

## Drug\_Exposure

Column ID	Require	type
• drug_exposure_id	Yes	bigint
• person_id	Yes	bigint
• drug_concept_id	Yes	integer
• drug_exposure_start_date	No	date
• drug_exposure_start_datetime	Yes	datetime
• drug_exposure_end_date	No	date
• drug_exposure_end_datetime	Yes	datetime
• drug_type_concept_id	Yes	integer
• stop_reason	No	varchar(20)
• refills	No	integer
• quantity	No	float
• days_supply	No	integer
• sig	No	varchar(MAX)
• route_concept_id	Yes	integer
• lot_number	No	varchar(50)
• provider_id	No	integer
• visit_occurrence_id	No	integer
• visit_detail_id	No	integer
• drug_source_value	No	varchar(50)
• drug_source_concept_id	Yes	integer
• route_source_value	No	varchar(50)
• dose_unit_source_value	No	varchar(50)



The drug\_exposure domain captures records about the utilization of a drug when ingested or other introduced into the body.

for example :

- drug exposure start date, end date
- standardized vocabularies for the drug concept
- How the drug exposure was represented in the source data.
- The quantity of drug as recorded in the original prescription or dispensing record.
- The number of days of supply of the medication as recorded in the original prescription or dispensing record.

### Sample Table

drug_exposure_id	person_id	drug_concept_id	drug_exposure_start_date	drug_exposure_end_date	drug_type_concept_id	quantity	days_supply	route_concept_id	drug_source_concept_id
202820241	119	1742255	2020-01-15	2020-01-15	38000177	3	3	4132161	42373730
202820242	119	19020131	2020-01-15	2020-01-15	38000177	2	1	4167540	42368024
203910922	119	42873446	2020-01-15	2020-03-15	38000177	35	35	4132161	42388405
203910923	119	36880194	2020-01-15	2020-03-15	38000177	35	35	4132161	42366887
206388223	119	42873446	2020-04-15	2020-08-15	38000177	120	120	4132161	42388405
206388224	119	36880194	2020-04-15	2020-08-15	38000177	120	120	4132161	42366887
208774302	119	44110094	2020-06-15	2020-06-15	38000177	1	1	4171047	0
213764344	119	42873446	2020-11-15	2020-12-15	38000177	35	35	4132161	42388405
213764345	119	36880194	2020-11-15	2020-12-15	38000177	35	35	4132161	42366887
213764346	119	41115302	2020-11-15	2020-12-15	38000177	35	35	4132161	42376095
215144858	119	42873446	2020-12-15	2021-06-15	38000177	180	180	4132161	42388405
215144859	119	36880194	2020-12-15	2021-06-15	38000177	180	180	4132161	42366887

CIV		
Column ID	Require	type
• civ_id	Yes	bigint
• person_id	Yes	bigint
• visit_occurrence_id	No	bigint
• provider_id	No	bigint
• drug_concept_id	Yes	integer
• drug_source_value	No	varchar(50)
• civ_start_date	Yes	date
• civ_start_datetime	No	datetime
• civ_end_date	Yes	date
• civ_end_datetime	No	datetime
• civ_type_concept_id	Yes	integer
• record_classification_value	No	varchar(50)
• record_classification_concept_id	No	integer
• volume_rate_value	No	varchar(50)
• volume_unit	No	varchar(50)
• volume_based_time_unit	No	varchar(50)
• weight_based_dose_rate_value	No	varchar(50)
• weight_based_dose_unit	No	varchar(50)
• weight_based_time_unit	No	varchar(50)
• weight	No	varchar(50)
• dose_rate	No	varchar(50)
• cumulative_dose	No	varchar(50)



for example :

- **civ start date, civ end date**
- standardized vocabularies for the drug concept
- standardized vocabularies for the **record classification**
  - start civ, restart civ, change bag, on going, stop civ, etc.

