

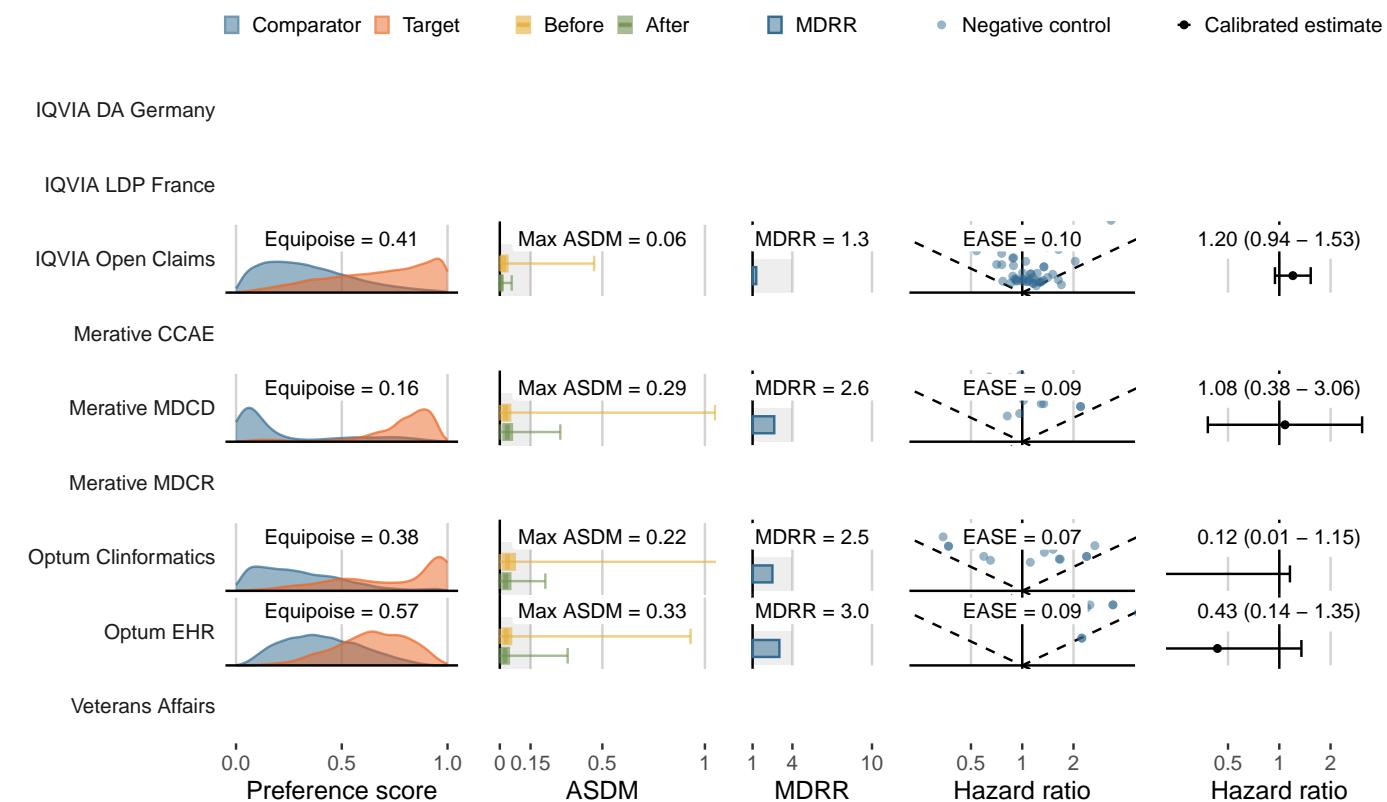
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Bone fracture**

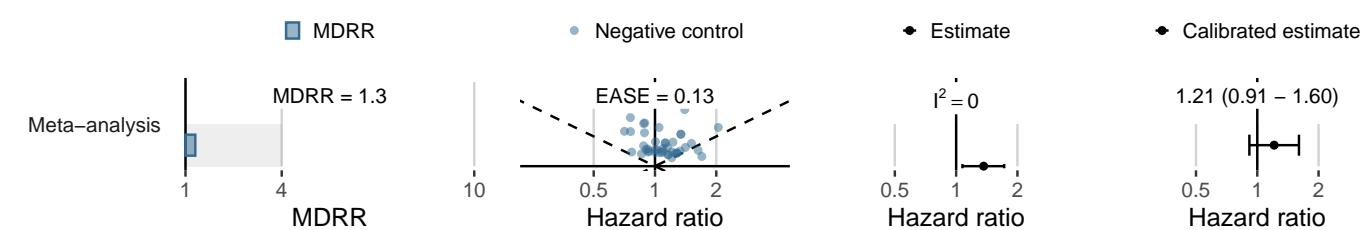
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	14,733	8,543	126	14.75
Merative CCAE	-	-	-	-
Merative MDCD	492	263	12	45.71
Merative MDCR	-	-	-	-
Optum Clininformatics	559	323	6	18.57
Optum EHR	934	204	<5	<24.49
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



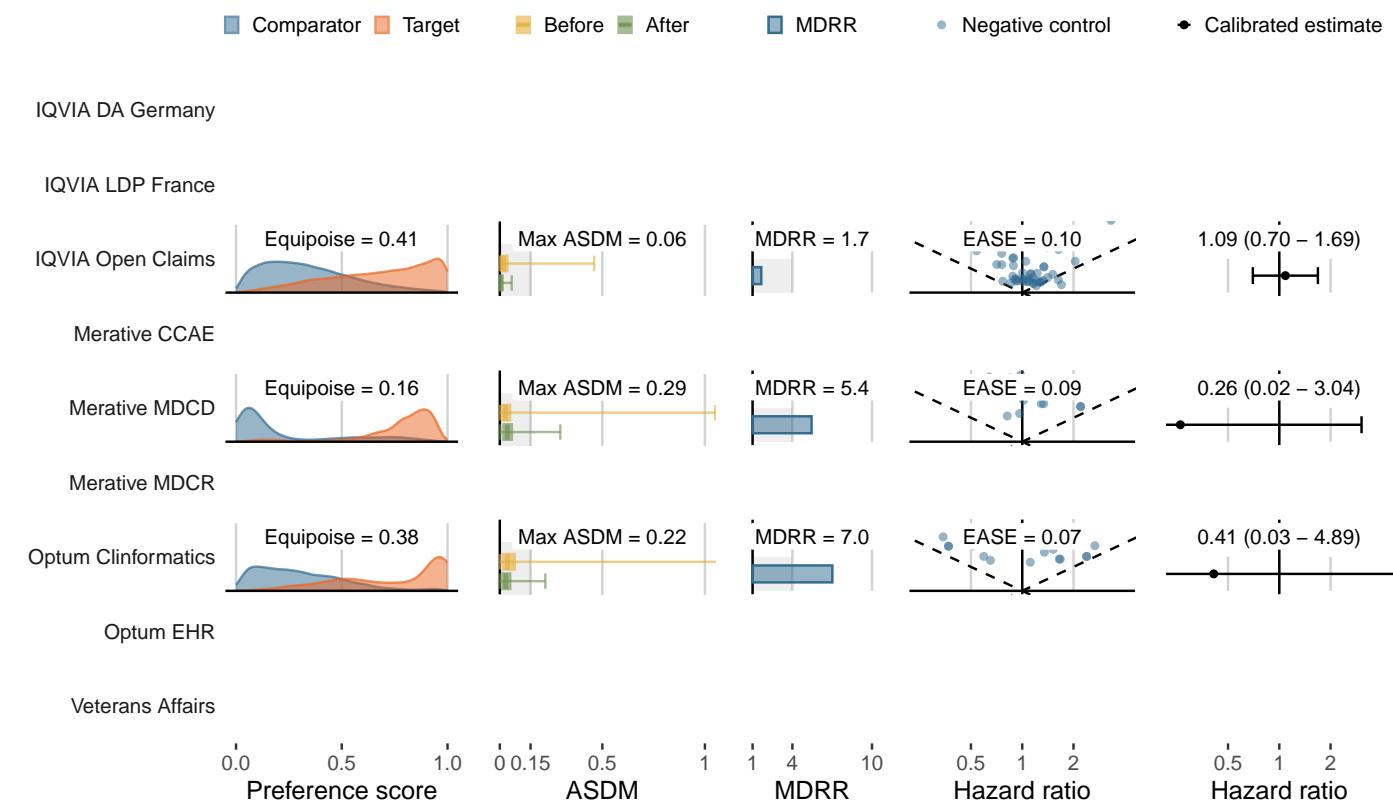
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Acute myocardial infarction**

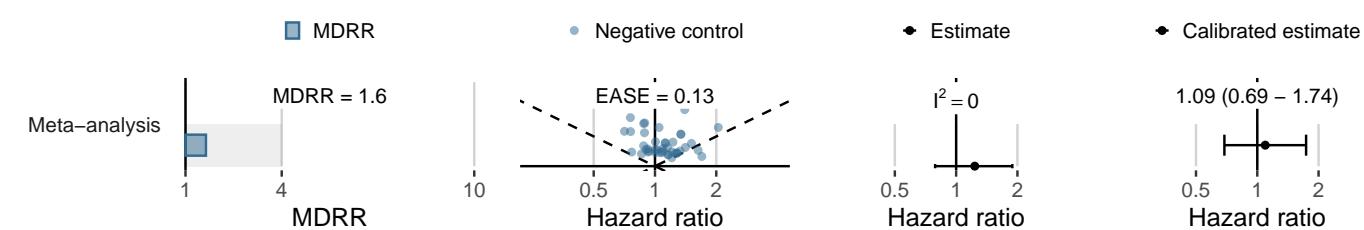
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,391	9,556	41	4.29
Merative CCAE	-	-	-	-
Merative MDCD	545	302	<5	<16.57
Merative MDCR	-	-	-	-
Optum Clininformatics	593	348	<5	<14.35
Optum EHR	1,002	218	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



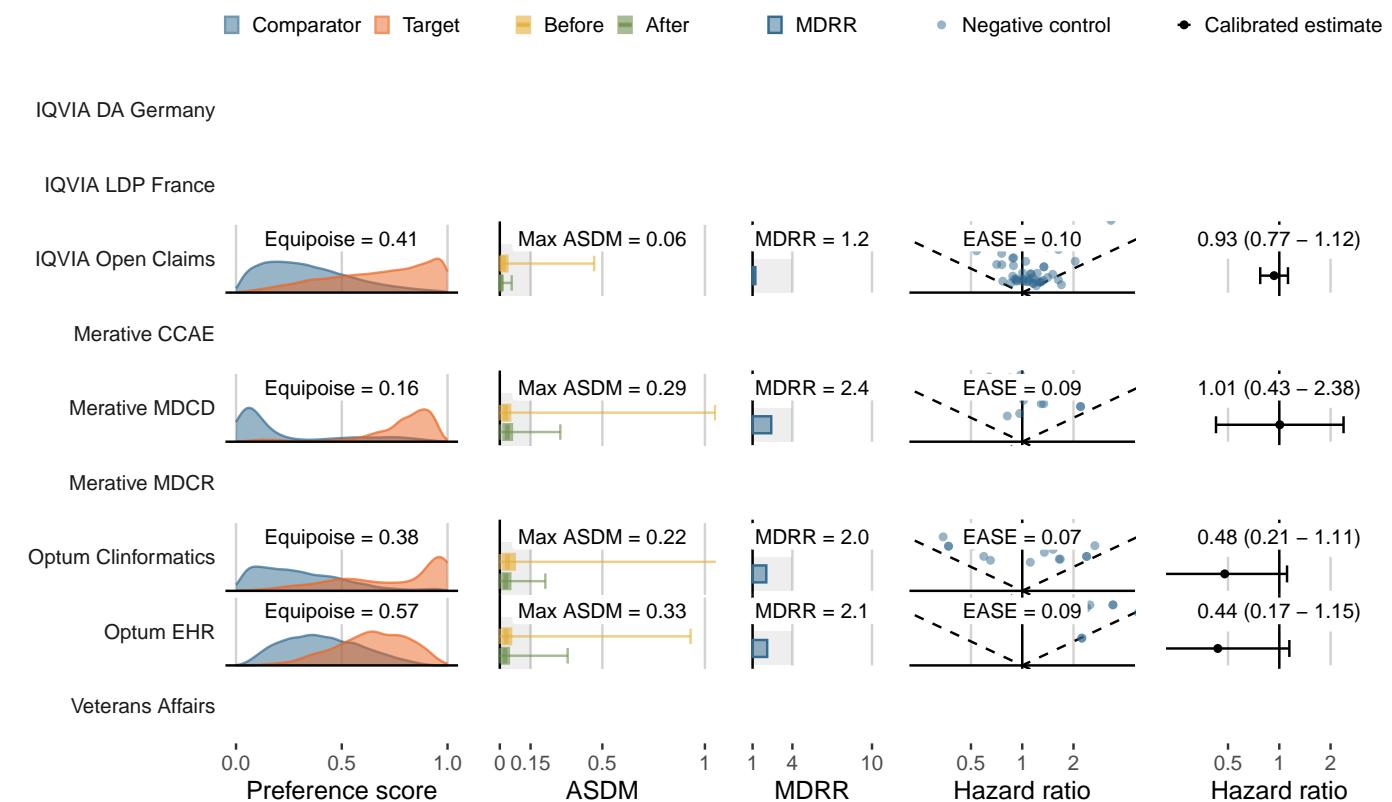
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Genitourinary infection**

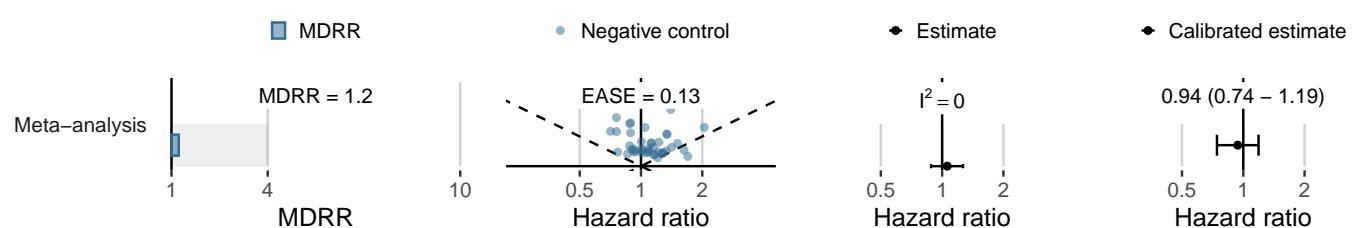
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	12,502	7,270	215	29.57
Merative CCAE	-	-	-	-
Merative MDCD	409	224	18	80.30
Merative MDCR	-	-	-	-
Optum Clininformatics	477	282	12	42.52
Optum EHR	881	188	6	31.85
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



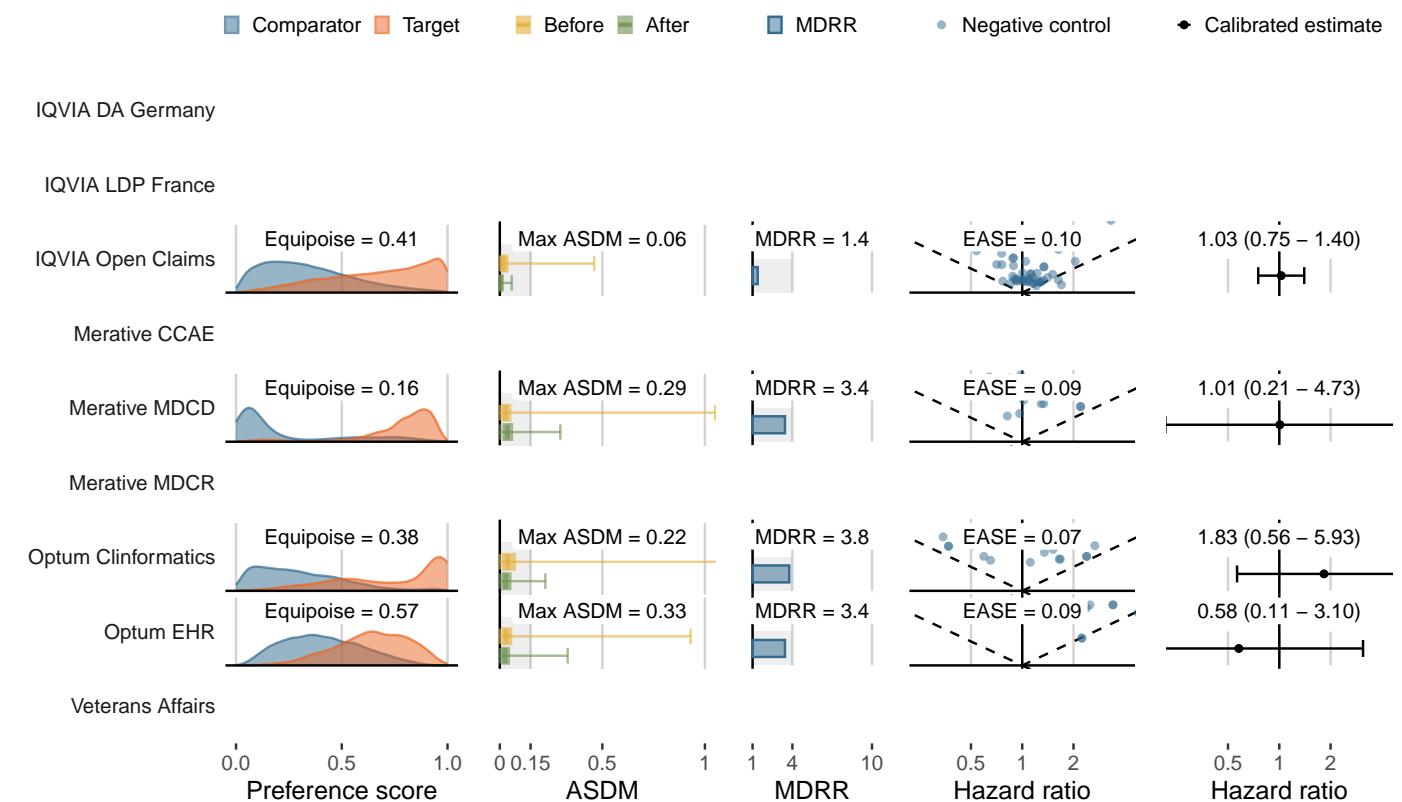
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Joint pain**

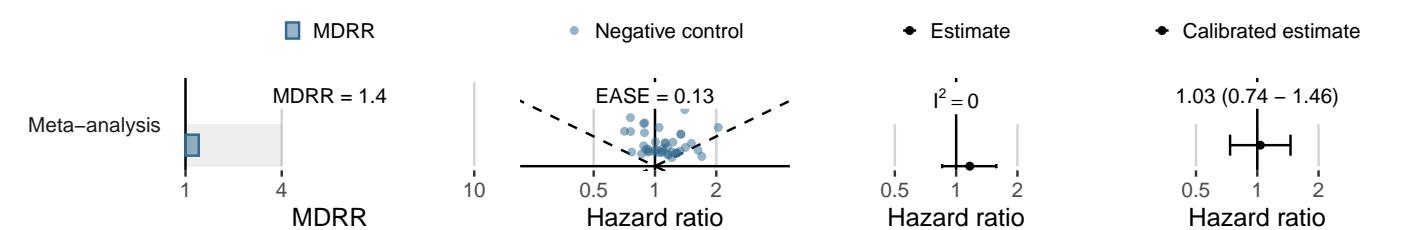
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	15,596	9,067	82	9.04
Merative CCAE	-	-	-	-
Merative MDCD	445	236	<5	<21.18
Merative MDCR	-	-	-	-
Optum Clininformatics	498	287	<5	<17.44
Optum EHR	958	208	<5	<24.07
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



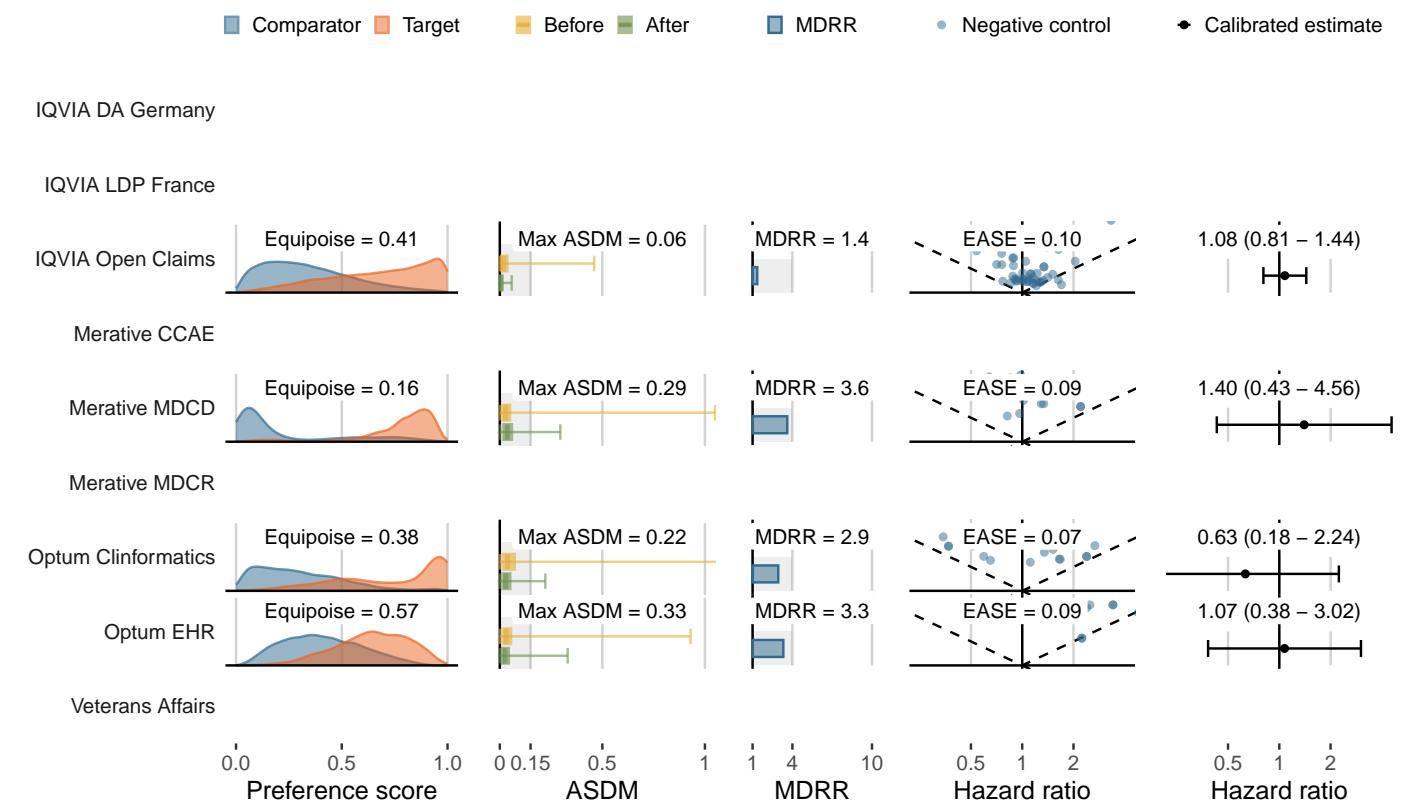
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Acute renal failure**

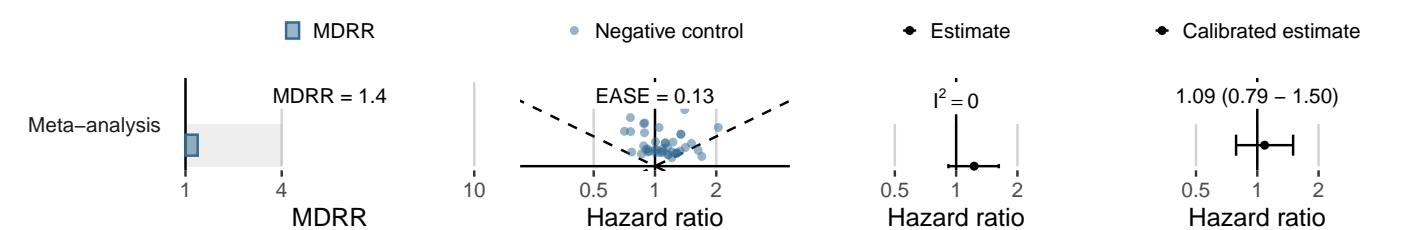
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,254	9,473	95	10.03
Merative CCAE	-	-	-	-
Merative MDCD	530	290	12	41.41
Merative MDCR	-	-	-	-
Optum Clininformatics	588	340	<5	<14.71
Optum EHR	998	217	6	27.62
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Thyroid tumor**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,651	9,735	10	1.03
Merative CCAE	-	-	-	-
Merative MDCD	561	310	-	0.00
Merative MDCR	-	-	-	-
Optum Clininformatics	601	352	<5	<14.21
Optum EHR	1,012	219	<5	<22.80
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ● Negative control ◆ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France



Merative CCAE

Merative MDCD

Merative MDCR



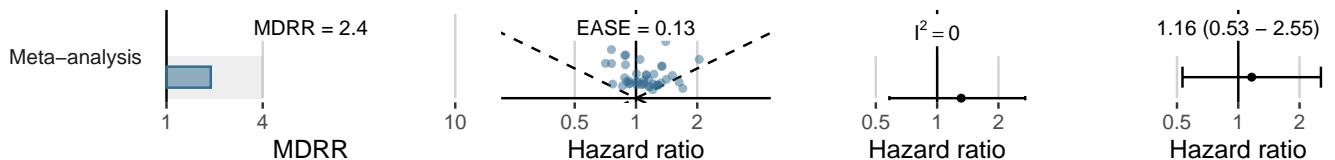
Optum EHR

Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ● Negative control ◆ Estimate ◆ Calibrated estimate



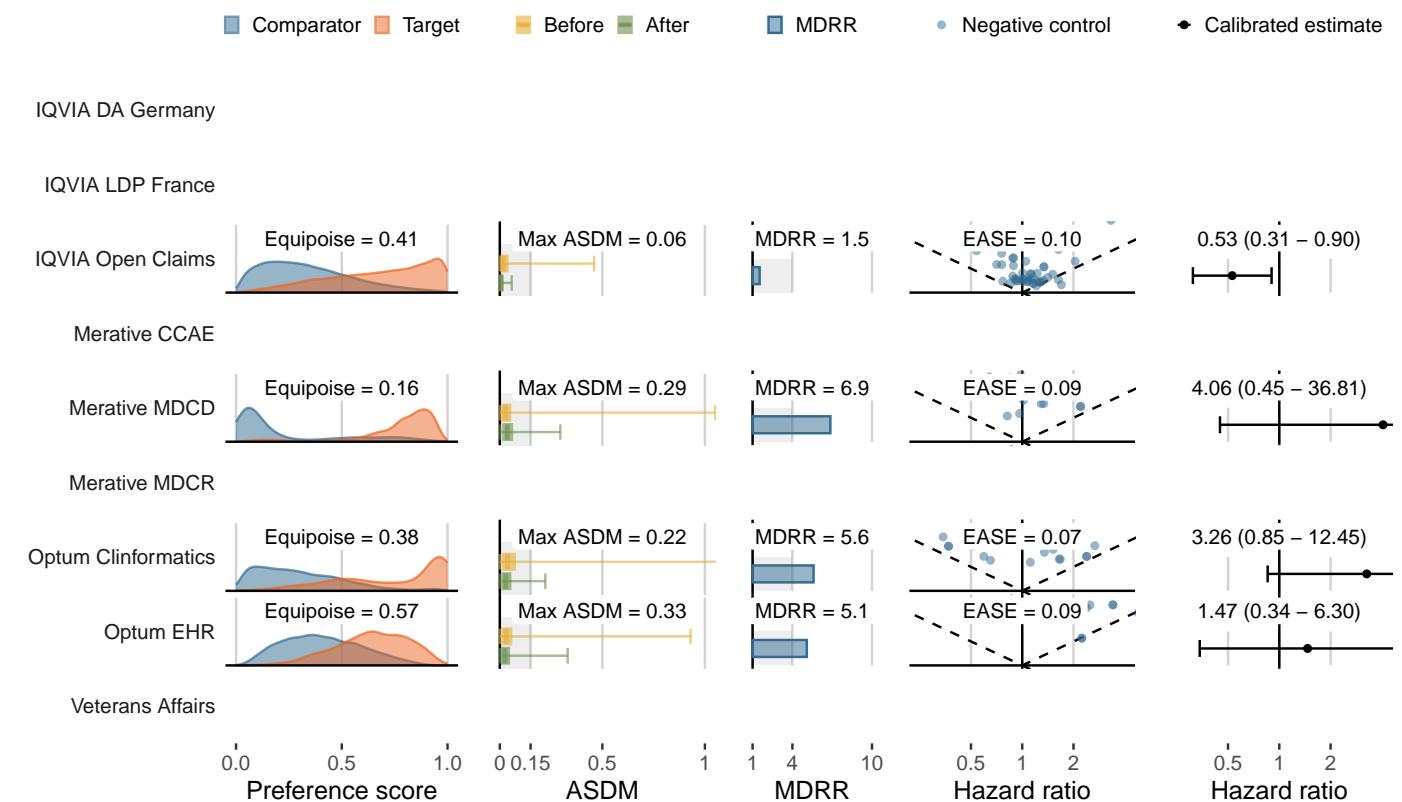
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Venous thromboembolic events**

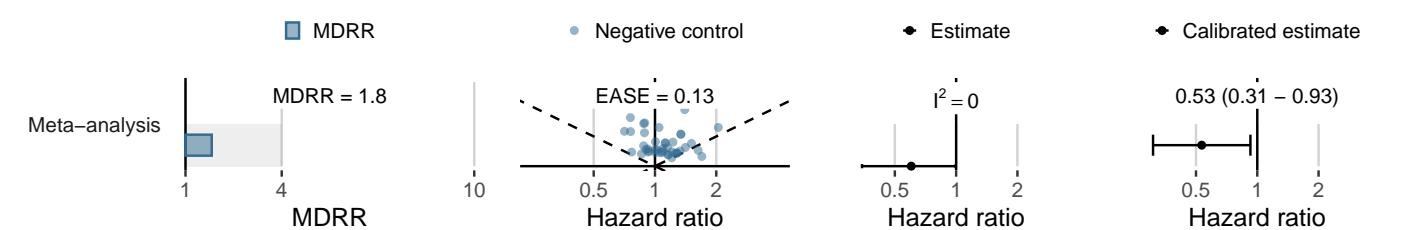
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,227	9,462	27	2.85
Merative CCAE	-	-	-	-
Merative MDCD	536	301	5	16.61
Merative MDCR	-	-	-	-
Optum Clininformatics	589	339	<5	<14.75
Optum EHR	986	213	<5	<23.42
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



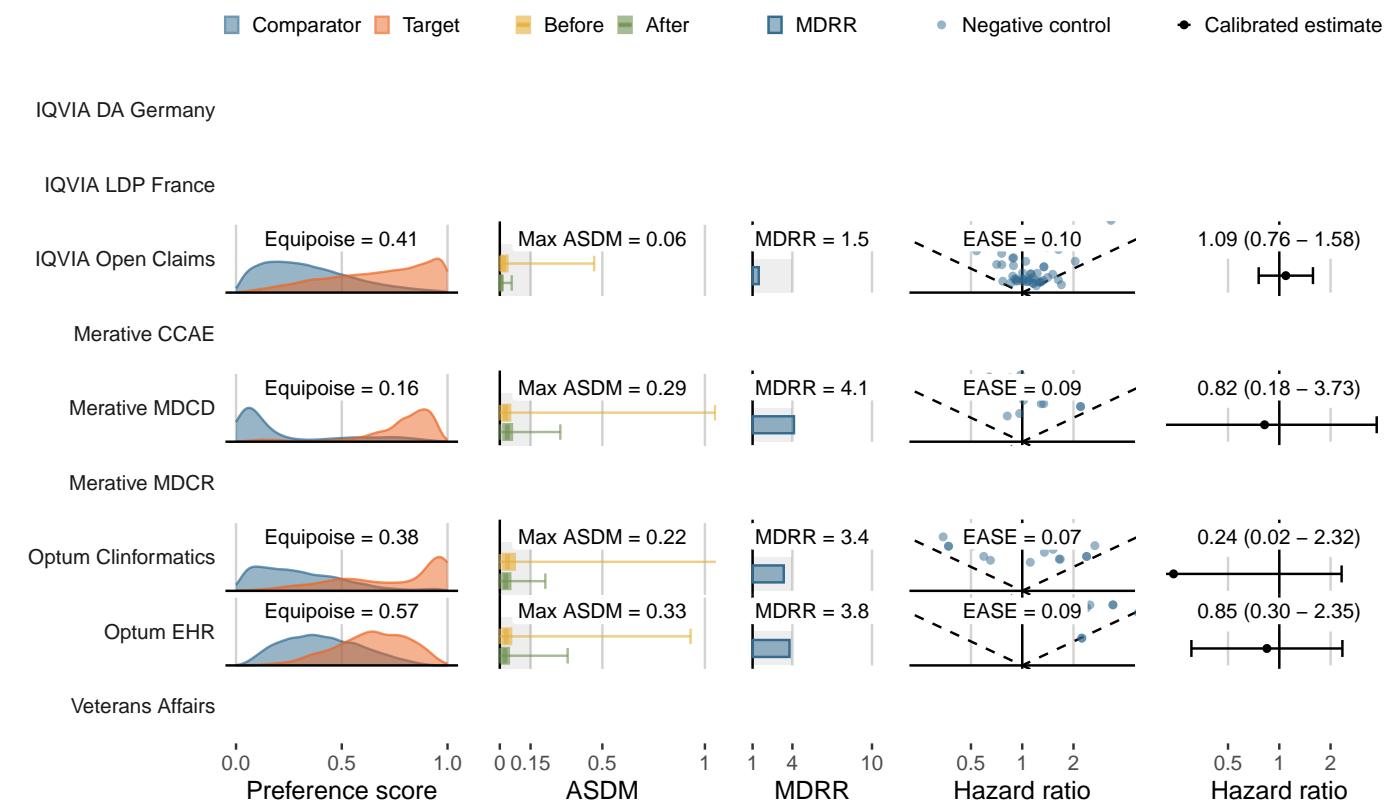
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Hospitalization with heart failure**

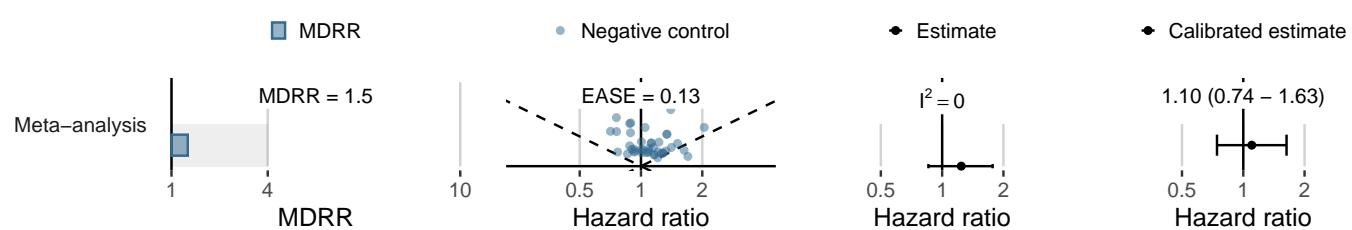
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,230	9,481	61	6.43
Merative CCAE	-	-	-	-
Merative MDCD	523	281	<5	<17.77
Merative MDCR	-	-	-	-
Optum Clininformatics	588	350	<5	<14.28
Optum EHR	992	215	7	32.51
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



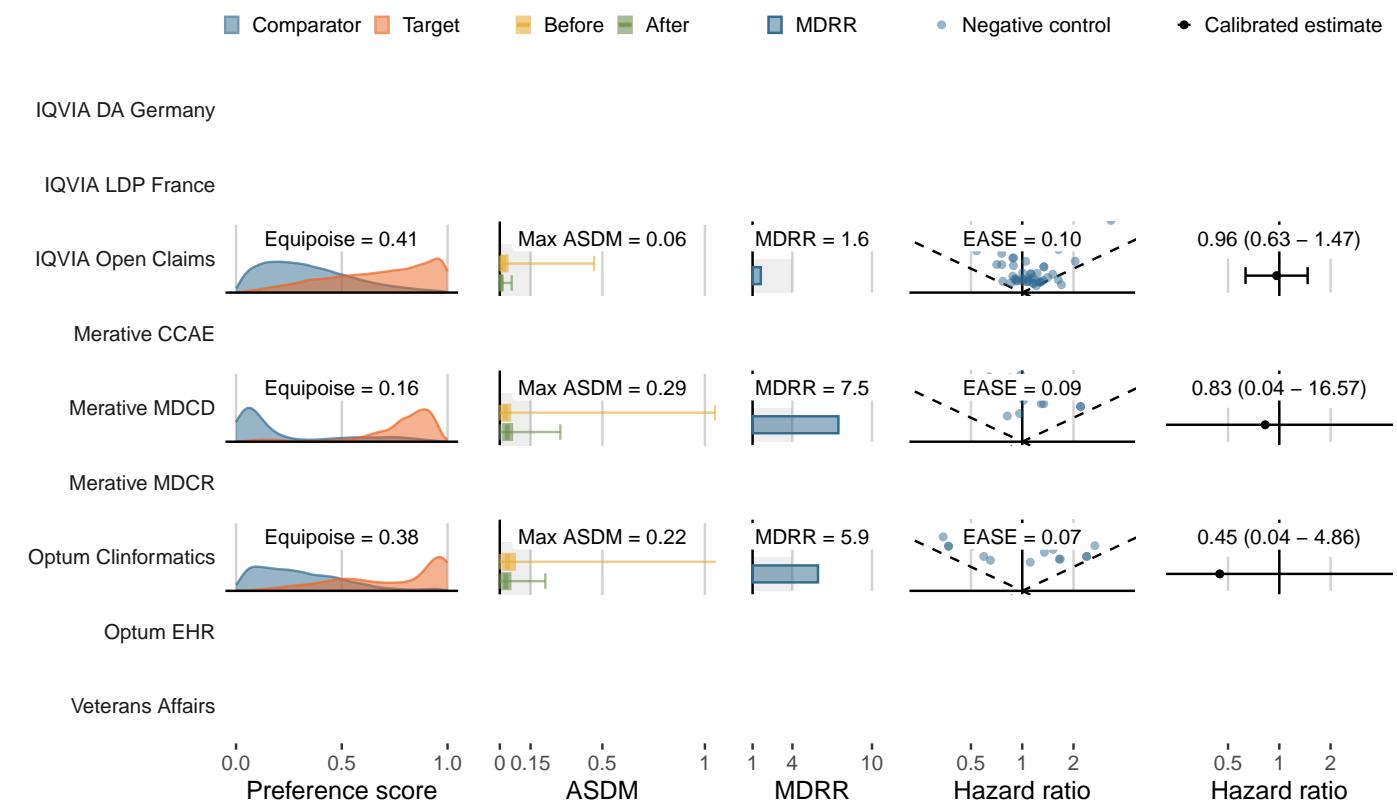
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Stroke**

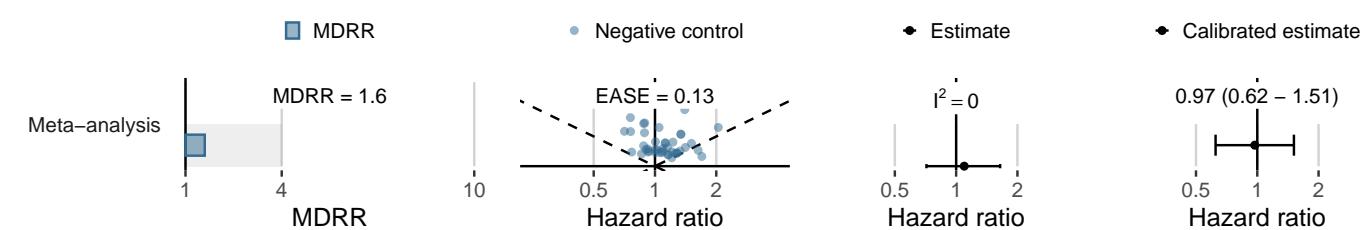
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,334	9,546	47	4.92
Merative CCAE	-	-	-	-
Merative MDCD	548	299	<5	<16.73
Merative MDCR	-	-	-	-
Optum Clininformatics	596	350	<5	<14.30
Optum EHR	1,004	219	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Bone fracture**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	9,225	4,827	64	13.26
Merative CCAE	-	-	-	-
Merative MDCC	-	-	-	-
Merative MDCR	-	-	-	-
Optum Clininformatics	233	107	-	0.00
Optum EHR	531	99	<5	<50.32
Veterans Affairs	16,927	13,853	130	9.38

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ● Negative control ◆ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France

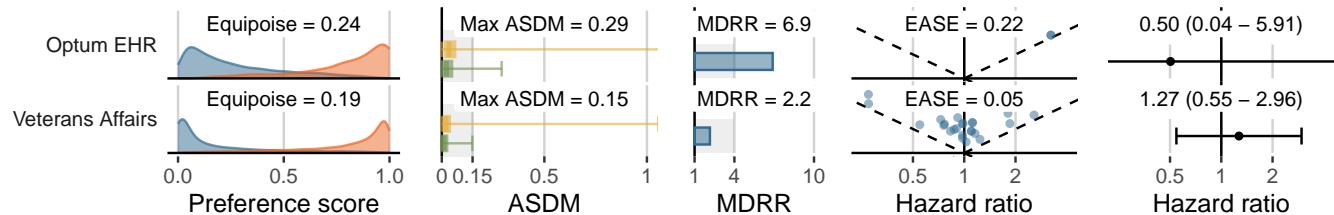


Merative CCAE

Merative MDCC

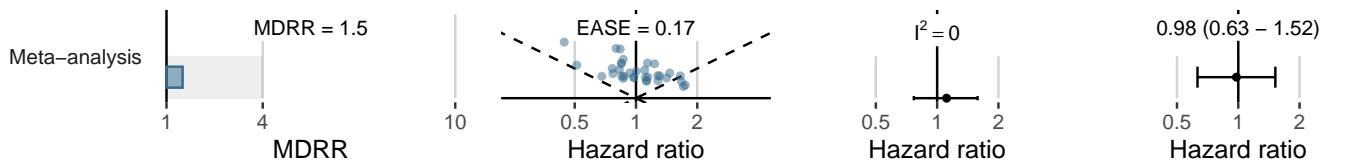
Merative MDCR

Optum Clininformatics



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ● Negative control ◆ Estimate ◆ Calibrated estimate



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Acute myocardial infarction**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	10,341	5,401	20	3.70
Merative CCAE	-	-	-	-
Merative MDCC	-	-	-	-
Merative MDCR	-	-	-	-
Optum Clininformatics	251	117	-	.00
Optum EHR	571	108	-	.00
Veterans Affairs	18,703	15,265	38	2.49

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ● Negative control ◆ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France



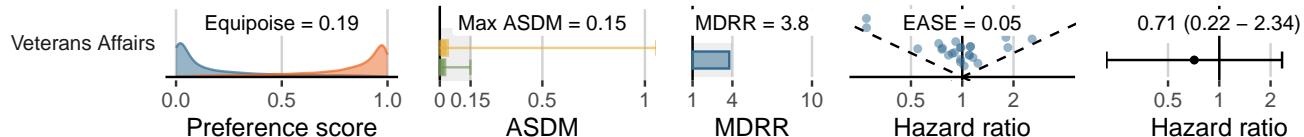
Merative CCAE

Merative MDCC

Merative MDCR

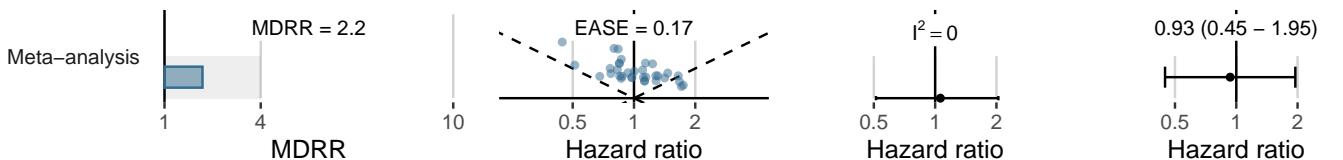
Optum Clininformatics

Optum EHR



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ● Negative control ◆ Estimate ◆ Calibrated estimate



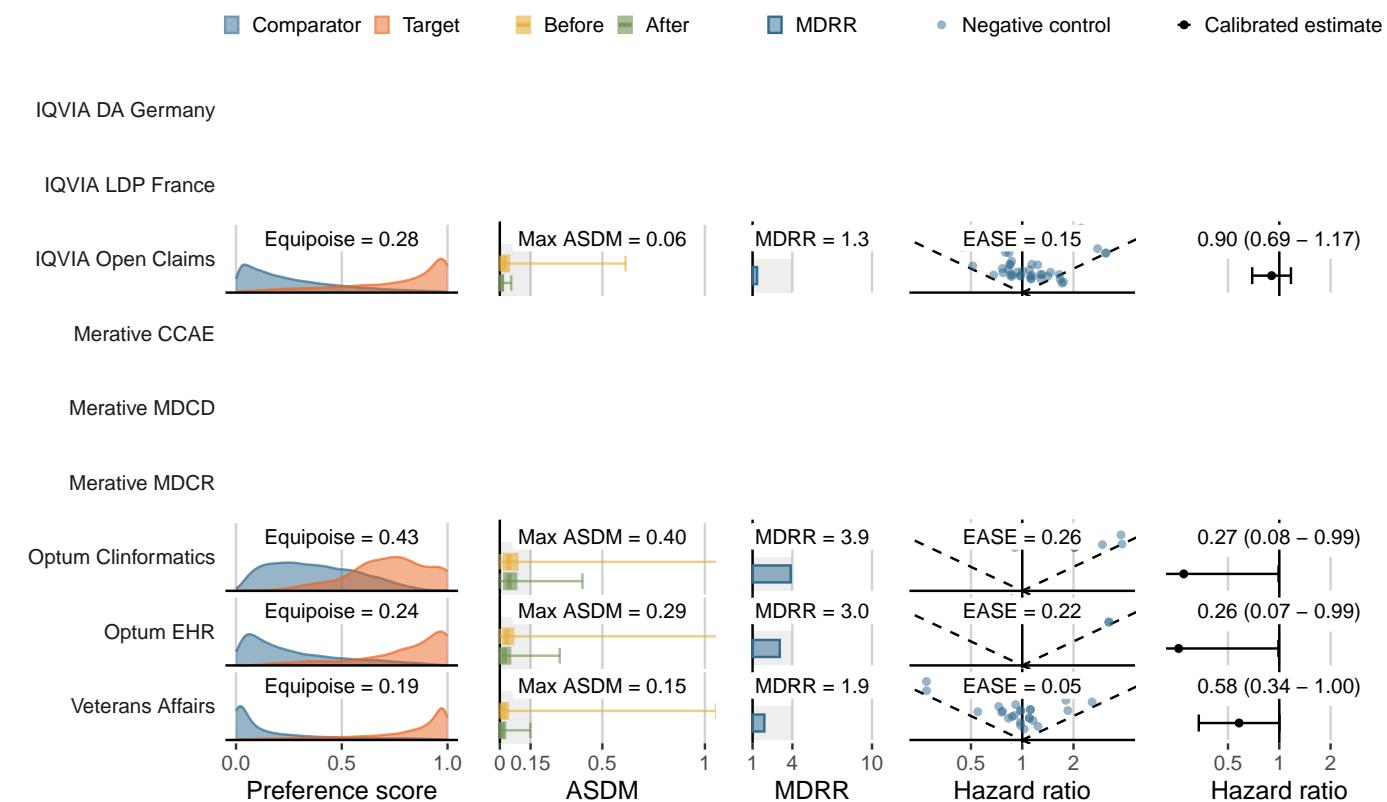
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Genitourinary infection**

