%	29%	10%	9%	20%	52%	11%	9%	21%	3%	4%	12%	
Rigid lenses for refits	32%	28%	15%	12%	12%	24%	24%	4%	21%	60%	6%	14%	6%	15%	
Materials	Low Dk (<40)	8%	7%	12%	1%	20%	11%	4%	0%	0%	5%	1%	35%	6%	
	Mid Dk (40-90)	60%	68%	15%	7%	57%	28%	52%	69%	23%	29%	25%	51%	40%	38%
	High Dk (>90)	32%	25%	73%	92%	23%	61%	44%	31%	77%	71%	70%	48%	25%	56%
Design	Sphere	25%	44%	45%	42%	76%	85%	39%	93%	37%	39%	30%	39%	50%	51%
	Toric	23%	23%	8%	15%	14%	2%	11%	7%	9%	34%	8%	15%	10%	14%
	Multifocal/monovision	11%	13%	10%	17%	3%	8%	26%	0%	12%	25%	0%	28%	13%	14%
	Ortho-K	24%	4%	26%	13%	1%	1%	22%	0%	7%	0%	63%	9%	12%	11%
	Anti-myopia	0%	1%	1%	14%	1%	0%	0%	0%	2%	0%	0%	0%	0%	2%
	Other	18%	15%	10%	0%	4%	4%	2%	0%	32%	3%	0%	10%	16%	8%
Planned replacement	45%	24%	31%	90%	33%	10%	43%	31%	35%	43%	100%	39%	22%	46%	
New fits into EW	35%	1%	1%	11%	0%	1%	13%	0%	2%	0%	0%	0%	0%	7%	
Refits into EW	22%	0%	1%	6%	18%	0%	0%	5%	0%	0%	0%	12%	4%	5%	

Table 3. Detailed information for all prescribed GP lenses only. (See Table 1 for country abbreviations.) Data presented for countries reporting > 35 GP lens fits. EW = extended wear.

GP Lenses

GP lens fitting in 2013 remained similar to recent years, with 12% of fits in “standard” GP lenses and a further 1% with orthokeratology lenses (Table 2). The presence in 2013 of data for the German, Austrian, and Polish markets confirms the relative popularity of GP lenses in these countries (see sidebar on p. 35). Significant levels of GP fitting also are apparent in France, Japan, the Netherlands, and Slovenia.

The number of scleral lens fits edged upward

again, with 170 such fits recorded for 2013. High-Dk materials (40 to 90 units) were the most commonly prescribed (56% of fits) (Table 3). Spherical lenses were the most popular GP lens design, and 12% of GP lenses prescribed were multifocals.

Soft Lenses

Soft lenses accounted for 88% of new contact lens fits in our 2013 survey (Table 4). Silicone hydrogel materials have continued to increase, now representing 59% of soft contact lenses prescribed. However, these lens materials have an even greater presence in some European markets, accounting for more than 80% of contact lens types prescribed in Bulgaria, France, Poland, and Slovenia.

Toric lenses now account for 27% of lens fits; this value is 34% if only spherical and toric lenses are considered (i.e., if fits such as multifocal, monovision, and cosmetic tints are discounted), indicating that clinically significant astigmatism in the majority of lens wearers is being corrected with current generation toric lenses.

Daily disposable lenses represent 31% of fits worldwide. Once again, there are clear differences among markets, with daily disposables accounting for 65%, 48%, 51%, and 55% of soft lens fits in Denmark, Japan, Norway, and Taiwan, respectively, compared to fewer than 10% of fits in the Netherlands, Nepal, and Poland. There has been a significant increase in daily disposable lens prescribing in the United States (Figure 1). Our data indicate that between 2002 and 2007, this lens type accounted for only 5% to 10% of fits in the United States, but this has