civ_start_date	civ_start_datetime	civ_end_date	civ_end_datetime	record_classification_concept_id	record_classification_value
2020-08-10	16:00	2020-08-10	17:00	4141652	Start CIV
2020-08-10	16:00	2020-08-10	17:00	4141652	Start CIV
2020-08-10	17:00	2020-08-10	21:00	4228329	Change rate
2020-08-10	17:00	2020-08-10	21:00	4228329	Change rate
2020-08-10	21:00	2020-08-11	00:01	4228329	Change rate
2020-08-10	21:00	2020-08-11	00:01	4228329	Change rate
2020-08-11	00:01	2020-08-11	06:00	44806352	On going
2020-08-11	00:01	2020-08-11	06:00	44806352	On going
2020-08-11	06:00	2020-08-11	08:00	4228329	Change rate
2020-08-11	06:00	2020-08-11	08:00	4228329	Change rate
2020-08-11	08:00	2020-08-11	08:00	0	Stop CIV
2020-08-11	08:00	2020-08-11	08:00	0	Stop CIV

- **volume\_rate, volume\_unit, volume\_based\_time\_unit**
  - **volume\_rate** column is the infusion rate capacity.
  - **volume\_unit, volume\_based\_time\_unit** columns are injection rate units and injection rate time units.
  - : cc, ml, day, hr, min, etc.

volume_rate	volume_unit	volume_based_time_unit
12.7	cc	hr
12.7	cc	hr
11.4	cc	hr
11.4	cc	hr
12.1	cc	hr
12.1	cc	hr
12.7	cc	hr
12.7	cc	hr
12.1	cc	hr
12.1	cc	hr
13.4	cc	hr
13.4	cc	hr
13.4	cc	hr
13.4	cc	hr

CIV		
Column ID	Require	type
civ_id	Yes	bigint
person_id	Yes	bigint
visit_occurrence_id	No	bigint
provider_id	No	bigint
drug_concept_id	Yes	integer
drug_source_value	No	varchar(50)
civ_start_date	Yes	date
civ_start_datetime	No	datetime
civ_end_date	Yes	date
civ_end_datetime	No	datetime
civ_type_concept_id	Yes	integer
record_classification_value	No	varchar(50)
record_classification_concept_id	No	integer
volume_rate_value	No	varchar(50)
volume_unit	No	varchar(50)
volume_based_time_unit	No	varchar(50)
weight_based_dose_rate_value	No	varchar(50)
weight_based_dose_unit	No	varchar(50)
weight_based_time_unit	No	varchar(50)
weight	No	varchar(50)
dose_rate	No	varchar(50)
cumulative_dose	No	varchar(50)



for example :

- **weight based : dose\_rate\_value, dose\_unit, time\_unit**
  - The **weight\_based\_dose\_rate\_value** column is the infusion dose based on the patient's weight.
  - The **weight\_based\_dose\_unit** column is the infusion dose unit based on patient's weight.  
: mcg/kg, mg/kg, ng/kg, u/kg, mEq/kg, etc.
  - The **weight\_based\_time\_unit** column is the infusion dose time.  
: day, hr, min, etc.
- **weight** column is the patient's weight.

weight_based_dose_rate_value	weight_based_dose_unit	weight_based_time_unit	weight
0.18	mcg/kg	min	47
0.18	mcg/kg	min	47
0.16	mcg/kg	min	47
0.16	mcg/kg	min	47
0.17	mcg/kg	min	47
0.17	mcg/kg	min	47
0.18	mcg/kg	min	47
0.18	mcg/kg	min	47
0.17	mcg/kg	min	47
0.17	mcg/kg	min	47
0.2	mcg/kg	min	47
0.2	mcg/kg	min	47
0.2	mcg/kg	min	47
0.2	mcg/kg	min	47

- **dose\_rate** : actual infusion volume per minute
  - **weight\_based\_dose\_rate\_value x weight**
- **cumulative\_dose**
  - **cumulative infusion volume**

dose rate	cumulative dose
8.46	8.46
8.46	16.92
7.52	24.44
7.52	31.96
7.99	39.95
7.99	47.94
8.46	56.4
8.46	64.86
7.99	72.85
7.99	80.84
9.4	90.24
9.4	99.64
9.4	109.04
9.4	118.44