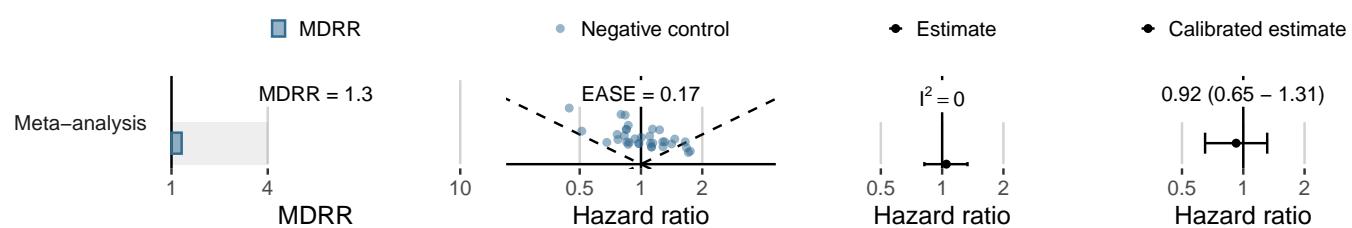
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	7,720	4,061	117	28.81
Merative CCAE	-	-	-	-
Merative MDCC	-	-	-	-
Merative MDCR	-	-	-	-
Optum Clininformatics	208	93	<5	<53.62
Optum EHR	503	92	<5	<54.31
Veterans Affairs	16,452	13,533	187	13.82

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



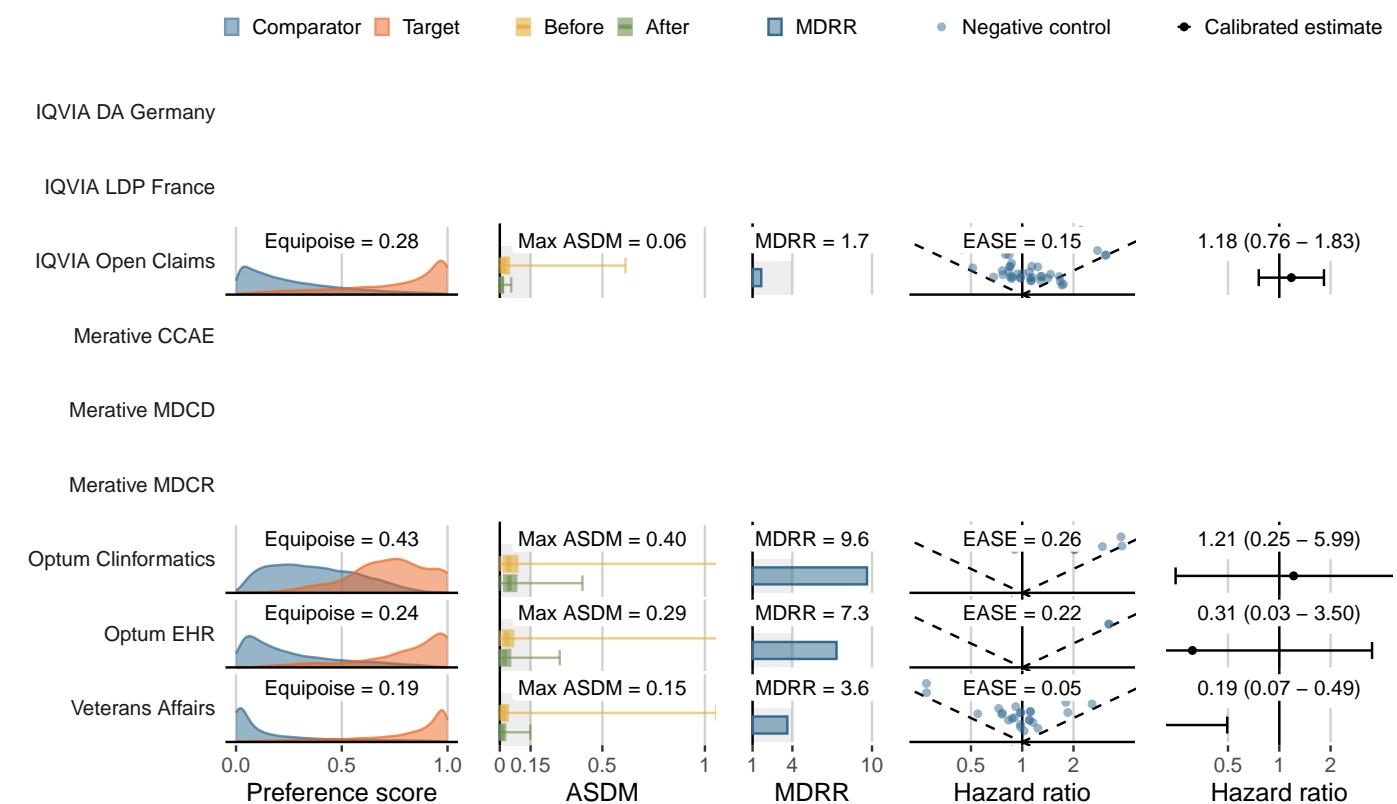
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Joint pain**

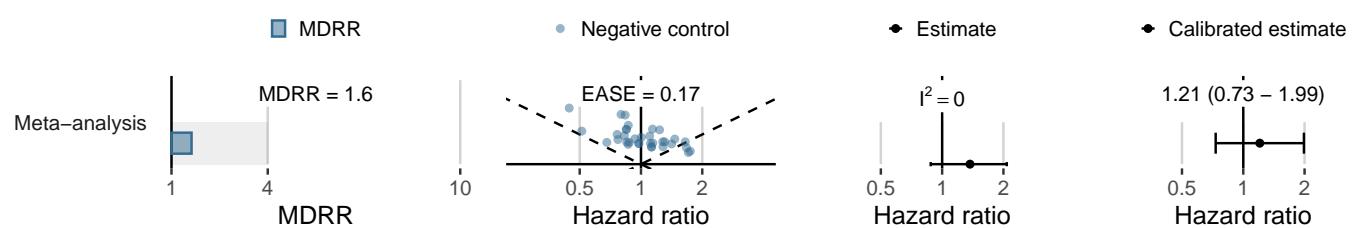
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	9,812	5,104	43	8.42
Merative CCAE	-	-	-	-
Merative MDCC	-	-	-	-
Merative MDCR	-	-	-	-
Optum Clininformatics	226	104	<5	<48.25
Optum EHR	545	103	<5	<48.76
Veterans Affairs	12,515	10,163	41	4.03

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Acute renal failure**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	10,226	5,333	48	9.00
Merative CCAE	-	-	-	-
Merative MDCC	-	-	-	-
Merative MDCR	-	-	-	-
Optum Clininformatics	246	114	<5	<43.69
Optum EHR	567	106	<5	<47.00
Veterans Affairs	18,405	15,017	132	8.79

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ● Negative control ◆ Calibrated estimate

IQVIA DA Germany

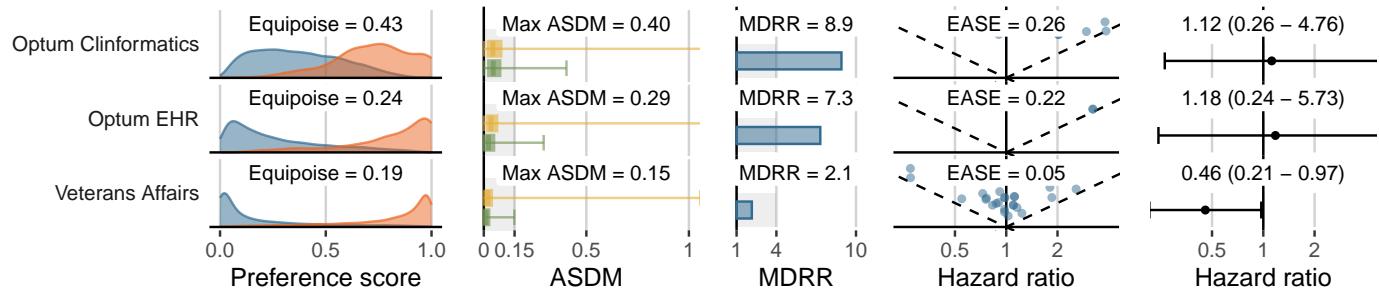
IQVIA LDP France



Merative CCAE

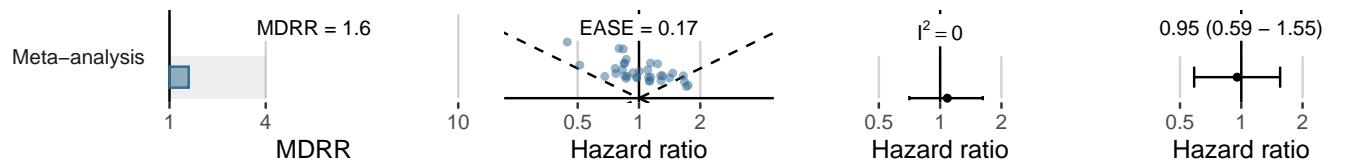
Merative MDCC

Merative MDCR



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ● Negative control ◆ Estimate ● Calibrated estimate



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Thyroid tumor**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	10,488	5,492	<5	<0.91
Merative CCAE	-	-	-	-
Merative MDCC	-	-	-	-
Merative MDCR	-	-	-	-
Optum Clininformatics	253	117	-	0.00
Optum EHR	578	108	<5	<46.34
Veterans Affairs	18,953	15,462	19	1.23

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France

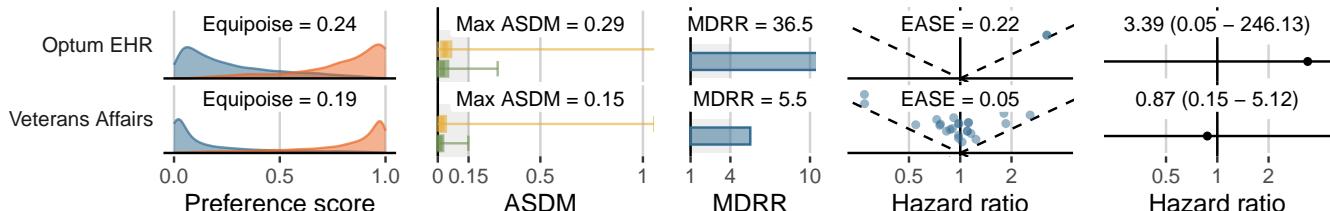


Merative CCAE

Merative MDCC

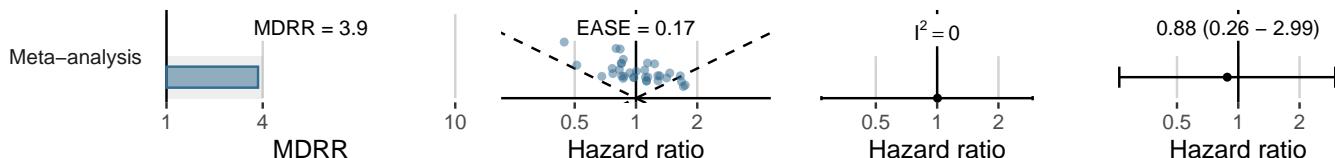
Merative MDCR

Optum Clininformatics



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate



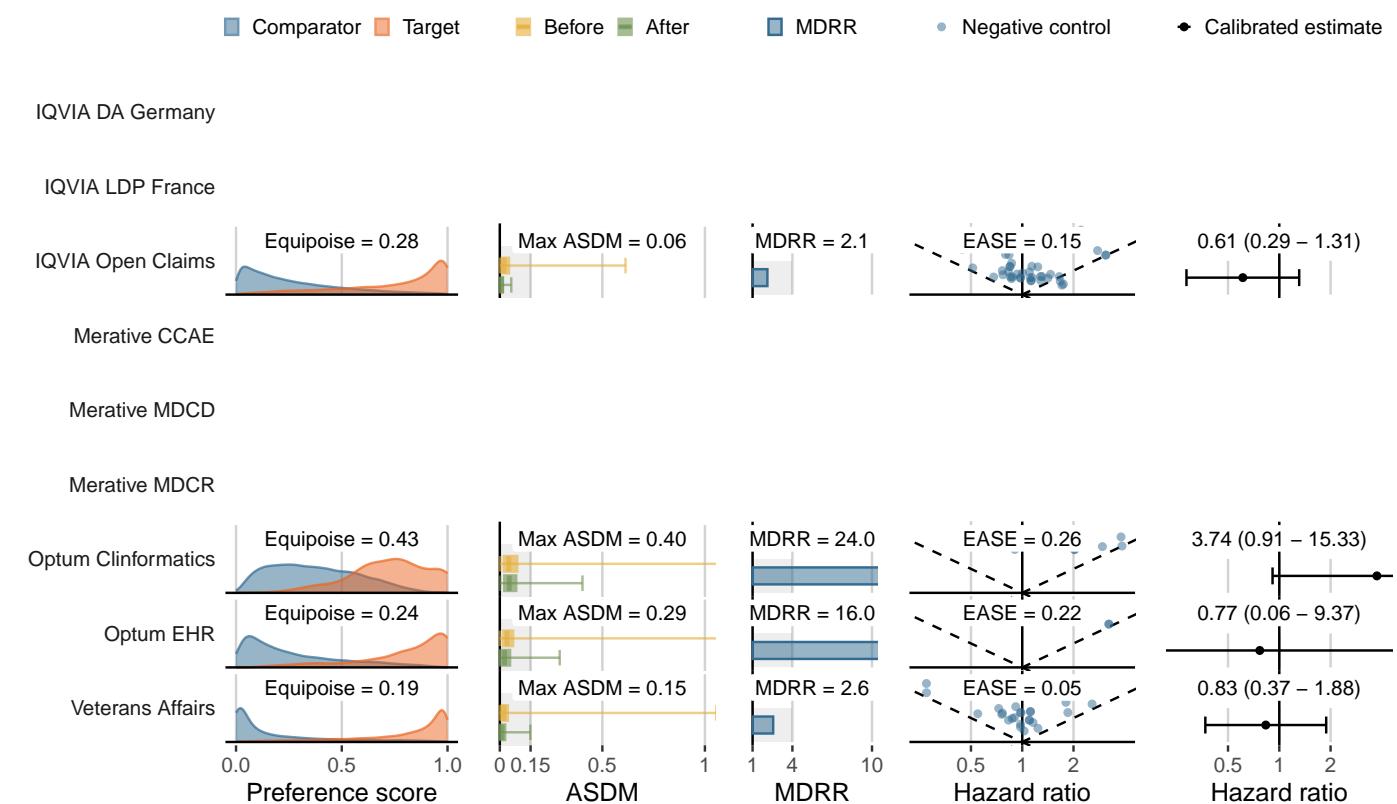
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Venous thromboembolic events**

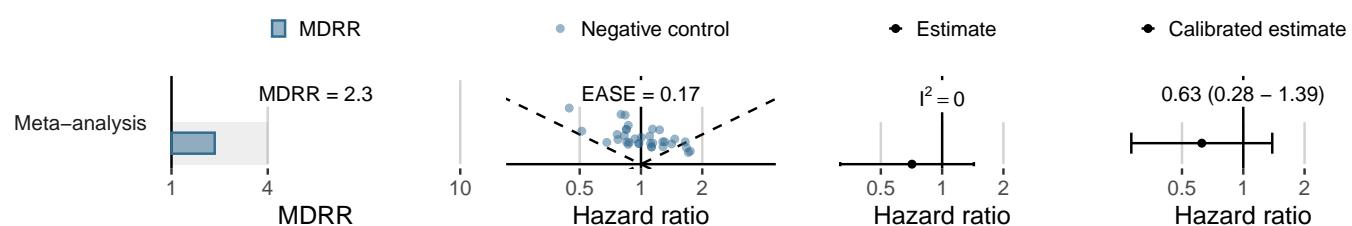
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	10,211	5,334	16	3.00
Merative CCAE	-	-	-	-
Merative MDCC	-	-	-	-
Merative MDCR	-	-	-	-
Optum Clininformatics	249	113	<5	<44.23
Optum EHR	562	106	<5	<47.08
Veterans Affairs	18,136	14,687	85	5.79

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



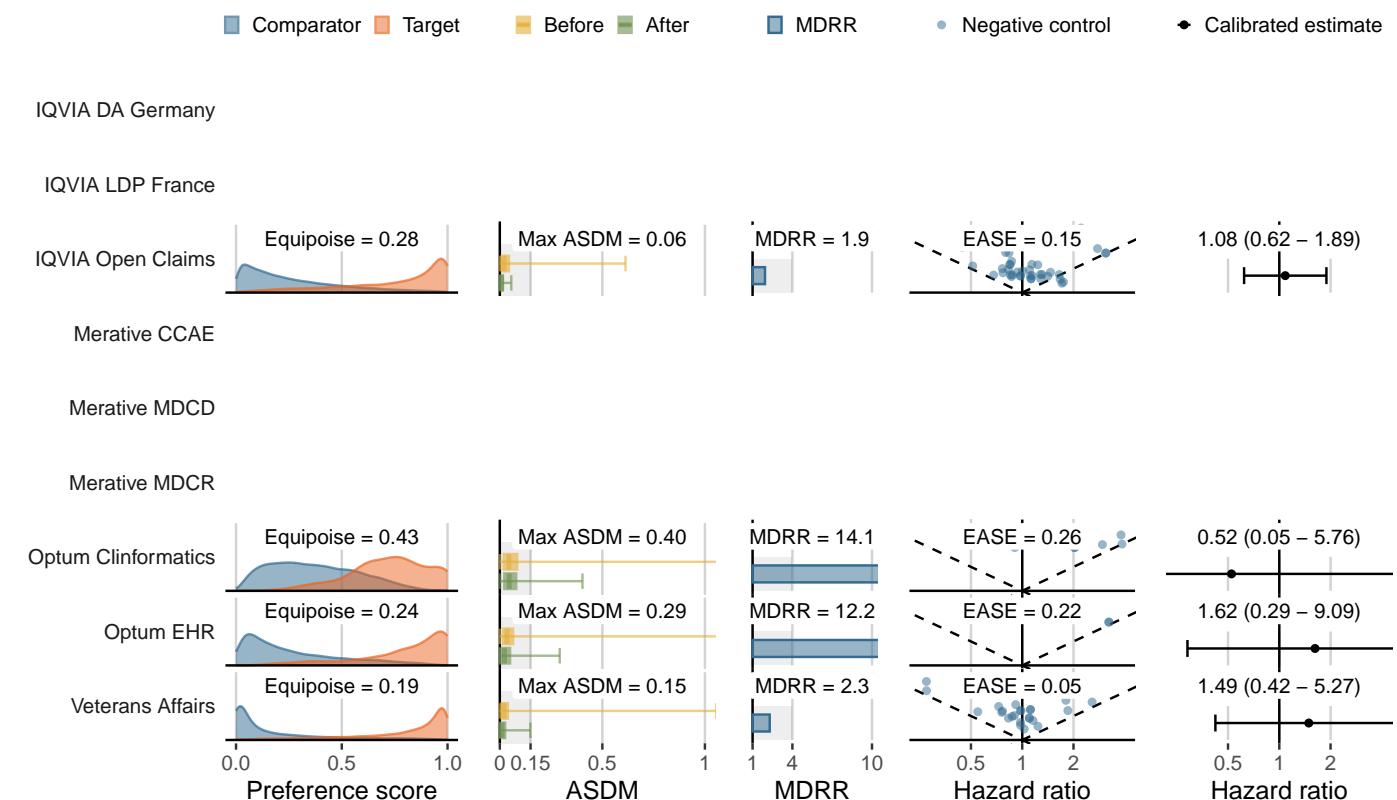
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Hospitalization with heart failure**

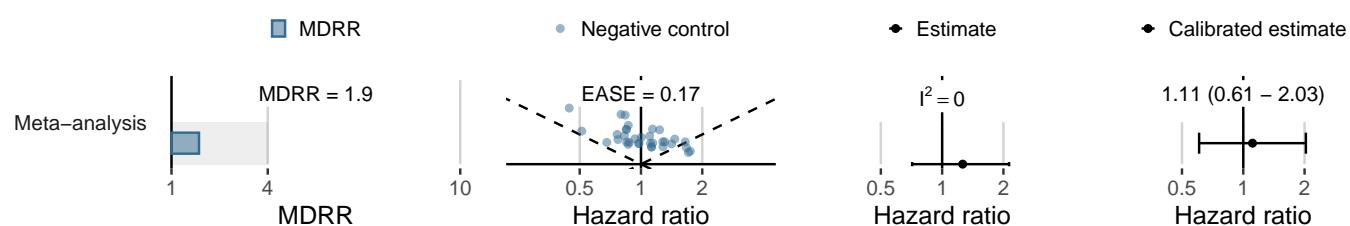
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	10,191	5,333	29	5.44
Merative CCAE	-	-	-	-
Merative MDCC	-	-	-	-
Merative MDCR	-	-	-	-
Optum Clininformatics	246	114	<5	<44.03
Optum EHR	559	105	<5	<47.55
Veterans Affairs	18,507	15,069	113	7.50

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Stroke**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	10,264	5,383	24	4.46
Merative CCAE	-	-	-	-
Merative MDCC	-	-	-	-
Merative MDCR	-	-	-	-
Optum Clininformatics	250	117	-	.00
Optum EHR	573	109	-	.00
Veterans Affairs	18,825	15,393	29	1.88

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France



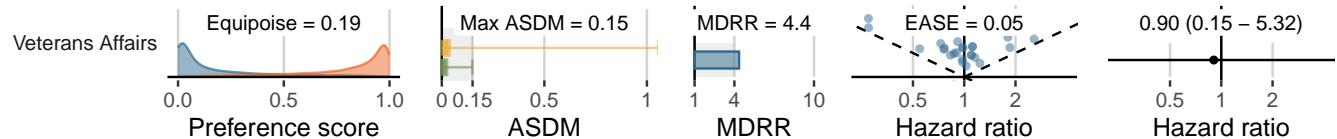
Merative CCAE

Merative MDCC

Merative MDCR

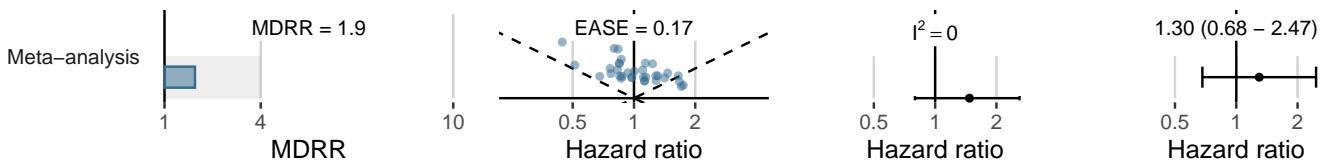
Optum Clininformatics

Optum EHR



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute pancreatitis**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,479	10,198	20	1.96
Merative CCAE	-	-	-	-
Merative MDCD	644	446	<5	<11.22
Merative MDCR	-	-	-	-
Optum Clininformatics	956	667	-	0.00
Optum EHR	1,080	245	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France

IQVIA Open Claims

Merative CCAE

Merative MDCD

Merative MDCR

Optum Clininformatics

Optum EHR

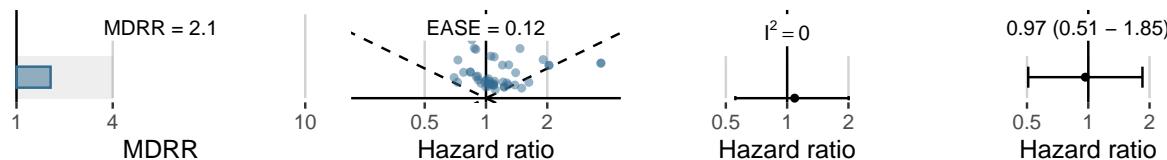
Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate

Meta-analysis



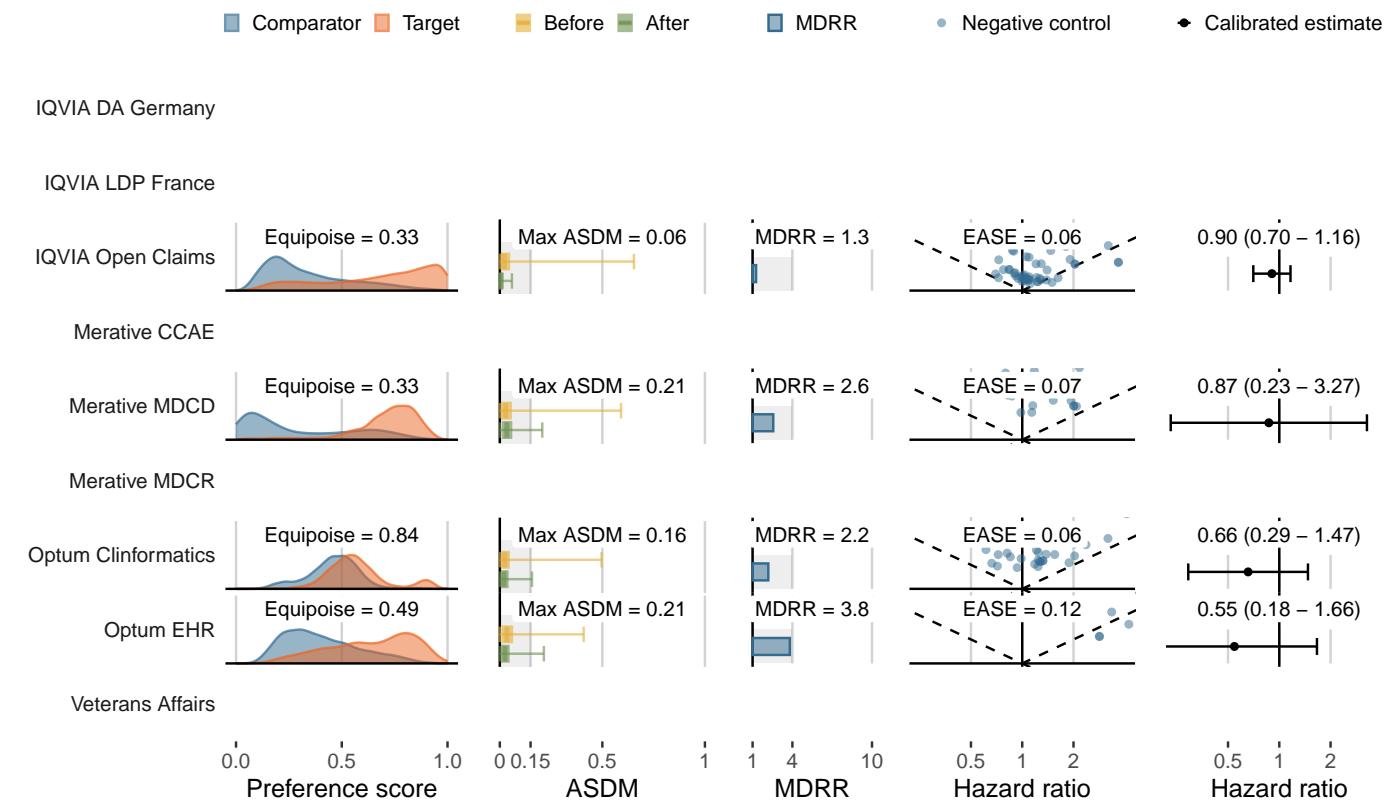
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Bone fracture**

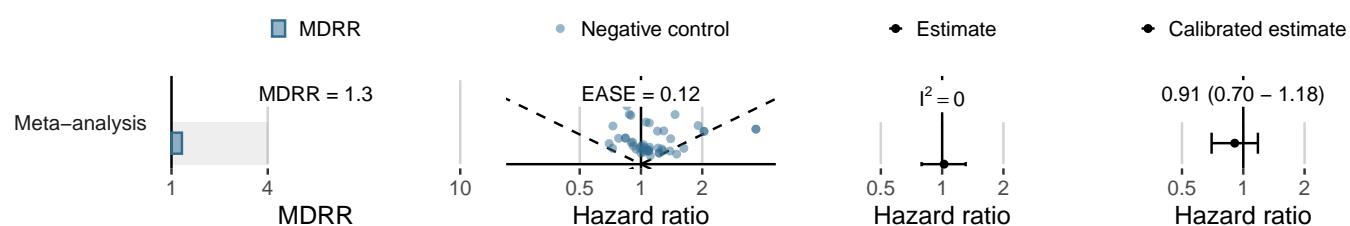
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	14,795	9,070	115	12.68
Merative CCAE	-	-	-	-
Merative MDCD	579	377	11	29.16
Merative MDCR	-	-	-	-
Optum Clininformatics	895	613	10	16.31
Optum EHR	1,012	226	5	22.14
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



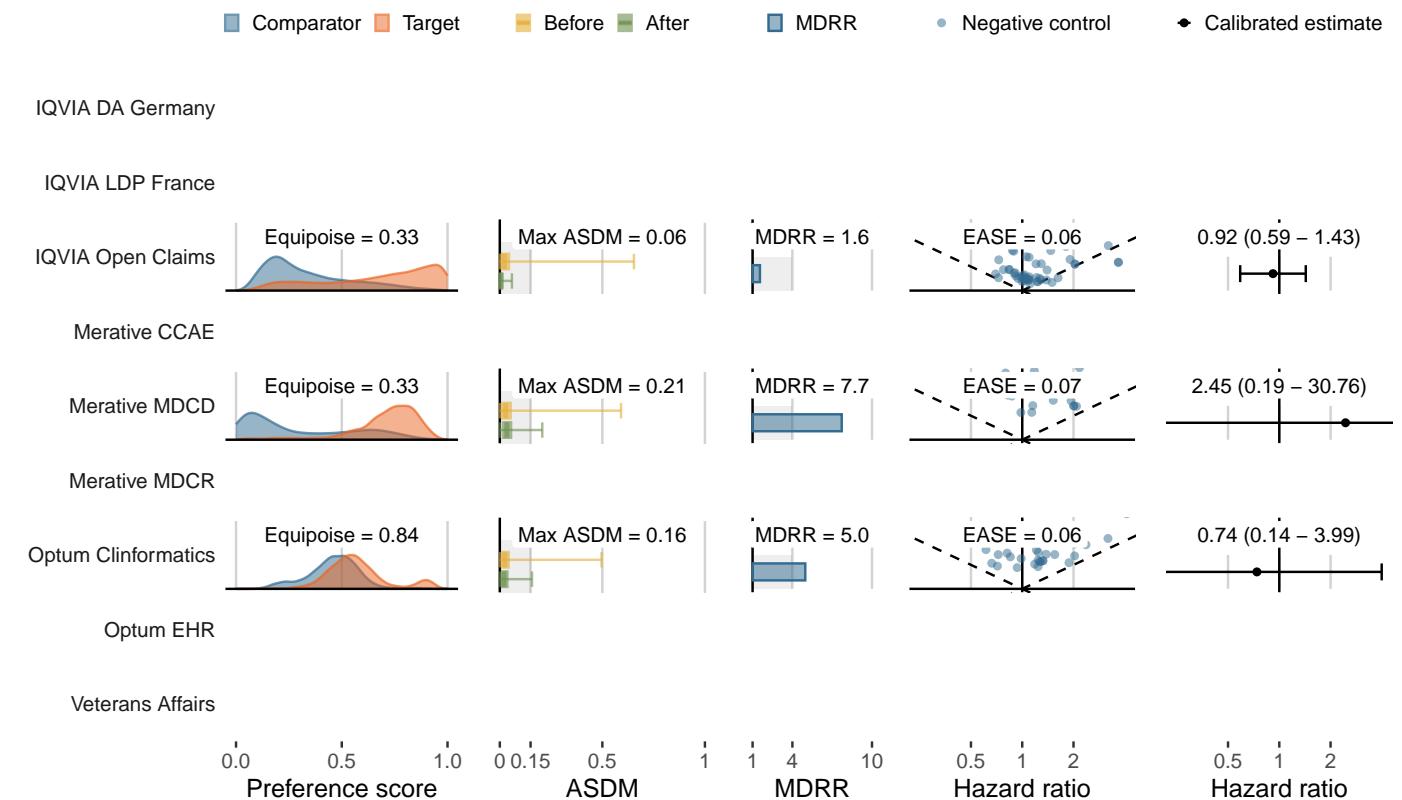
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute myocardial infarction**

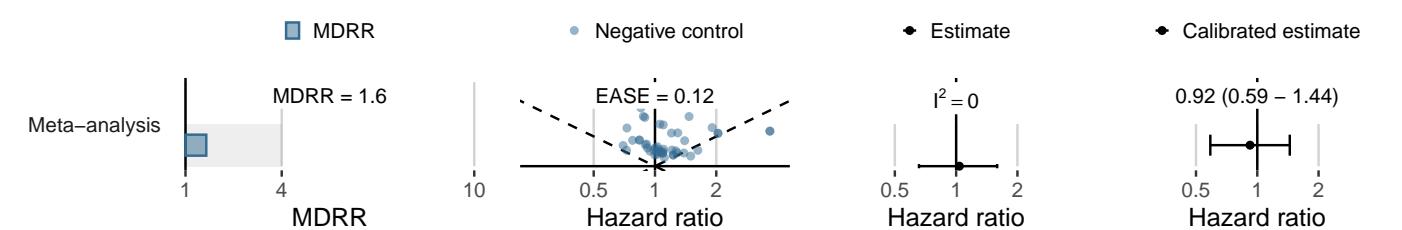
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,283	10,070	39	3.87
Merative CCAE	-	-	-	-
Merative MDCD	632	434	<5	<11.53
Merative MDCR	-	-	-	-
Optum Clininformatics	945	664	<5	<7.53
Optum EHR	1,076	243	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



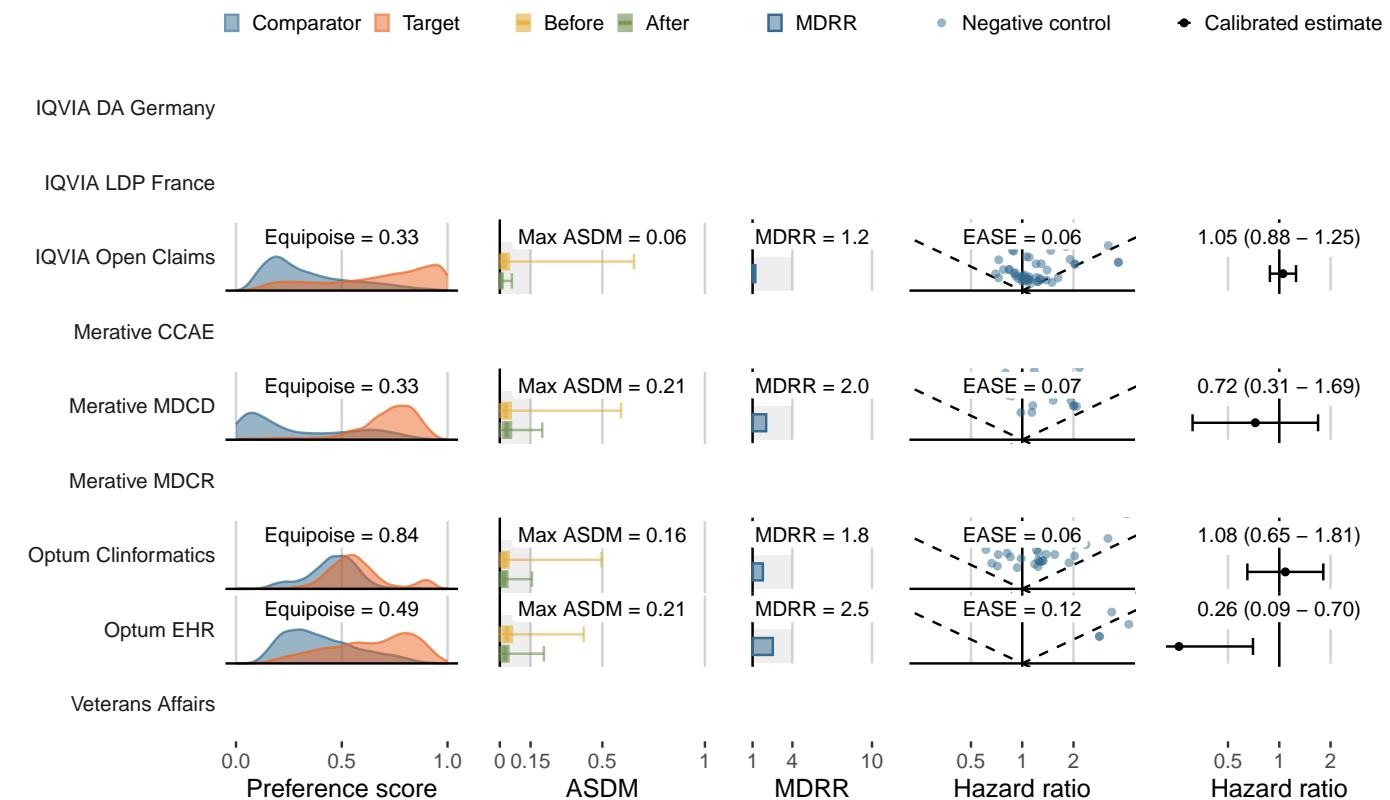
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Genitourinary infection**

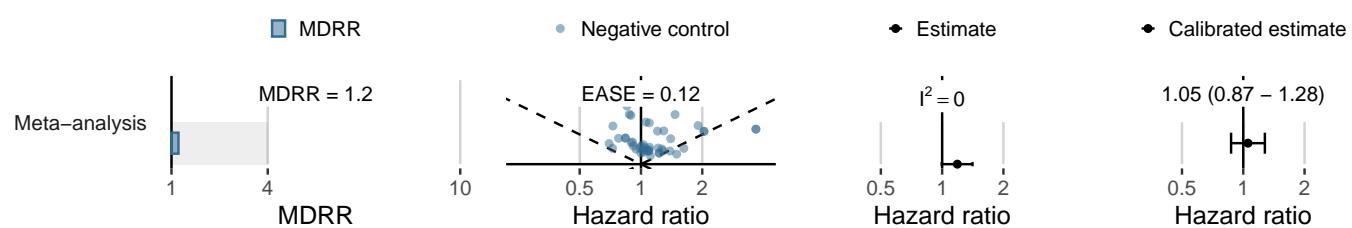
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	12,923	7,933	232	29.24
Merative CCAE	-	-	-	-
Merative MDCD	517	364	28	76.99
Merative MDCR	-	-	-	-
Optum Clininformatics	770	532	24	45.15
Optum EHR	945	209	8	38.23
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



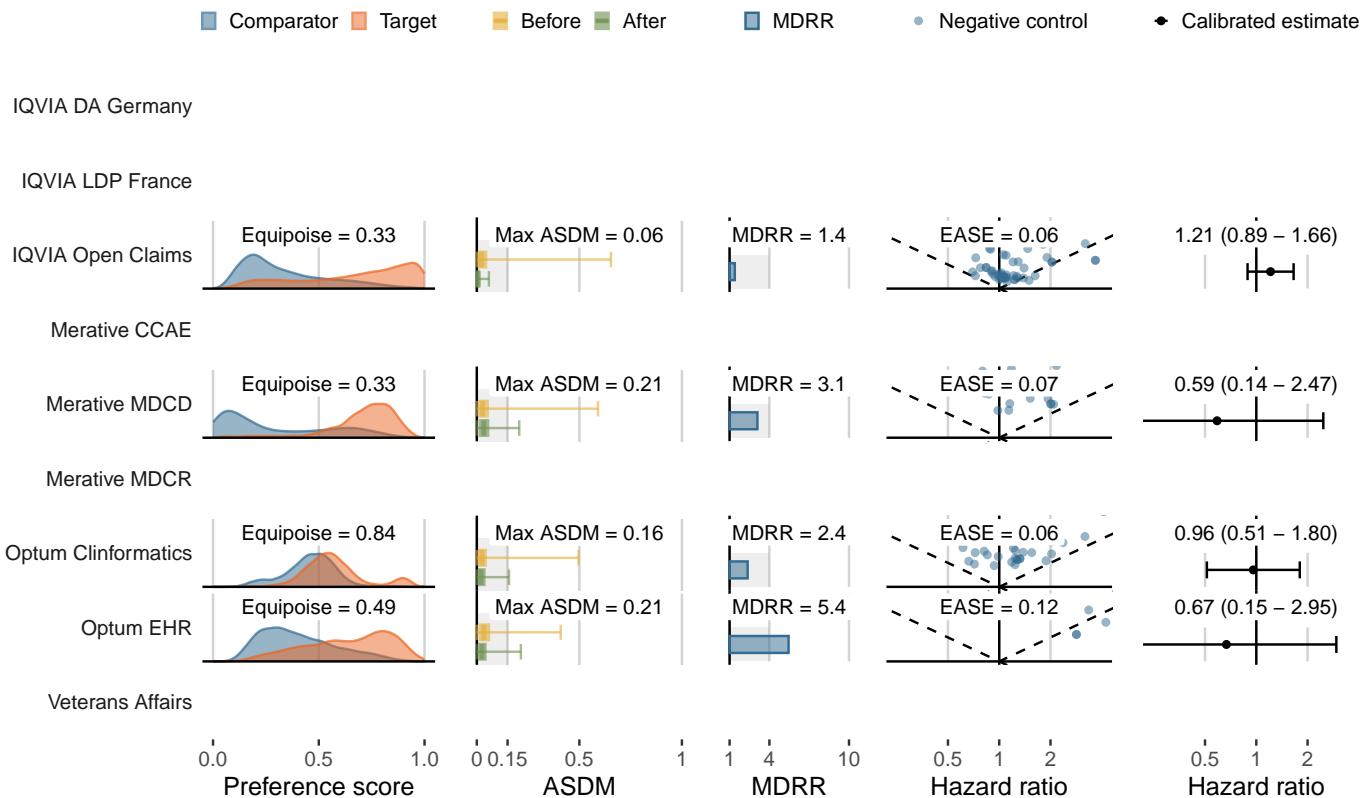
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Joint pain**

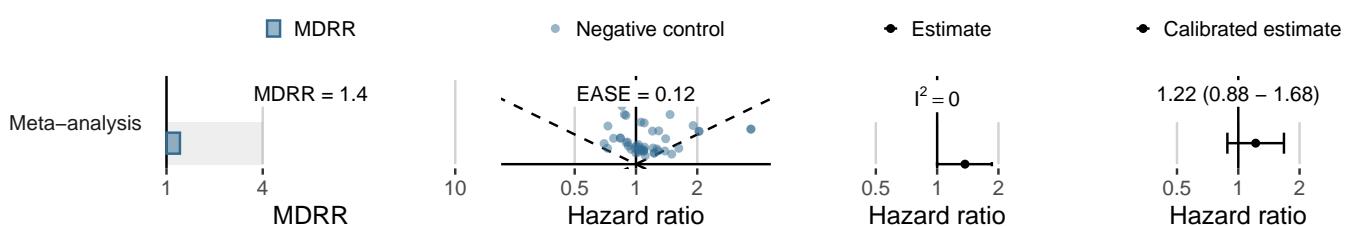
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	15,653	9,653	86	8.91
Merative CCAE	-	-	-	-
Merative MDCD	523	344	6	17.44
Merative MDCR	-	-	-	-
Optum Clininformatics	789	530	17	32.09
Optum EHR	1,029	232	<5	<21.60
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



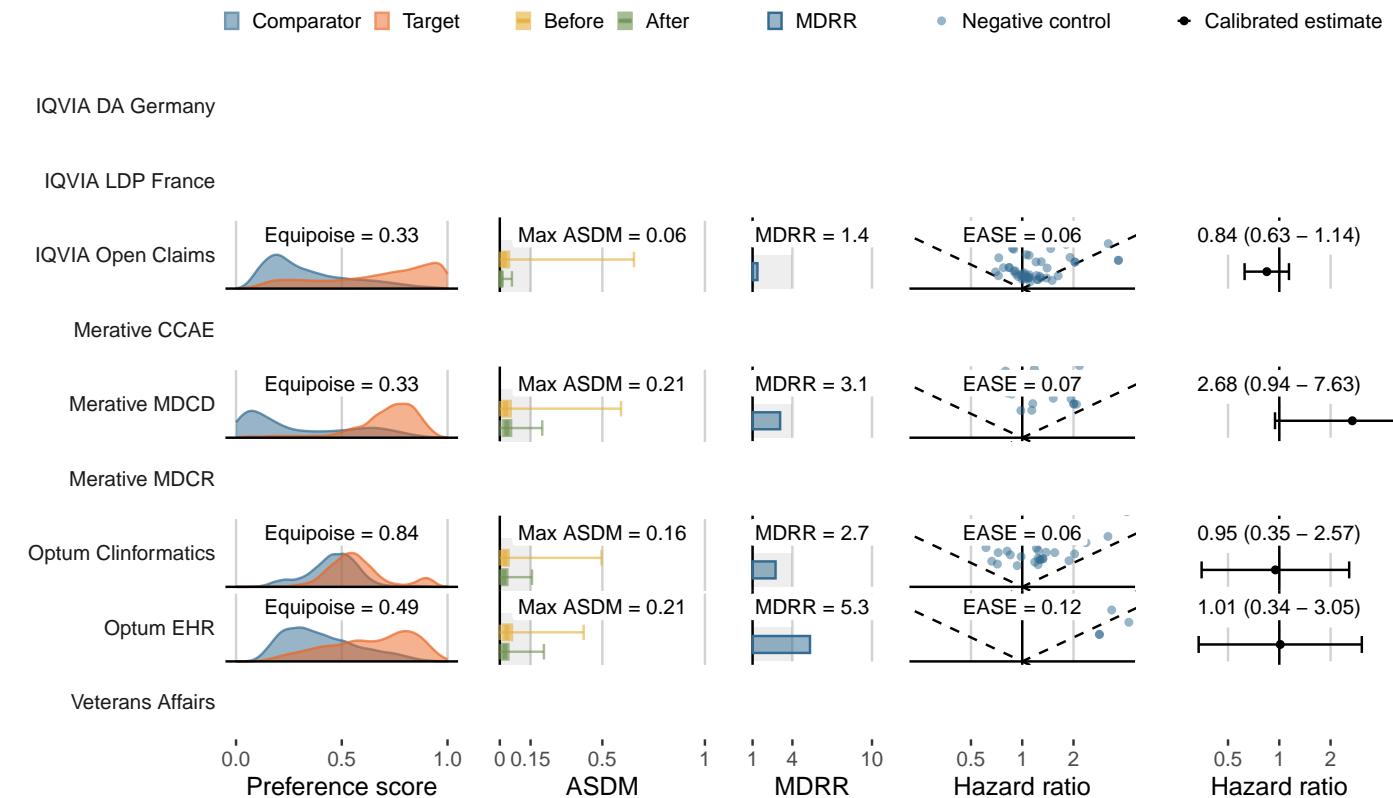
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute renal failure**