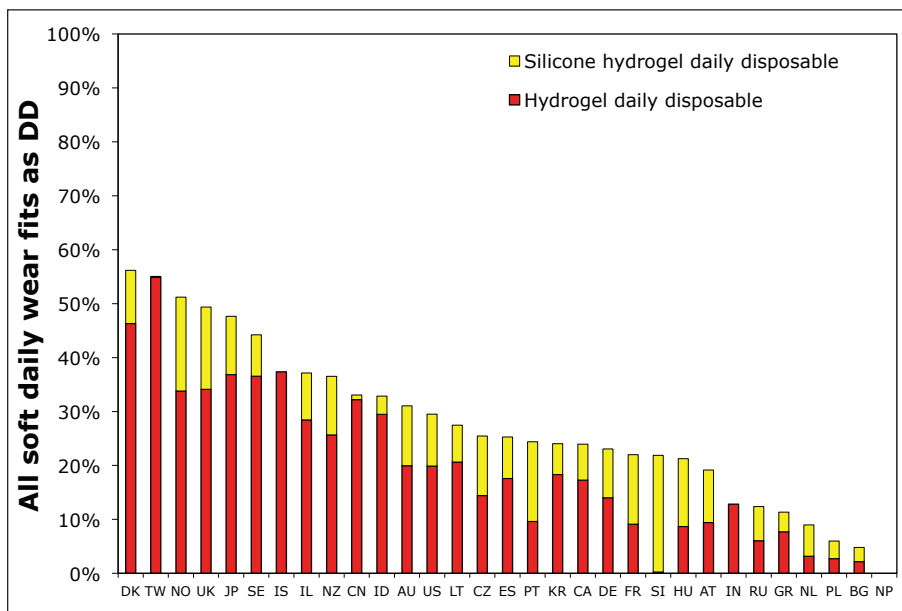


Figure 2. Daily disposable prescribing in 2013.

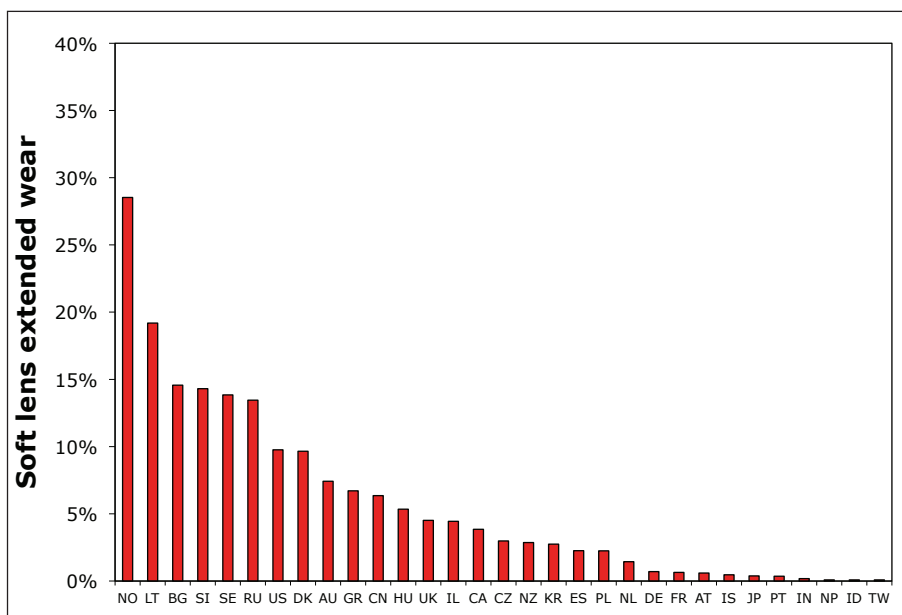


Figure 3. Extended wear prescribing in 2013.

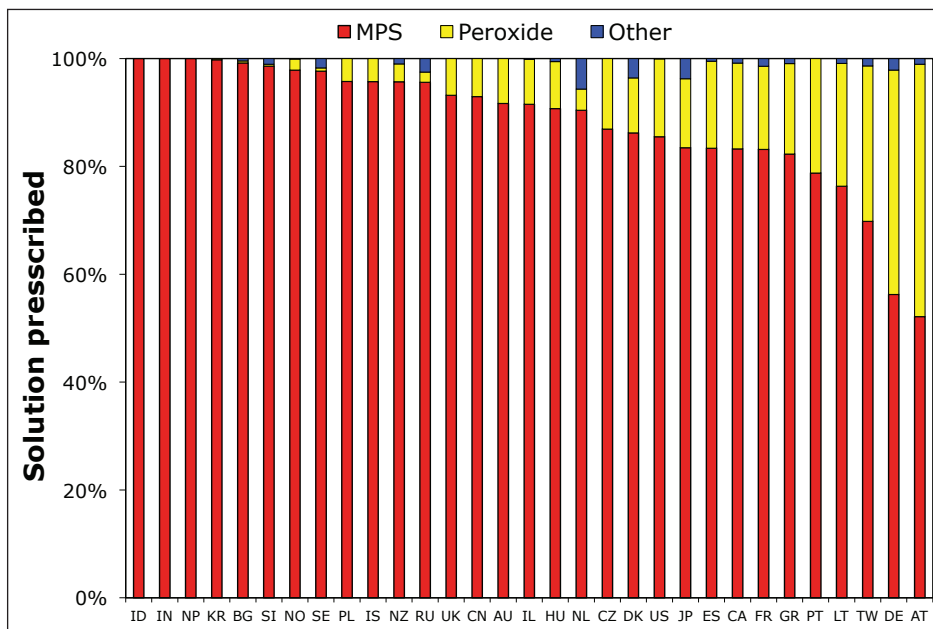


Figure 4. Solution prescribing for soft lenses. MPS = multipurpose solution.

risen since that time frame and stands at 30% of fits for 2013.

