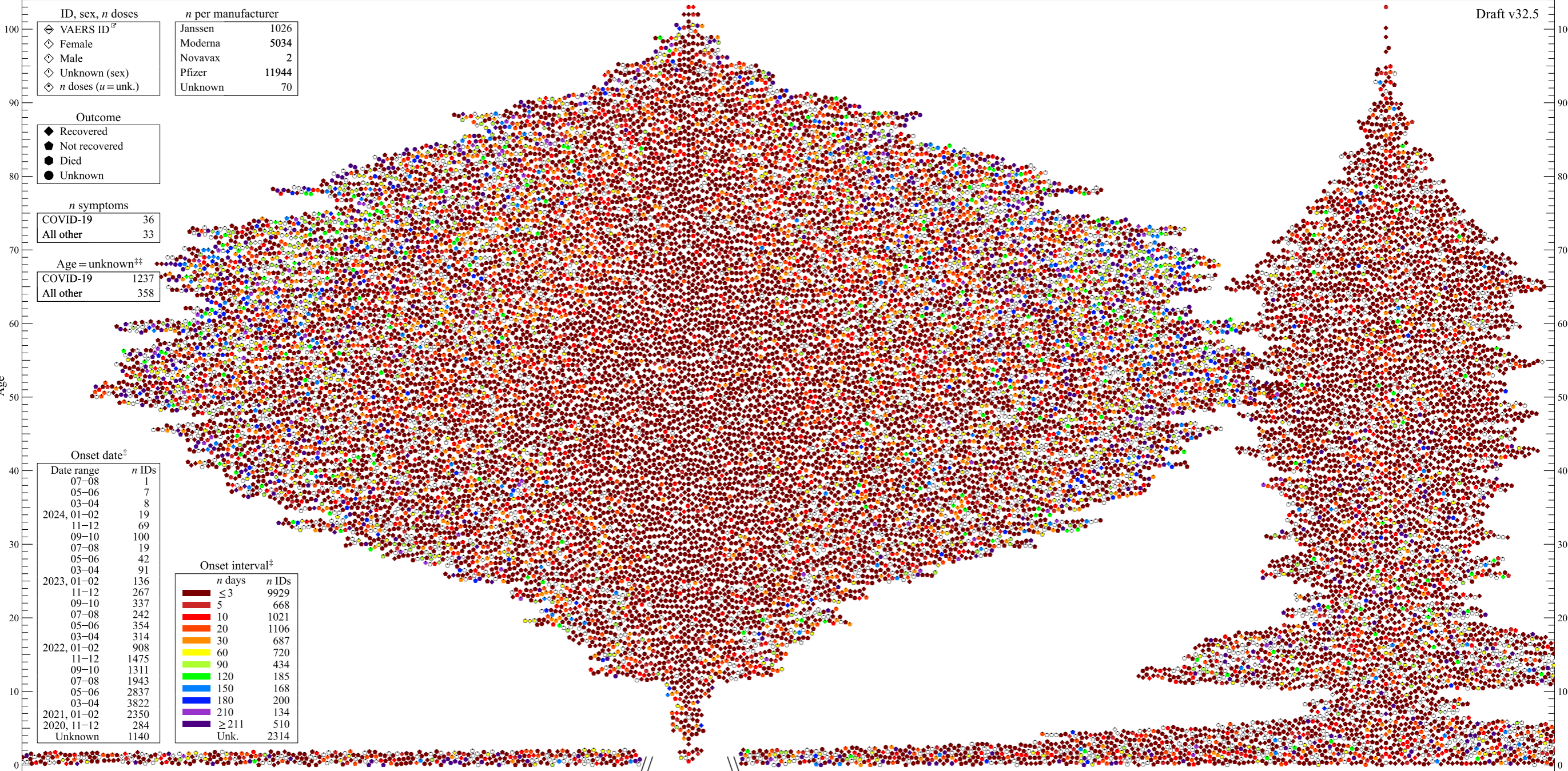


Language and speech disorders – aphasia, dysarthria, dysphonia, dysphemia, dysgraphia, apraxia, dyslalia, agnosia, etc: age distribution, VAERS data\* (U.S. and foreign), 1990.07–2024.08.30†

Draft v32.5



**ID, sex, *n* doses**

- ◊ VAERS ID<sup>Ⓔ</sup>
- ◊ Female
- ◊ Male
- ◊ Unknown (sex)
- ◊ *n* doses (*u*=unk.)

***n* per manufacturer**

Janssen	1026
Moderna	5034
Novavax	2
Pfizer	11944
Unknown	70

**Outcome**

- ◆ Recovered
- ◆ Not recovered
- Died
- Unknown

***n* symptoms**

COVID-19	36
All other	33

**Age = unknown<sup>‡‡</sup>**

COVID-19	1237
All other	358

**Onset date<sup>‡</sup>**

Date range	<i>n</i> IDs
07–08	1
05–06	7
03–04	8
2024, 01–02	19
11–12	69
09–10	100
07–08	19
05–06	42
03–04	91
2023, 01–02	136
11–12	267
09–10	337
07–08	242
05–06	354
03–04	314
2022, 01–02	908
11–12	1475
09–10	1311
07–08	1943
05–06	2837
03–04	3822
2021, 01–02	2350
2020, 11–12	284
Unknown	1140

**Onset interval<sup>‡</sup>**

<i>n</i> days	<i>n</i> IDs
≤ 3	9929
5	668
10	1021
20	1106
30	687
60	720
90	434
120	185
150	168
180	200
210	134
≥ 211	510
Unk.	2314

	All COVID-19 2020.12.14–2024.08.30	All non-COVID-19 1990.07–2020.12.13
<i>n</i> VAERS IDs	18076	8207
$\mu$ , Mean <sup>‡‡</sup>	54.9	27.4
$\hat{x}$ , Median <sup>‡‡</sup>	55.0	18.0
$\sigma$ , Standard deviation <sup>‡‡</sup>	19.2	26.5
$\gamma$ , Skewness <sup>‡‡</sup>	-0.1	0.6
<i>n</i> Hospitalized	6448	1899
<i>n</i> Life threatening	1963	591
<i>n</i> Recovered	4627	2700
<i>n</i> Not recovered	10116	3241
<i>n</i> Died	537	101

†Terms queried in SYMPTOM fields 1–5 include: agnosia, a/dys -graphia, a/dys/para -lexia, a/dys -phasia, a/dys/mis -phonia, a/dys/echo -praxia, cognitive linguistic deficit, (communication/language/speech/speech sound) disorder, disorganized speech, an/dys -arthria, dys/copro/echo -lalia, dysphemia, dysprosody, & logorrhea. <sup>‡</sup>*n* IDs are all COVID-19.  
<sup>‡‡</sup>Natural language processing was used to extract age values from SYMPTOM TEXT and fill in missing data. Remaining reports with unknown age are neither plotted, nor included in calculations, but are included in subtotals. All plotted age values have a random adjustment within  $\sim \pm 0.5$  yr. <sup>Ⓔ</sup>Symbols link to respective reports at OpenVAERS.  
 \*VAERS disclaimer (excerpts): "... VAERS is designed to rapidly detect unusual or unexpected patterns of adverse events, also known as 'safety signals'. If a safety signal is found ..., further studies can be done in safety systems such as the CDC's [VSD & CISA]." "Note that the inclusion of events in VAERS data does not infer causality." vaers.hhs.gov