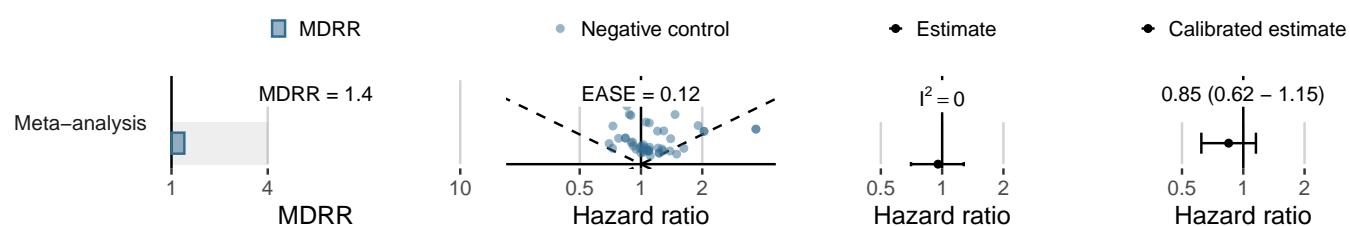
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,192	9,989	99	9.91
Merative CCAE	-	-	-	-
Merative MDCD	624	421	16	38.00
Merative MDCR	-	-	-	-
Optum Clininformatics	932	649	6	9.24
Optum EHR	1,071	241	7	29.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Thyroid tumor**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,558	10,245	11	1.07
Merative CCAE	-	-	-	-
Merative MDCD	650	448	<5	<11.16
Merative MDCR	-	-	-	-
Optum Clininformatics	954	664	<5	<7.54
Optum EHR	1,089	245	<5	<20.43
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France

IQVIA Open Claims

Merative CCAE

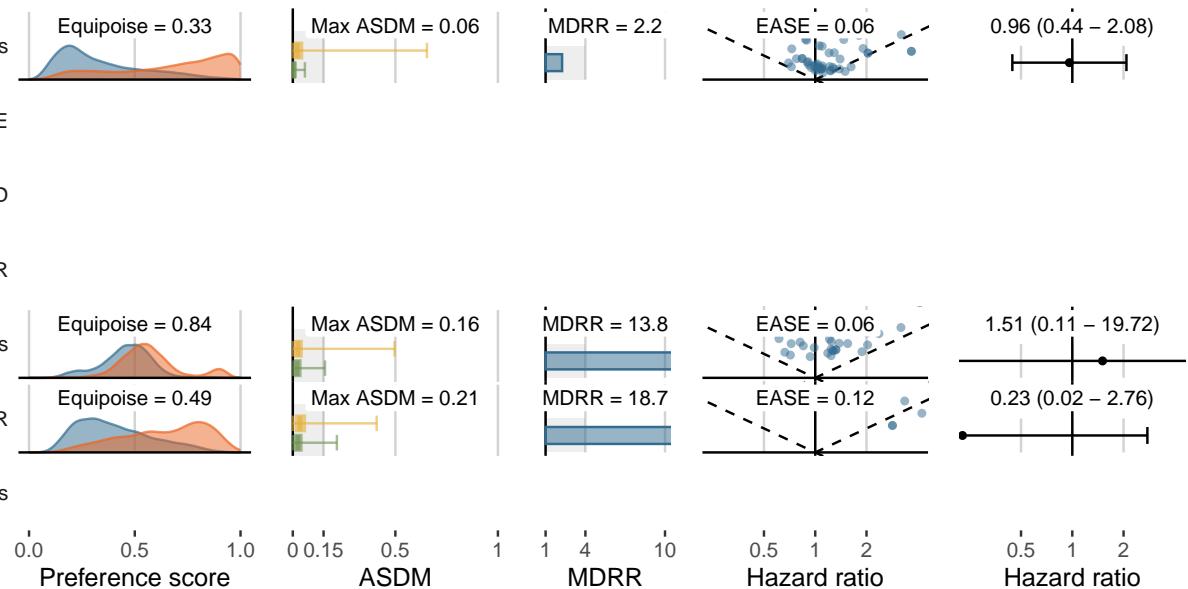
Merative MDCD

Merative MDCR

Optum Clininformatics

Optum EHR

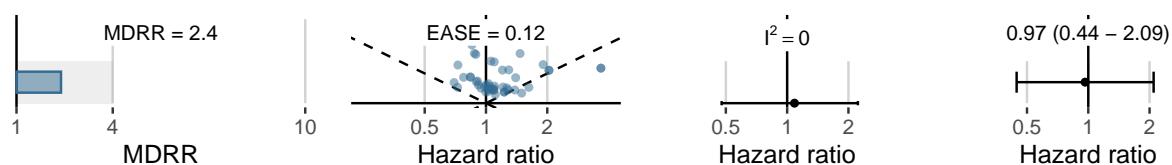
Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate

Meta-analysis



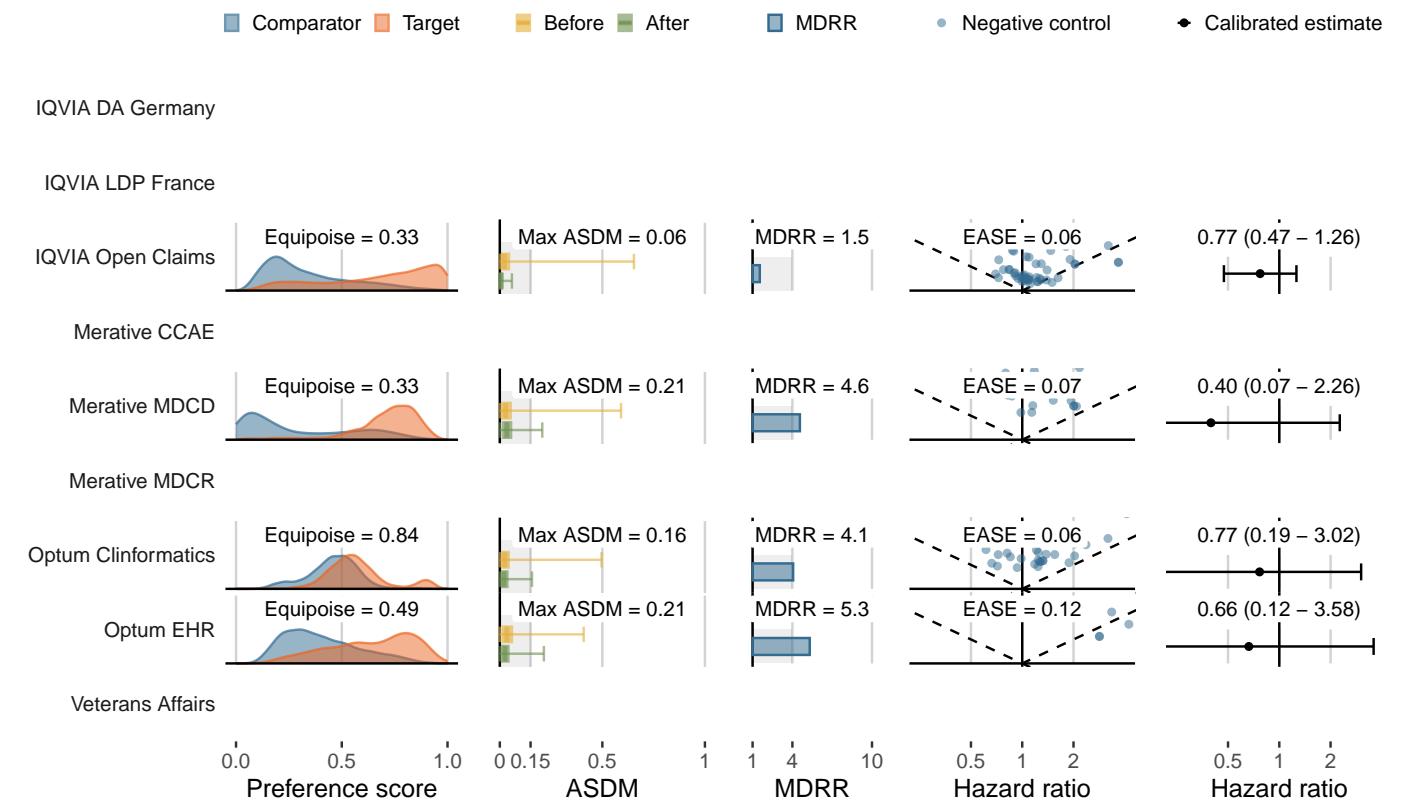
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Venous thromboembolic events**

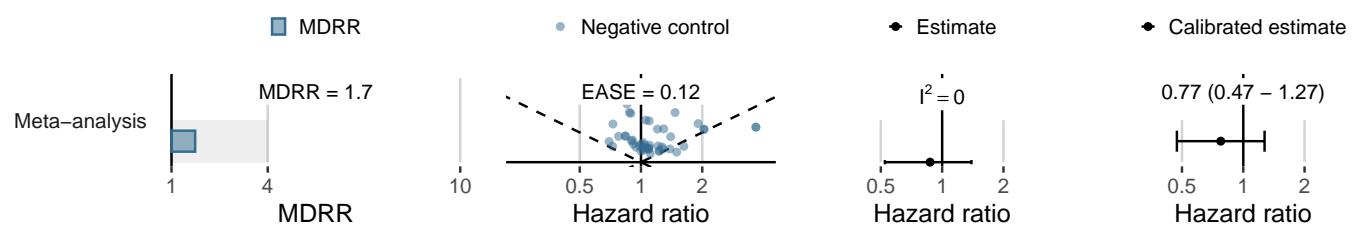
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,177	10,004	28	2.80
Merative CCAE	-	-	-	-
Merative MDCD	636	440	7	15.90
Merative MDCR	-	-	-	-
Optum Clininformatics	935	644	5	7.77
Optum EHR	1,063	239	<5	<20.93
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



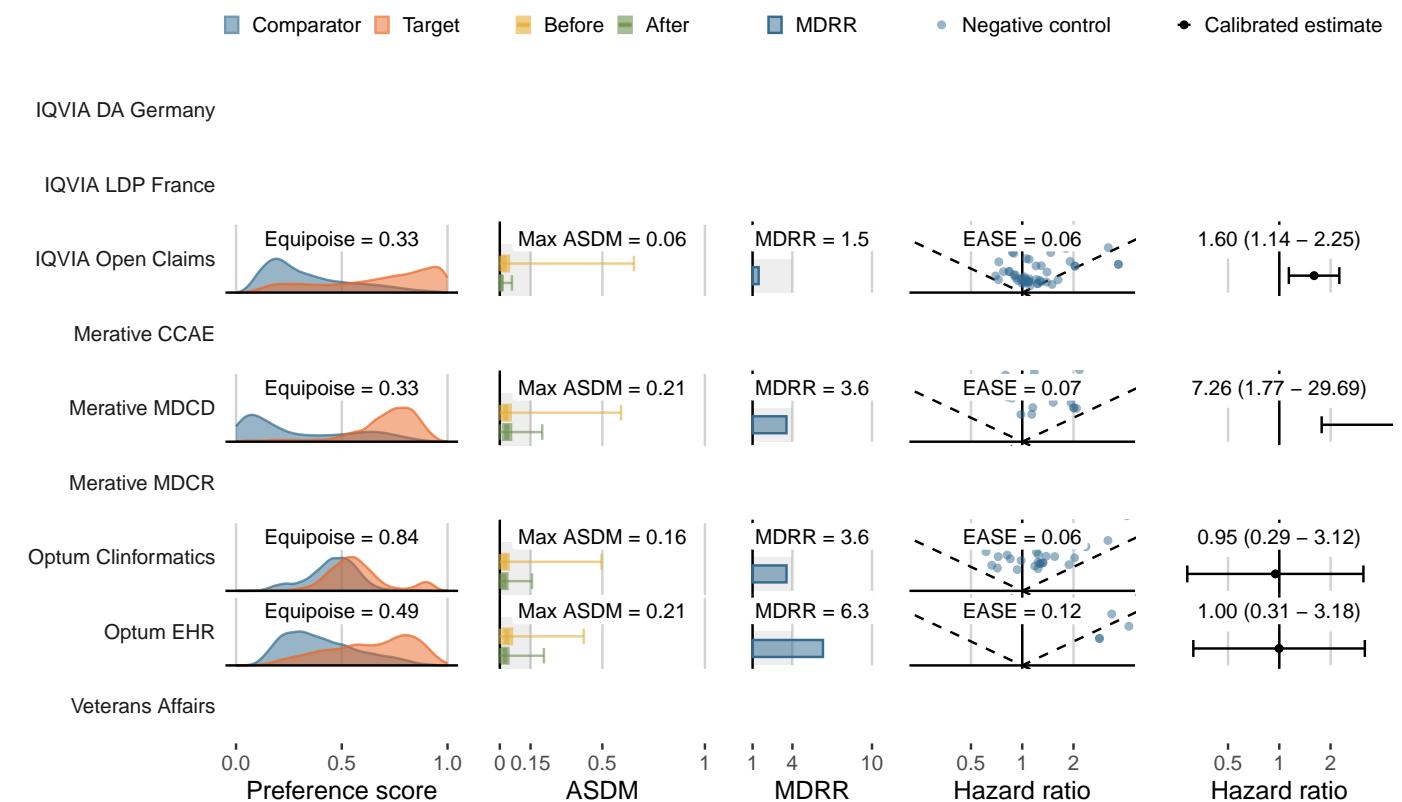
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Hospitalization with heart failure**

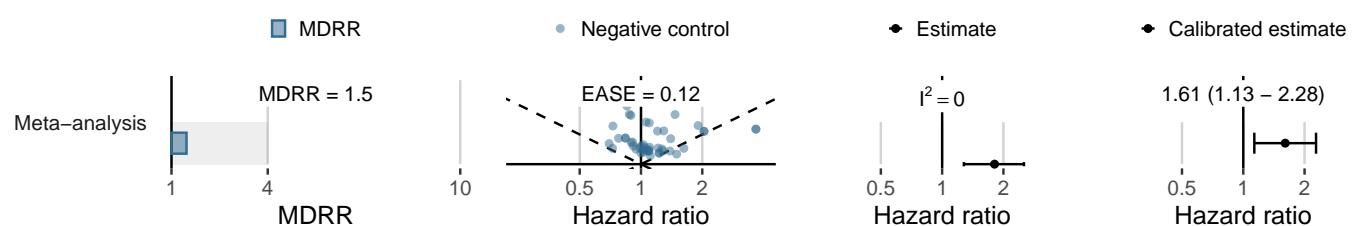
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,153	9,976	72	7.22
Merative CCAE	-	-	-	-
Merative MDCD	606	403	6	14.89
Merative MDCR	-	-	-	-
Optum Clininformatics	934	656	<5	<7.62
Optum EHR	1,068	240	6	25.03
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



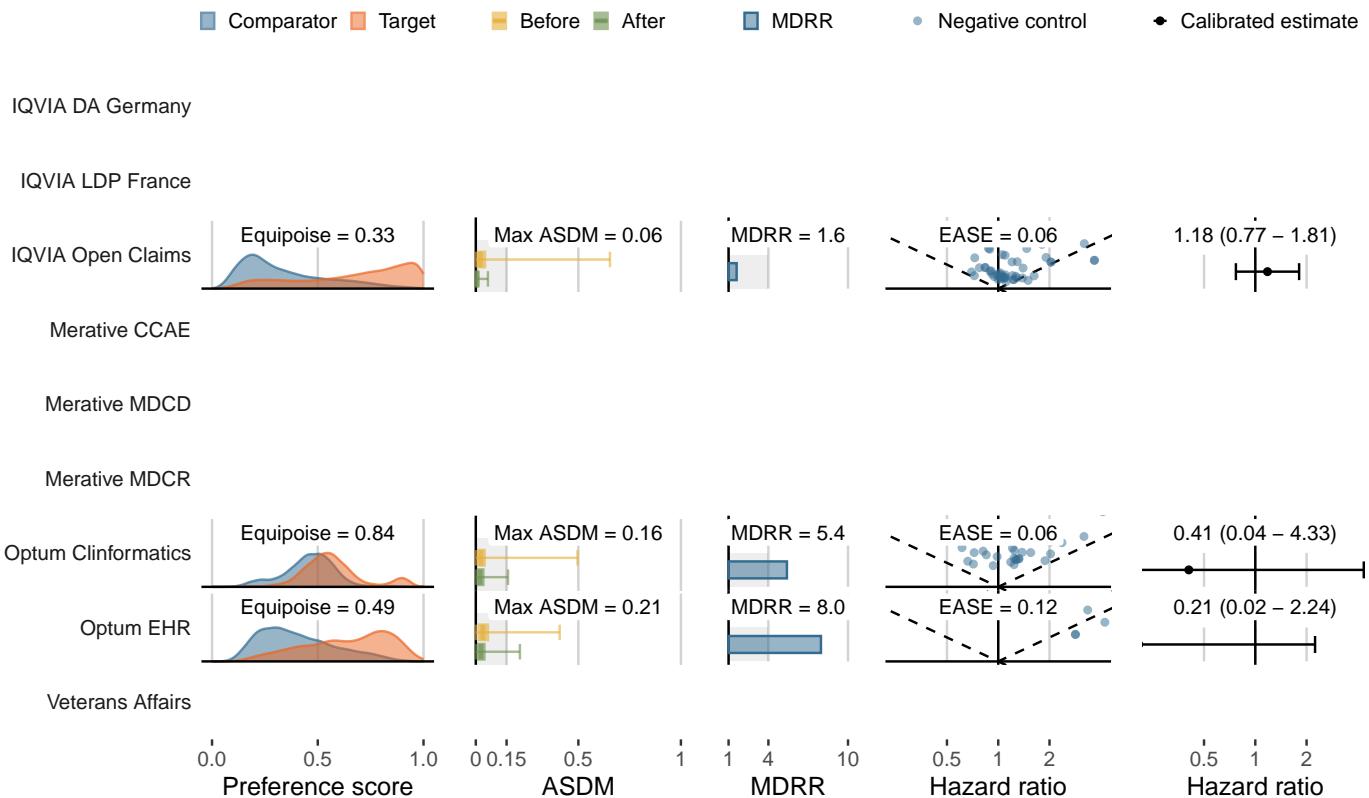
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Stroke**

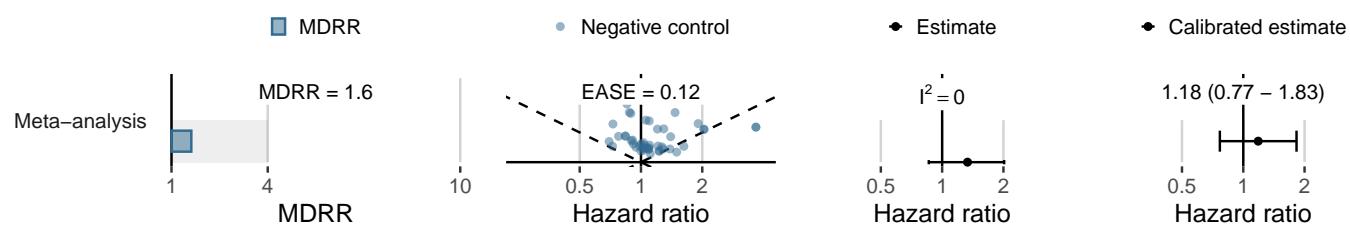
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,286	10,065	45	4.47
Merative CCAE	-	-	-	-
Merative MDCD	631	432	<5	<11.56
Merative MDCR	-	-	-	-
Optum Clininformatics	946	659	<5	<7.58
Optum EHR	1,081	244	<5	<20.46
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



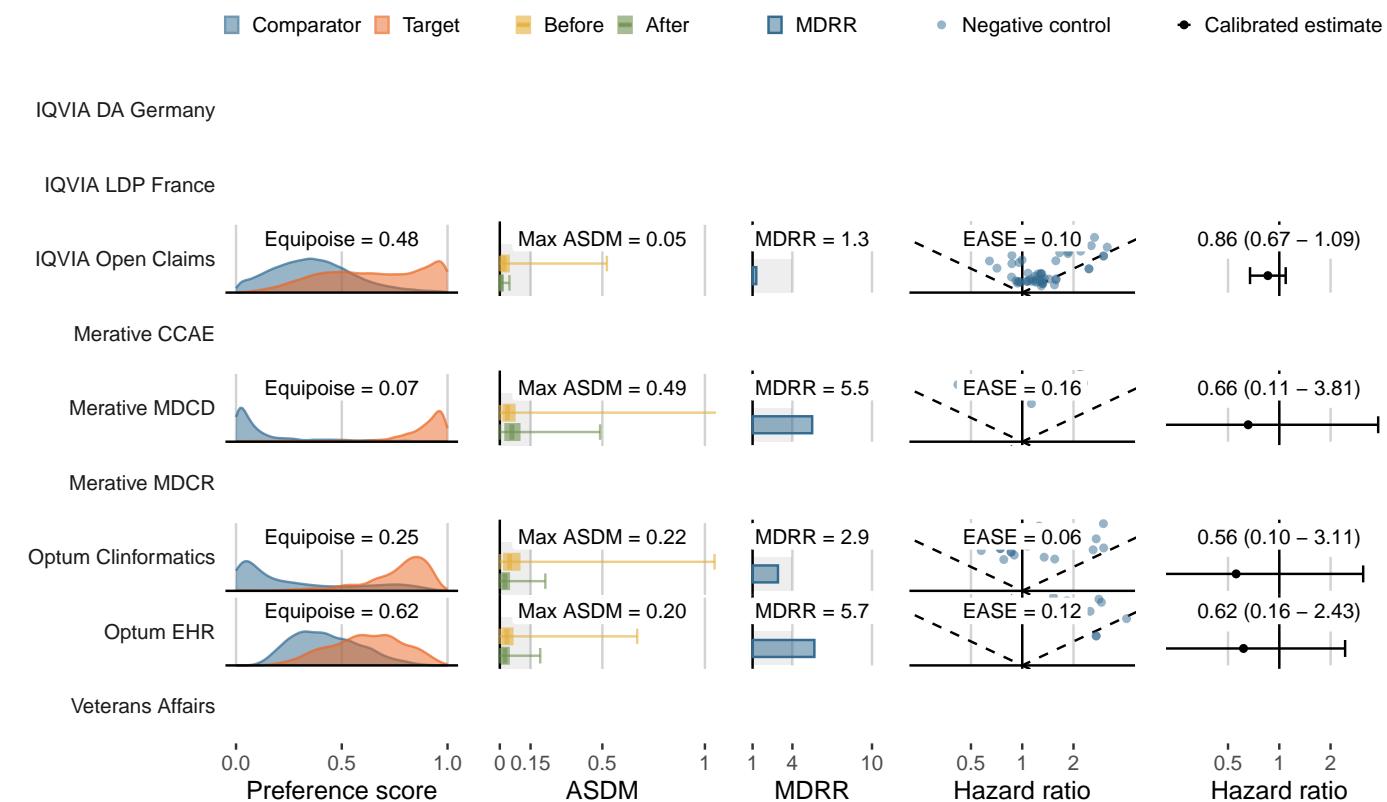
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Bone fracture**

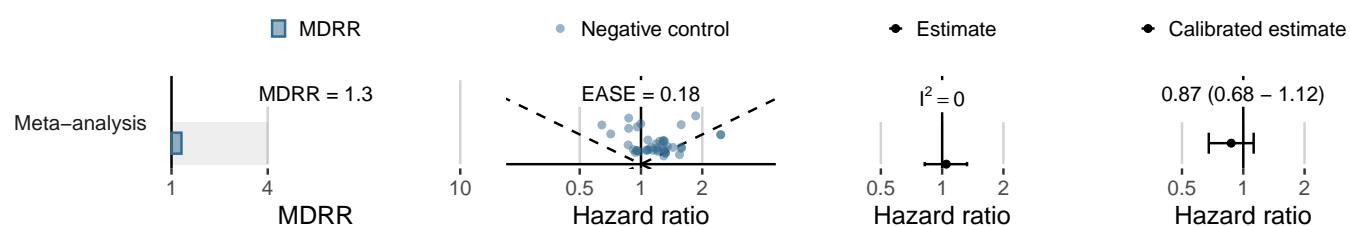
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	15,358	9,090	121	13.31
Merative CCAE	-	-	-	-
Merative MDCD	187	104	<5	<47.92
Merative MDCR	-	-	-	-
Optum Clininformatics	791	515	7	13.60
Optum EHR	998	217	5	23.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute myocardial infarction**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,974	10,108	40	3.96
Merative CCAE	-	-	-	-
Merative MDCD	199	111	-	0.00
Merative MDCR	-	-	-	-
Optum Clininformatics	840	555	<5	<9.01
Optum EHR	1,062	233	-	0.00
Veterans Affairs	-	-	-	-

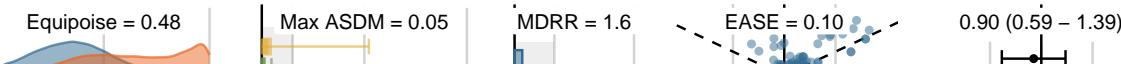
How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ● Negative control ◆ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France

IQVIA Open Claims



Merative CCAE

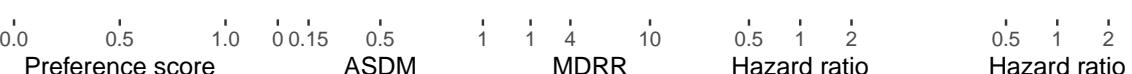
Merative MDCD

Merative MDCR



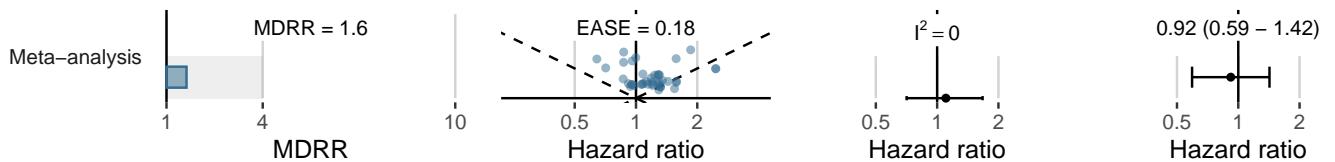
Optum EHR

Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ● Negative control ◆ Estimate ◆ Calibrated estimate



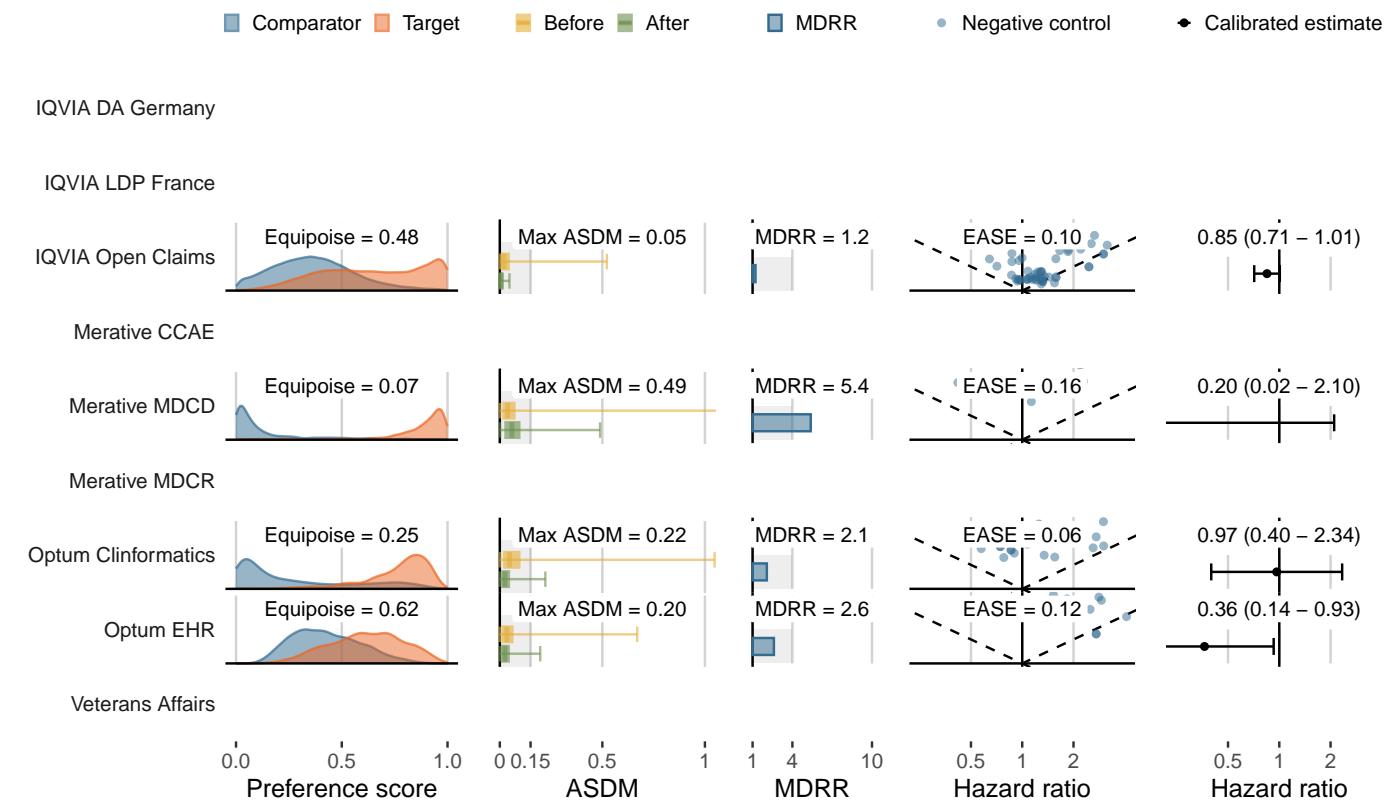
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Genitourinary infection**

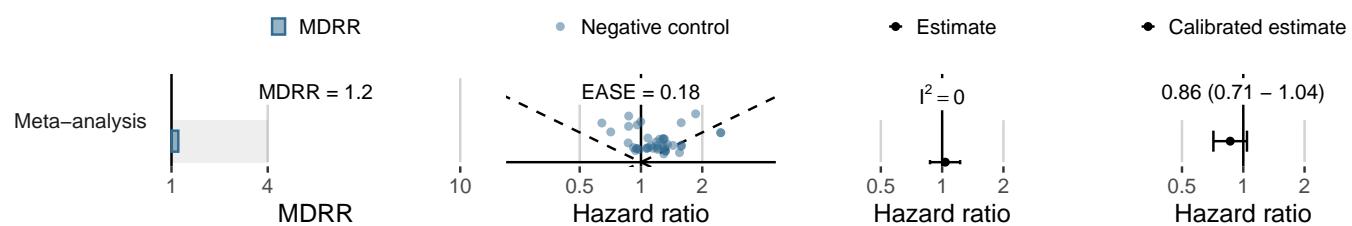
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	13,144	7,768	227	29.22
Merative CCAE	-	-	-	-
Merative MDCD	162	92	<5	<54.17
Merative MDCR	-	-	-	-
Optum Clininformatics	694	447	21	46.99
Optum EHR	944	203	8	39.37
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



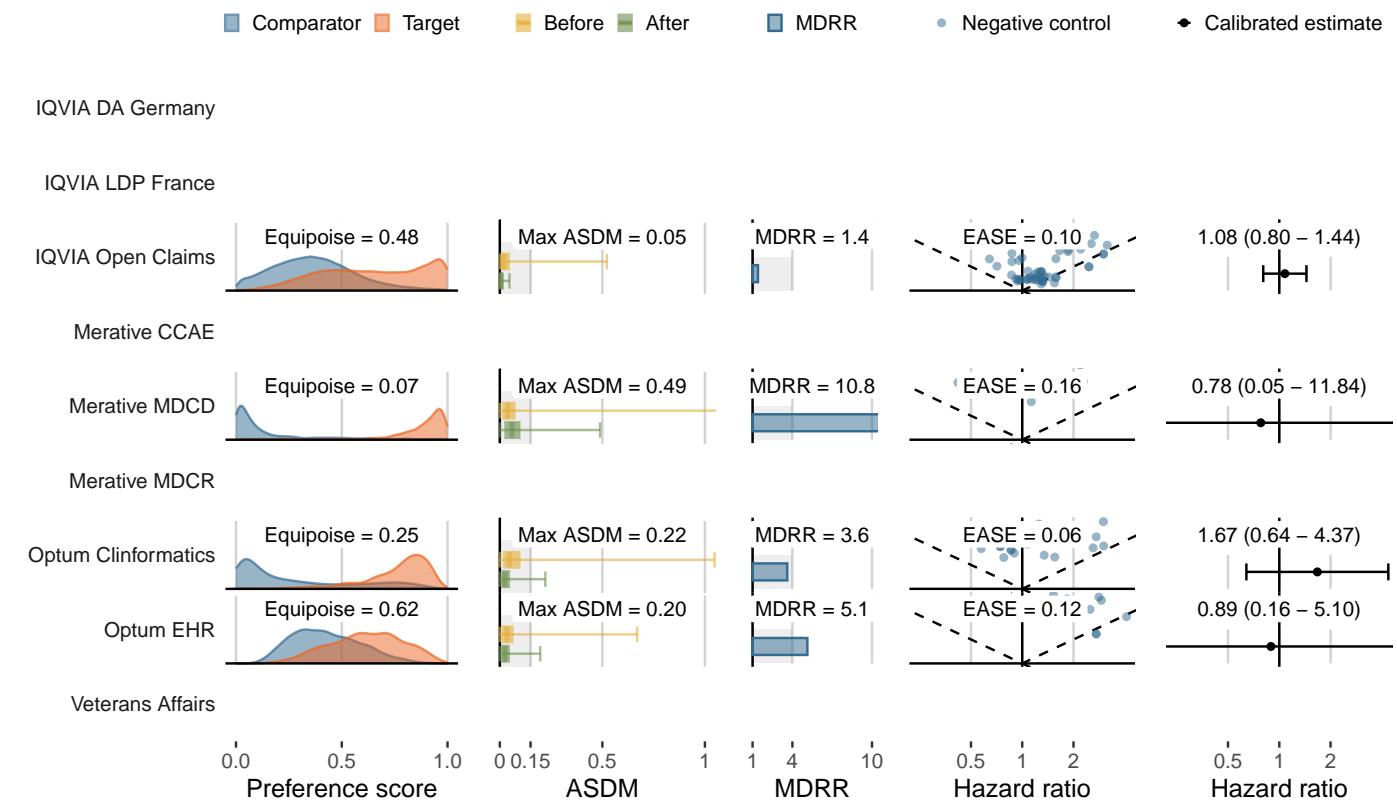
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Joint pain**

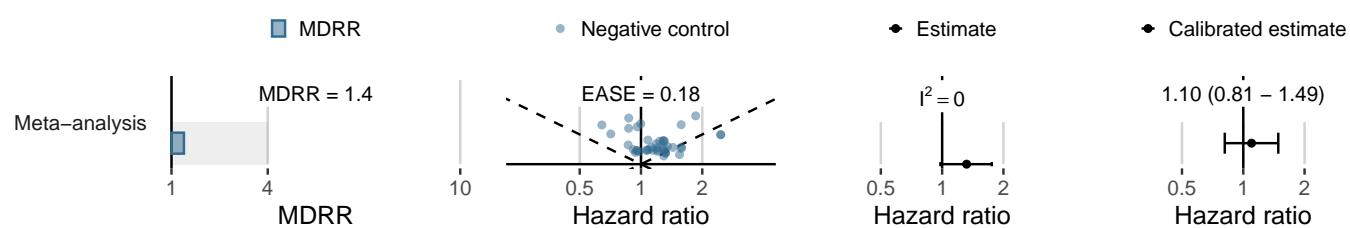
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,225	9,635	82	8.51
Merative CCAE	-	-	-	-
Merative MDCD	171	83	<5	<60.12
Merative MDCR	-	-	-	-
Optum Clininformatics	703	445	10	22.47
Optum EHR	1,020	222	<5	<22.55
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



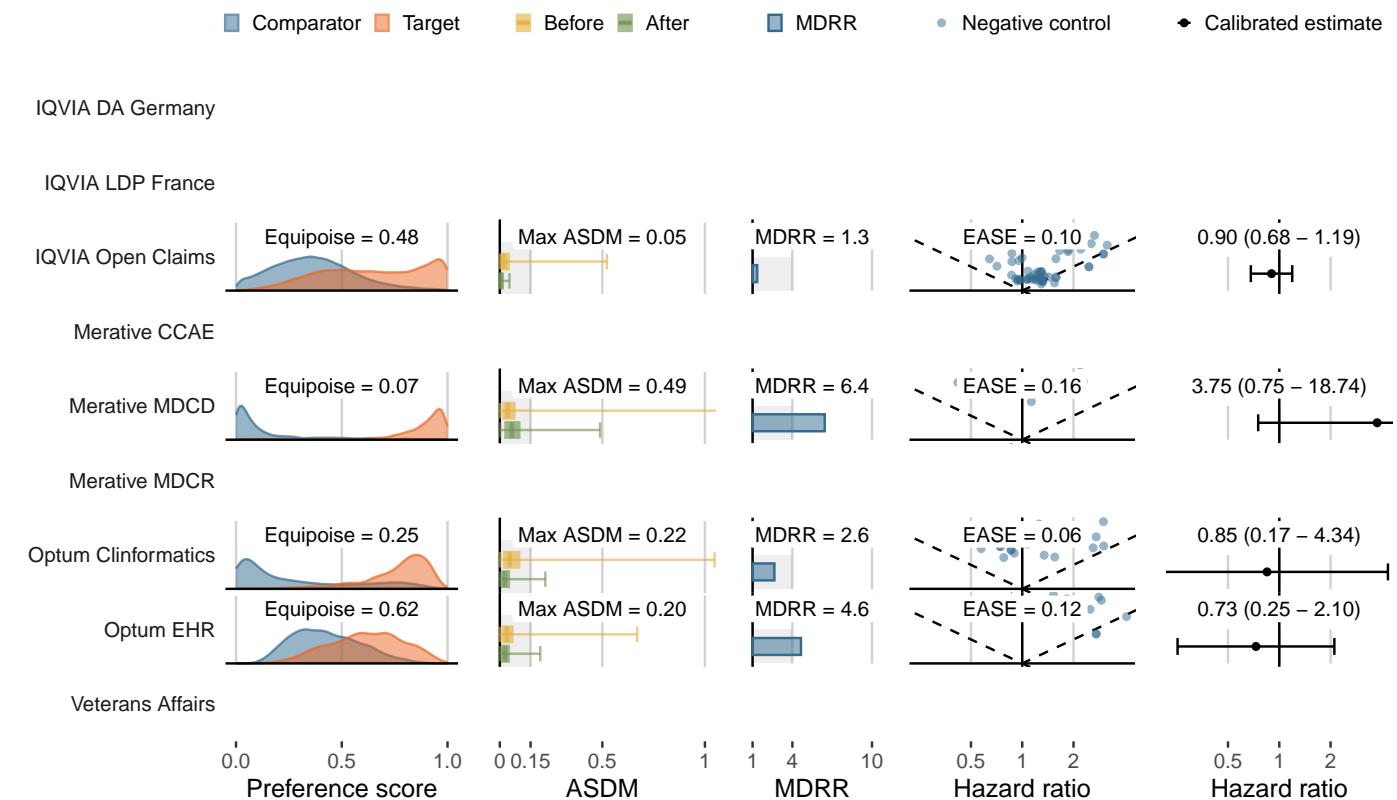
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute renal failure**

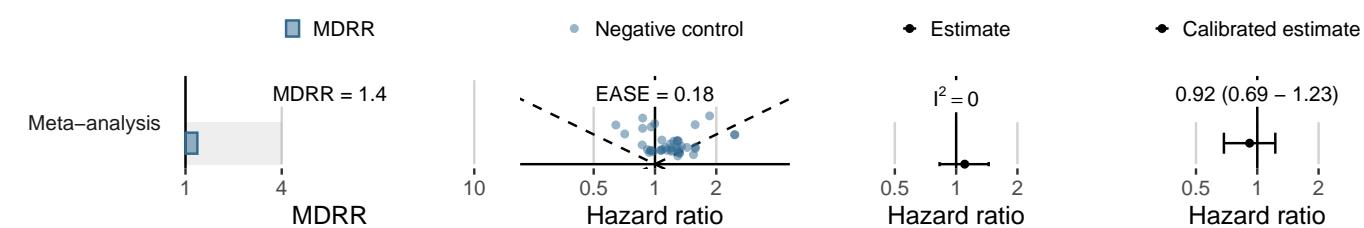
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,871	10,013	100	9.99
Merative CCAE	-	-	-	-
Merative MDCD	196	103	<5	<48.32
Merative MDCR	-	-	-	-
Optum Clininformatics	833	546	5	9.16
Optum EHR	1,063	233	7	30.02
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Thyroid tumor**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	17,271	10,294	10	0.97
Merative CCAE	-	-	-	-
Merative MDCD	207	115	-	0.00
Merative MDCR	-	-	-	-
Optum Clininformatics	845	551	<5	<9.08
Optum EHR	1,078	235	<5	<21.26
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ● Negative control ◆ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France

IQVIA Open Claims

Merative CCAE

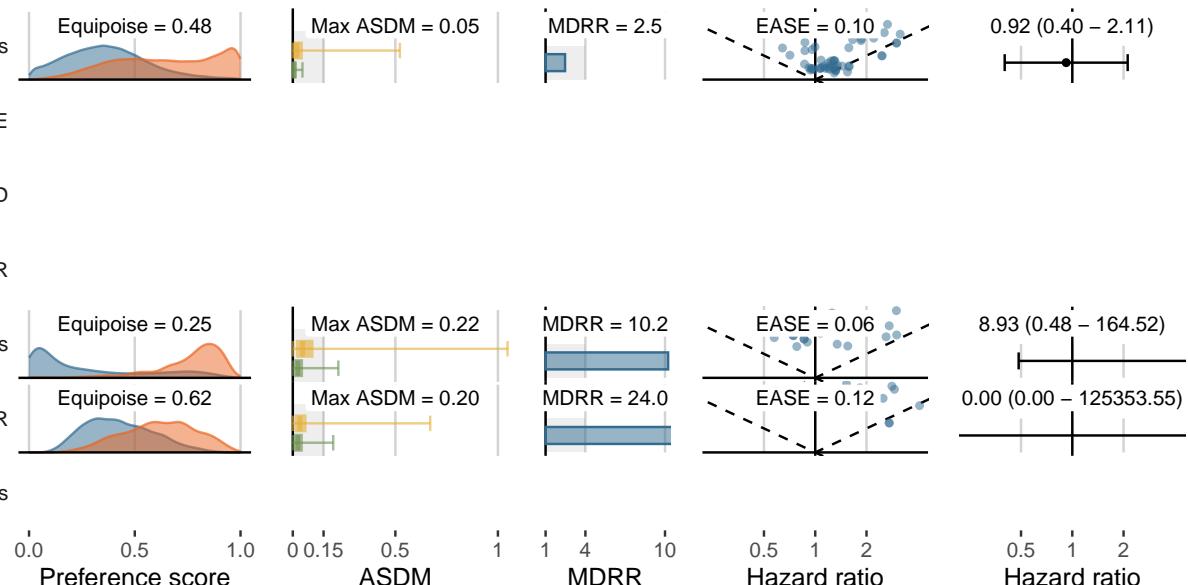
Merative MDCD

Merative MDCR

Optum Clininformatics

Optum EHR

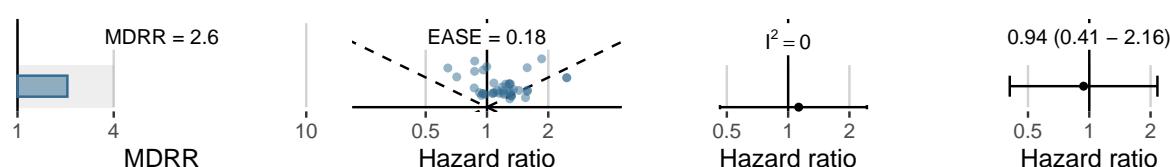
Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ● Negative control ◆ Estimate ◆ Calibrated estimate

Meta-analysis



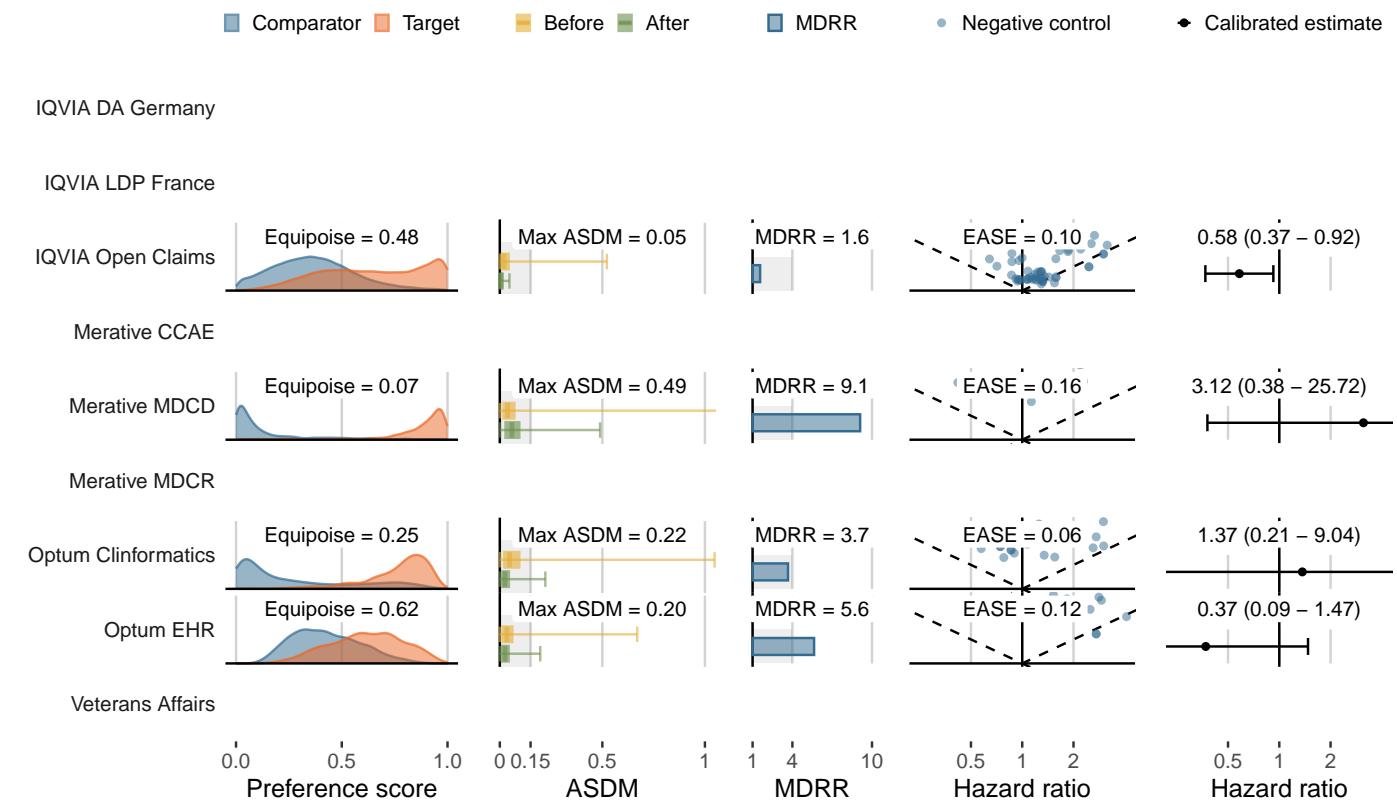
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Venous thromboembolic events**