CIV		
Column ID	Require	type
civ_id	Yes	bigint
person_id	Yes	bigint
visit_occurrence_id	No	bigint
provider_id	No	bigint
drug_concept_id	Yes	integer
drug_source_value	No	varchar(50)
civ_start_date	Yes	date
civ_start_datetime	No	datetime
civ_end_date	Yes	date
civ_end_datetime	No	datetime
civ_type_concept_id	Yes	integer
record_classification_value	No	varchar(50)
record_classification_concept_id	No	integer
volume_rate_value	No	varchar(50)
volume_unit	No	varchar(50)
volume_based_time_unit	No	varchar(50)
weight_based_dose_rate_value	No	varchar(50)
weight_based_dose_unit	No	varchar(50)
weight_based_time_unit	No	varchar(50)
weight	No	varchar(50)
dose_rate	No	varchar(50)
cumulative_dose	No	varchar(50)

### Sample Table

person_id	visit_occurrence_id	drug_concept_id	drug_source_value	civ_start_date	civ_start_datetime	civ_end_date	civ_end_datetime	civ_type_concept_id	cord_classification_val	record_classification_concept_id
22	9201	42370058	Dextrose 5% 50ml	2020-08-10	2020-08-10 16:00	2020-08-10	2020-08-10 17:00	32833	Start CIV	4141652
22	9201	42375364	Norepinephrine 10mg	2020-08-10	2020-08-10 16:00	2020-08-10	2020-08-10 17:00	32833	Start CIV	4141652
22	9201	42370058	Dextrose 5% 50ml	2020-08-10	2020-08-10 17:00	2020-08-10	2020-08-10 21:00	32833	Change rate	4228329
22	9201	42375364	Norepinephrine 10mg	2020-08-10	2020-08-10 17:00	2020-08-10	2020-08-10 21:00	32833	Change rate	4228329
22	9201	42370058	Dextrose 5% 50ml	2020-08-10	2020-08-10 21:00	2020-08-11	2020-08-11 00:01	32833	Change rate	4228329
22	9201	42375364	Norepinephrine 10mg	2020-08-10	2020-08-10 21:00	2020-08-11	2020-08-11 00:01	32833	Change rate	4228329
22	9201	42370058	Dextrose 5% 50ml	2020-08-11	2020-08-11 00:01	2020-08-11	2020-08-11 06:00	32833	On going	44806352
22	9201	42375364	Norepinephrine 10mg	2020-08-11	2020-08-11 00:01	2020-08-11	2020-08-11 06:00	32833	On going	44806352
22	9201	42370058	Dextrose 5% 50ml	2020-08-11	2020-08-11 06:00	2020-08-11	2020-08-11 08:00	32833	Change rate	4228329
22	9201	42375364	Norepinephrine 10mg	2020-08-11	2020-08-11 06:00	2020-08-11	2020-08-11 08:00	32833	Change rate	4228329
22	9201	42370058	Dextrose 5% 50ml	2020-08-11	2020-08-11 08:00	2020-08-11	2020-08-11 08:00	32833	Stop CIV	0
22	9201	42375364	Norepinephrine 10mg	2020-08-11	2020-08-11 08:00	2020-08-11	2020-08-11 08:00	32833	Stop CIV	0

volume_rate	volume_unit	volume_based_time_unit	weight_based_dose_rate_value	weight_based_dose_unit	weight_based_time_unit	weight	dose rate	cumulative dose
12.7	cc	hr	0.18	mcg/kg	min	47	8.46	8.46
12.7	cc	hr	0.18	mcg/kg	min	47	8.46	16.92
11.4	cc	hr	0.16	mcg/kg	min	47	7.52	24.44
11.4	cc	hr	0.16	mcg/kg	min	47	7.52	31.96
12.1	cc	hr	0.17	mcg/kg	min	47	7.99	39.95
12.1	cc	hr	0.17	mcg/kg	min	47	7.99	47.94
12.1	cc	hr	0.17	mcg/kg	min	47	7.99	55.93
12.1	cc	hr	0.17	mcg/kg	min	47	7.99	63.92
13.4	cc	hr	0.2	mcg/kg	min	47	9.4	73.32
13.4	cc	hr	0.2	mcg/kg	min	47	9.4	82.72
13.4	cc	hr	0.2	mcg/kg	min	47	9.4	92.12
13.4	cc	hr	0.2	mcg/kg	min	47	9.4	101.52