The breakdown of daily disposable contact lenses into traditional hydrogels and silicone hydrogels was recorded for the first time in 2013 (Table 2 and Figure 2). Overall, about one-third of daily disposable lenses prescribed are silicone hydrogels, although this figure is higher for Hungary, the Netherlands, and Portugal.

In general, extended wear is rarely prescribed (3%

of new fits and 7% of refits), although, as in previous years, many more patients are prescribed this modality in Norway and Lithuania (Figure 3). Half of all patients in the presbyopic age range are prescribed multifocal contact lenses, while 10% receive a monovision correction. Multipurpose lens care solutions are prescribed to 85% of contact lens wearers, although notable variations exist worldwide (Figure 4). **CLS**

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	AT	AU	BG	CA	CN	CZ	DE	DK	ES	FR	GR	HU	ID
Soft lenses for new fits	77%	96%	94%	96%	97%	96%	75%	94%	89%	71%	98%	93%	97%
Soft lenses for refits	68%	94%	95%	94%	98%	96%	72%	90%	85%	88%	92%	96%	98%
Materials													
Low water content (<40%)	2%	6%	4%	5%	15%	2%	1%	2%	5%	2%	2%	1%	6%
Mid water content (40-60%)	18%	17%	11%	18%	54%	17%	25%	39%	36%	7%	33%	17%	74%
High water content (>60%)	15%	8%	3%	9%	6%	11%	14%	25%	4%	8%	2%	10%	6%
Silicone hydrogel	66%	69%	82%	68%	25%	70%	60%	33%	55%	83%	63%	71%	15%
Design													
Sphere	37%	47%	89%	46%	48%	56%	36%	41%	43%	42%	47%	57%	48%
Toric	41%	32%	8%	32%	10%	32%	39%	37%	38%	29%	27%	30%	14%
Cosmetic tint	1%	1%	1%	0%	16%	2%	1%	0%	1%	1%	4%	0%	31%
Multifocal/monovision	21%	20%	3%	21%	2%	7%	24%	21%	19%	28%	21%	13%	7%
Anti-myopia	0%	1%	0%	0%	9%	0%	0%	0%	0%	1%	0%	0%	0%
Other	0%	0%	0%	0%	15%	3%	1%	1%	0%	0%	0%	0%	0%
Replacement													
Daily	19%	31%	5%	24%	33%	25%	23%	65%	25%	22%	11%	21%	33%
1-2 weekly	8%	19%	4%	17%	5%	17%	26%	5%	2%	20%	14%	11%	12%
Monthly	41%	45%	58%	57%	42%	55%	40%	26%	66%	54%	59%	66%	38%
3-6 monthly	19%	2%	23%	1%	10%	0%	3%	3%	5%	2%	6%	0%	17%
Annually	11%	2%	10%	0%	10%	4%	7%	0%	2%	2%	1%	2%	1%
Unplanned	1%	1%	0%	0%	0%	0%	1%	0%	0%	0%	8%	0%	0%
New fits into EW	0%	4%	7%	2%	3%	3%	0%	10%	2%	0%	1%	5%	0%
Refits into EW	4%	3%	1%	9%	17%	5%	9%	4%	1%	12%	3%	1%	8%
EW with silicone hydrogels	100%	99%	69%	100%	75%	100%	100%	96%	83%	85%	96%	91%	100%
MPS solutions	52%	92%	99%	83%	93%	87%	56%	86%	83%	83%	82%	91%	100%
Presbyopes multi/mono	51%/11%	25%/25%	2%/6%	42%/13%	0%/20%	19%/1%	60%/5%	56%/13%	65%/1%	72%/4%	58%/13%	61%/4%	0%/0%

Table 4. Detailed information for all prescribed soft lenses for markets reporting >100 soft lens fits. (See Table 1 for country abbreviations.)

Germany, Austria, and Poland

Data were recorded for Germany in 2013 after a six-year gap, and the 2013 survey presents information for Poland and Austria for the first time. These markets feature more GP lens fits compared to most other countries (Figure 5), with fewer daily disposables and extended wear lenses. Germany and Austria are the markets in which peroxides are most widely prescribed, accounting for more than 40% of soft lenses dispensed (Figure 4).