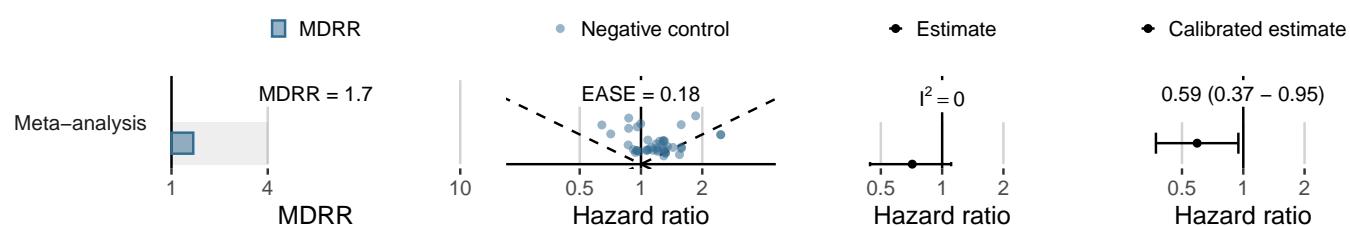
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,845	10,046	28	2.79
Merative CCAE	-	-	-	-
Merative MDCD	198	109	<5	<46.05
Merative MDCR	-	-	-	-
Optum Clininformatics	826	535	<5	<9.34
Optum EHR	1,049	229	<5	<21.82
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



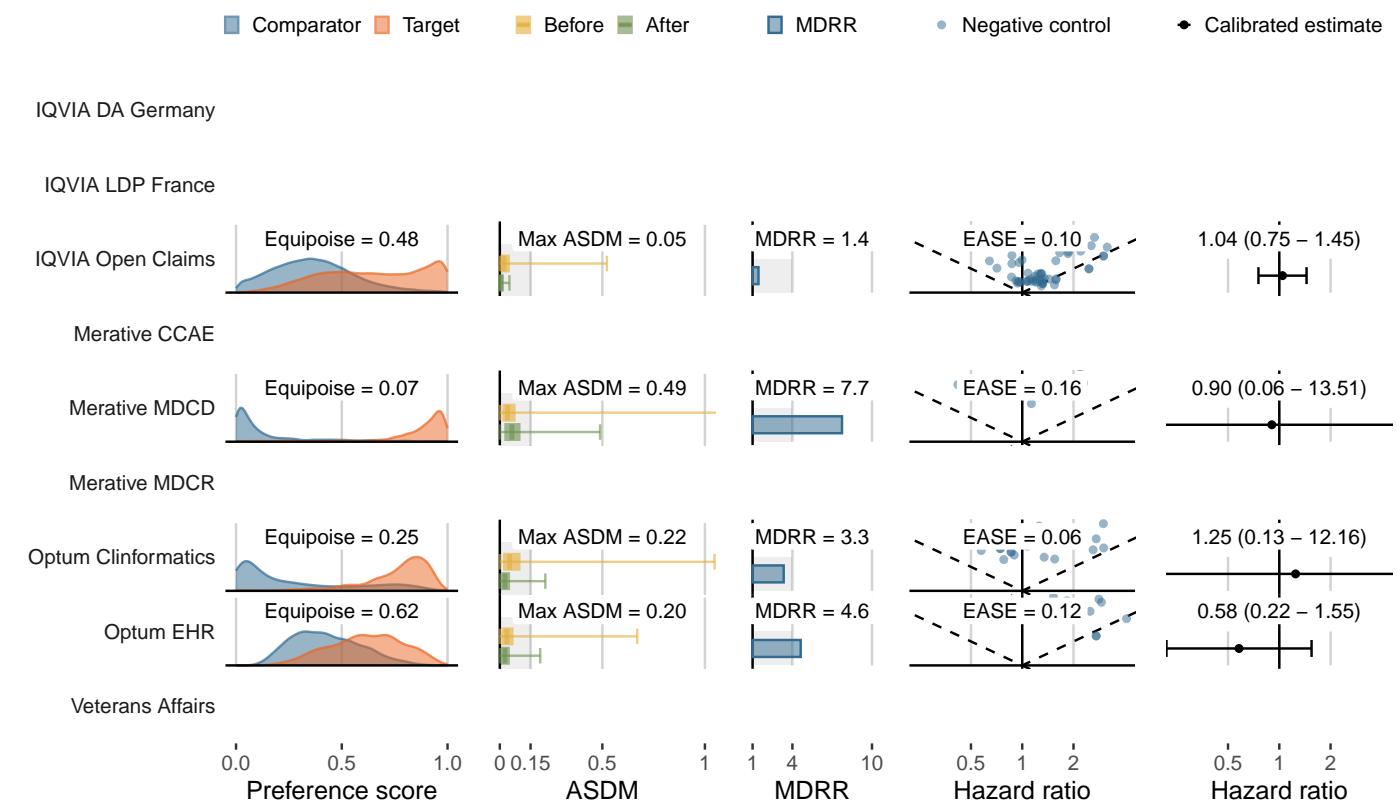
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Hospitalization with heart failure**

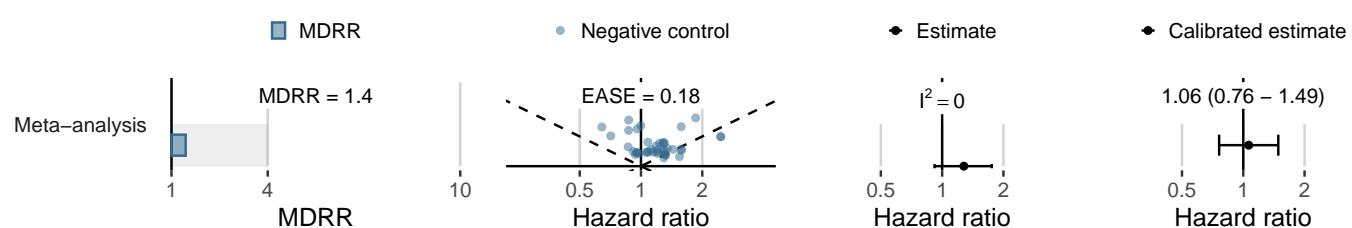
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,801	9,982	74	7.41
Merative CCAE	-	-	-	-
Merative MDCD	1,316	849	12	14.13
Merative MDCR	-	-	-	-
Optum Clininformatics	831	549	<5	<9.11
Optum EHR	1,053	230	8	34.77
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



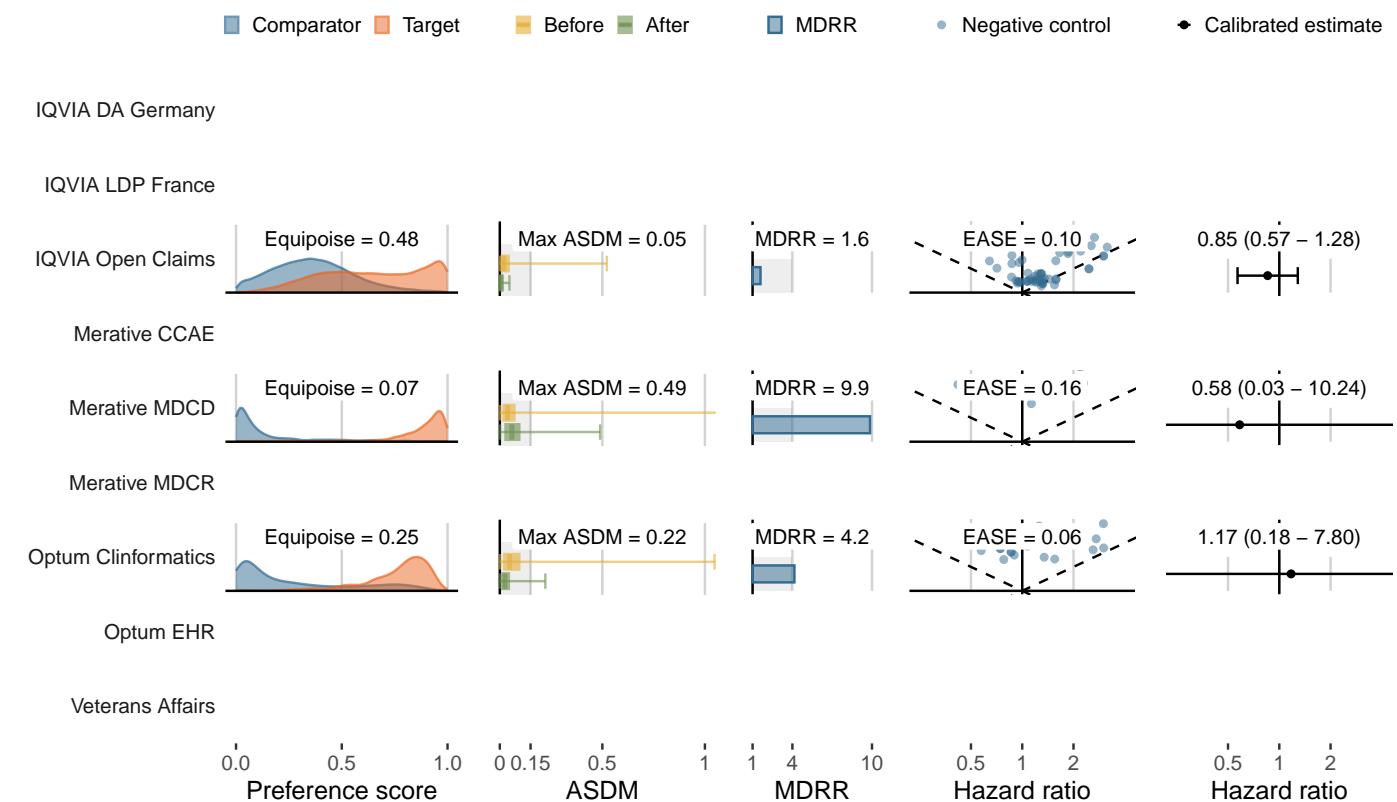
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Stroke**

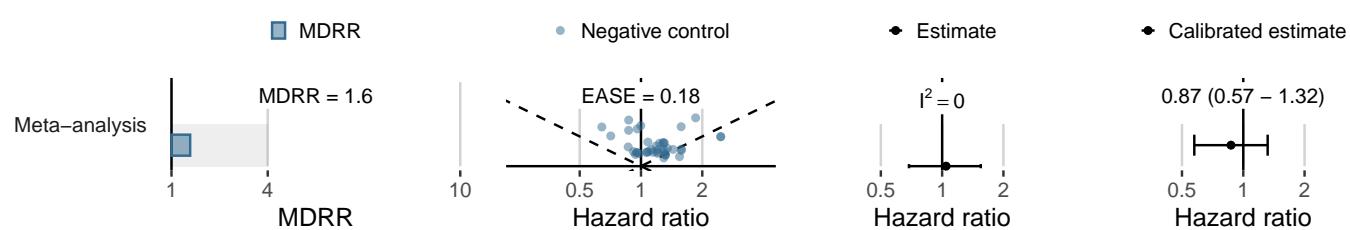
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,948	10,105	48	4.75
Merative CCAE	-	-	-	-
Merative MDCD	200	109	<5	<45.94
Merative MDCR	-	-	-	-
Optum Clininformatics	839	551	<5	<9.08
Optum EHR	1,067	235	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute pancreatitis**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	19,259	11,438	26	2.27
Merative CCAE	-	-	-	-
Merative MDCD	454	268	<5	<18.62
Merative MDCR	-	-	-	-
Optum Clininformatics	799	515	-	0.00
Optum EHR	1,058	232	-	0.00
Veterans Affairs	16,487	13,140	13	0.99

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France

IQVIA Open Claims



Merative CCAE

Merative MDCD

Merative MDCR



Optum Clininformatics

Optum EHR

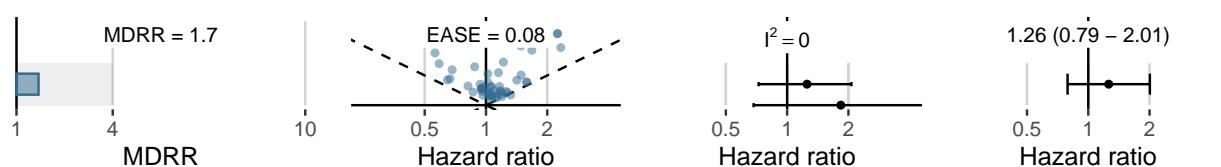
Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate

Meta-analysis



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Bladder cancer**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	19,472	11,565	6	0.52
Merative CCAE	-	-	-	-
Merative MDCD	462	271	<5	<18.43
Merative MDCR	-	-	-	-
Optum Clininformatics	800	509	-	0.00
Optum EHR	1,065	233	-	0.00
Veterans Affairs	16,487	13,116	34	2.59

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France



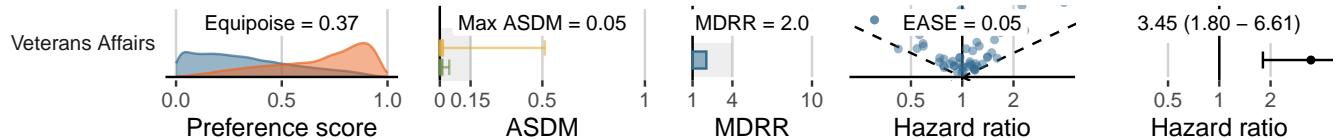
Merative CCAE

Merative MDCD

Merative MDCR

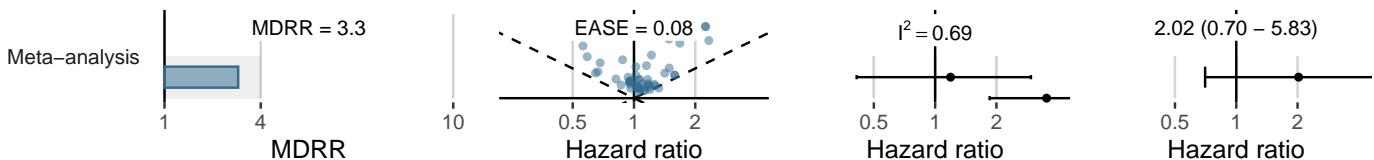
Optum Clininformatics

Optum EHR



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate



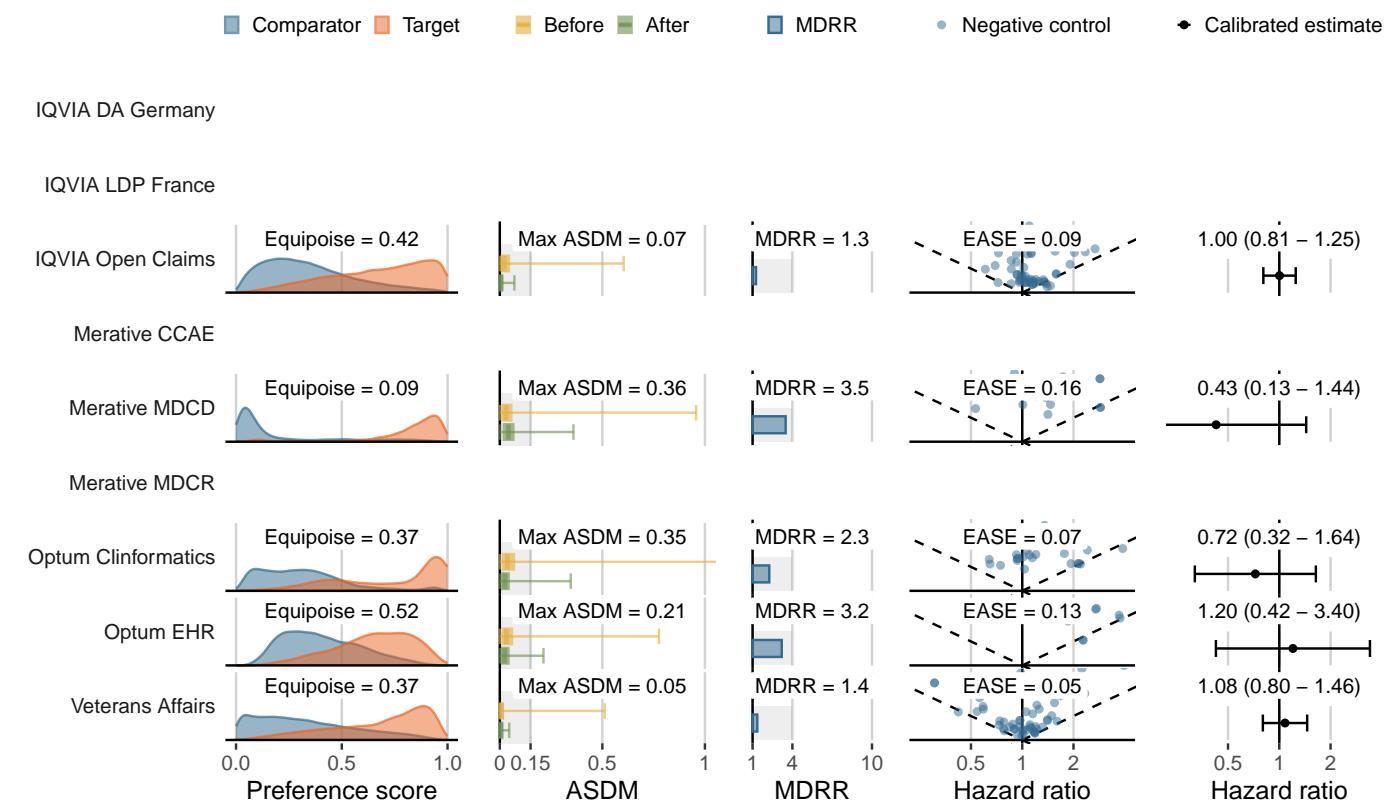
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Bone fracture**

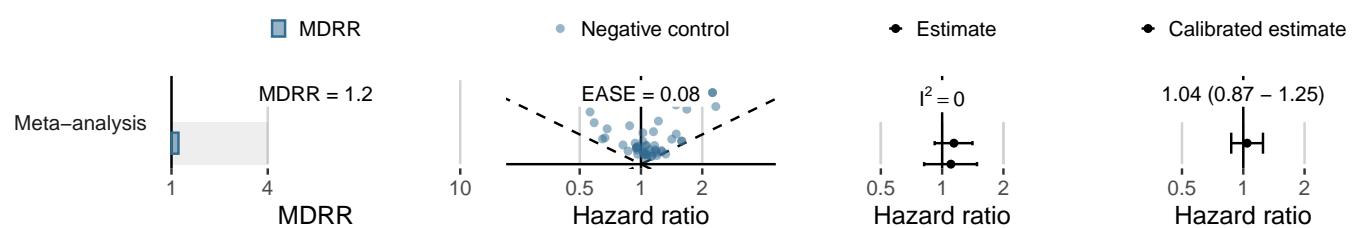
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	17,212	10,137	144	14.20
Merative CCAE	-	-	-	-
Merative MDCD	400	232	9	38.83
Merative MDCR	-	-	-	-
Optum Clininformatics	742	461	8	17.36
Optum EHR	983	216	5	23.13
Veterans Affairs	14,675	11,752	112	9.53

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



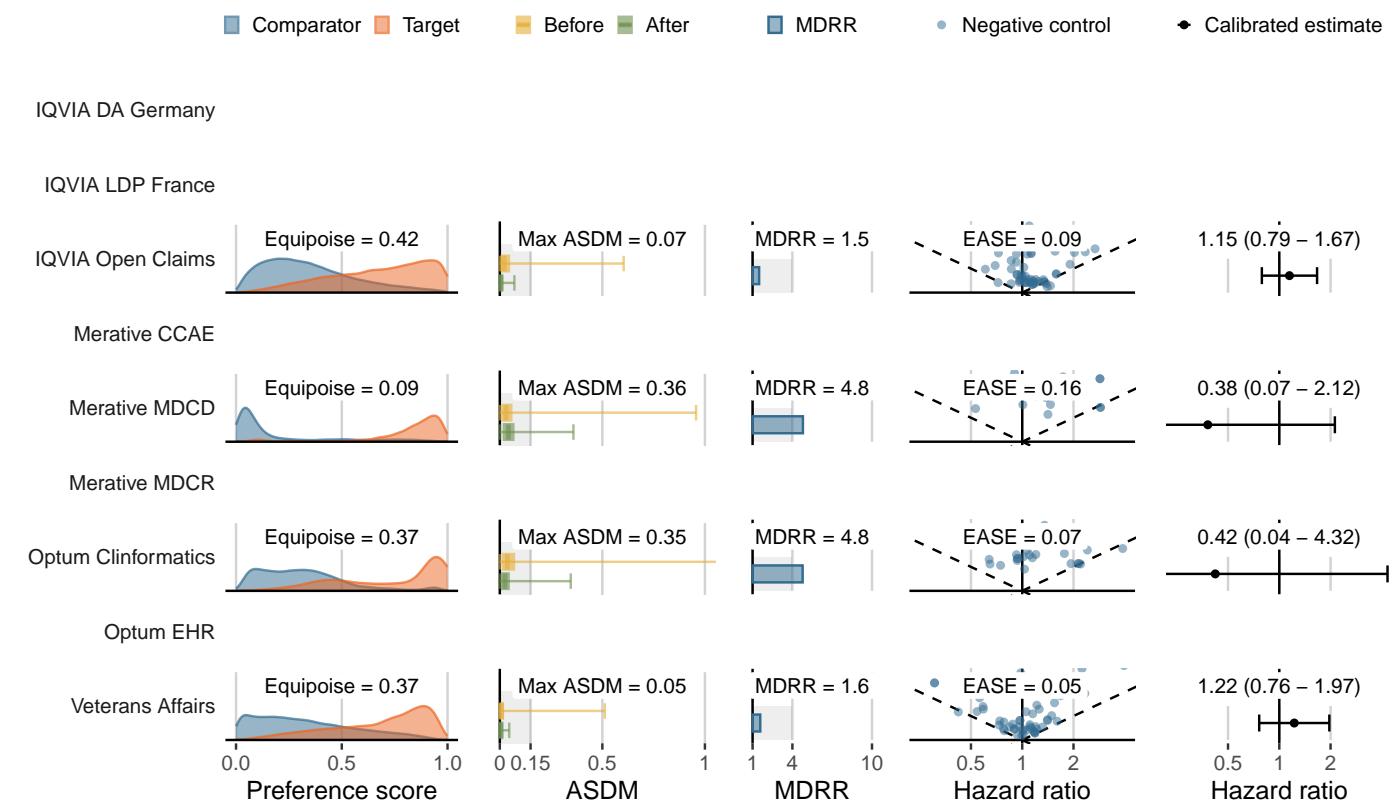
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute myocardial infarction**

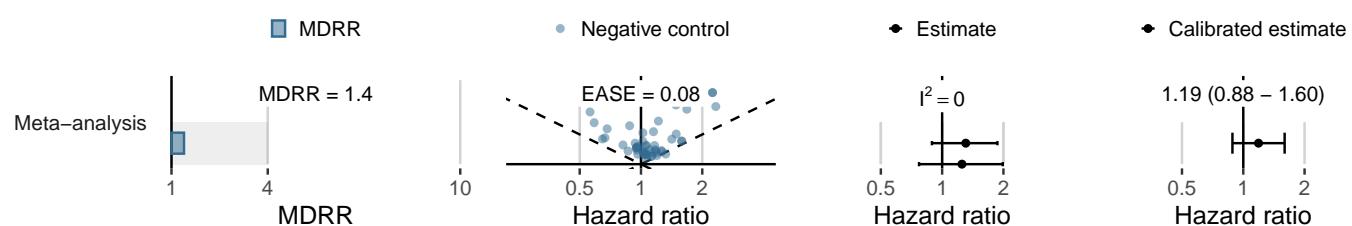
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	19,046	11,307	51	4.51
Merative CCAE	-	-	-	-
Merative MDCD	445	264	<5	<18.97
Merative MDCR	-	-	-	-
Optum Clininformatics	789	506	<5	<9.88
Optum EHR	1,052	231	-	0.00
Veterans Affairs	16,156	12,819	35	2.73

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



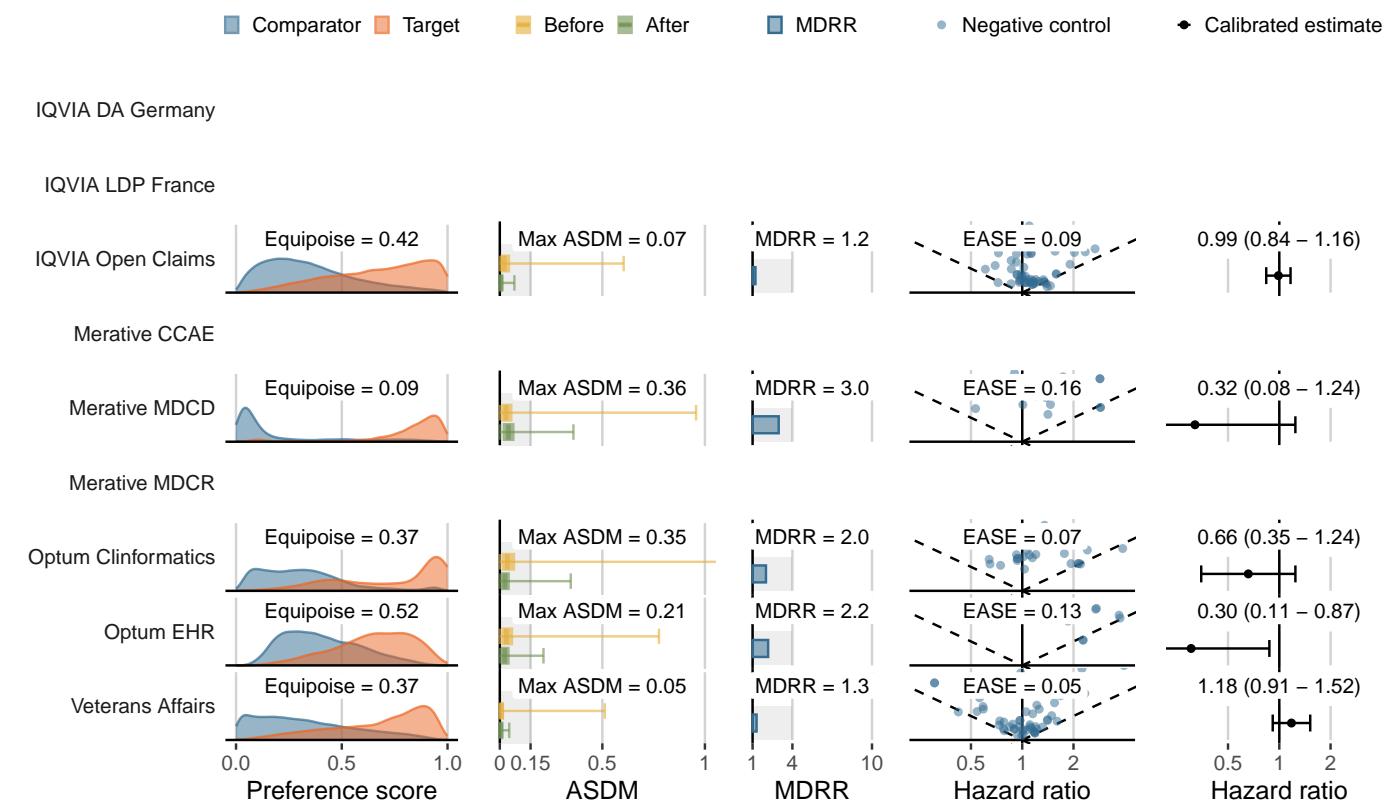
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Genitourinary infection**

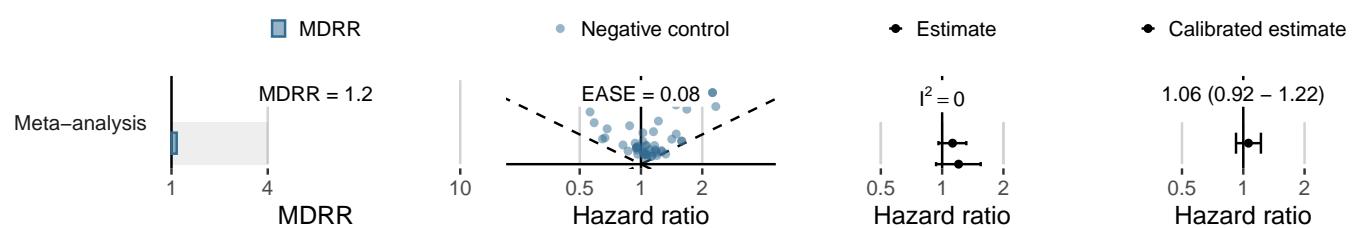
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	14,559	8,598	269	31.29
Merative CCAE	-	-	-	-
Merative MDCD	351	206	7	34.00
Merative MDCR	-	-	-	-
Optum Clininformatics	649	415	19	45.82
Optum EHR	926	200	6	30.03
Veterans Affairs	14,381	11,525	152	13.19

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



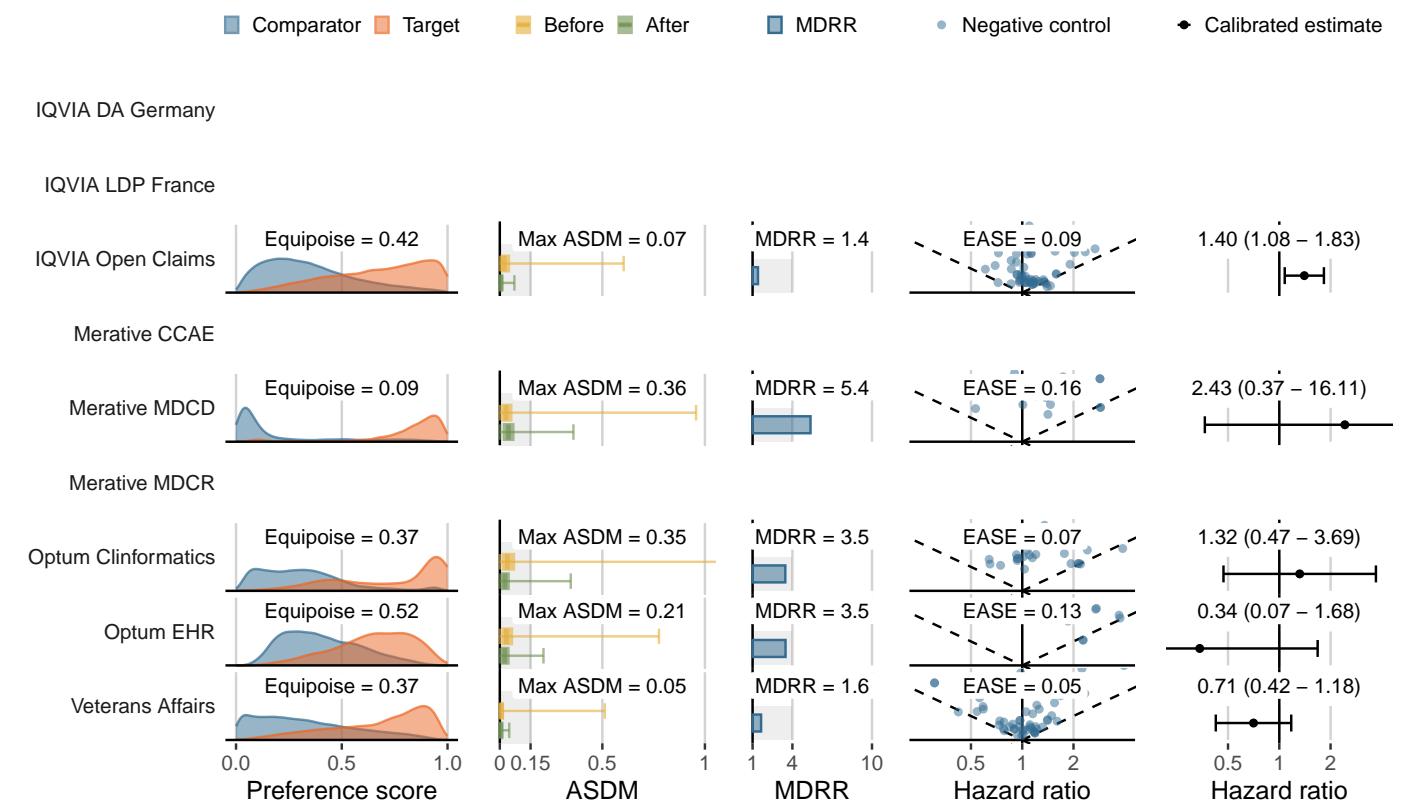
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Joint pain**

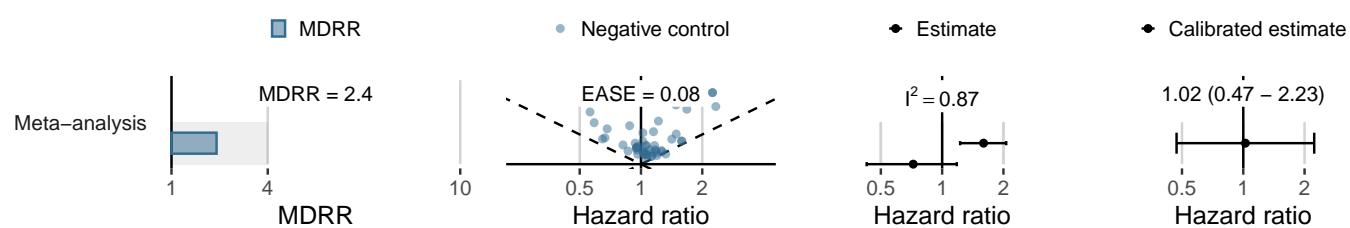
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	18,121	10,709	105	9.80
Merative CCAE	-	-	-	-
Merative MDCD	367	200	5	24.99
Merative MDCR	-	-	-	-
Optum Clininformatics	675	413	5	12.10
Optum EHR	1,012	221	<5	<22.61
Veterans Affairs	11,219	8,937	37	4.14

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Renal cancer**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	19,465	11,554	9	0.78
Merative CCAE	-	-	-	-
Merative MDCD	461	272	-	0.00
Merative MDCR	-	-	-	-
Optum Clininformatics	801	510	-	0.00
Optum EHR	1,062	232	<5	<21.51
Veterans Affairs	16,551	13,186	15	1.14

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France

IQVIA Open Claims

Merative CCAE

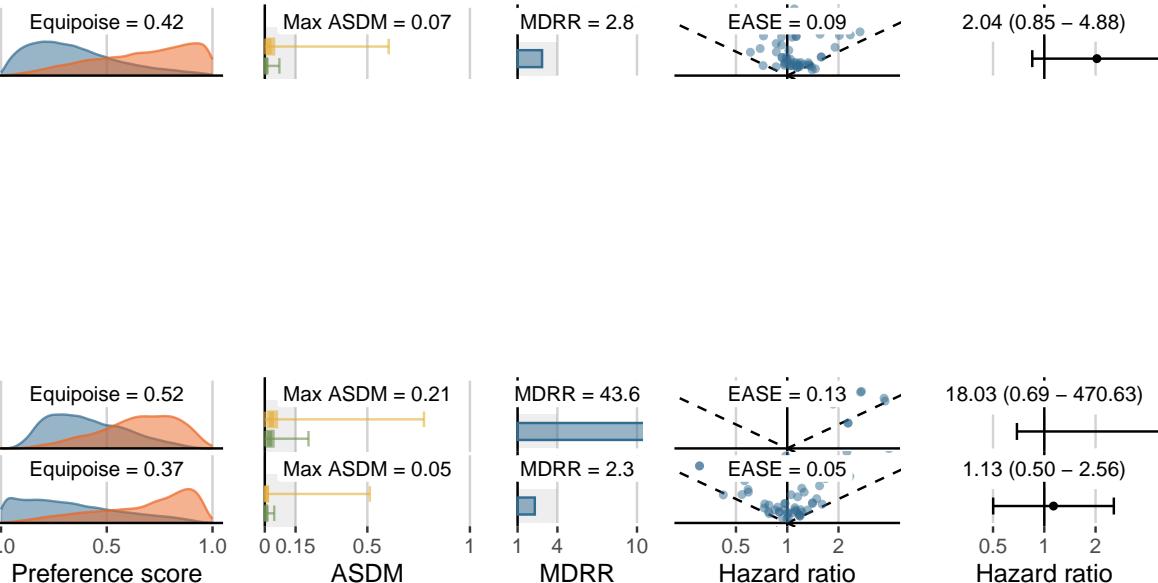
Merative MDCD

Merative MDCR

Optum Clininformatics

Optum EHR

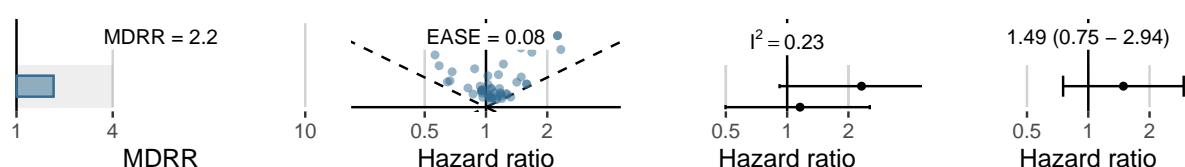
Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate

Meta-analysis



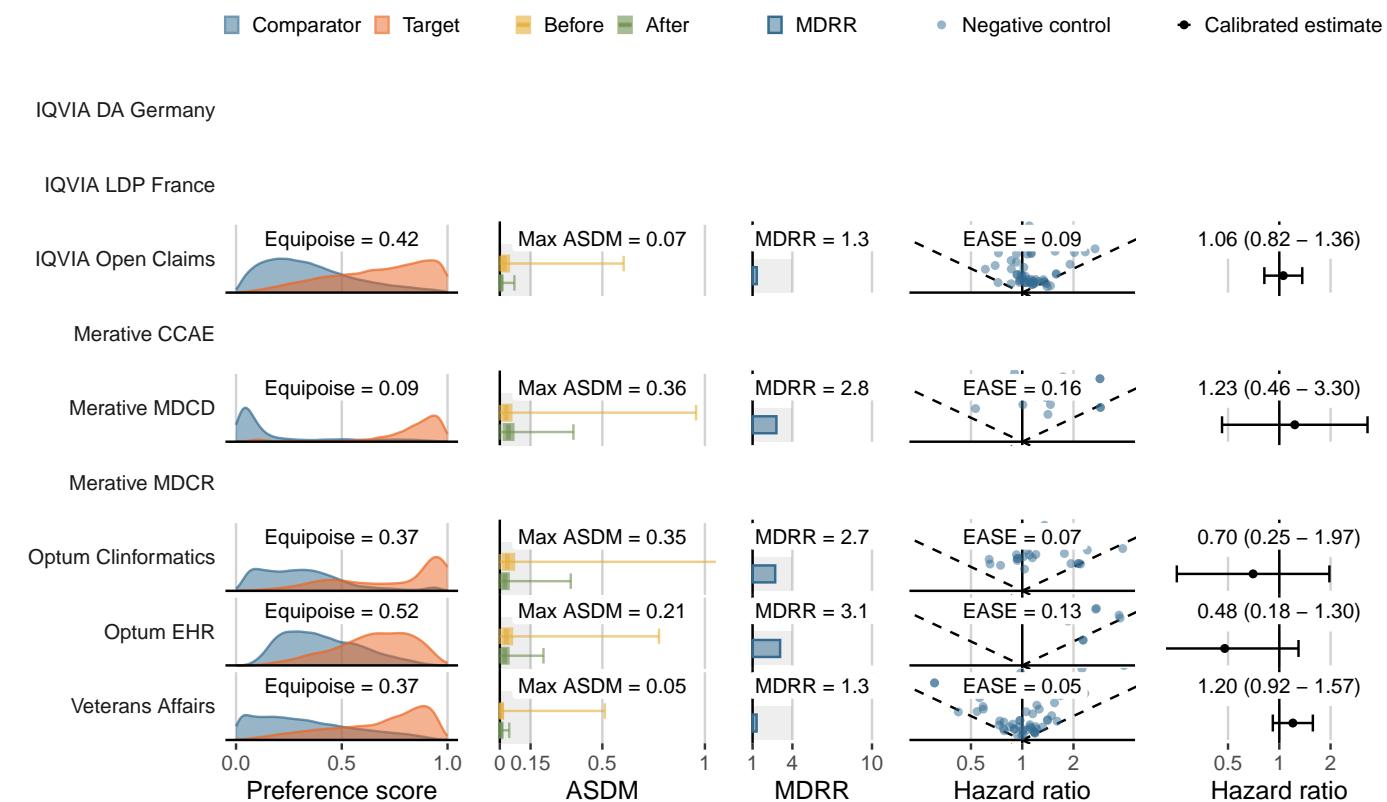
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute renal failure**

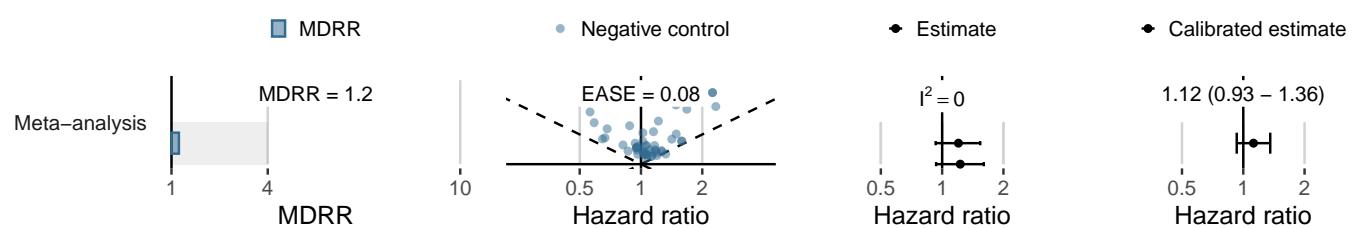
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	18,908	11,207	119	10.62
Merative CCAE	-	-	-	-
Merative MDCD	443	254	11	43.28
Merative MDCR	-	-	-	-
Optum Clininformatics	778	494	5	10.12
Optum EHR	1,048	230	6	26.11
Veterans Affairs	15,955	12,659	124	9.80

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



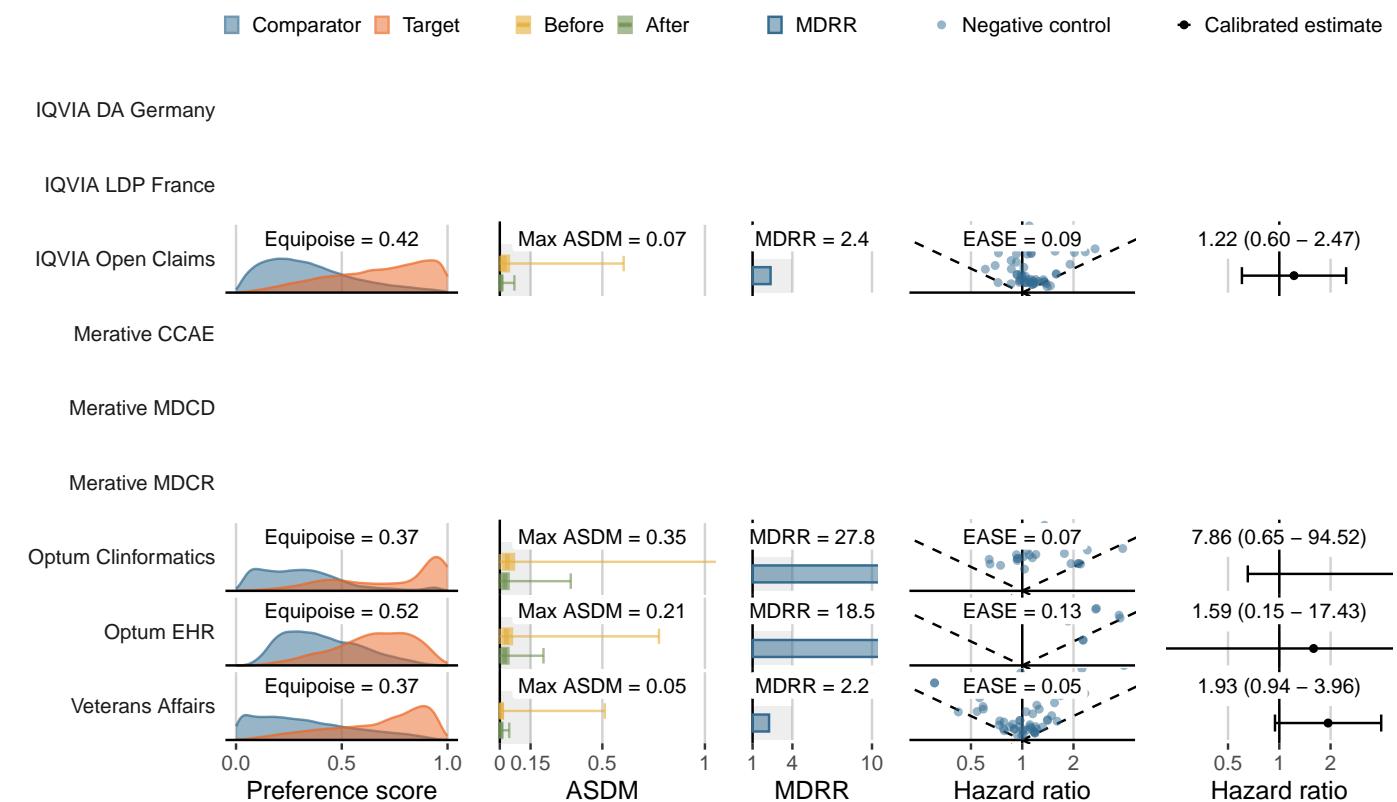
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Thyroid tumor**

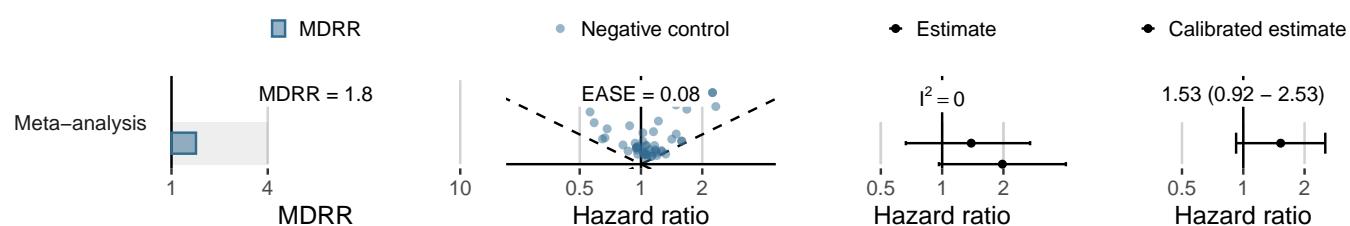
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	19,354	11,504	13	1.13
Merative CCAE	-	-	-	-
Merative MDCD	459	272	-	0.00
Merative MDCR	-	-	-	-
Optum Clininformatics	797	506	<5	<9.89
Optum EHR	1,065	233	<5	<21.50
Veterans Affairs	16,528	13,141	20	1.52

