### OP07: Distribution of age across all observation period records

Count distribution of age across all observation period records:  the mean, the standard deviation, the minimum, the 25th percentile, the median, the 75th percentile, the maximum and the number of missing values. No input is required for this query.

**Sample query:**

WITH t AS (

SELECT DISTINCT

person\_id, EXTRACT( YEAR FROM first\_observation\_date ) - year\_of\_birth AS age

FROM -- person, first observation date

( SELECT person\_id

, min( observation\_period\_start\_date ) AS first\_observation\_date

FROM observation\_period

GROUP BY person\_id

)

JOIN person USING( person\_id )

WHERE year\_of\_birth IS NOT NULL

) SELECT count(\*) AS num\_people

, min( age ) AS min\_age

, max( age ) AS max\_age

, round( avg( age ), 2 ) AS avg\_age

, round( stdDev( age ), 1 ) AS stdDev\_age

, (SELECT DISTINCT PERCENTILE\_DISC(0.25) WITHIN GROUP (ORDER BY age ) over () FROM t) AS percentile\_25

, (SELECT DISTINCT PERCENTILE\_DISC(0.5) WITHIN GROUP (ORDER BY age ) over () FROM t) AS median\_age

, (SELECT DISTINCT PERCENTILE\_DISC(0.75) WITHIN GROUP (ORDER BY age ) over () FROM t) AS percentile\_75

FROM t;

**Input:**

None

**Output:**

|  |  |
| --- | --- |
| **Field** | **Description** |
| num\_people | Number of people in a dataset |
| min\_age | Minimum age of person |
| max\_age | Maximum age of a person |
| avg\_age | Average age of people in the dataset |
| stdDev\_age | Standard deviation of person age |
| percentile\_25 | 25th percentile of of the age group |
| median\_age | 50th percentile of the age group |
| percentile\_75 | 75th percentile of the age group |

**Sample output record:**

|  |  |
| --- | --- |
| **Field** | **Value** |
| num\_people | 151039265 |
| min\_age | 0 |
| max\_age | 85 |
| avg\_age | 31 |
| stdDev\_age | 19.4 |
| percentile\_25 | 16 |
| median\_age | 31 |
| percentile\_75 | 47 |