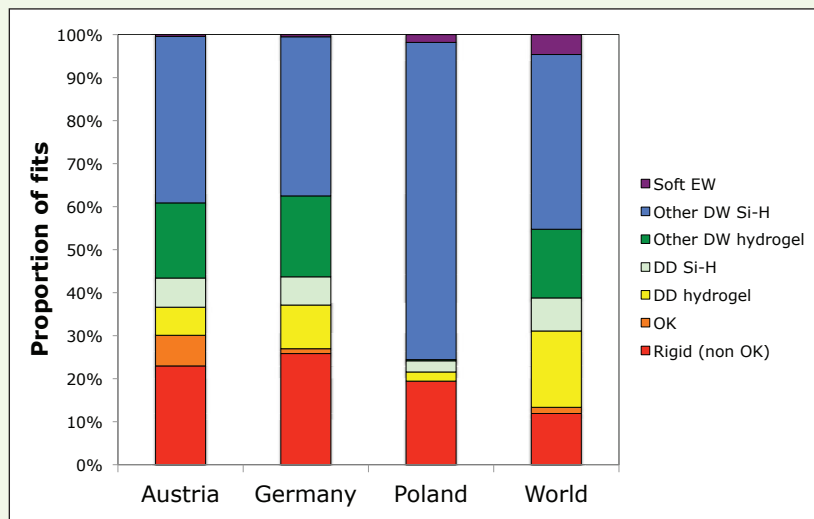


Figure 5. Contact lens prescribing in Austria, Germany, and Poland.
DW = daily wear
EW = extended wear
Si-H = silicone hydrogel
OK = orthokeratology

(Spanish General Council of the Colleges of Opticians-Optometrists; Sweden—the Swedish Optometry Association and the Swedish Contact Lens Association.

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IL	JP	KR	LT	NL	NO	NP	NZ	PL	PT	RU	SE	SI	TW	UK	US	Overall
90%	91%	77%	100%	80%	96%	48%	89%	65%	98%	100%	99%	91%	79%	97%	96%	88%
88%	76%	87%	100%	76%	93%	96%	79%	93%	93%	98%	98%	40%	94%	86%	94%	85%
4%	10%	34%	2%	1%	2%	18%	1%	0%	6%	6%	1%	0%	46%	1%	3%	5%
29%	41%	29%	10%	10%	17%	50%	23%	3%	14%	17%	27%	4%	45%	14%	17%	23%
26%	10%	13%	19%	12%	20%	22%	8%	0%	7%	3%	21%	1%	9%	29%	8%	13%
40%	39%	24%	69%	77%	61%	9%	68%	97%	72%	73%	51%	96%	0%	57%	73%	59%
68%	79%	37%	67%	45%	48%	93%	43%	36%	45%	78%	31%	73%	93%	45%	48%	53%
26%	15%	22%	17%	36%	30%	7%	40%	38%	36%	15%	27%	26%	6%	34%	27%	27%
2%	4%	41%	9%	0%	0%	0%	1%	0%	0%	4%	0%	0%	0%	1%	1%	3%
4%	3%	0%	6%	20%	21%	0%	14%	26%	18%	2%	41%	1%	1%	21%	23%	15%
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
36%	48%	25%	27%	9%	51%	0%	37%	6%	24%	12%	45%	22%	55%	50%	30%	31%
18%	48%	7%	4%	9%	6%	1%	7%	4%	6%	28%	4%	38%	25%	6%	32%	18%
43%	2%	11%	65%	77%	42%	7%	55%	90%	63%	54%	51%	40%	18%	43%	37%	44%
1%	0%	56%	3%	4%	1%	0%	1%	0%	0%	5%	0%	0%	0%	1%	2%	4%
2%	0%	1%	1%	0%	0%	93%	0%	0%	7%	0%	0%	0%	2%	0%	0%	2%
0%	2%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	1%
2%	0%	1%	9%	0%	21%	0%	1%	0%	1%	9%	12%	12%	0%	0%	4%	3%
6%	0%	0%	0%	3%	23%	2%	31%	0%	4%	3%	0%	16%	15%	16%	0%	7%
20%	23%	24%	94%	99%	98%	100%	92%	100%	100%	98%	91%	97%	100%	97%	94%	91%
92%	83%	100%	76%	90%	98%	100%	96%	96%	79%	96%	98%	99%	70%	93%	86%	86%
5%/17%	20%/1%	0%/0%	54%/0%	54%/5%	46%/23%	0%/0%	28%/16%	90%/0%	70%/0%	19%/0%	61%/9%	5%/0%	18%/0%	35%/23%	53%/15%	50%/10%

The final row indicates the proportion of multifocal and monovision lenses prescribed when patients were over 45 years of age.