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



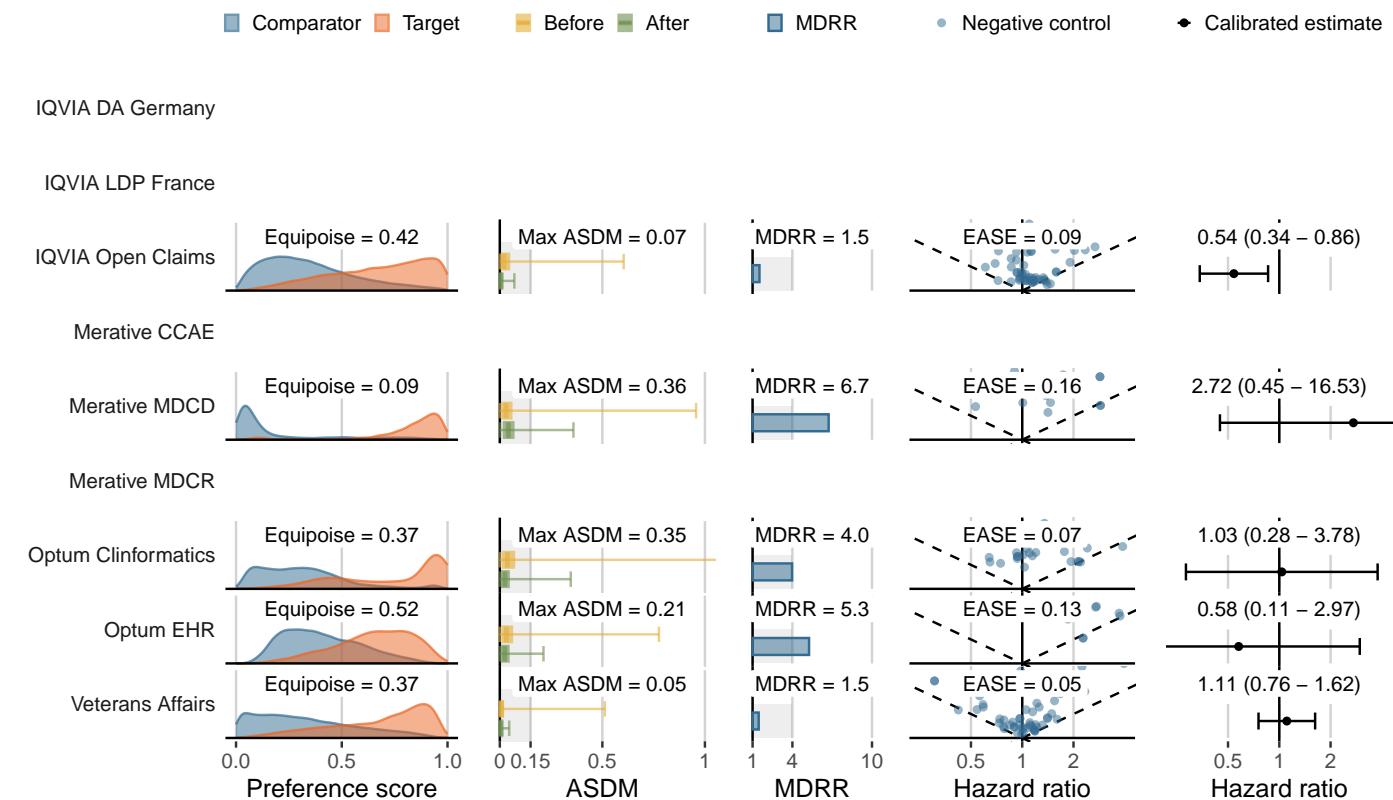
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Venous thromboembolic events**

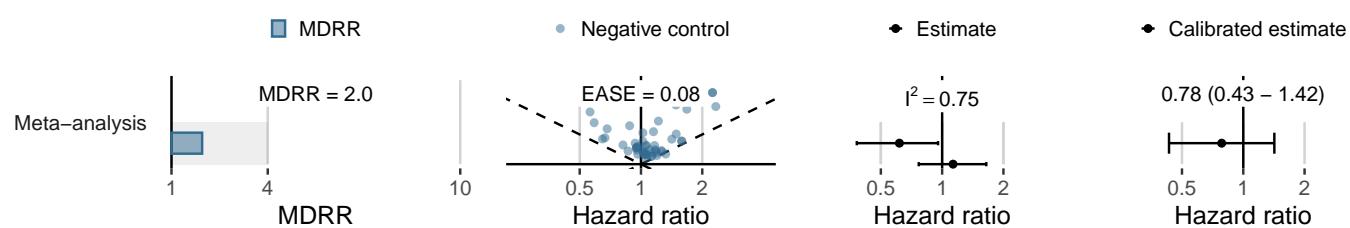
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	18,883	11,210	36	3.21
Merative CCAE	-	-	-	-
Merative MDCD	440	258	<5	<19.41
Merative MDCR	-	-	-	-
Optum Clininformatics	782	492	<5	<10.17
Optum EHR	1,036	227	<5	<22.07
Veterans Affairs	15,969	12,668	63	4.97

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



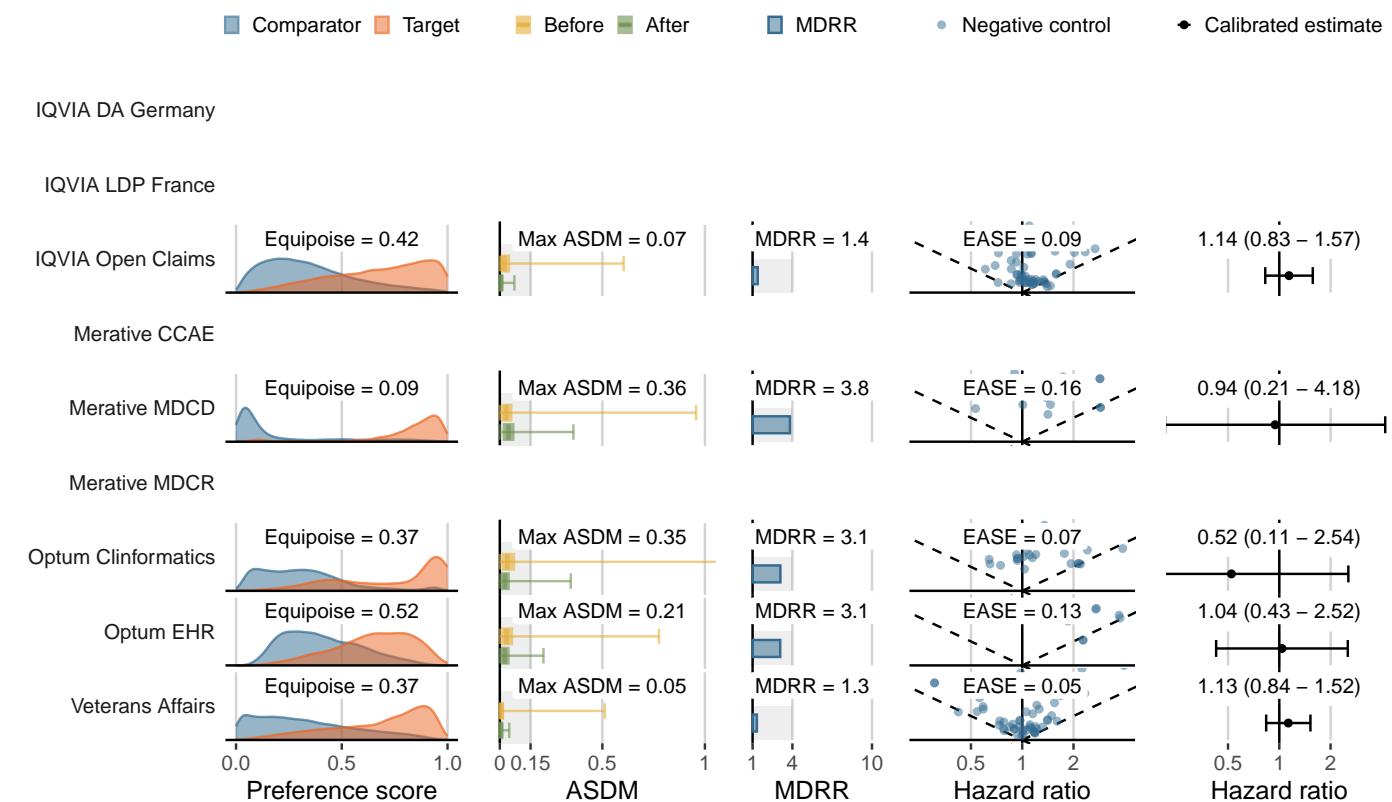
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Hospitalization with heart failure**

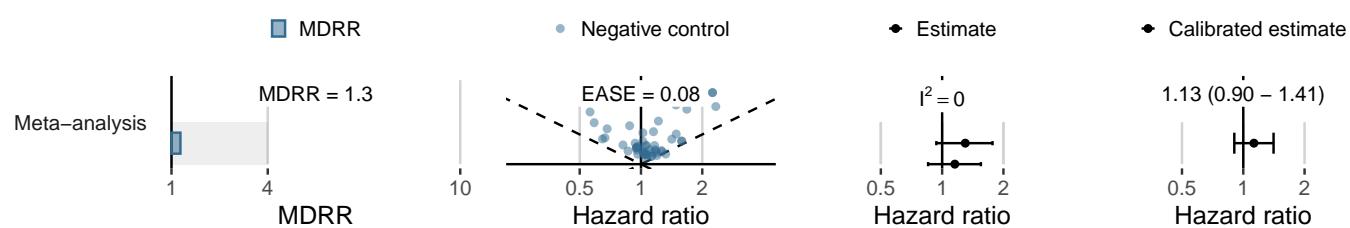
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	18,828	11,183	76	6.80
Merative CCAE	-	-	-	-
Merative MDCD	432	241	5	20.79
Merative MDCR	-	-	-	-
Optum Clininformatics	782	503	<5	<9.94
Optum EHR	1,038	227	8	35.25
Veterans Affairs	16,018	12,649	105	8.30

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



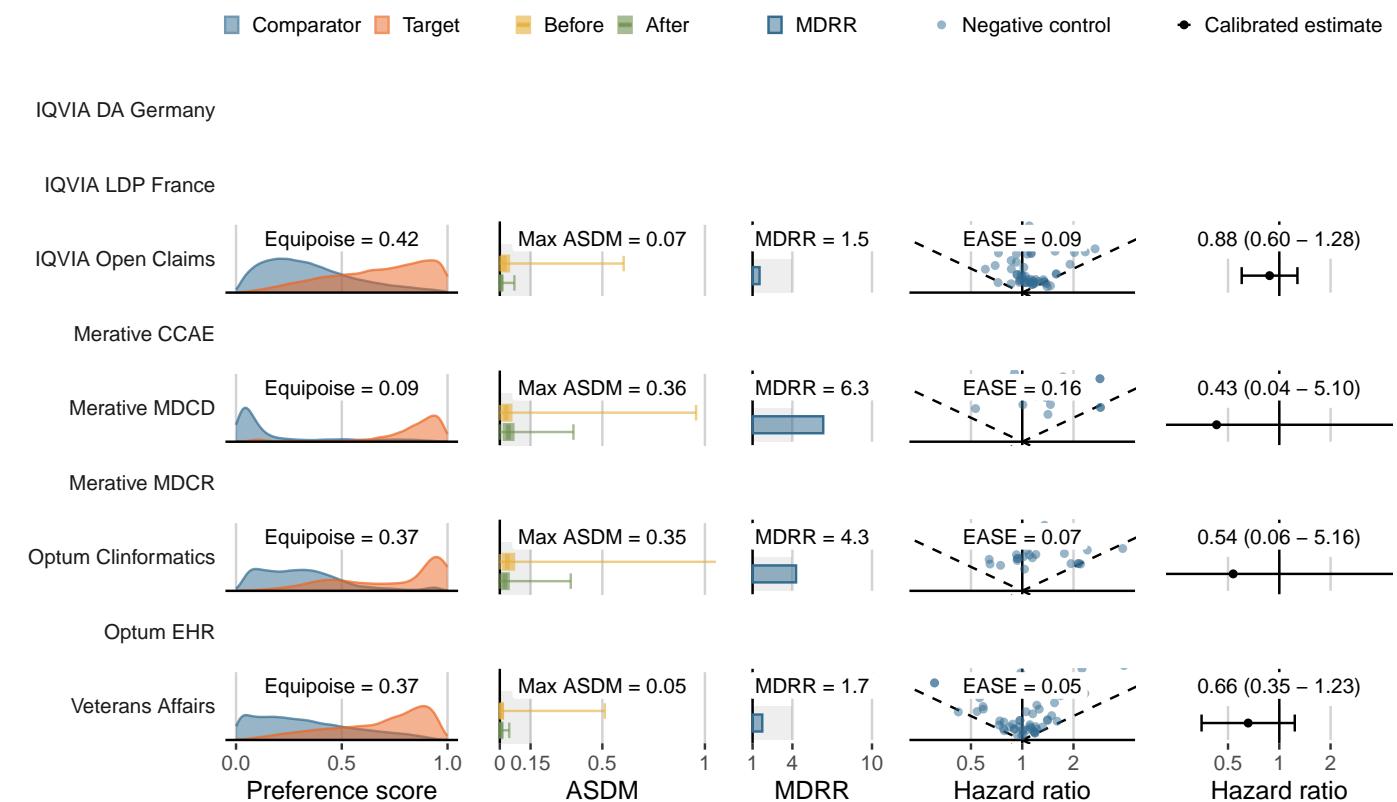
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Stroke**

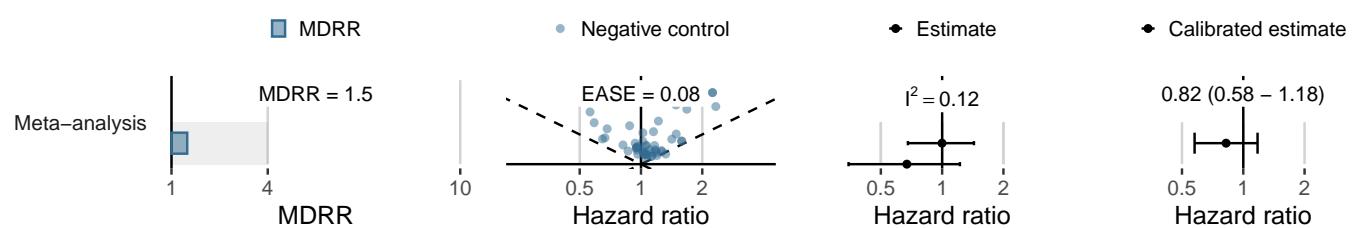
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	18,973	11,272	51	4.52
Merative CCAE	-	-	-	-
Merative MDCD	448	262	<5	<19.05
Merative MDCR	-	-	-	-
Optum Clininformatics	789	506	<5	<9.88
Optum EHR	1,056	232	-	0.00
Veterans Affairs	16,349	13,011	25	1.92

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Acute pancreatitis**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,292	12,807	28	2.19
Merative CCAE	-	-	-	-
Merative MDCD	1,203	794	<5	<6.30
Merative MDCR	-	-	-	-
Optum Clininformatics	1,015	687	-	0.00
Optum EHR	1,169	260	-	0.00
Veterans Affairs	25,758	23,072	27	1.17

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France

IQVIA Open Claims

Merative CCAE

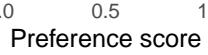
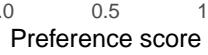
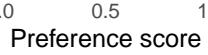
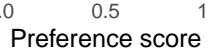
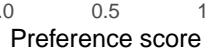
Merative MDCD

Merative MDCR

Optum Clininformatics

Optum EHR

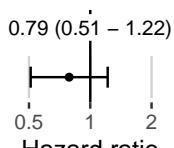
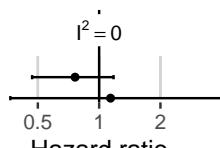
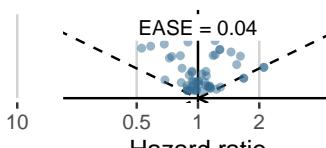
Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate

Meta-analysis



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Bladder cancer**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,520	12,933	6	0.46
Merative CCAE	-	-	-	-
Merative MDCD	1,224	808	<5	<6.19
Merative MDCR	-	-	-	-
Optum Clininformatics	1,017	687	-	0.00
Optum EHR	1,175	261	-	0.00
Veterans Affairs	25,742	22,997	49	2.13

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

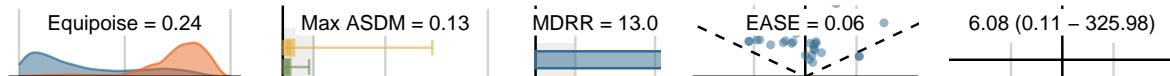
IQVIA LDP France

IQVIA Open Claims



Merative CCAE

Merative MDCD

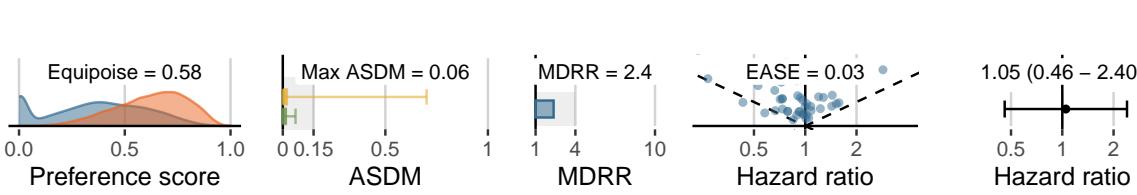


Merative MDCR

Optum Clininformatics

Optum EHR

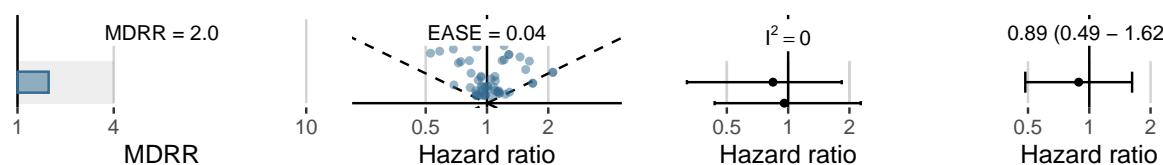
Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate

Meta-analysis



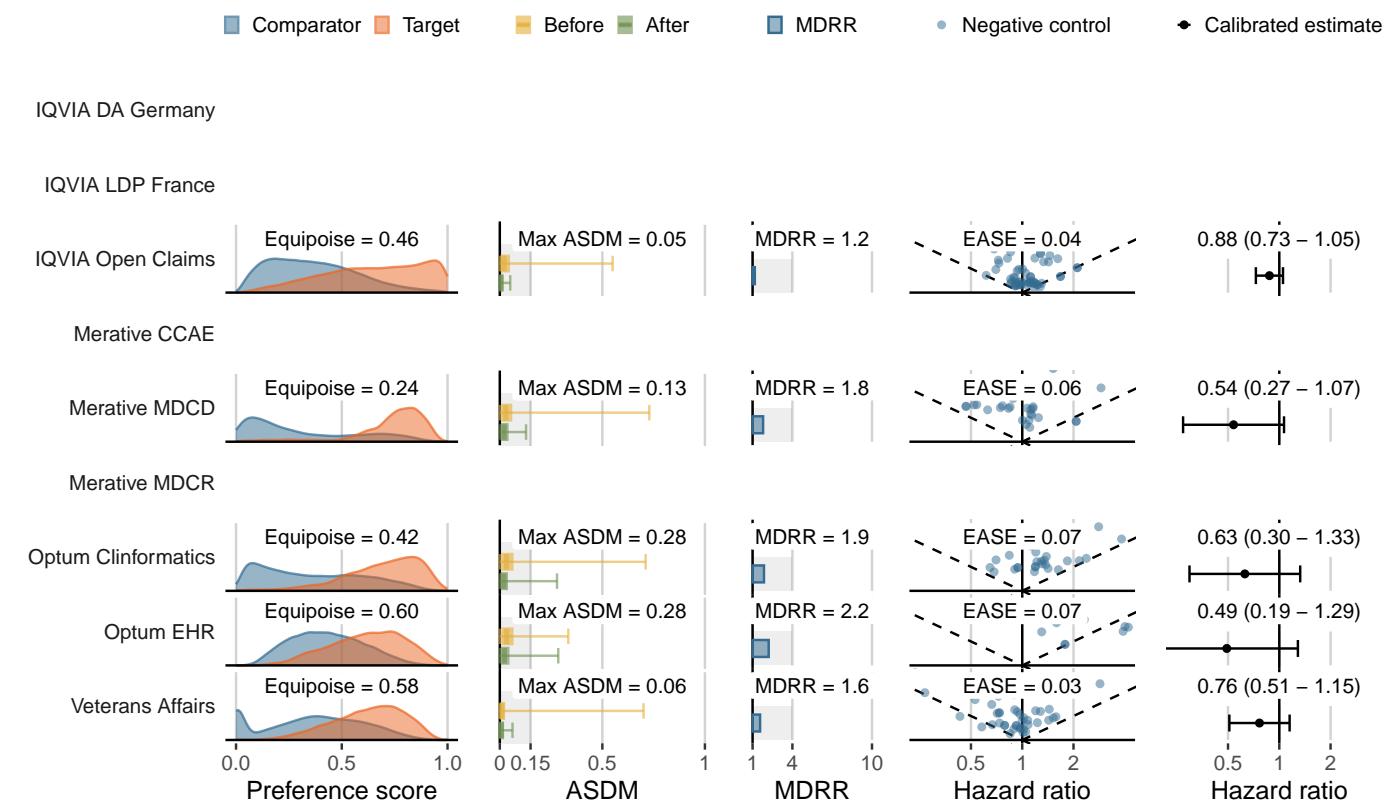
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Bone fracture**

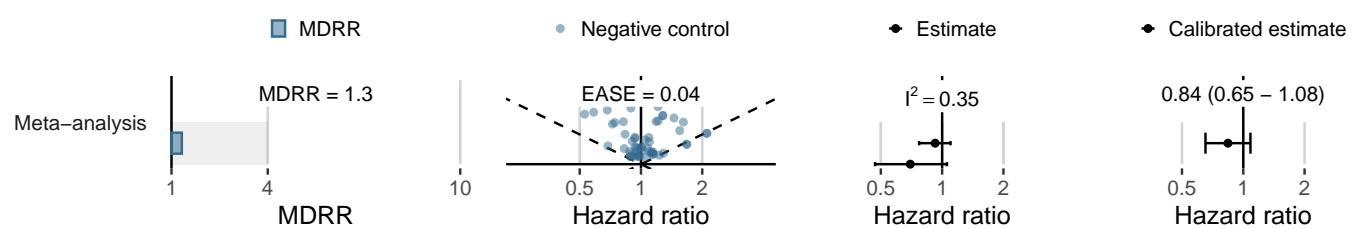
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	19,113	11,396	161	14.13
Merative CCAE	-	-	-	-
Merative MDCD	1,084	701	21	29.96
Merative MDCR	-	-	-	-
Optum Clininformatics	948	631	10	15.85
Optum EHR	1,088	241	5	20.75
Veterans Affairs	22,832	20,397	183	8.97

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



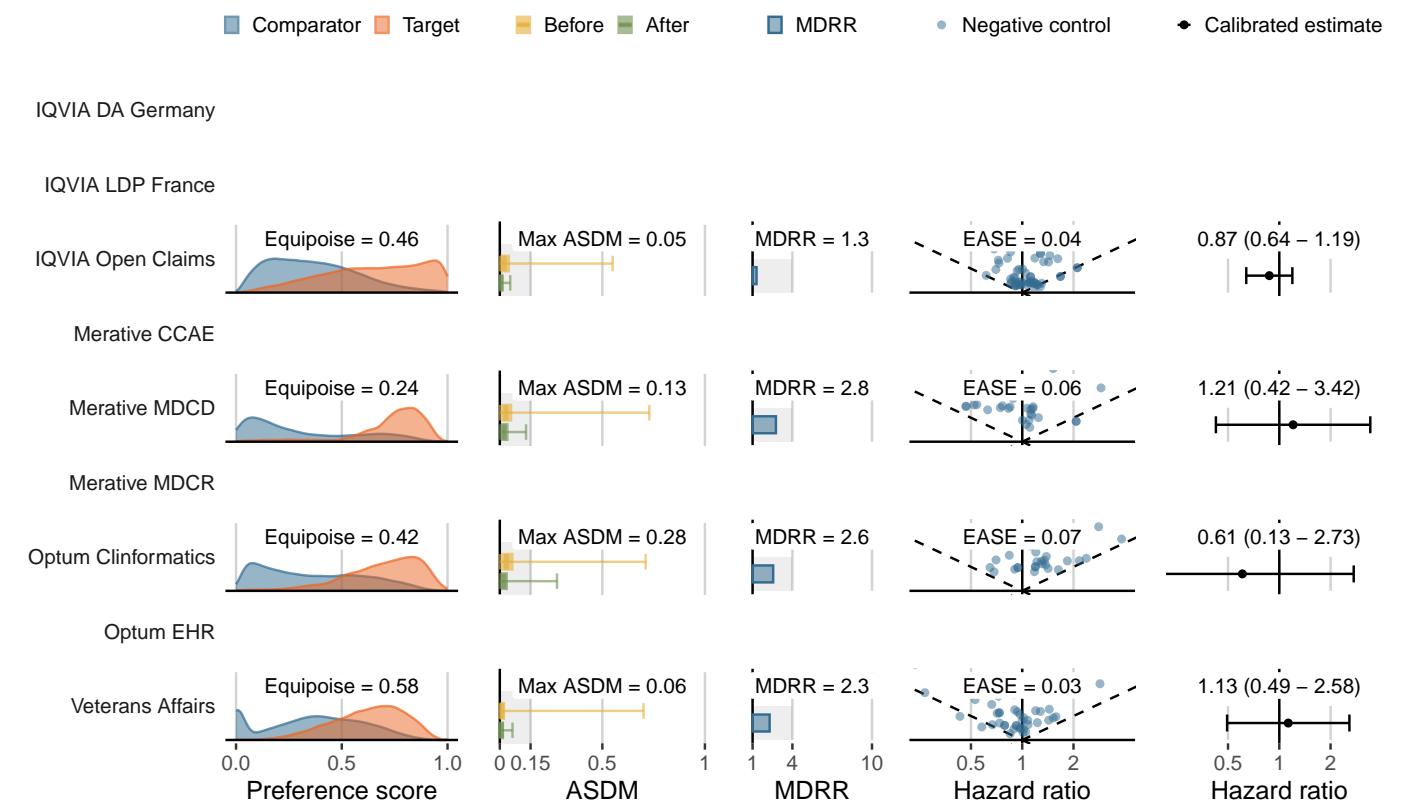
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Acute myocardial infarction**

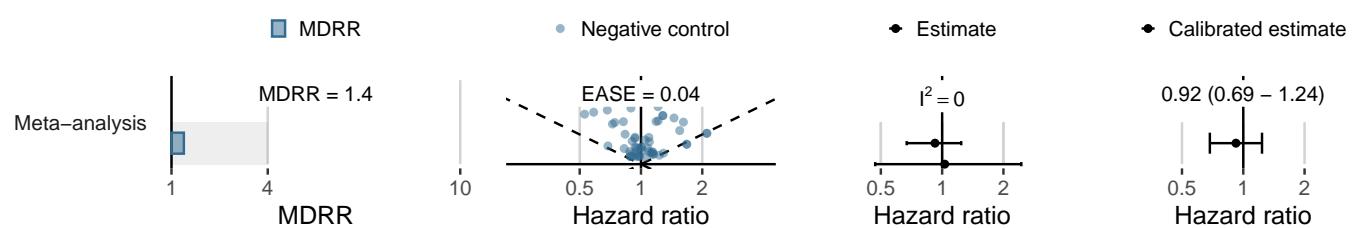
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,062	12,659	53	4.19
Merative CCAE	-	-	-	-
Merative MDCD	1,185	787	9	11.43
Merative MDCR	-	-	-	-
Optum Clininformatics	1,005	684	<5	<7.31
Optum EHR	1,163	259	-	0.00
Veterans Affairs	25,437	22,750	58	2.55

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



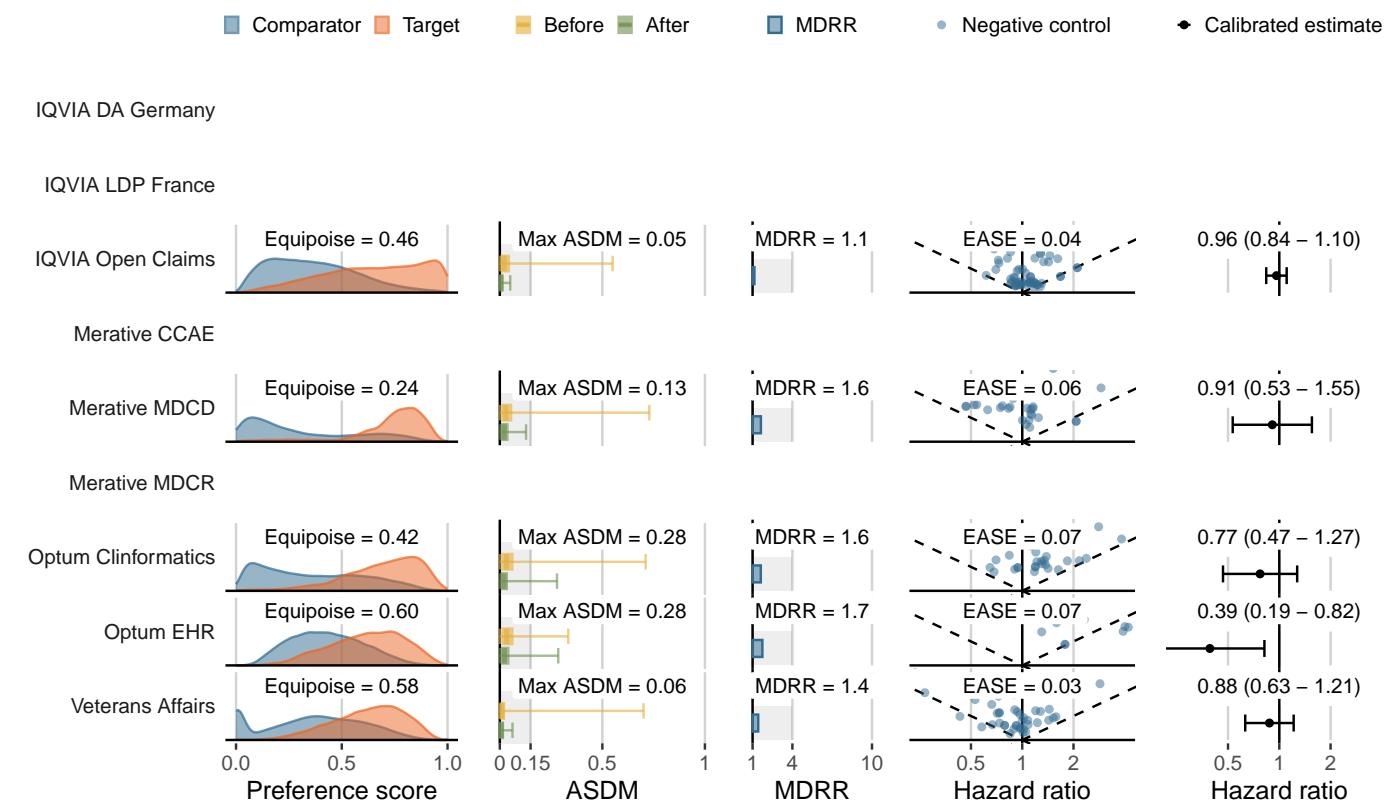
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Genitourinary infection**

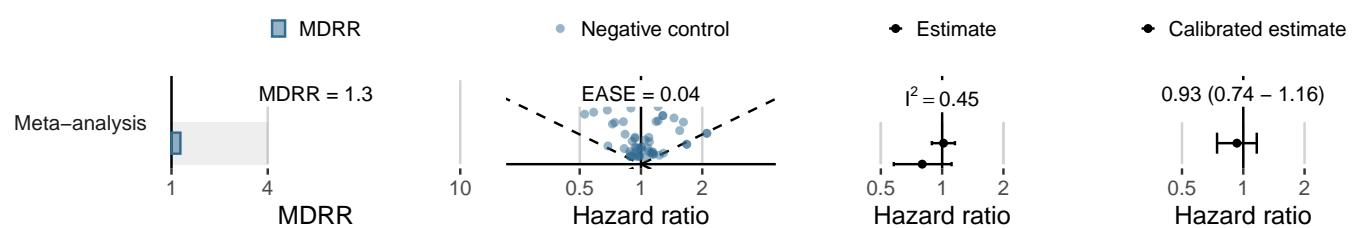
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,153	9,662	308	31.88
Merative CCAE	-	-	-	-
Merative MDCD	943	606	33	54.43
Merative MDCR	-	-	-	-
Optum Clininformatics	821	548	24	43.76
Optum EHR	1,023	224	8	35.64
Veterans Affairs	22,222	19,874	285	14.34

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



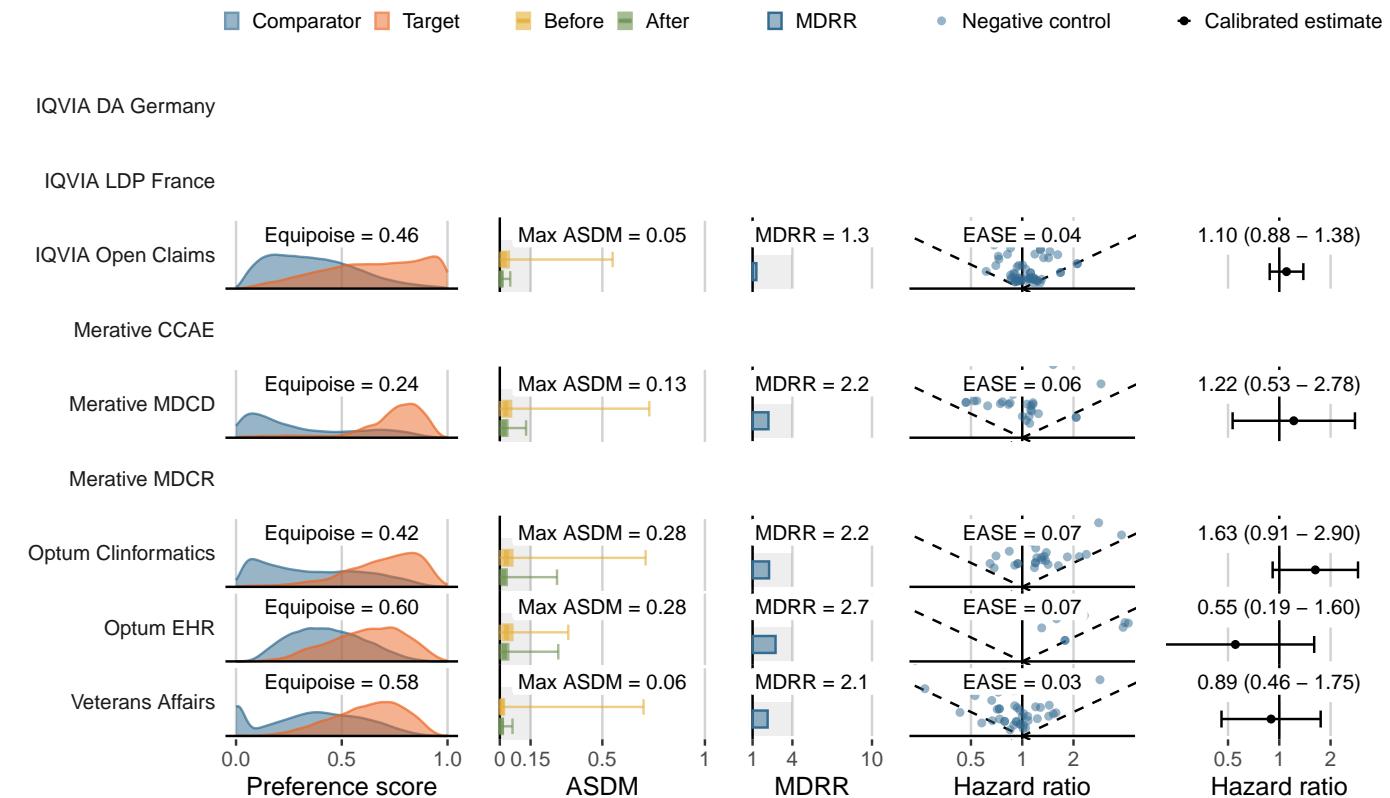
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Joint pain**

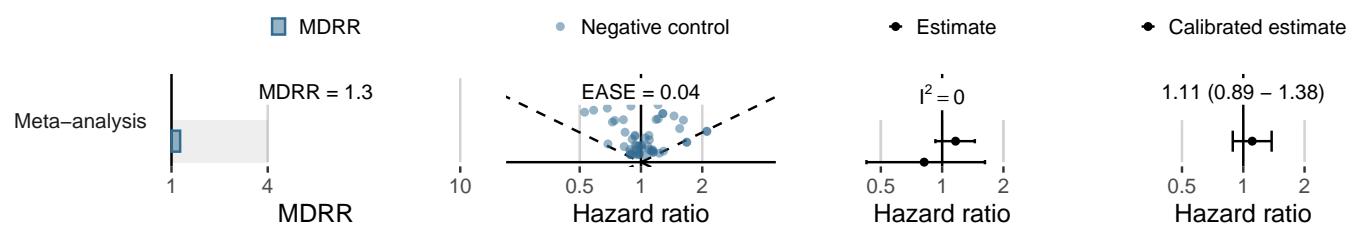
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	20,064	12,025	111	9.23
Merative CCAE	-	-	-	-
Merative MDCD	974	614	12	19.56
Merative MDCR	-	-	-	-
Optum Clininformatics	843	548	17	31.01
Optum EHR	1,117	248	<5	<20.17
Veterans Affairs	17,235	15,436	61	3.95

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



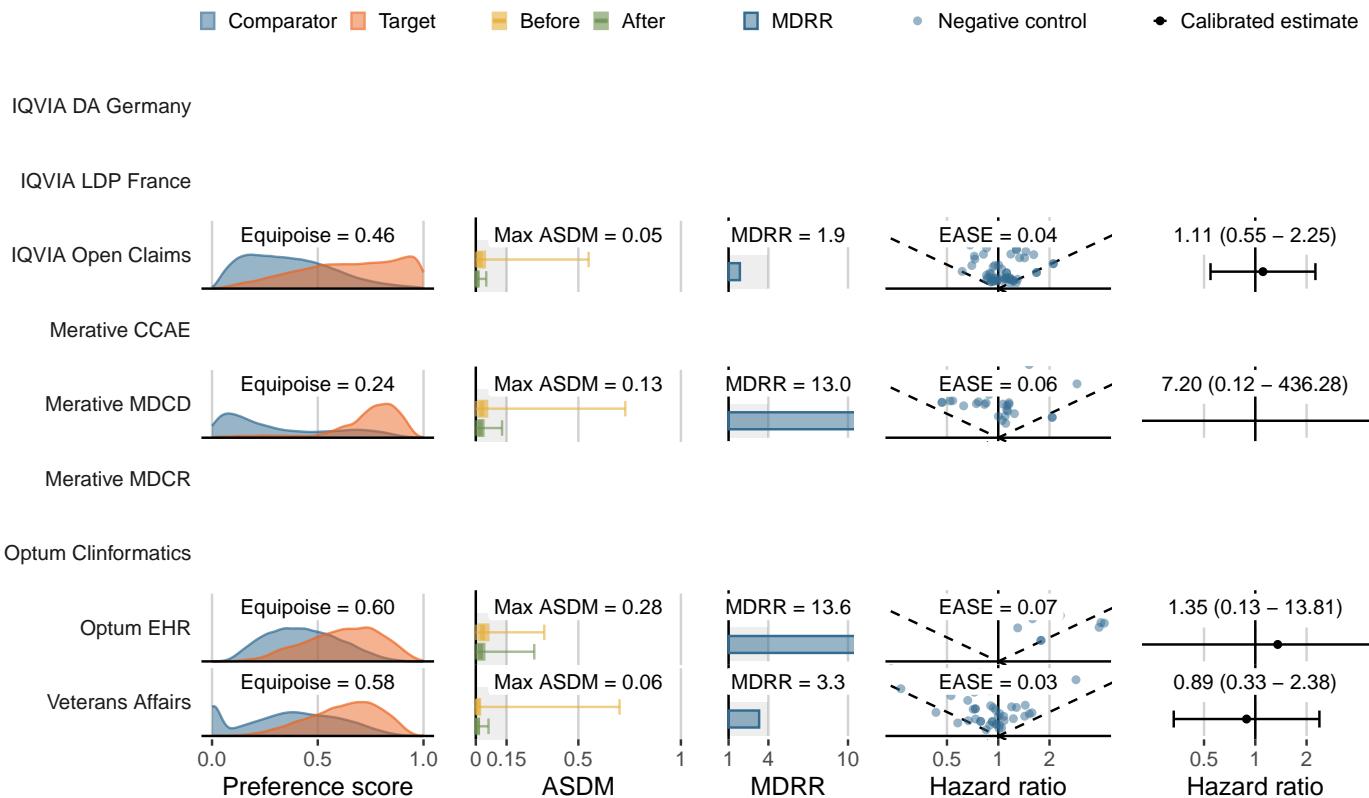
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Renal cancer**

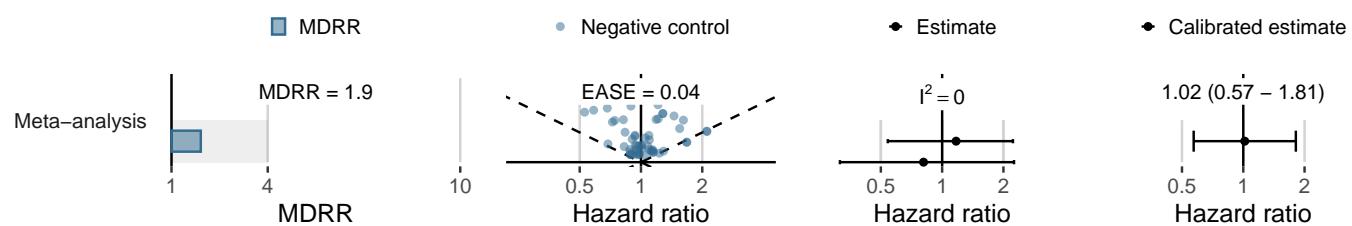
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,517	12,927	9	0.70
Merative CCAE	-	-	-	-
Merative MDCD	1,224	809	<5	<6.18
Merative MDCR	-	-	-	-
Optum Clininformatics	1,018	688	-	0.00
Optum EHR	1,172	260	<5	<19.21
Veterans Affairs	25,853	23,131	23	0.99

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



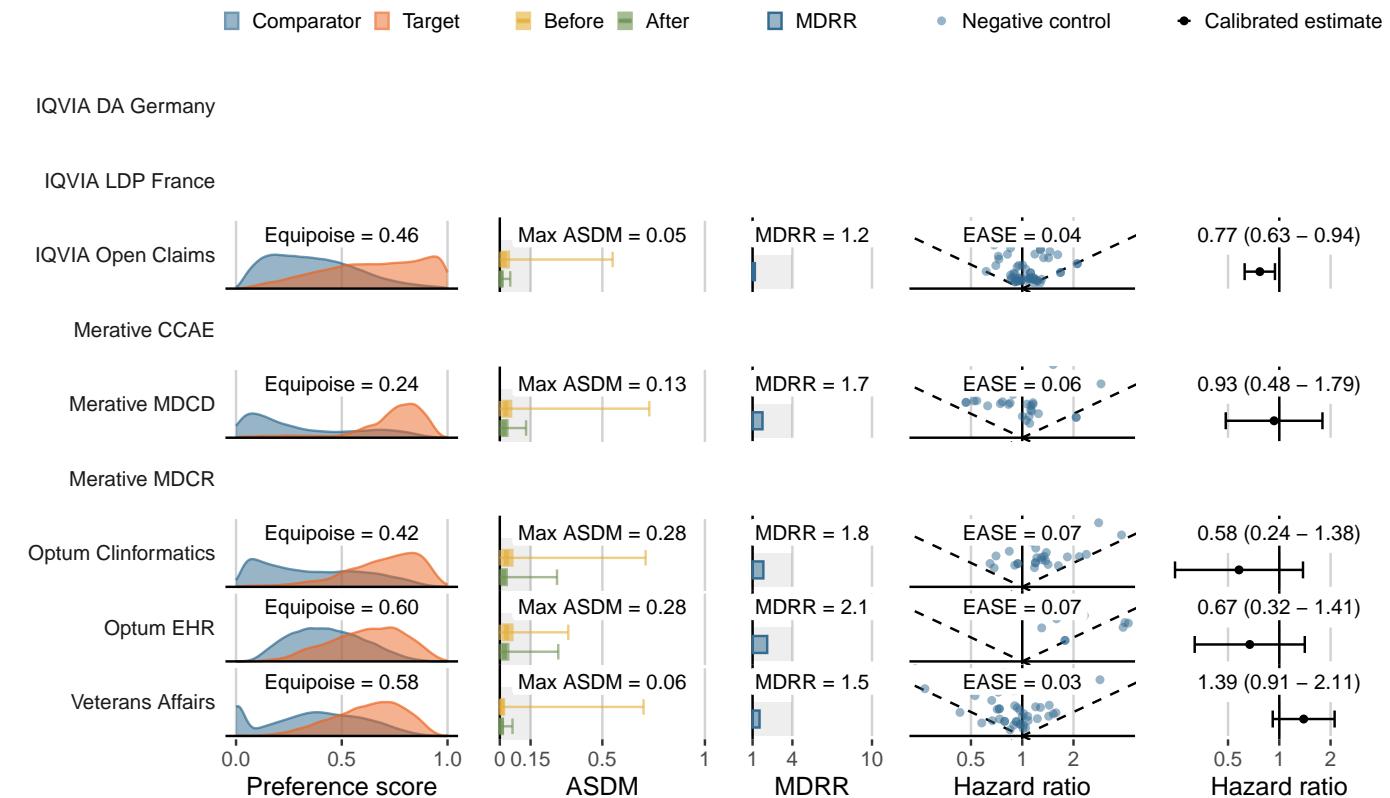
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Acute renal failure**

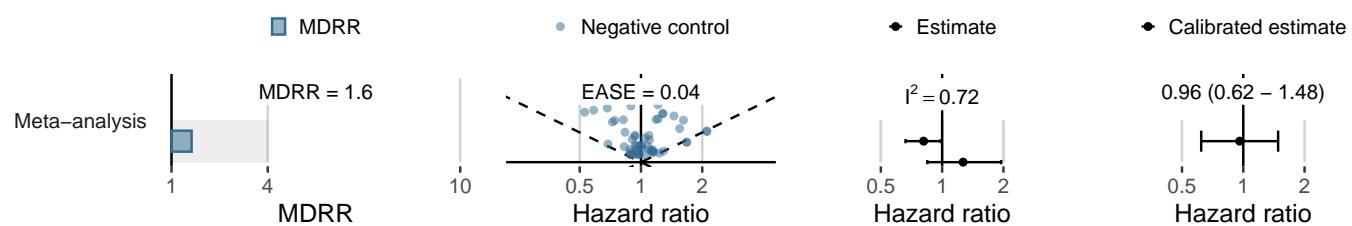
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	20,924	12,545	131	10.44
Merative CCAE	-	-	-	-
Merative MDCD	1,149	742	30	40.44
Merative MDCR	-	-	-	-
Optum Clininformatics	992	669	6	8.97
Optum EHR	1,156	257	8	31.12
Veterans Affairs	24,972	22,259	213	9.57

