**CO21:** Distribution of age, stratified by condition

This query is used to provide summary statistics for the age across all condition occurrence records stratified by condition (condition\_concept\_id): the mean, the standard deviation, the minimum, the 25th percentile, the median, the 75th percentile, the maximum and the number of missing values. The age value is defined by the earliest condition occurrence. The input to the query is a value (or a comma-separated list of values) of a condition\_concept\_id.

Oracle specific query.

**Sample query:**

SELECT concept\_name AS condition

, condition\_concept\_id

, count(\*) AS condition\_occurrences

, min( age ) over () AS min\_age

, max( age ) over () AS max\_age

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

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

, PERCENTILE\_DISC(0.25) WITHIN GROUP( ORDER BY age ) over ()

AS percentile\_25

, PERCENTILE\_DISC(0.5) WITHIN GROUP (ORDER BY age ) over ()

AS median\_age

, PERCENTILE\_DISC(0.75) WITHIN GROUP (ORDER BY age ) over ()

AS percentile\_75

FROM -- condition occurrences with age at time of condition

( SELECT condition\_concept\_id

, EXTRACT( YEAR from condition\_start\_date ) AS age -- year\_of\_birth

FROM condition\_occurrence

JOIN person USING( person\_id )

WHERE condition\_concept\_id

IN -- all SNOMED codes for diabetes

( 192691, 193323, 194700, 195771, 200687, 201254,

201530, 201531, 201820, 201826 , 318712, 373999,

377821, 4008576, 4009780, 4024659, 4030061,

4034960, 4034962, 4047906 , 40480000, 4048202,

40482883, 40488810, 4058243, 4062685, 4062686,

4062687, 4063042, 4063043 , 4079850, 4096041,

4096042, 4096668, 4096670, 4096671, 4099214,

4099215, 4099217, 4099334 , 4099651, 4099652,

4099653, 4099741, 4102018, 4129378, 4129516,

4129519, 4130162, 4130164 , 4130166, 4136889,

4137214, 4140808, 4143529, 4143689, 4143857,

4144583, 4145827, 4151281 , 4151282, 4152858,

4155634, 4166381, 4178452, 4178790, 4192852,

4193704, 4196141, 4198296 , 4200873, 4200875,

4202383, 4212631, 4221344, 4222222, 4222410,

4222547, 4222553, 4222687 , 4222834, 4223303,

4223444, 4224254, 4224709, 4224723, 4225013,

4225055, 4225656, 4226245 , 4227210, 4228102,

4228112, 4230254, 4231917, 4235410, 4237068,

4240589, 4245270, 4252384, 4263902, 4295011,

4304377, 4312138, 4321756, 4322638, 4325113,

4326434, 4327944, 435216 , 439770, 443012,

443412, 443592

)

)

JOIN concept ON concept\_id = condition\_concept\_id

GROUP BY concept\_name, condition\_concept\_id, age

ORDER BY condition\_occurrences DESC

**Input:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Example** | **Mandatory** | **Notes** |
| condition\_concept\_id list | 192691, 193323, 194700, 195771, 200687, 201254, 201530, 201531, 201820, 201826 , 318712, 373999, 377821, 4008576, 4009780, 4024659, 4030061, 4034960, 4034962, 4047906 , 40480000, 4048202, 40482883, 40488810, 4058243, 4062685, 4062686, 4062687, 4063042, 4063043 , 4079850, 4096041, 4096042, 4096668, 4096670, 4096671, 4099214, 4099215, 4099217, 4099334 , 4099651, 4099652, 4099653, 4099741, 4102018, 4129378, 4129516, 4129519, 4130162, 4130164 , 4130166, 4136889, 4137214, 4140808, 4143529, 4143689, 4143857, 4144583, 4145827, 4151281 , 4151282, 4152858, 4155634, 4166381, 4178452, 4178790, 4192852, 4193704, 4196141, 4198296 , 4200873, 4200875, 4202383, 4212631, 4221344, 4222222, 4222410, 4222547, 4222553, 4222687 , 4222834, 4223303, 4223444, 4224254, 4224709, 4224723, 4225013, 4225055, 4225656, 4226245 , 4227210, 4228102, 4228112, 4230254, 4231917, 4235410, 4237068, 4240589, 4245270, 4252384, 4263902, 4295011, 4304377, 4312138, 4321756, 4322638, 4325113, 4326434, 4327944, 435216 , 439770, 443012, 443412, 443592 | Yes | SNOMED condition concept identifiers for dia |

**Output:**

|  |  |
| --- | --- |
| **Field** | **Description** |
| condition | Name of the condition |
| condition\_concept\_id | Condition concept identifier |
| min\_age | Minimum age of the people with condition |
| max\_age | Maximum age of the people with condition |
| avg\_age | Average age of the people with condition |
| stdDev\_age | Standard deviation of the people  with condition |
| percentile\_25 | Age 25th percentile of the people with condition |
| median\_age | Median age  of the people with condition |
| percentile\_75 | Age 75th percentile of the people with condition |

**Sample output record:**

|  |  |
| --- | --- |
| **Field** | **Description** |
| condition | Type 1 diabetes mellitus |
| condition\_concept\_id | 201826 |
| min\_age | 2006 |
| max\_age | 2017 |
| avg\_age | 2014 |
| stdDev\_age | 3.6 |
| percentile\_25 | 2009 |
| median\_age | 2013 |
| percentile\_75 | 2015 |