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



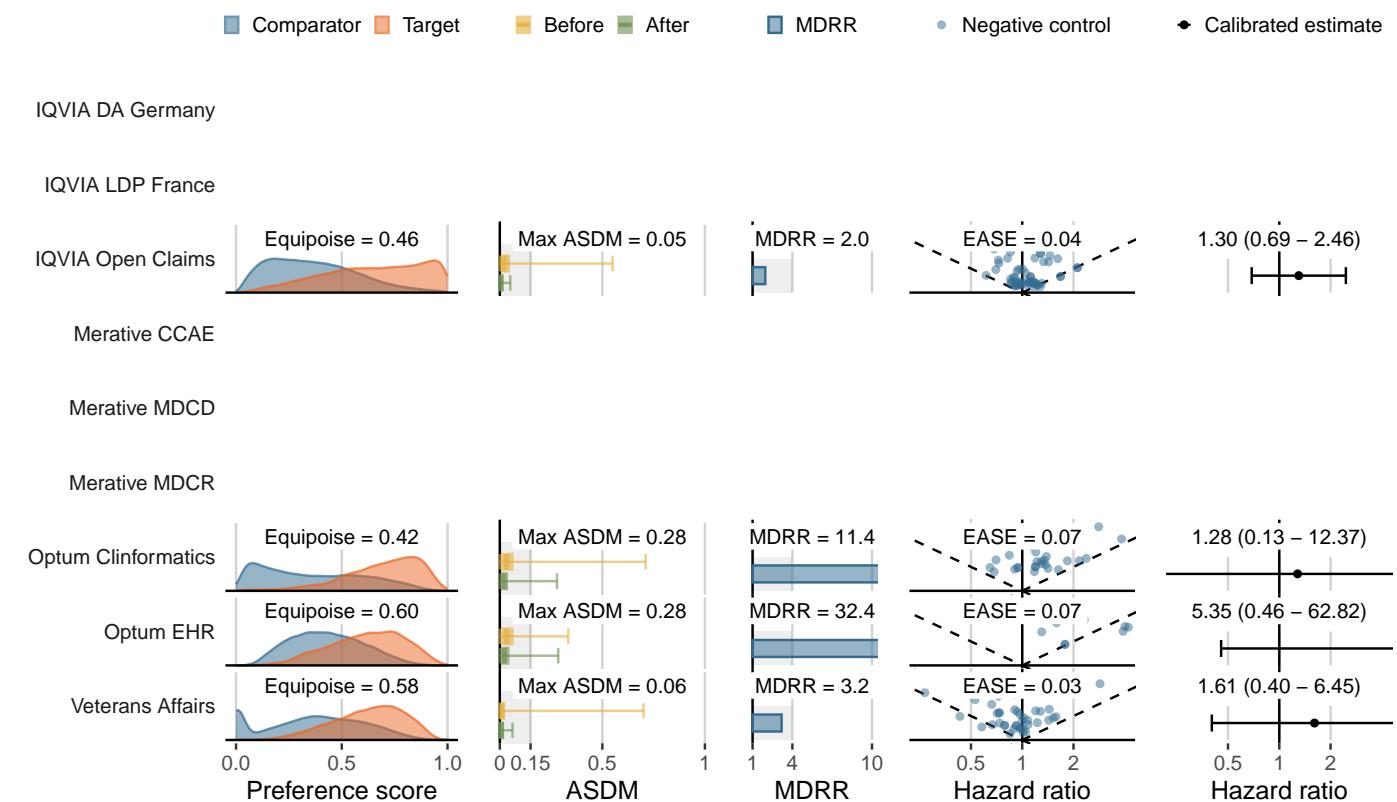
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Thyroid tumor**

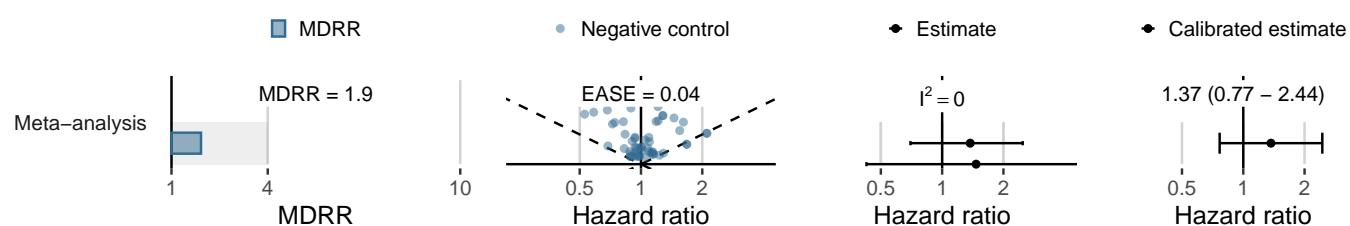
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,401	12,875	14	1.09
Merative CCAE	-	-	-	-
Merative MDCD	1,221	808	-	0.00
Merative MDCR	-	-	-	-
Optum Clininformatics	1,013	683	<5	<7.32
Optum EHR	1,175	260	<5	<19.20
Veterans Affairs	25,797	23,062	25	1.08

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



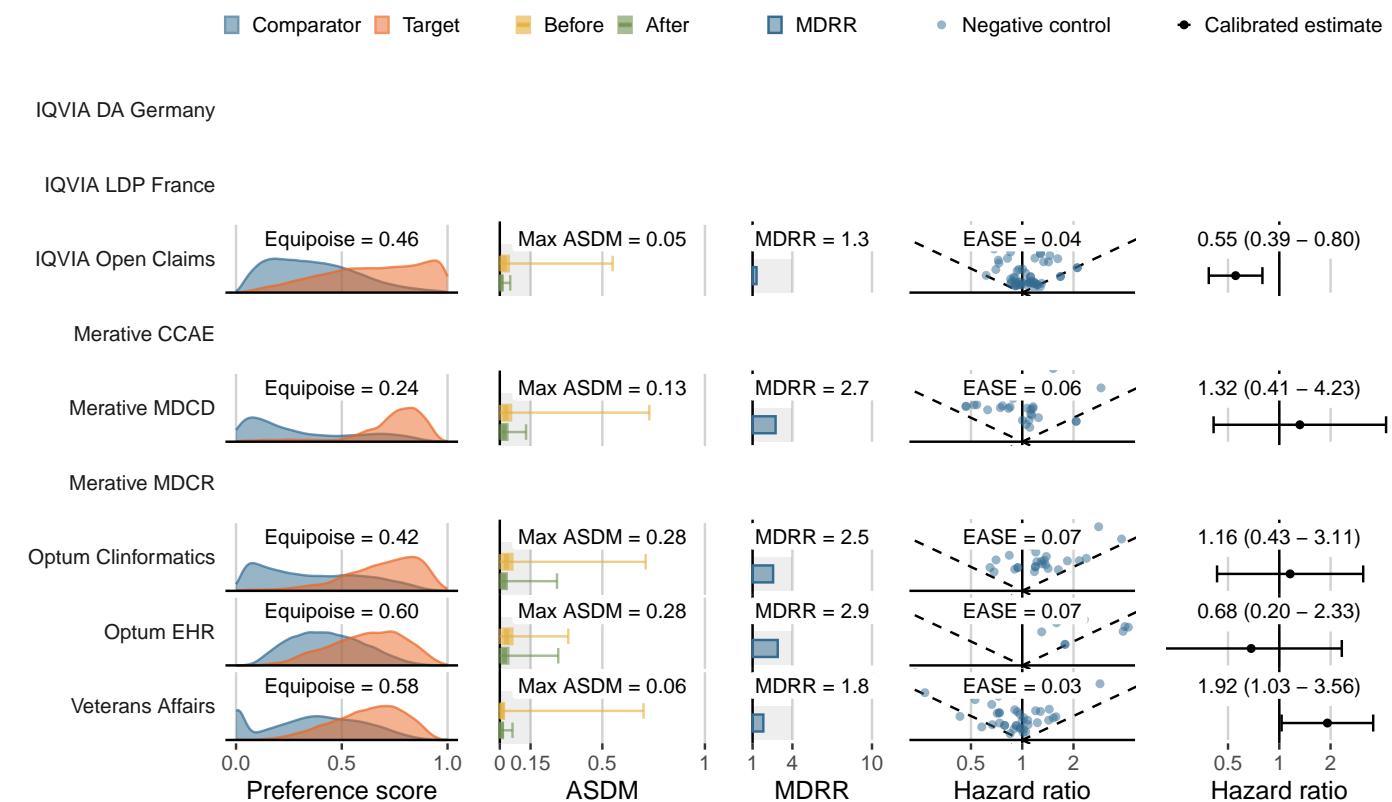
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Venous thromboembolic events**

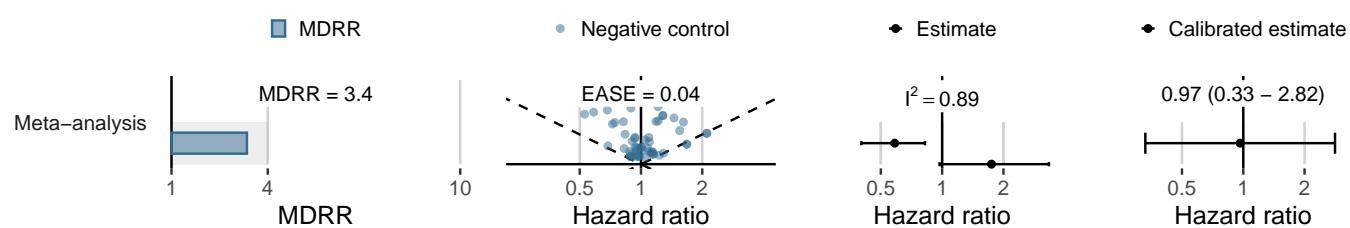
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	20,898	12,565	42	3.34
Merative CCAE	-	-	-	-
Merative MDCD	1,178	775	11	14.20
Merative MDCR	-	-	-	-
Optum Clininformatics	995	664	5	7.53
Optum EHR	1,145	254	<5	<19.68
Veterans Affairs	24,990	22,218	116	5.22

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



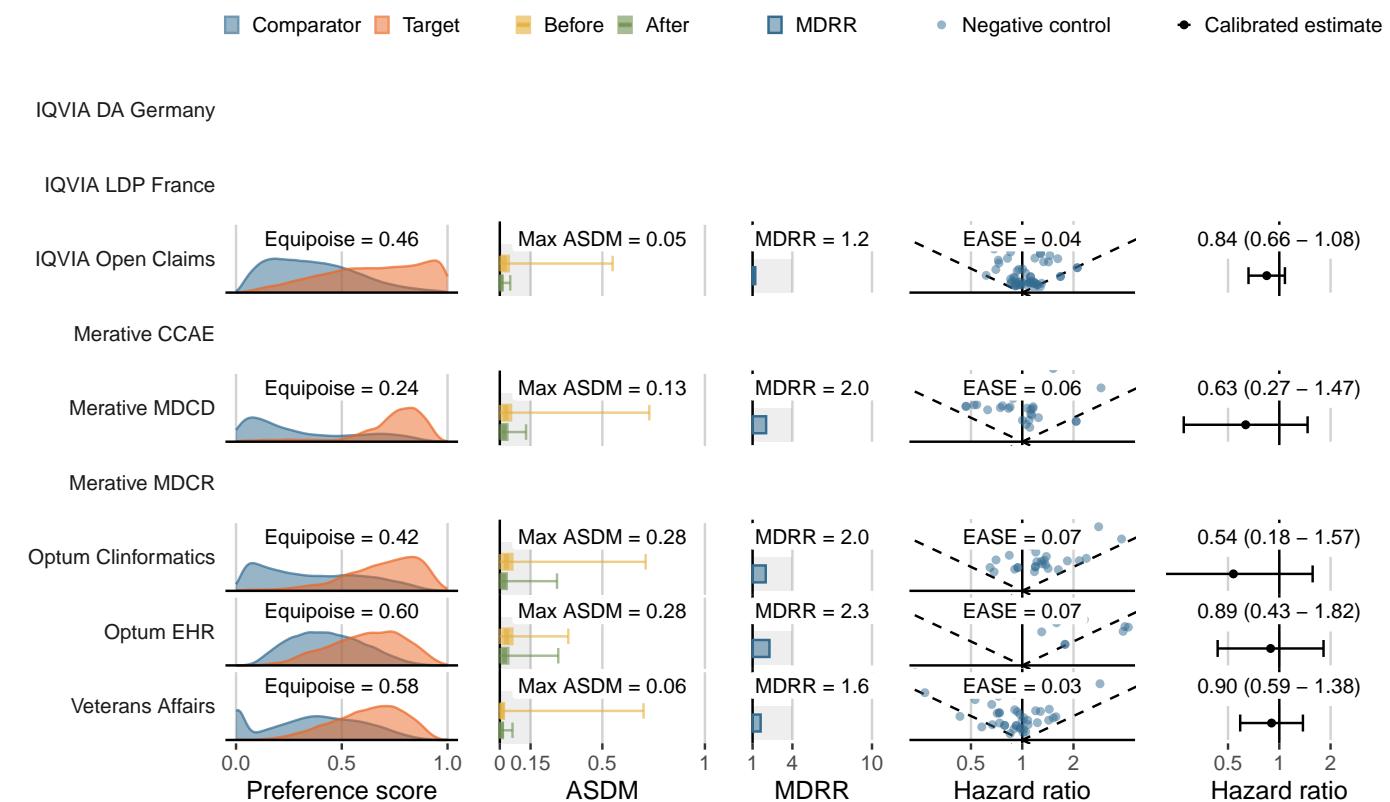
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Hospitalization with heart failure**

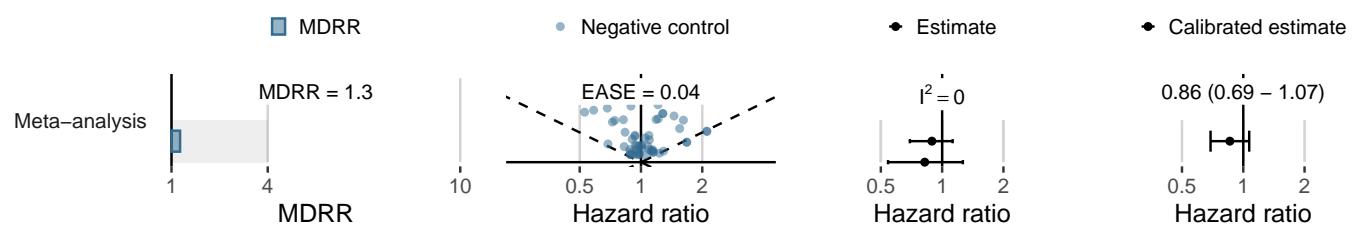
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	20,841	12,523	87	6.95
Merative CCAE	-	-	-	-
Merative MDCD	1,144	740	11	14.86
Merative MDCR	-	-	-	-
Optum Clininformatics	993	676	<5	<7.40
Optum EHR	1,146	255	9	35.35
Veterans Affairs	25,182	22,434	168	7.49

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



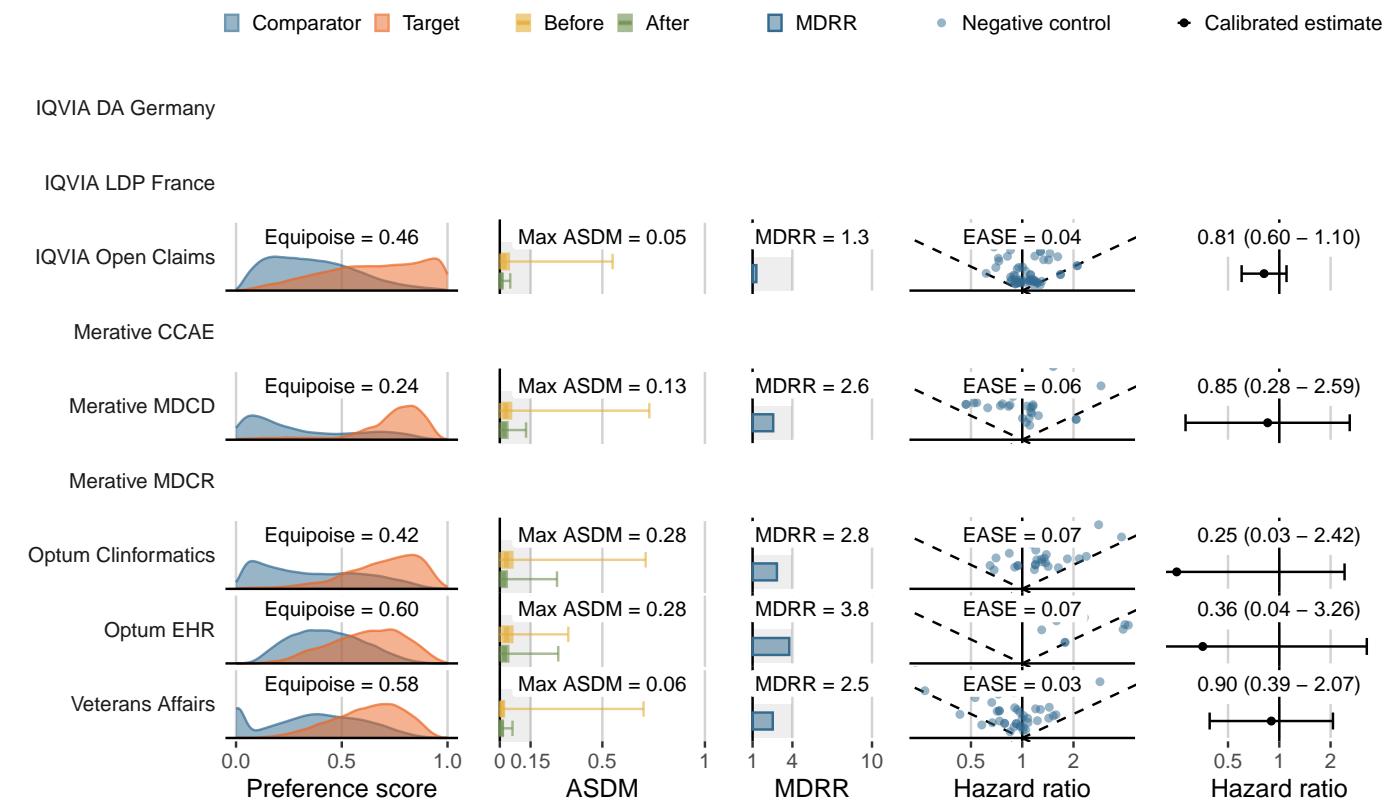
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Stroke**

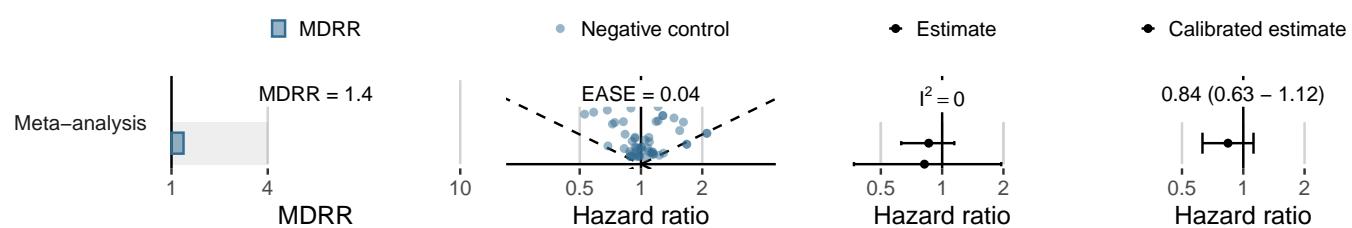
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,017	12,641	58	4.59
Merative CCAE	-	-	-	-
Merative MDCD	1,179	770	9	11.69
Merative MDCR	-	-	-	-
Optum Clininformatics	1,004	679	<5	<7.36
Optum EHR	1,167	260	<5	<19.24
Veterans Affairs	25,560	22,866	40	1.75

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Acute pancreatitis**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,494	12,923	28	2.17
Merative CCAE	-	-	-	-
Merative MDCD	1,313	864	<5	<5.79
Merative MDCR	-	-	-	-
Optum Clininformatics	1,014	687	-	0.00
Optum EHR	1,170	260	-	0.00
Veterans Affairs	21,281	19,360	22	1.14

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France

IQVIA Open Claims



Merative CCAE

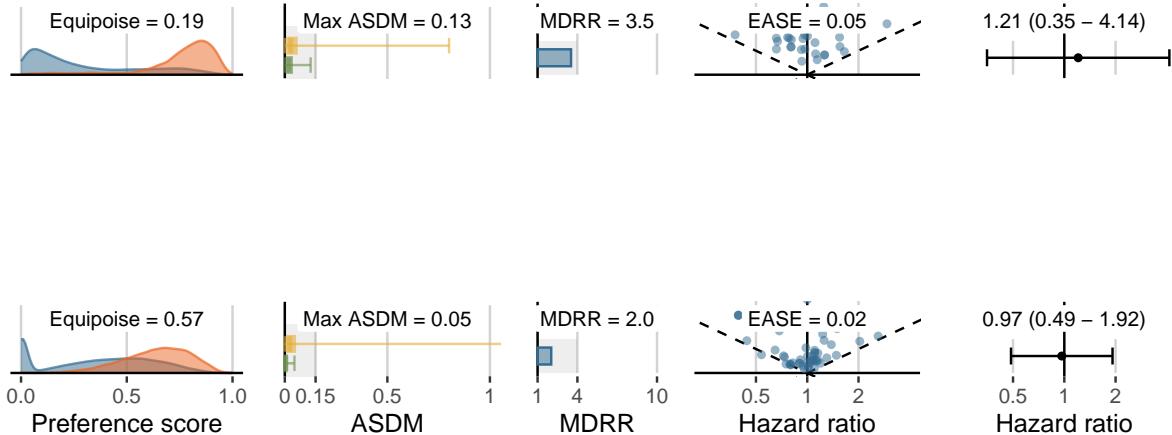
Merative MDCD

Merative MDCR

Optum Clininformatics

Optum EHR

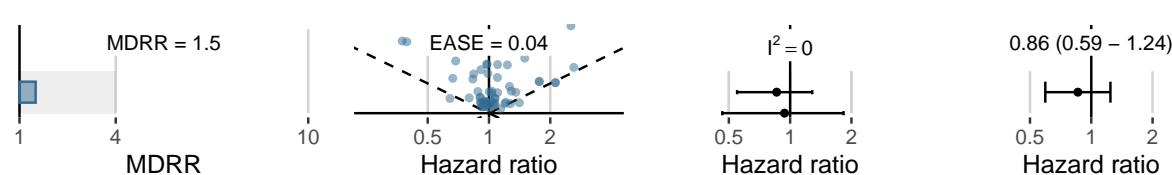
Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate

Meta-analysis



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Bladder cancer**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,720	13,045	6	0.46
Merative CCAE	-	-	-	-
Merative MDCD	1,333	872	<5	<5.74
Merative MDCR	-	-	-	-
Optum Clininformatics	1,016	687	-	0.00
Optum EHR	1,176	261	-	0.00
Veterans Affairs	21,305	19,332	38	1.97

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

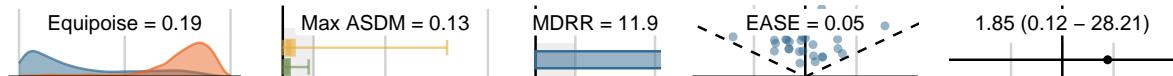
IQVIA LDP France

IQVIA Open Claims



Merative CCAE

Merative MDCD

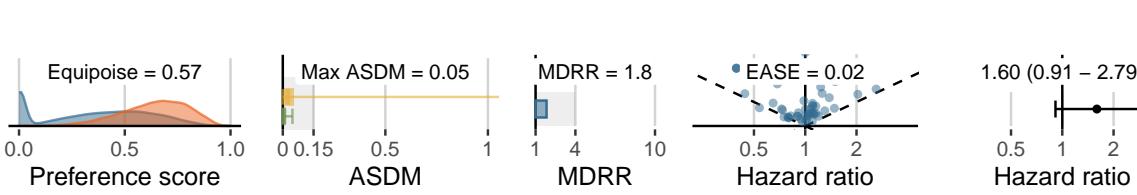


Merative MDCR

Optum Clininformatics

Optum EHR

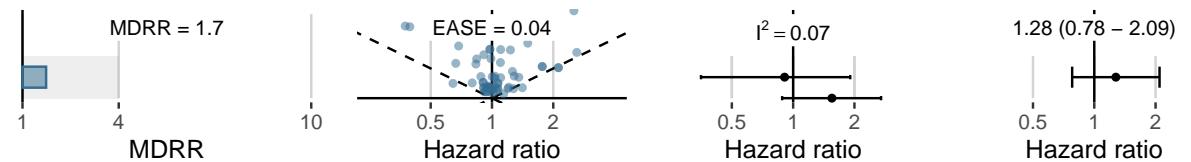
Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate

Meta-analysis



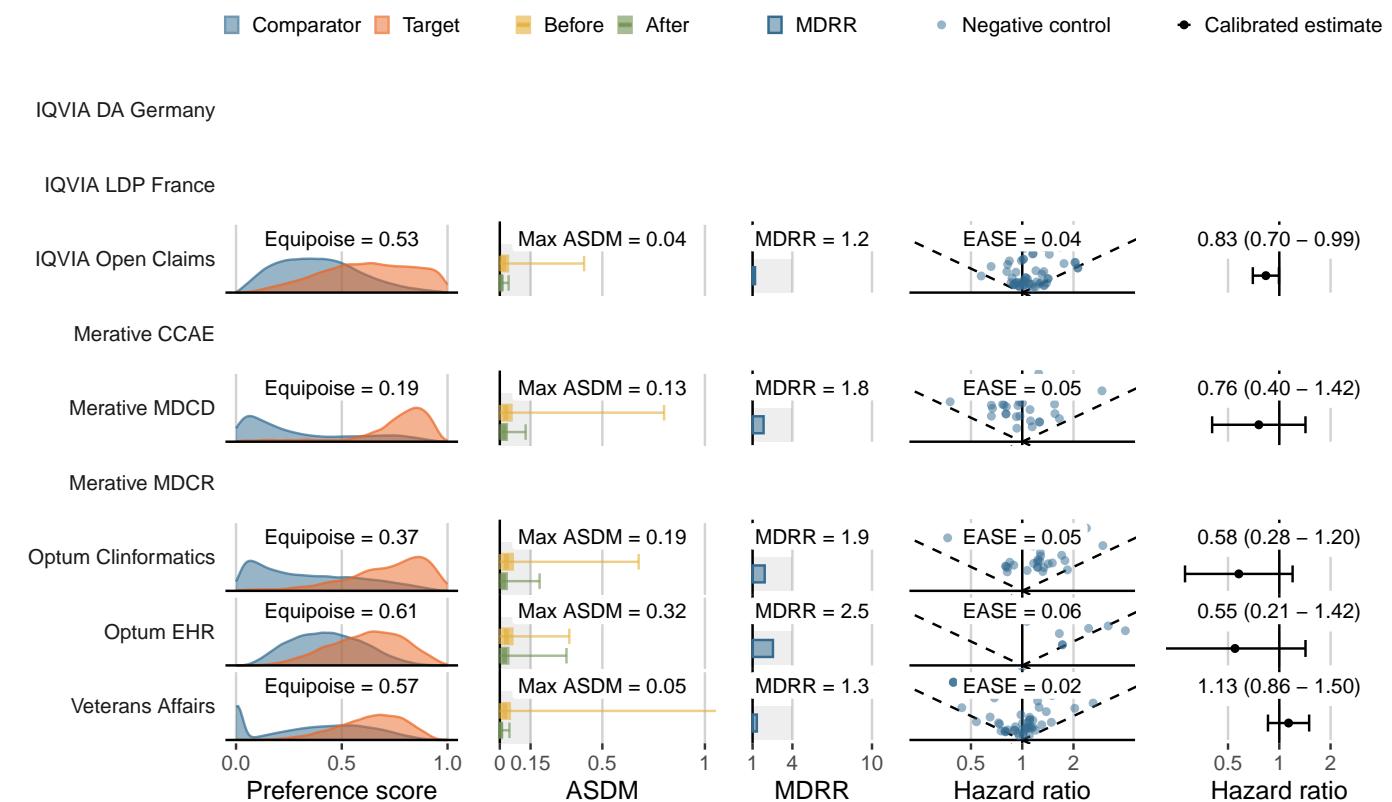
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Bone fracture**

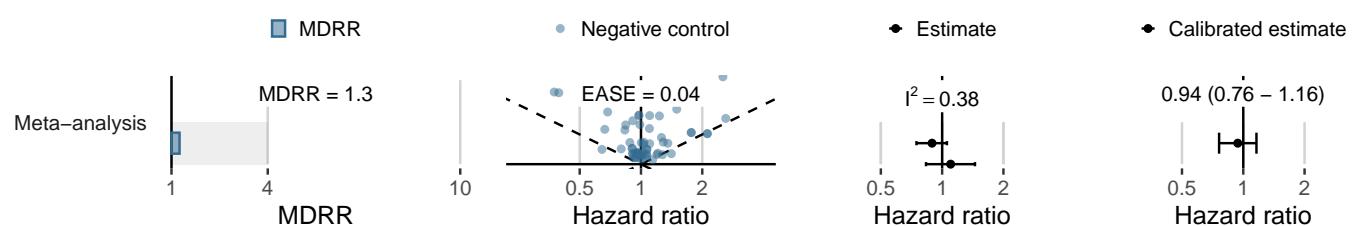
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	19,301	11,504	164	14.26
Merative CCAE	-	-	-	-
Merative MDCD	1,172	751	27	35.94
Merative MDCR	-	-	-	-
Optum Clininformatics	948	631	10	15.85
Optum EHR	1,089	241	5	20.74
Veterans Affairs	19,024	17,222	160	9.29

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



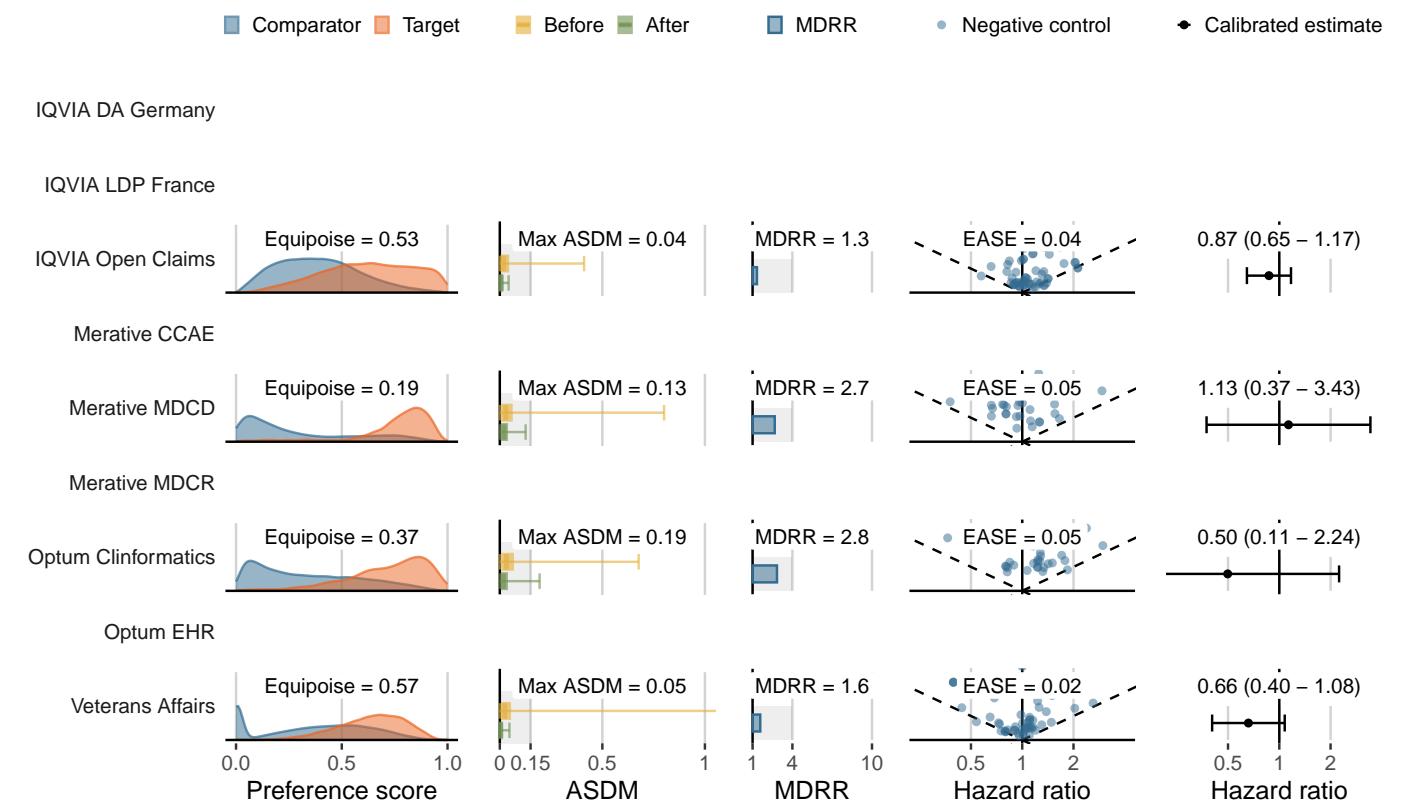
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Acute myocardial infarction**

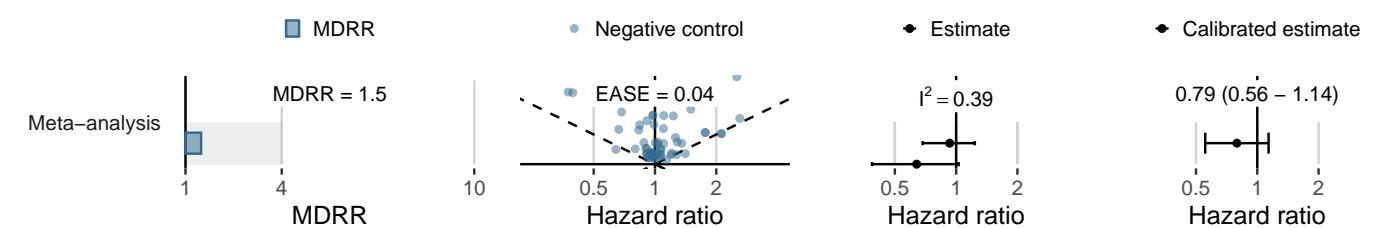
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,264	12,774	55	4.31
Merative CCAE	-	-	-	-
Merative MDCD	1,296	851	7	8.23
Merative MDCR	-	-	-	-
Optum Clininformatics	1,004	684	<5	<7.31
Optum EHR	1,164	259	-	0.00
Veterans Affairs	21,047	19,123	48	2.51

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



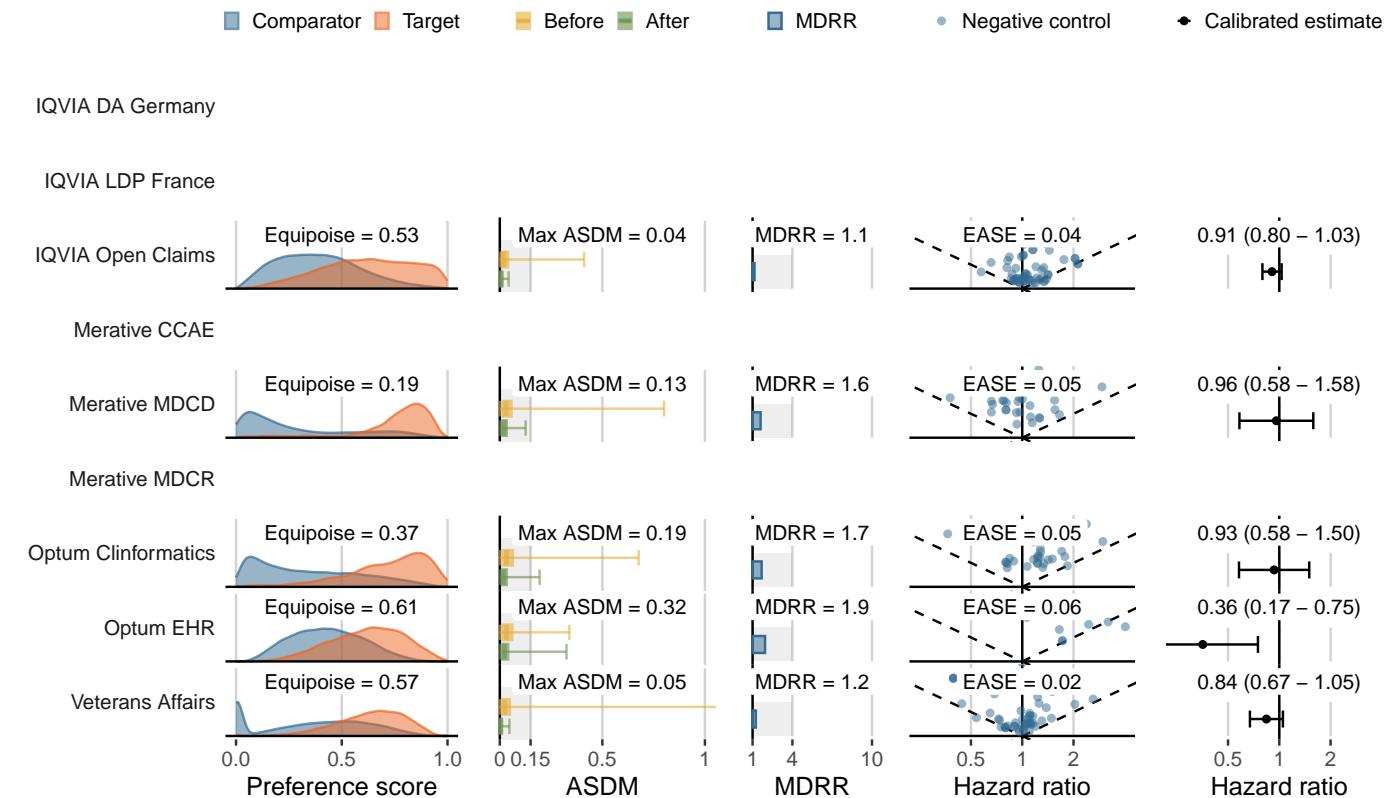
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Genitourinary infection**

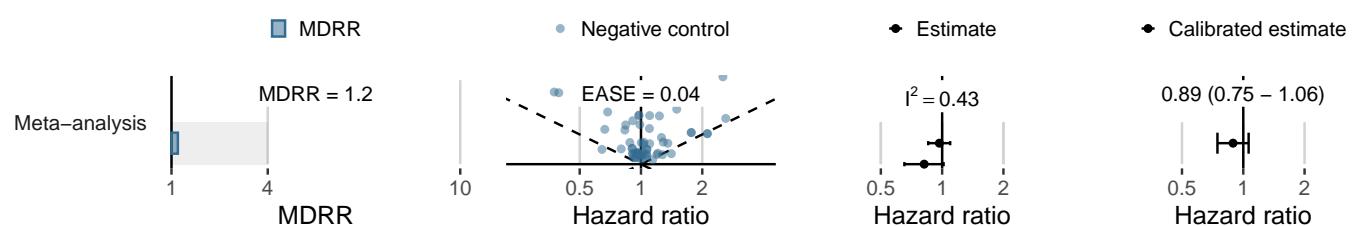
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,281	9,735	311	31.95
Merative CCAE	-	-	-	-
Merative MDCD	1,027	664	36	54.23
Merative MDCR	-	-	-	-
Optum Clininformatics	821	548	24	43.77
Optum EHR	1,025	225	8	35.60
Veterans Affairs	18,606	16,893	239	14.15

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



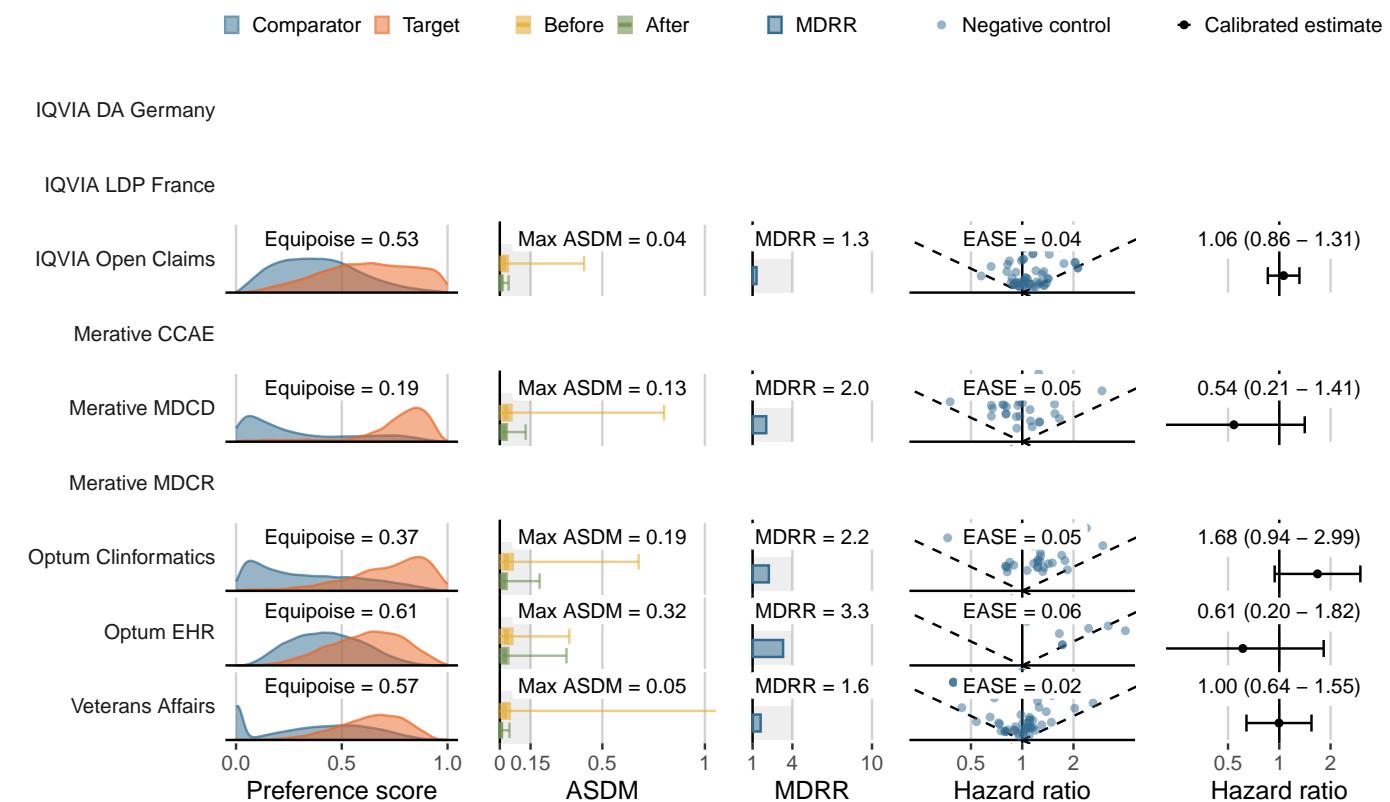
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Joint pain**

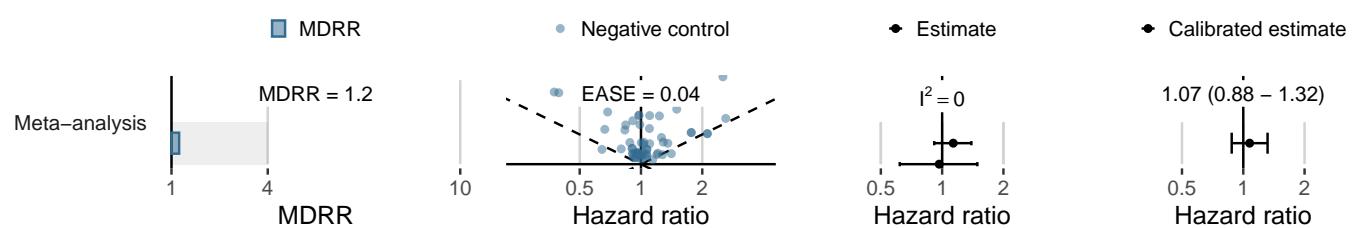
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	20,259	12,137	113	9.31
Merative CCAE	-	-	-	-
Merative MDCD	1,076	667	12	18.00
Merative MDCR	-	-	-	-
Optum Clininformatics	843	548	17	31.01
Optum EHR	1,117	248	<5	<20.19
Veterans Affairs	14,261	12,996	50	3.85

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Renal cancer**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,720	13,043	9	0.69
Merative CCAE	-	-	-	-
Merative MDCD	1,332	871	<5	<5.74
Merative MDCR	-	-	-	-
Optum Clininformatics	1,017	688	-	0.00
Optum EHR	1,173	260	<5	<19.21
Veterans Affairs	21,397	19,445	19	0.98

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

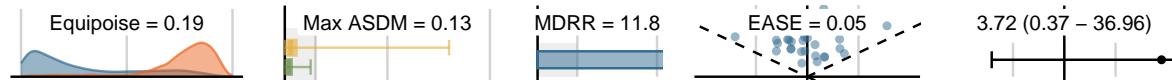
IQVIA LDP France

IQVIA Open Claims



Merative CCAE

Merative MDCD

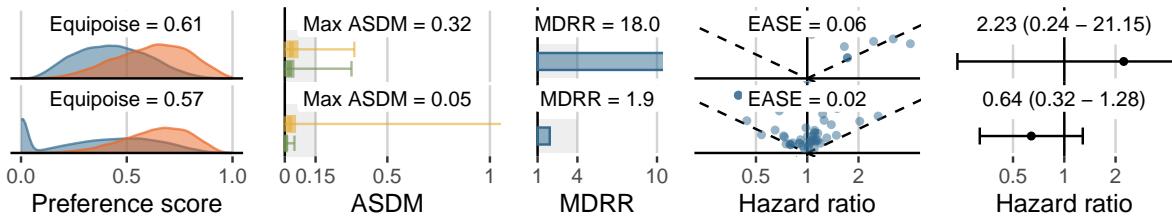


Merative MDCR

Optum Clininformatics

Optum EHR

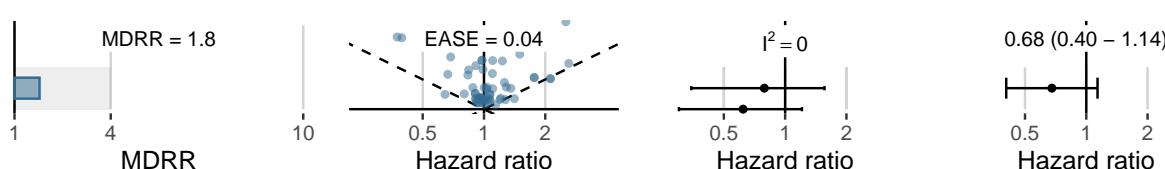
Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate

Meta-analysis



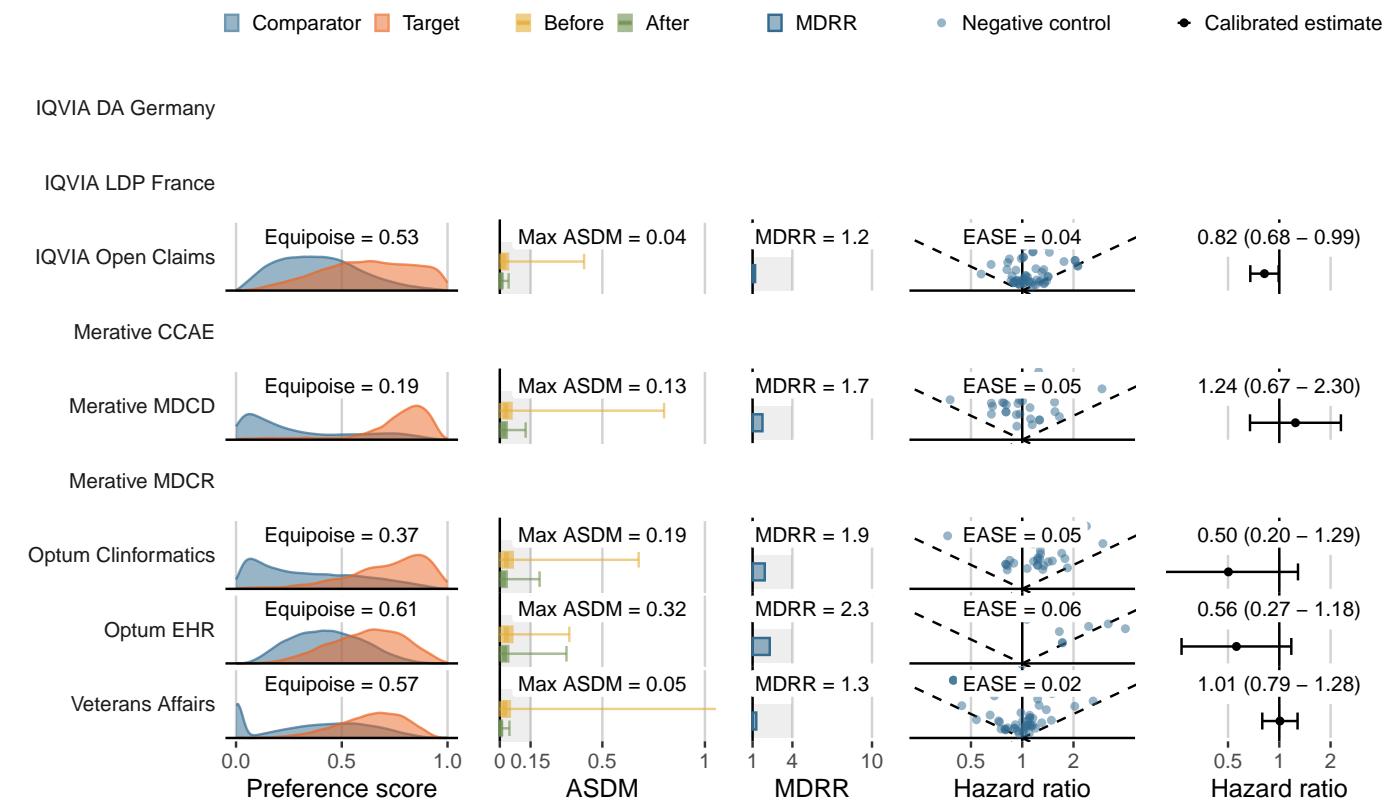
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Acute renal failure**

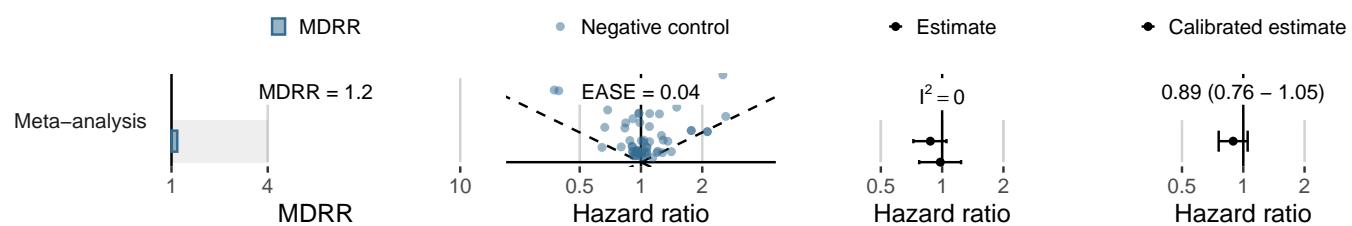
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,123	12,658	132	10.43
Merative CCAE	-	-	-	-
Merative MDCD	1,247	803	26	32.38
Merative MDCR	-	-	-	-
Optum Clininformatics	991	669	6	8.97
Optum EHR	1,157	257	8	31.11
Veterans Affairs	20,636	18,710	176	9.41

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



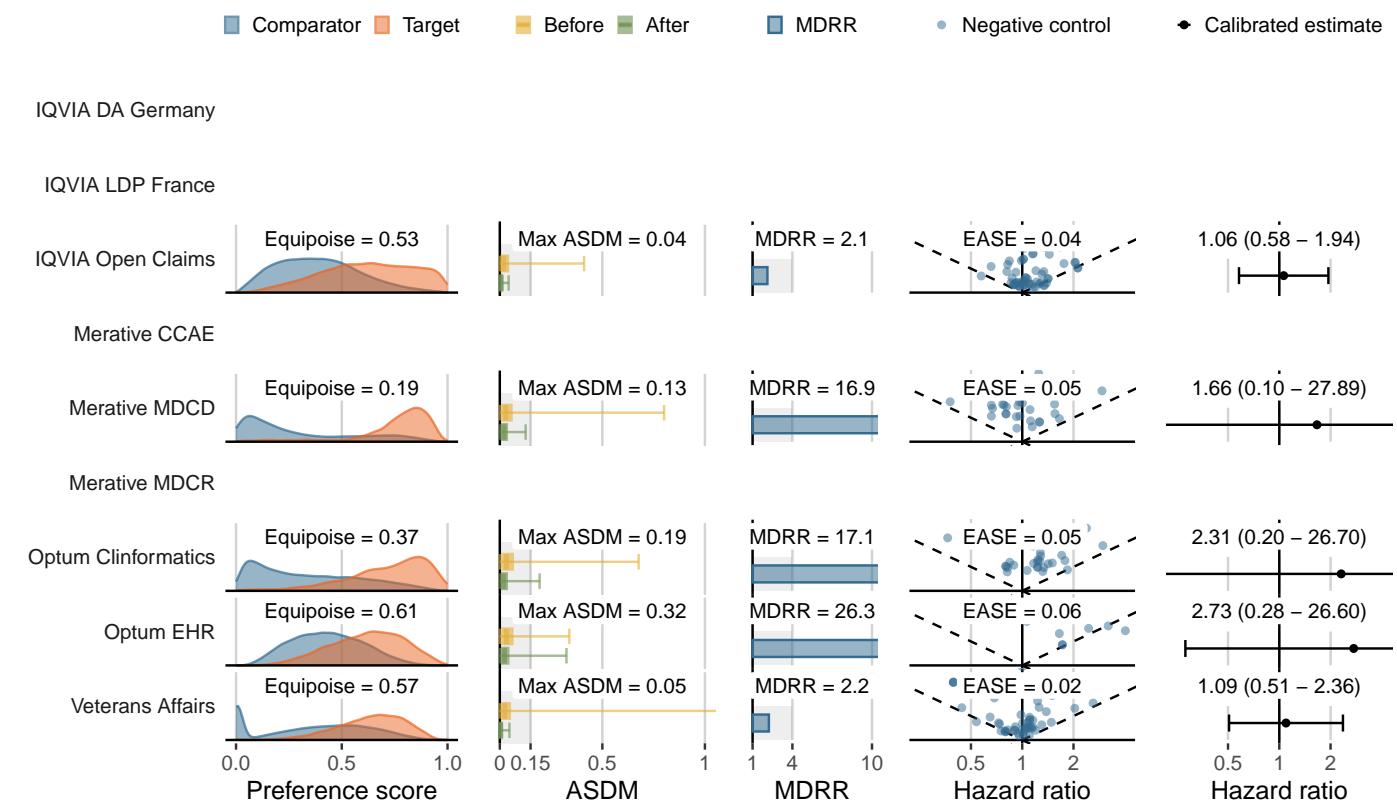
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Thyroid tumor**

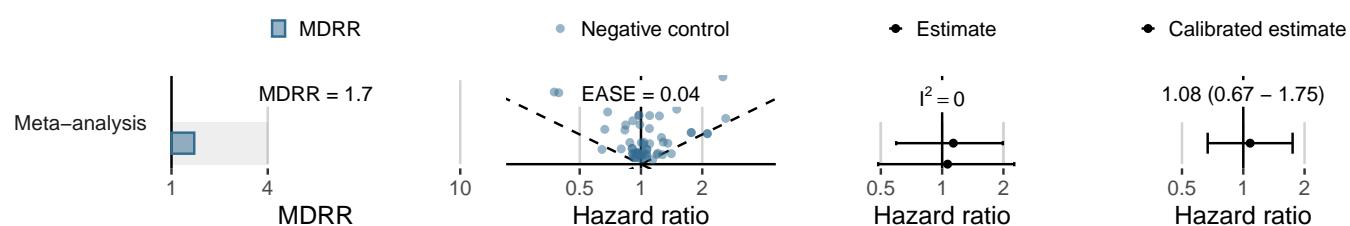
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,603	12,989	14	1.08
Merative CCAE	-	-	-	-
Merative MDCD	1,330	874	<5	<5.72
Merative MDCR	-	-	-	-
Optum Clininformatics	1,012	683	<5	<7.32
Optum EHR	1,176	260	<5	<19.20
Veterans Affairs	21,371	19,412	19	0.98

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



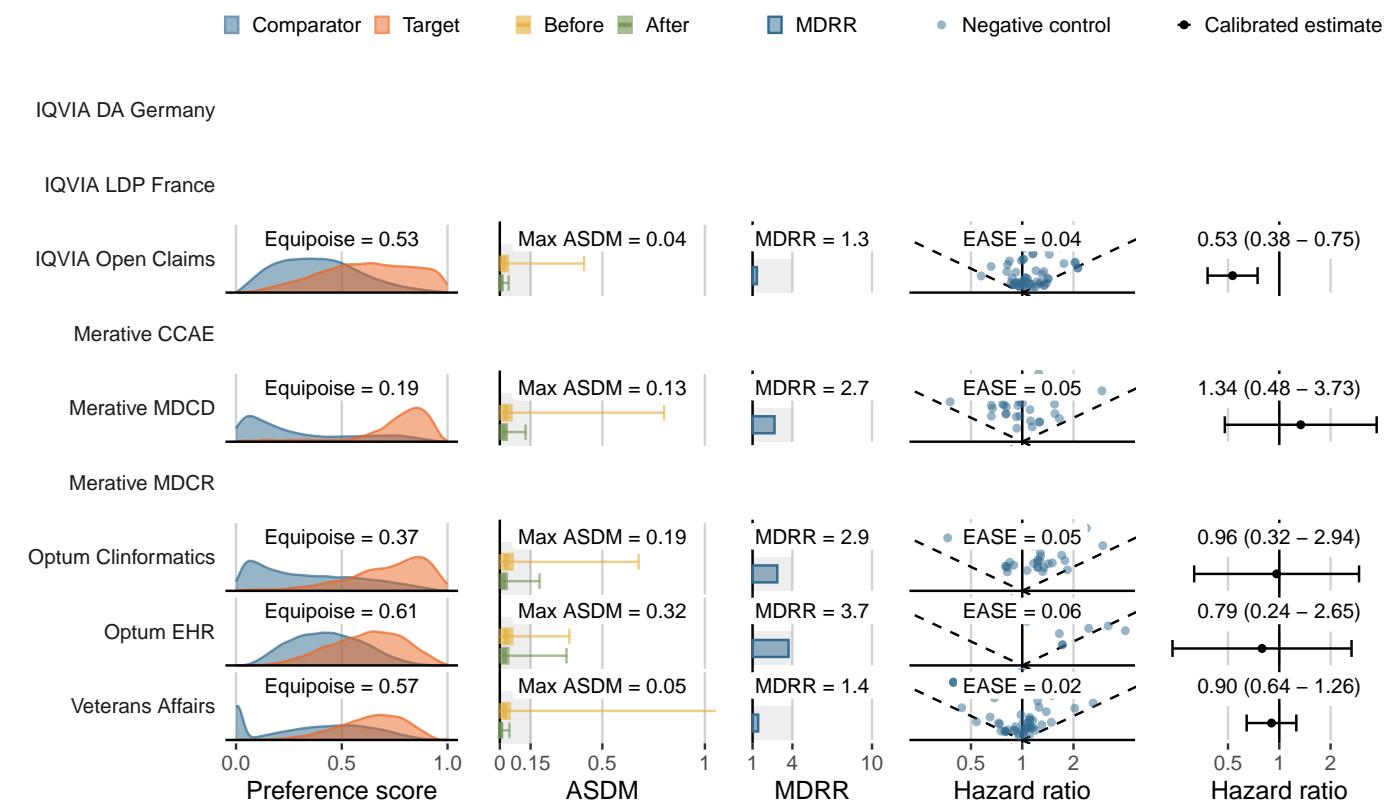
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Venous thromboembolic events**

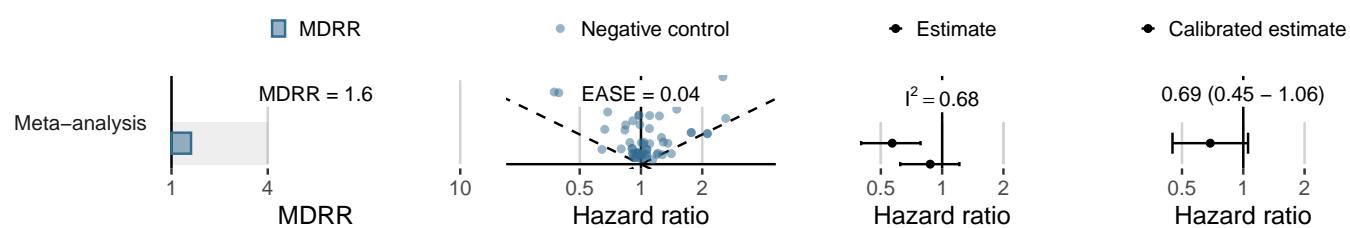
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,104	12,677	41	3.23
Merative CCAE	-	-	-	-
Merative MDCD	1,280	836	9	10.77
Merative MDCR	-	-	-	-
Optum Clininformatics	994	664	5	7.53
Optum EHR	1,146	254	<5	<19.68
Veterans Affairs	20,692	18,674	97	5.19

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



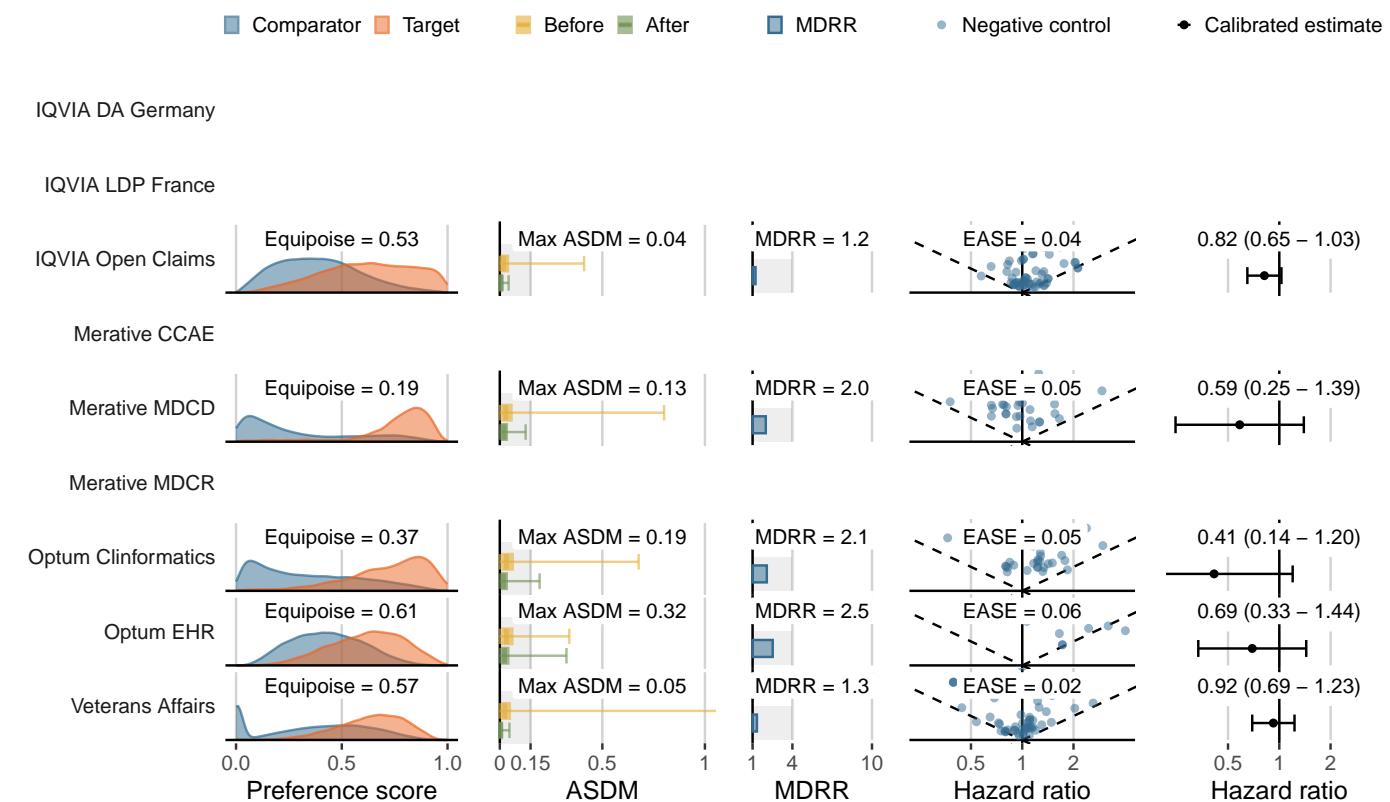
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Hospitalization with heart failure**

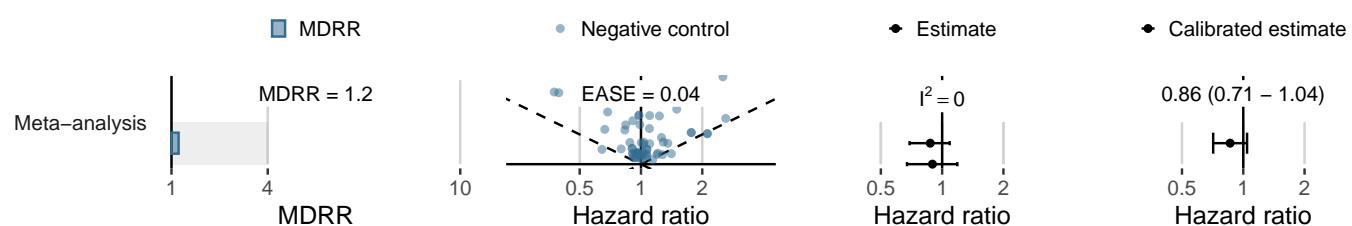
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,052	12,643	87	6.88
Merative CCAE	-	-	-	-
Merative MDCD	1,246	795	9	11.32
Merative MDCR	-	-	-	-
Optum Clininformatics	992	676	<5	<7.40
Optum EHR	1,148	255	9	35.33
Veterans Affairs	20,816	18,844	136	7.22

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



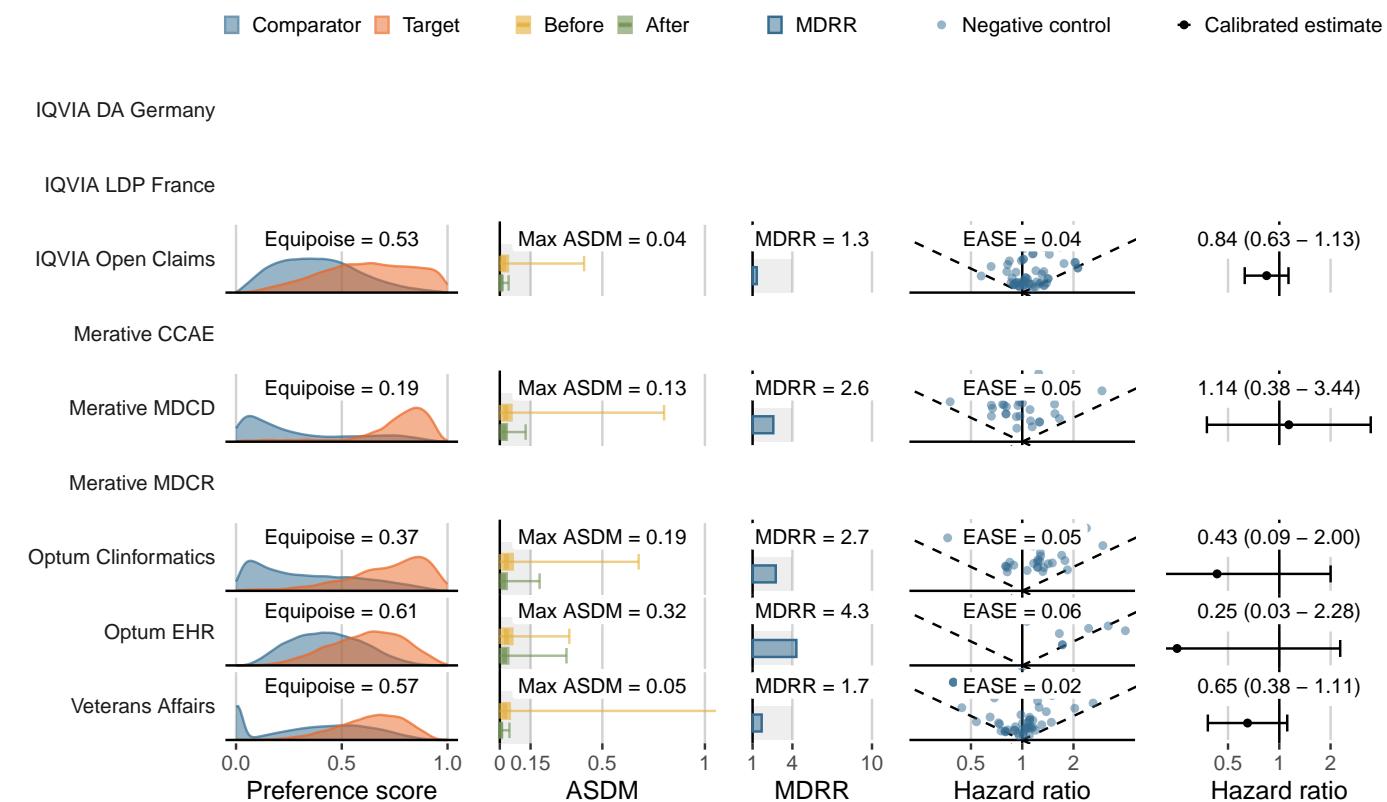
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Stroke**

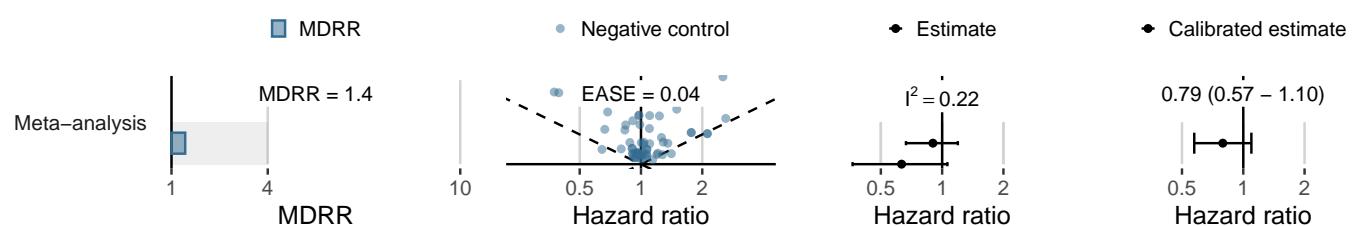
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	21,212	12,755	58	4.55
Merative CCAE	-	-	-	-
Merative MDCD	1,294	844	9	10.66
Merative MDCR	-	-	-	-
Optum Clininformatics	1,003	679	<5	<7.37
Optum EHR	1,168	260	<5	<19.23
Veterans Affairs	21,159	19,225	32	1.66

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glyburide** (Sulfonylureas)
- Outcome: **Acute pancreatitis**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	18,358	11,099	21	1.89
Merative CCAE	-	-	-	-
Merative MDCD	509	301	<5	<16.64
Merative MDCR	-	-	-	-
Optum Clininformatics	989	660	-	0.00
Optum EHR	1,112	251	-	0.00
Veterans Affairs	94	79	-	0.00

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France

IQVIA Open Claims



Merative CCAE

Merative MDCD

Merative MDCR

Optum Clininformatics

Optum EHR

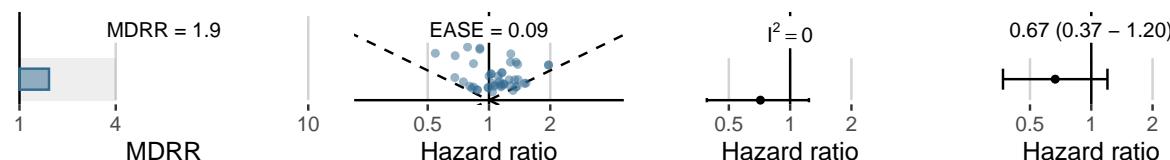
Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate

Meta-analysis



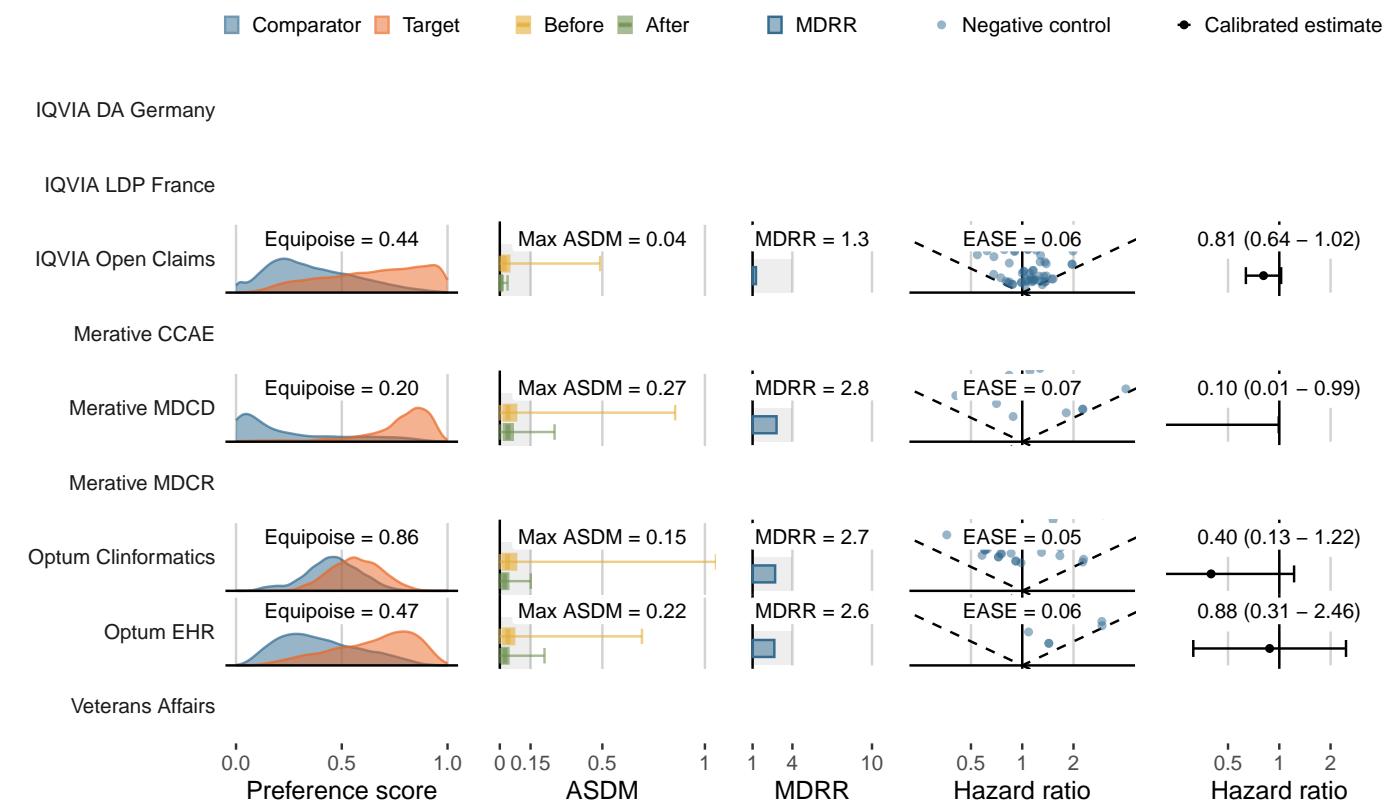
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glyburide** (Sulfonylureas)
- Outcome: **Bone fracture**

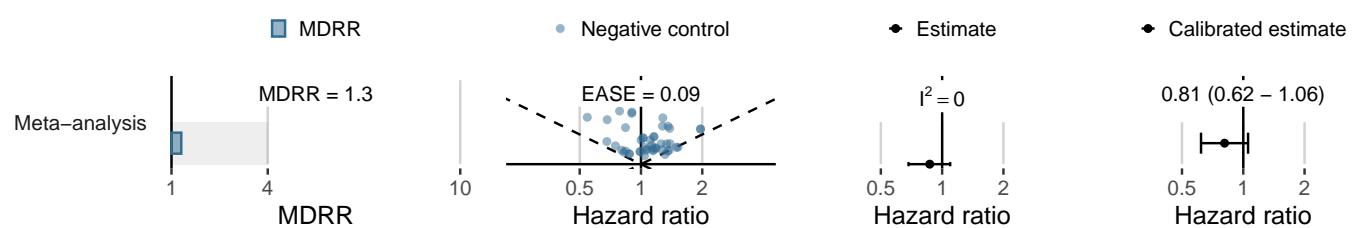
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	16,490	9,887	127	12.85
Merative CCAE	-	-	-	-
Merative MDCD	473	284	6	21.13
Merative MDCR	-	-	-	-
Optum Clininformatics	927	611	9	14.72
Optum EHR	1,036	231	5	21.68
Veterans Affairs	87	75	-	0.00

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glyburide** (Sulfonylureas)
- Outcome: **Acute myocardial infarction**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	18,164	10,975	48	4.37
Merative CCAE	-	-	-	-
Merative MDCD	502	297	<5	<16.82
Merative MDCR	-	-	-	-
Optum Clininformatics	979	656	<5	<7.62
Optum EHR	1,106	249	-	0.00
Veterans Affairs	90	77	-	0.00

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

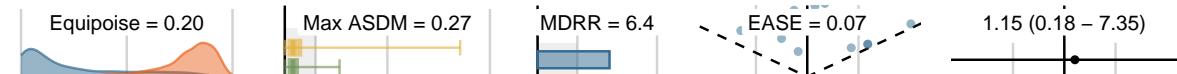
IQVIA LDP France

IQVIA Open Claims



Merative CCAE

Merative MDCD



Merative MDCR

Optum Clininformatics

Optum EHR

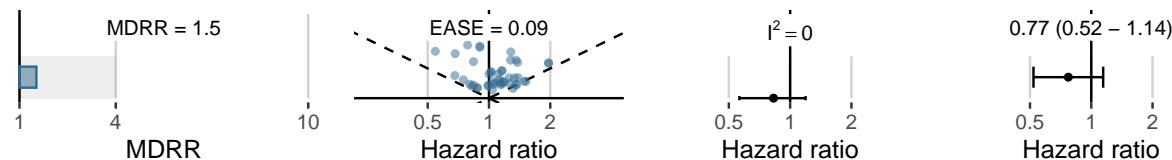
Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate

Meta-analysis



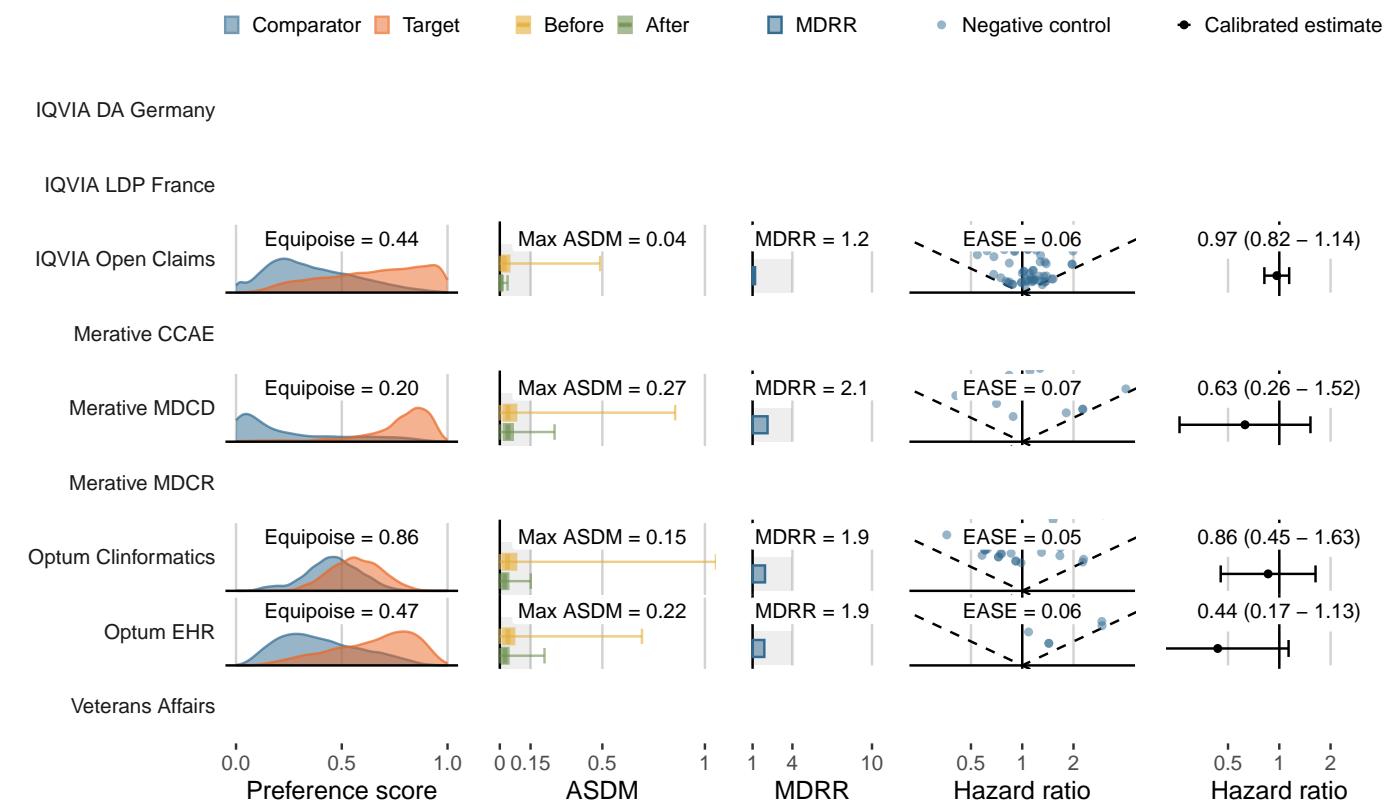
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glyburide** (Sulfonylureas)
- Outcome: **Genitourinary infection**

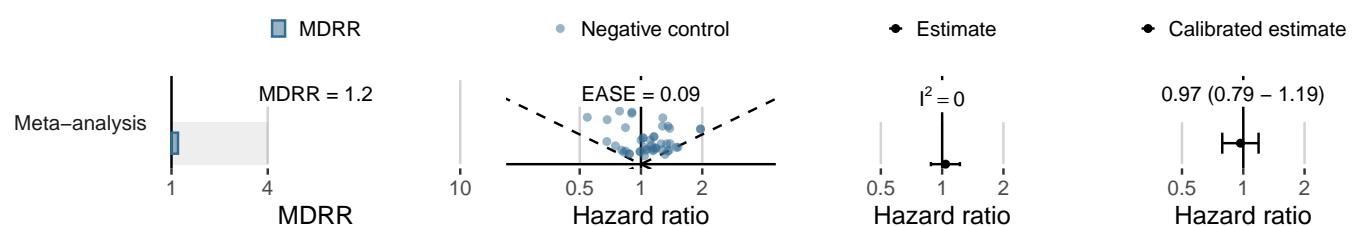
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	14,173	8,536	255	29.87
Merative CCAE	-	-	-	-
Merative MDCD	404	233	15	64.27
Merative MDCR	-	-	-	-
Optum Clininformatics	808	535	23	42.96
Optum EHR	972	216	8	37.00
Veterans Affairs	84	74	-	0.00

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



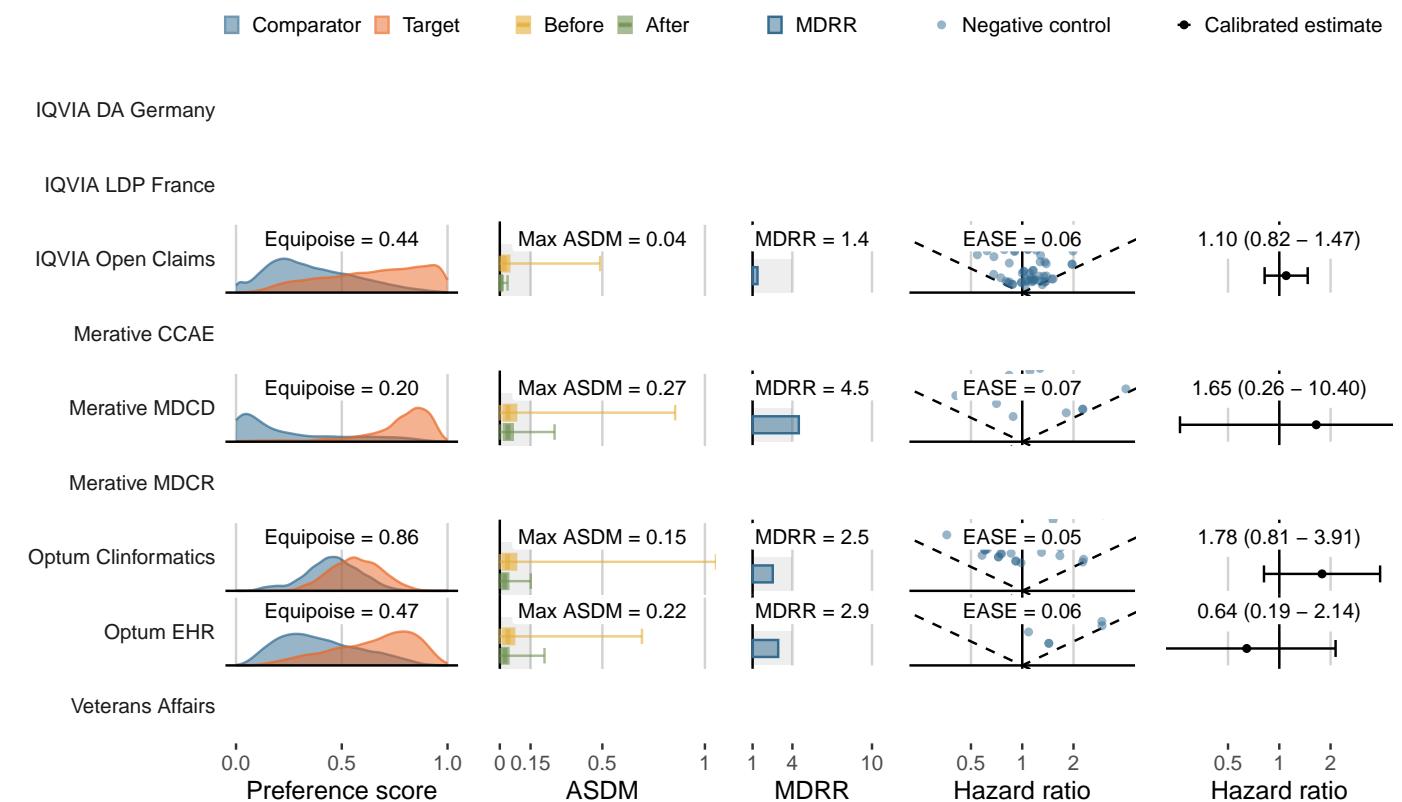
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glyburide** (Sulfonylureas)
- Outcome: **Joint pain**

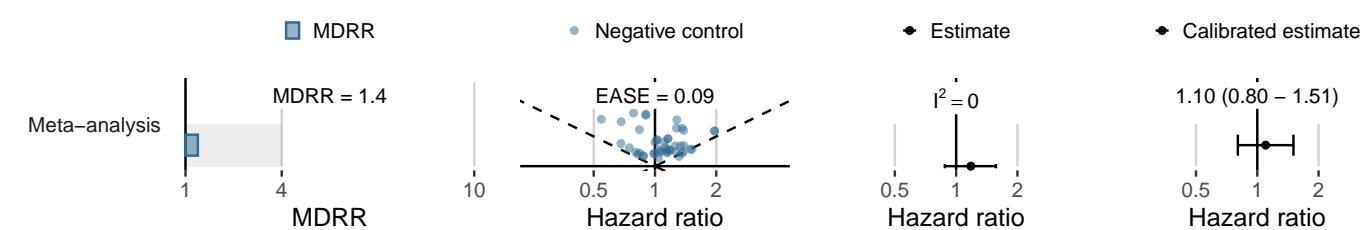
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	17,382	10,498	92	8.76
Merative CCAE	-	-	-	-
Merative MDCD	421	245	6	24.51
Merative MDCR	-	-	-	-
Optum Clininformatics	826	533	17	31.88
Optum EHR	1,062	238	<5	<20.96
Veterans Affairs	12	8	-	0.00

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



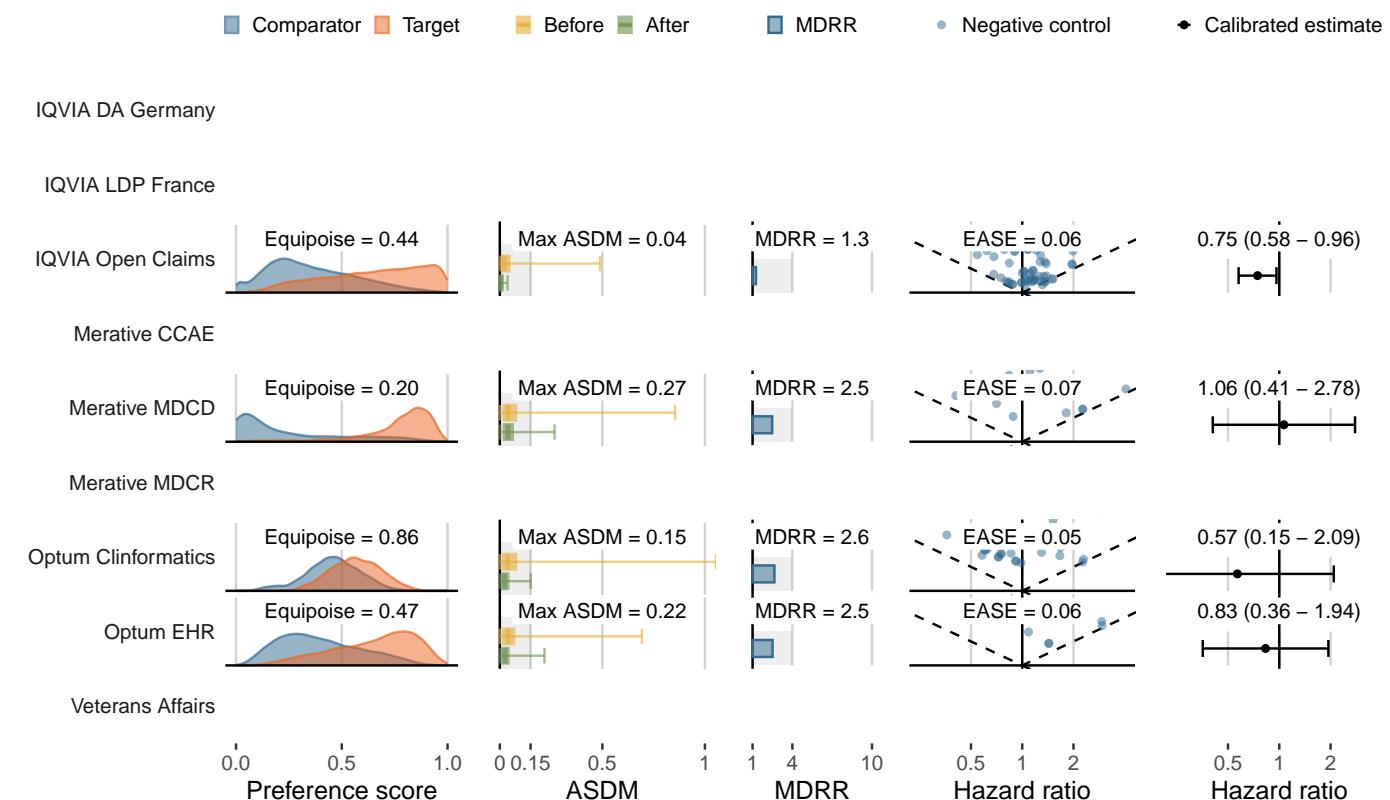
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glyburide** (Sulfonylureas)
- Outcome: **Acute renal failure**

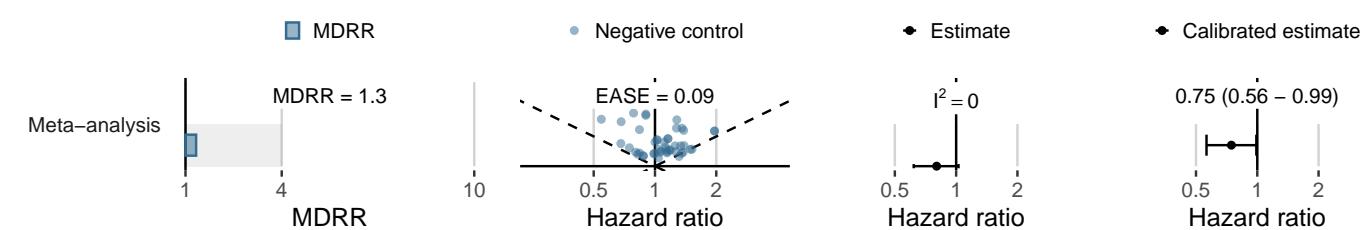
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	18,043	10,868	113	10.40
Merative CCAE	-	-	-	-
Merative MDCD	490	277	13	46.89
Merative MDCR	-	-	-	-
Optum Clininformatics	968	647	6	9.27
Optum EHR	1,103	248	8	32.22
Veterans Affairs	92	78	<10	<128.02

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glyburide** (Sulfonylureas)
- Outcome: **Thyroid tumor**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	18,453	11,161	10	0.90
Merative CCAE	-	-	-	-
Merative MDCD	517	305	-	0.00
Merative MDCR	-	-	-	-
Optum Clininformatics	987	656	<5	<7.62
Optum EHR	1,117	250	<5	<19.96
Veterans Affairs	94	79	-	0.00

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ● Negative control ◆ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France

IQVIA Open Claims

Merative CCAE

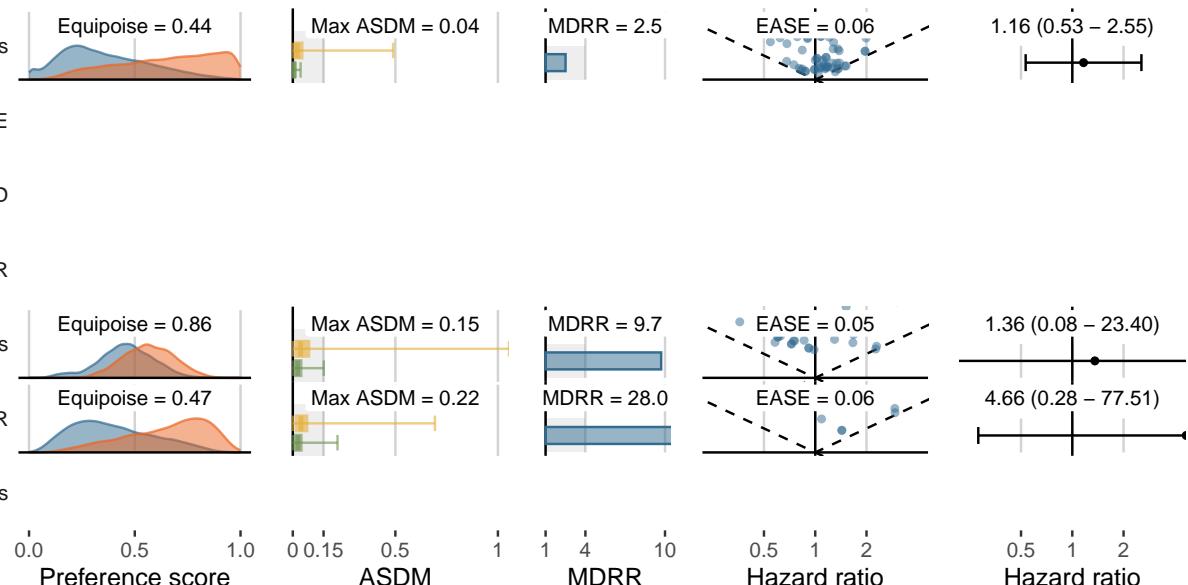
Merative MDCD

Merative MDCR

Optum Clininformatics

Optum EHR

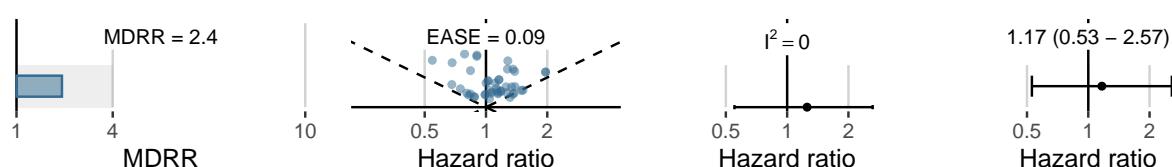
Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ● Negative control ◆ Estimate ◆ Calibrated estimate

Meta-analysis



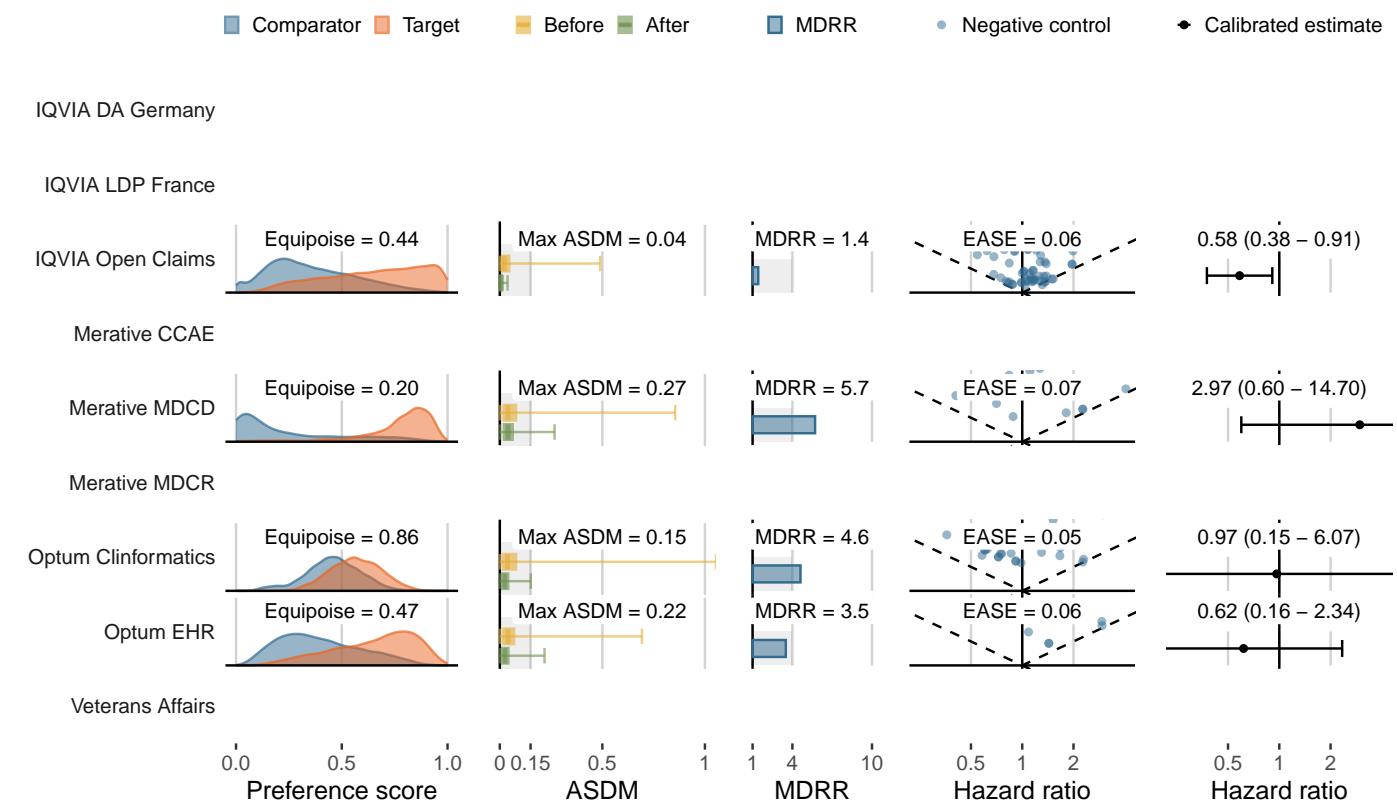
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glyburide** (Sulfonylureas)
- Outcome: **Venous thromboembolic events**

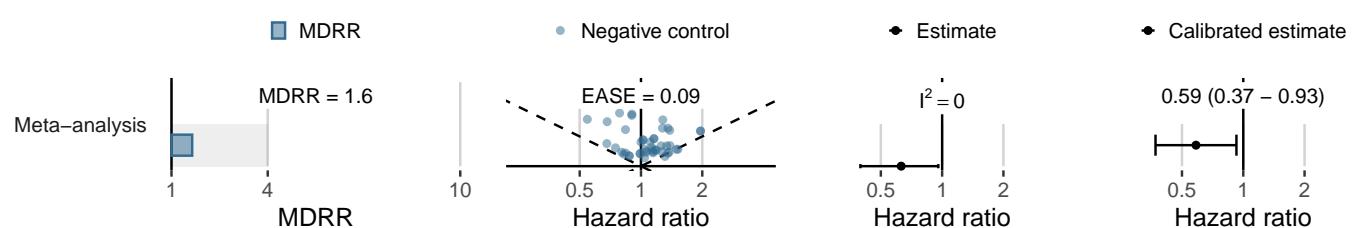
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	18,011	10,880	31	2.85
Merative CCAE	-	-	-	-
Merative MDCD	499	293	5	17.09
Merative MDCR	-	-	-	-
Optum Clininformatics	973	646	5	7.74
Optum EHR	1,090	245	<5	<20.43
Veterans Affairs	92	78	<10	<127.56

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



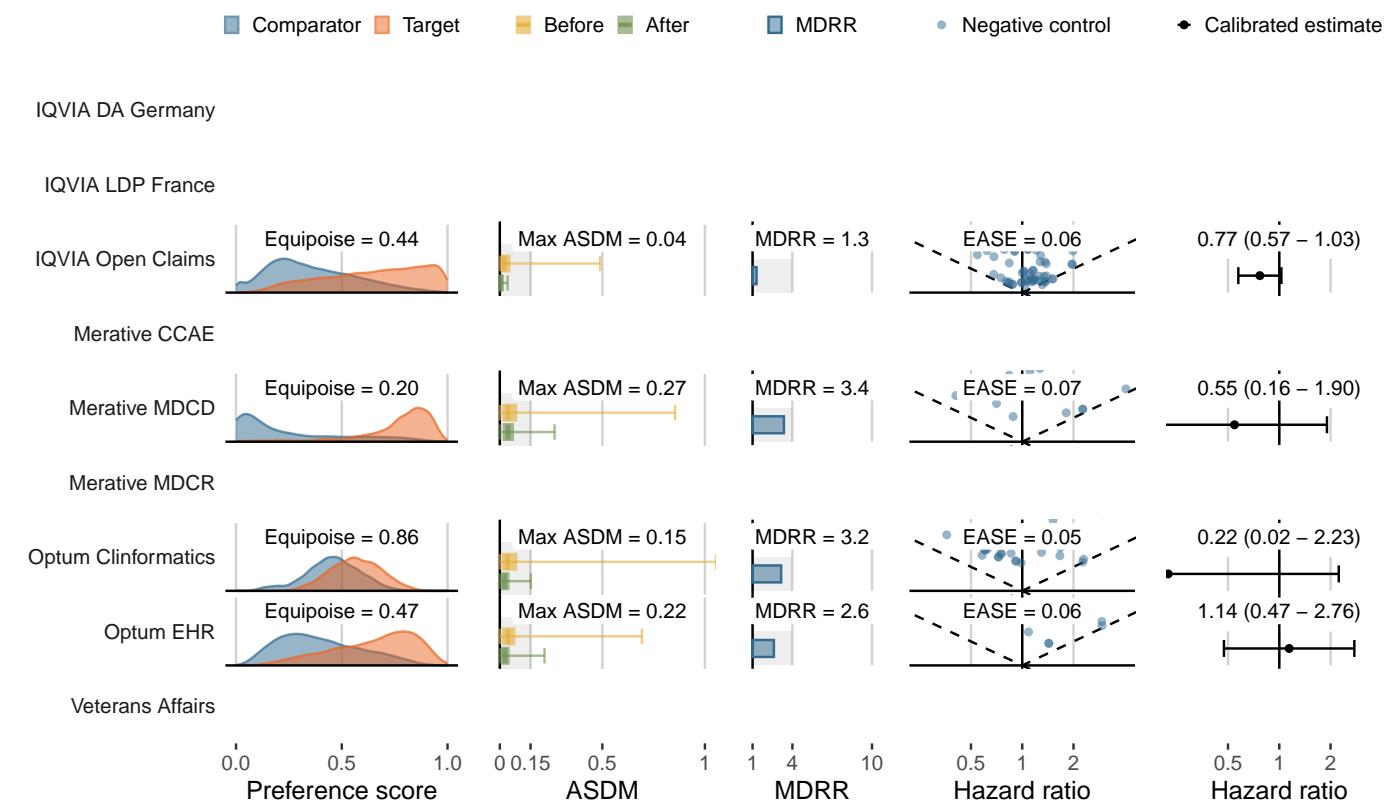
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glyburide** (Sulfonylureas)
- Outcome: **Hospitalization with heart failure**

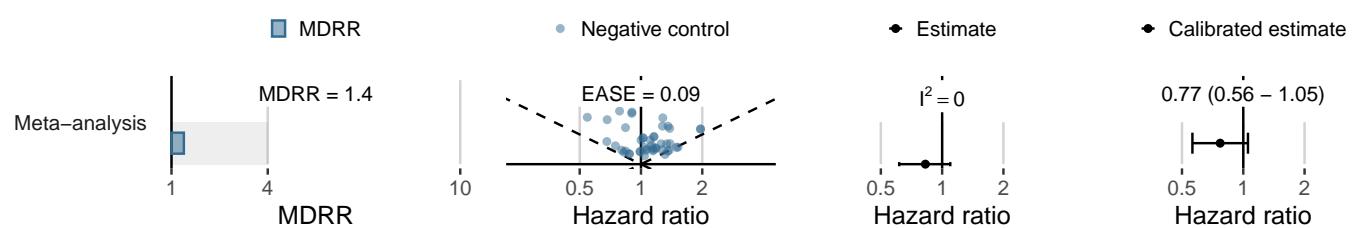
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	18,012	10,881	79	7.26
Merative CCAE	-	-	-	-
Merative MDCD	480	273	5	18.33
Merative MDCR	-	-	-	-
Optum Clininformatics	967	648	<5	<7.71
Optum EHR	1,092	243	8	32.91
Veterans Affairs	92	79	<10	<126.96

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



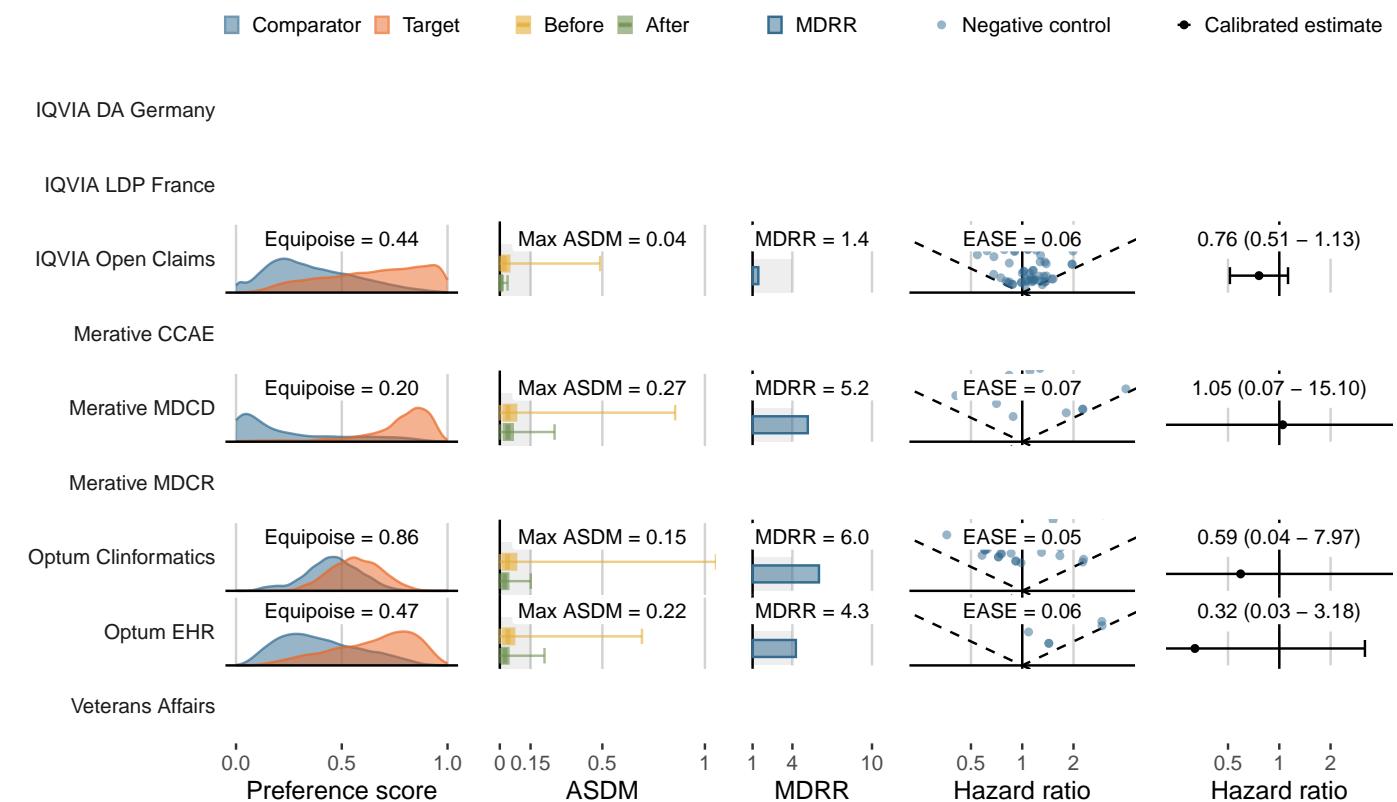
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Alogliptin** (DPP-4 inhibitors)
- Comparator (class): **Glyburide** (Sulfonylureas)
- Outcome: **Stroke**

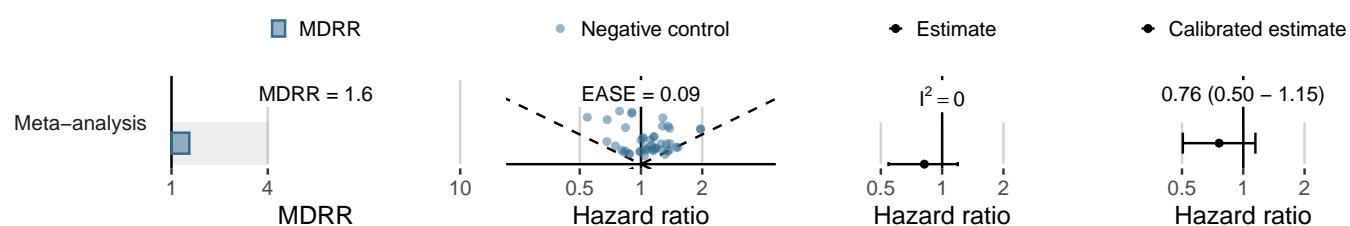
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	18,139	10,967	49	4.47
Merative CCAE	-	-	-	-
Merative MDCD	505	297	<5	<16.81
Merative MDCR	-	-	-	-
Optum Clininformatics	980	654	<5	<7.65
Optum EHR	1,109	250	<5	<20.01
Veterans Affairs	91	77	-	0.00

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



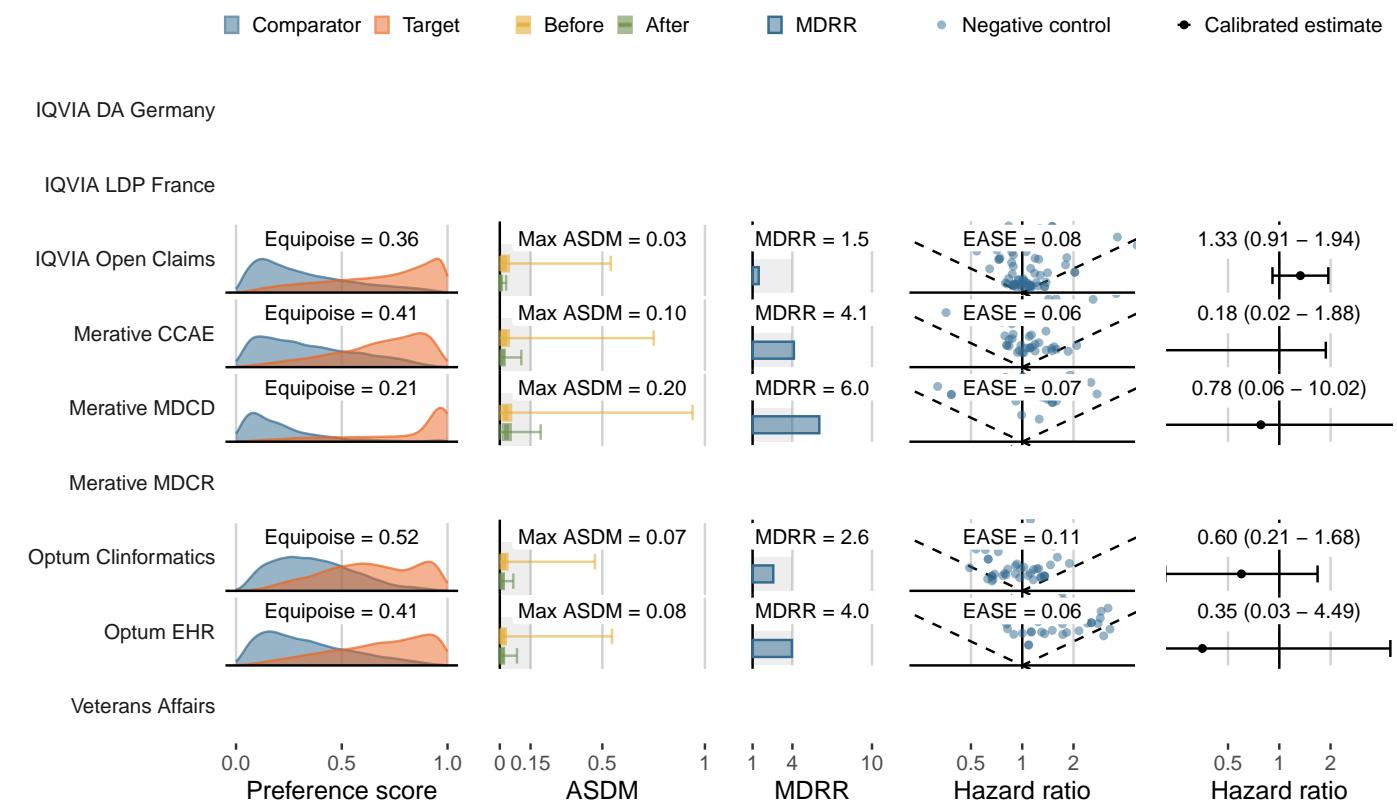
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Acute pancreatitis**

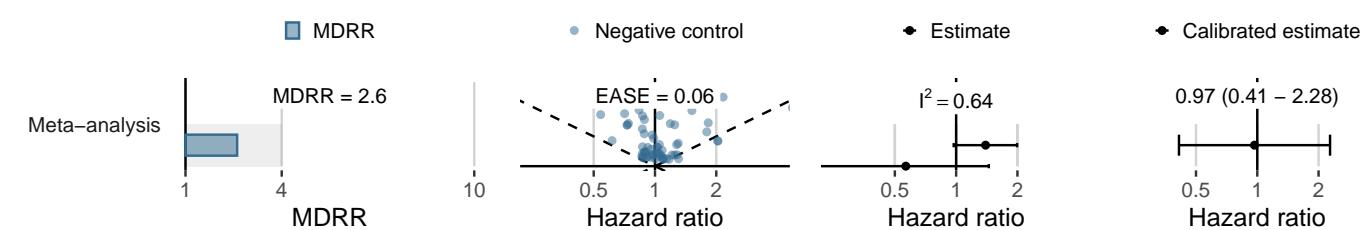
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	59,428	44,537	86	1.93
Merative CCAE	3,107	2,206	<5	<2.27
Merative MDCD	629	397	<5	<12.59
Merative MDCR	408	330	<5	<15.13
Optum Clininformatics	6,063	4,449	10	2.25
Optum EHR	4,309	897	<5	<5.58
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



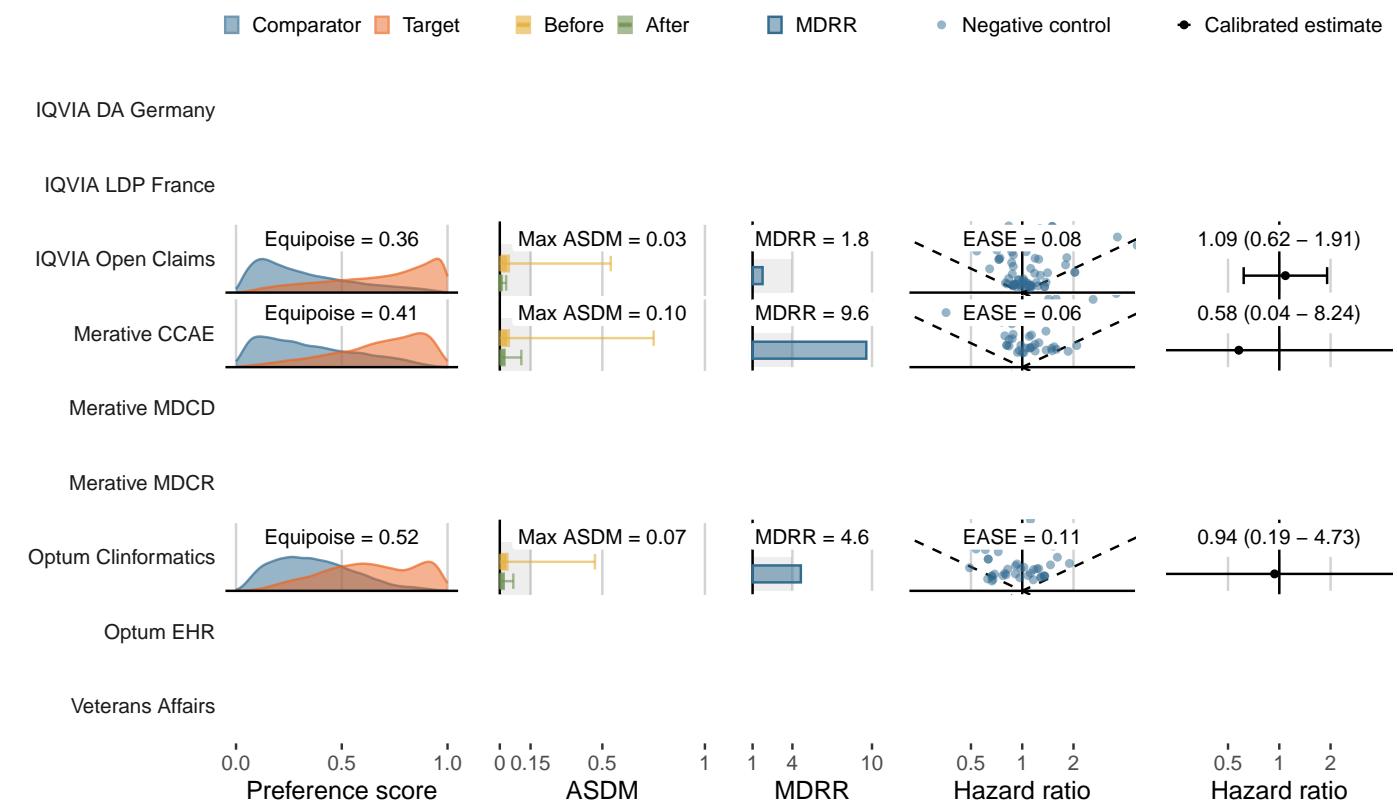
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Bladder cancer**

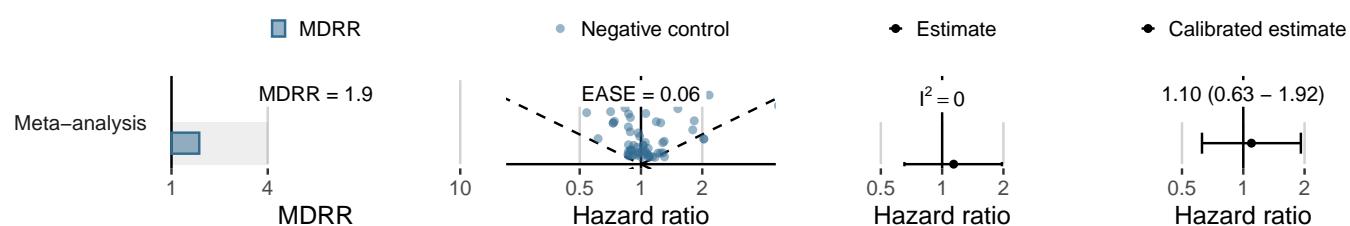
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	59,773	44,660	44	0.99
Merative CCAE	3,129	2,226	<5	<2.25
Merative MDCD	639	409	-	0.00
Merative MDCR	406	328	-	0.00
Optum Clininformatics	6,080	4,454	5	1.12
Optum EHR	4,315	899	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



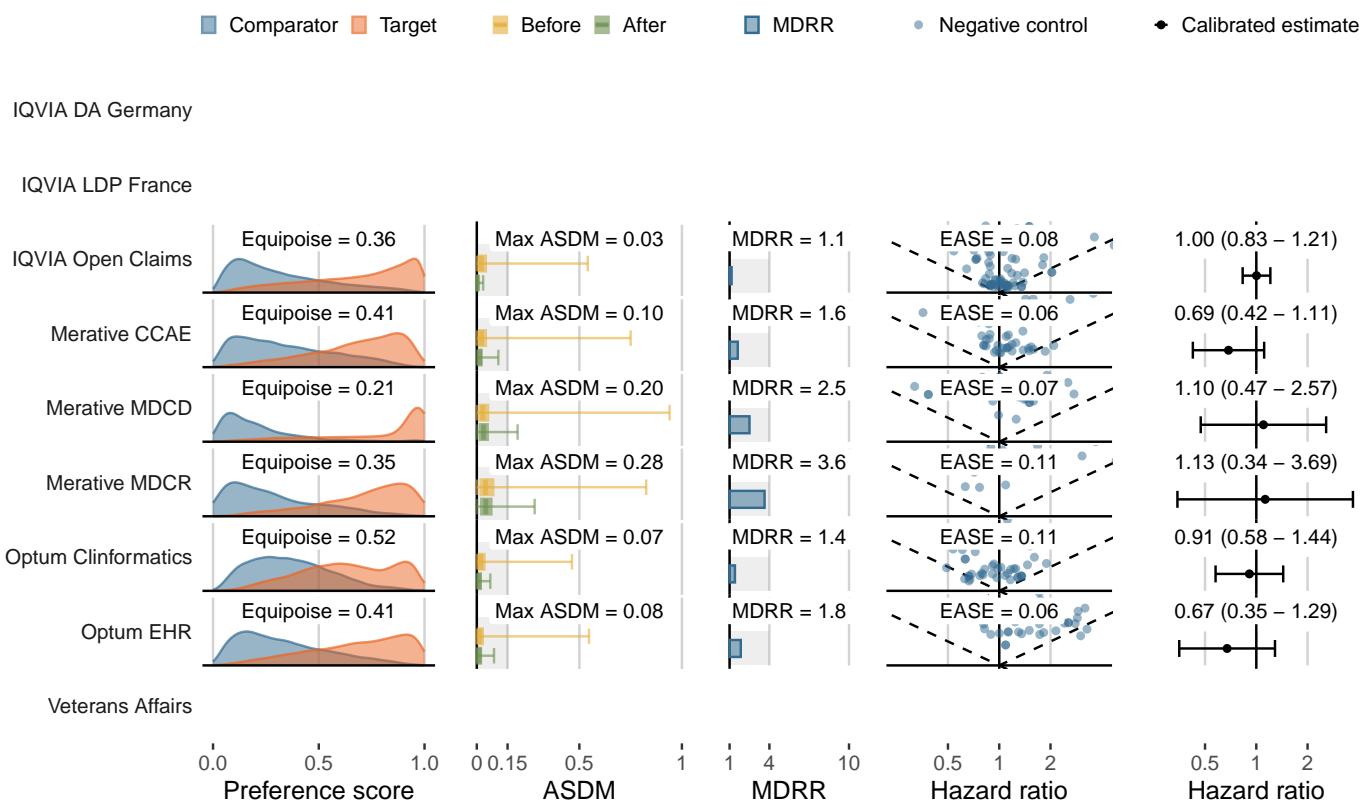
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Bone fracture**

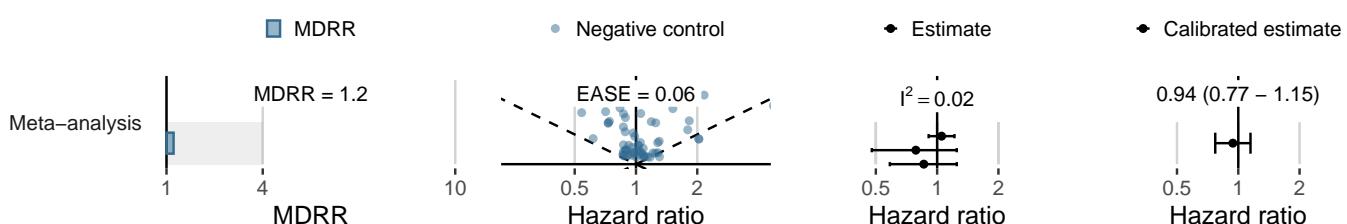
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	51,907	38,374	623	16.24
Merative CCAE	2,841	1,980	33	16.67
Merative MDCD	547	353	16	45.37
Merative MDCR	351	293	8	27.31
Optum Clininformatics	5,542	3,975	97	24.40
Optum EHR	4,013	830	20	24.10
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



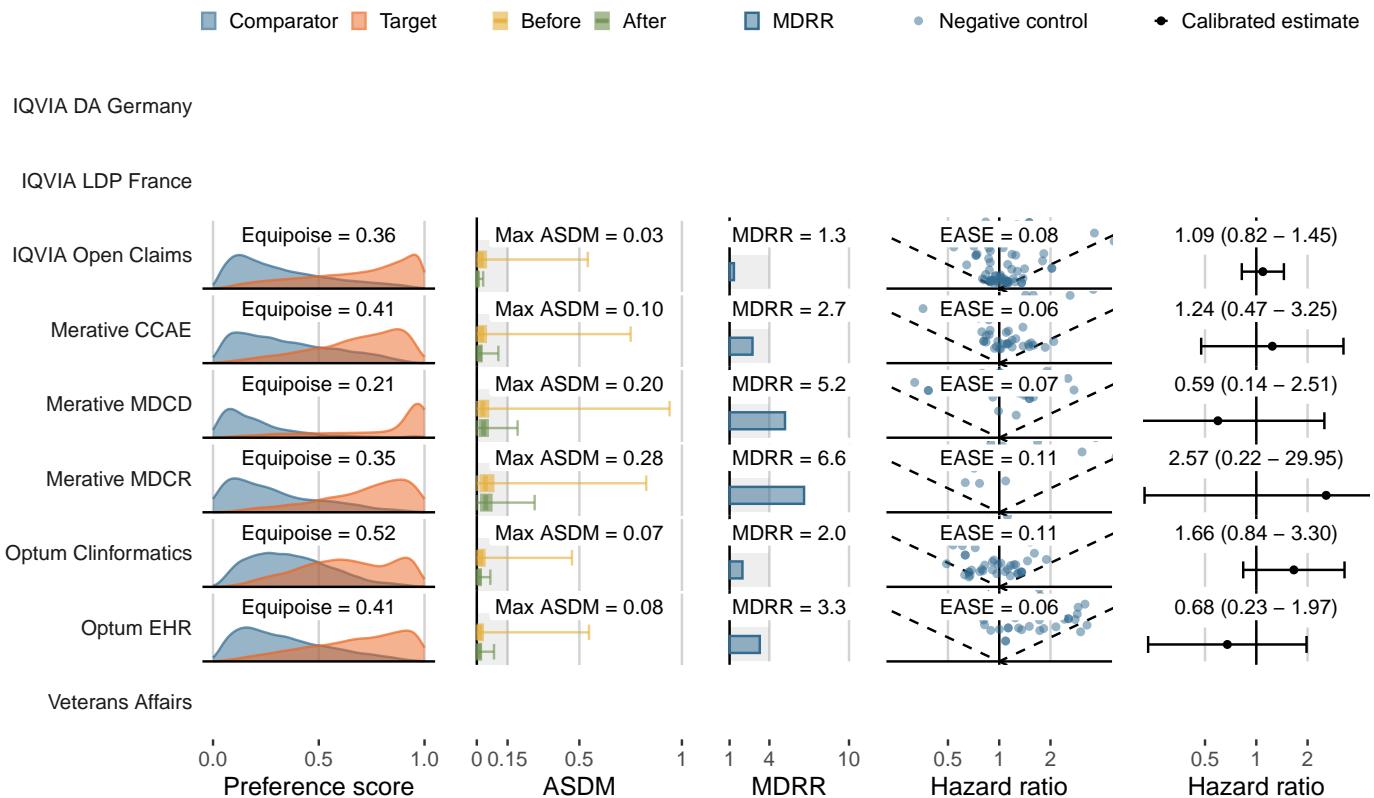
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Acute myocardial infarction**

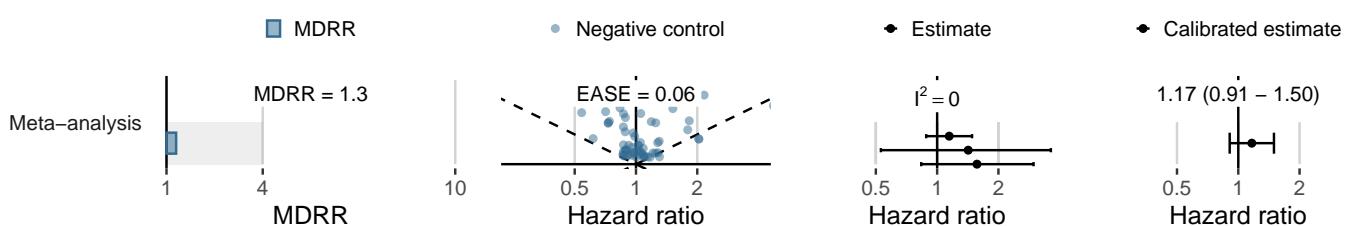
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	58,388	43,534	176	4.04
Merative CCAE	3,062	2,165	11	5.08
Merative MDCD	614	394	<5	<12.68
Merative MDCR	398	324	<5	<15.45
Optum Clininformatics	5,960	4,361	36	8.26
Optum EHR	4,273	885	6	6.78
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



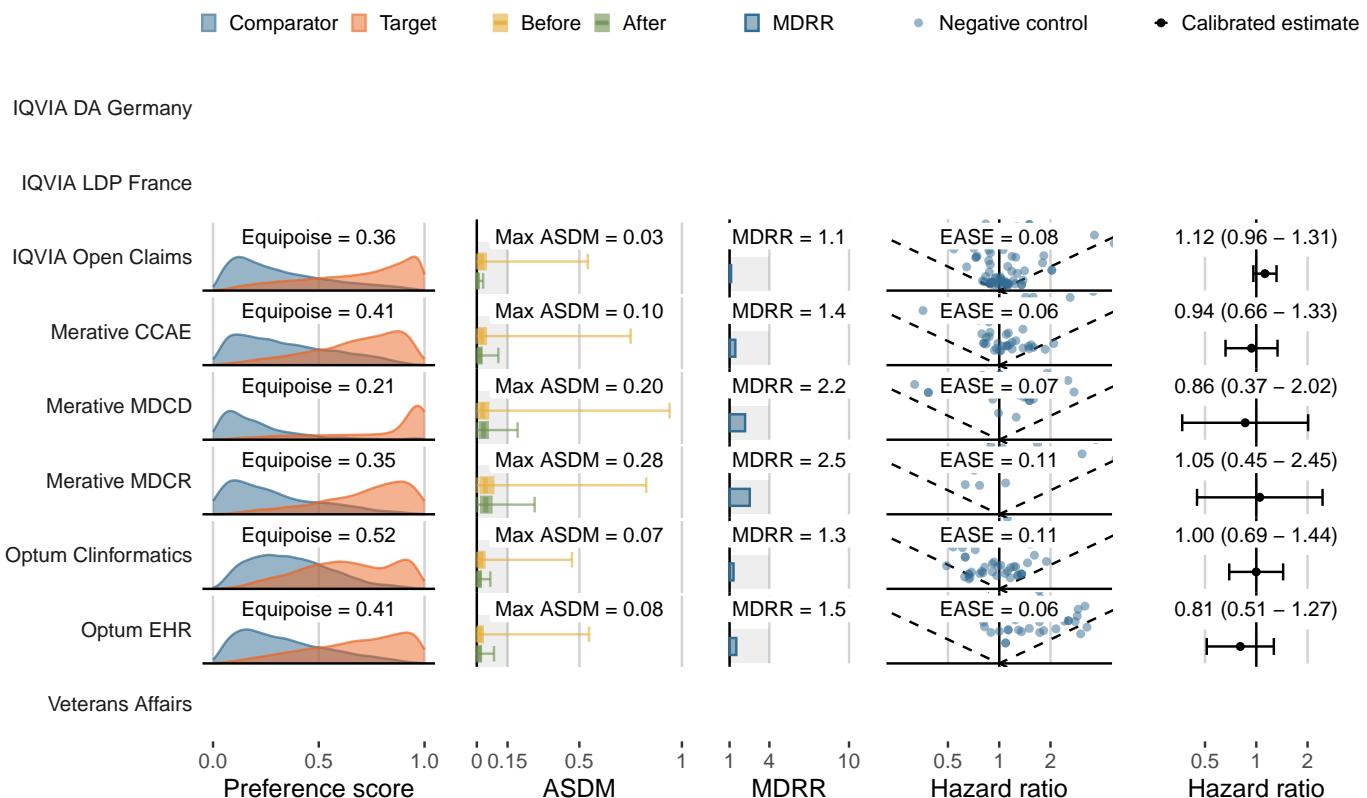
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Genitourinary infection**

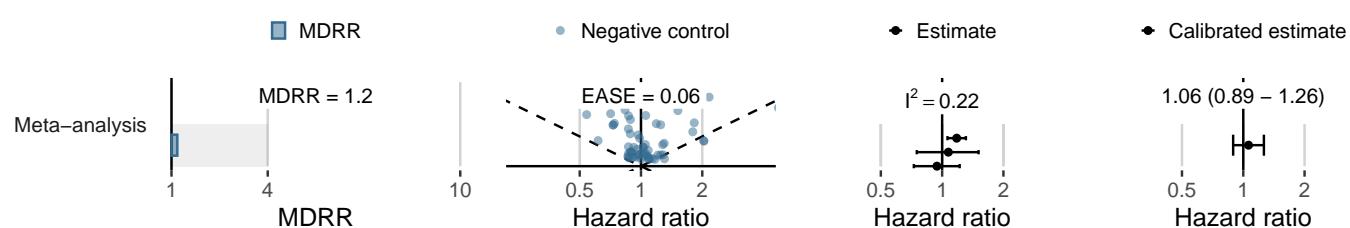
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	45,135	33,360	1,062	31.83
Merative CCAE	2,490	1,747	71	40.65
Merative MDCD	1,784	1,146	64	55.85
Merative MDCR	314	256	17	66.36
Optum Clininformatics	4,734	3,314	183	55.22
Optum EHR	3,641	717	44	61.40
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



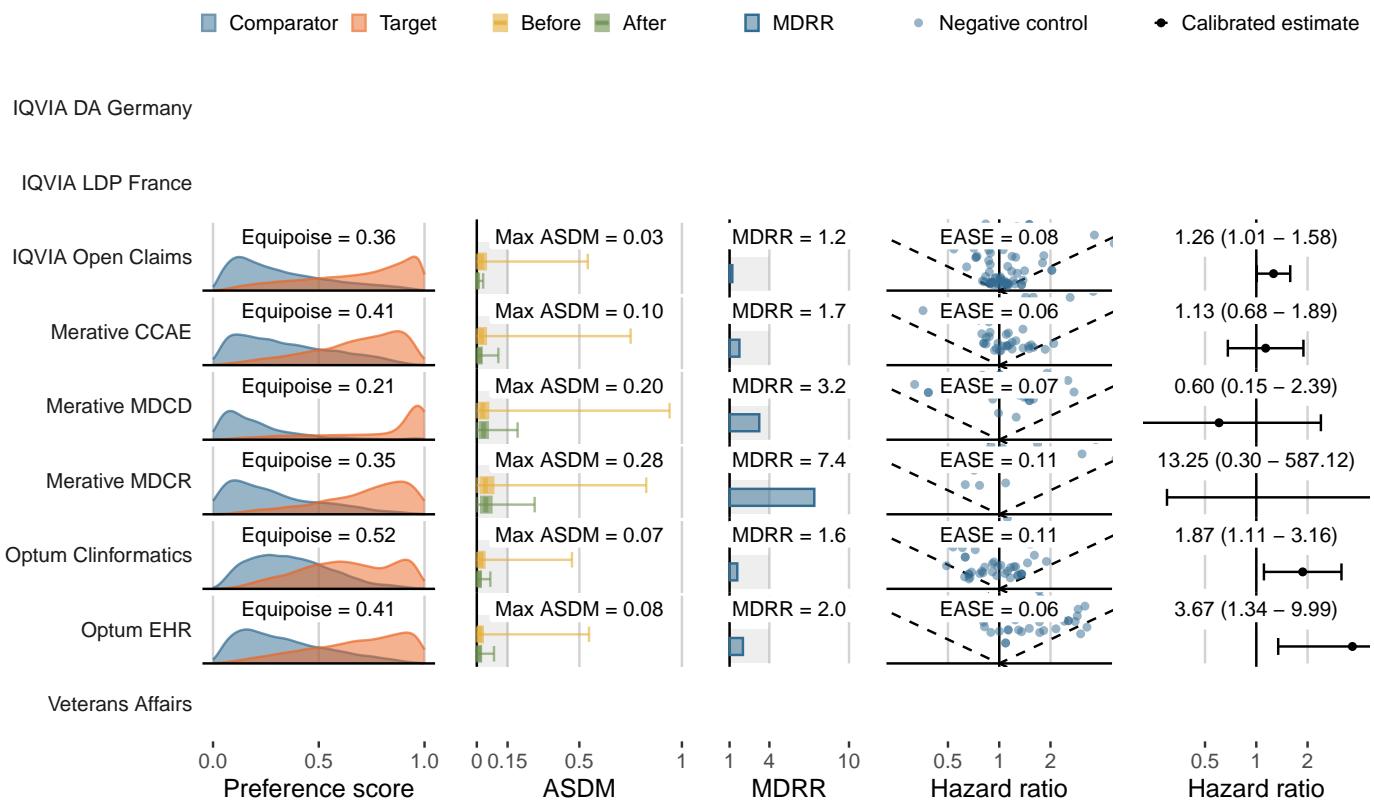
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Joint pain**

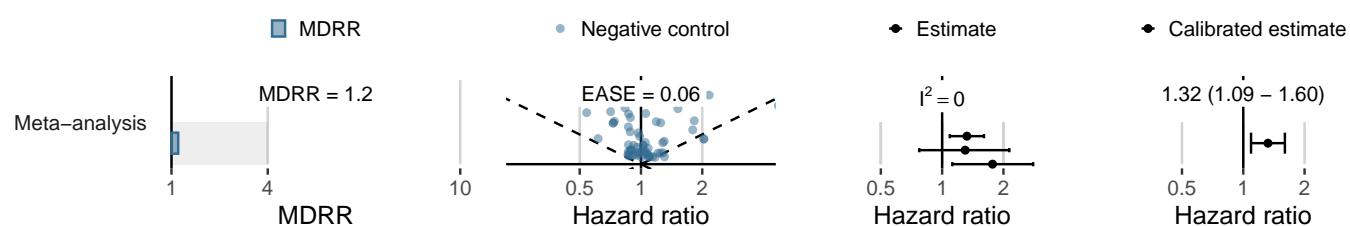
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	55,848	41,571	343	8.25
Merative CCAE	2,917	2,070	34	16.42
Merative MDCD	507	323	5	15.47
Merative MDCR	336	269	5	18.61
Optum Clininformatics	5,218	3,679	67	18.21
Optum EHR	4,078	842	11	13.07
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



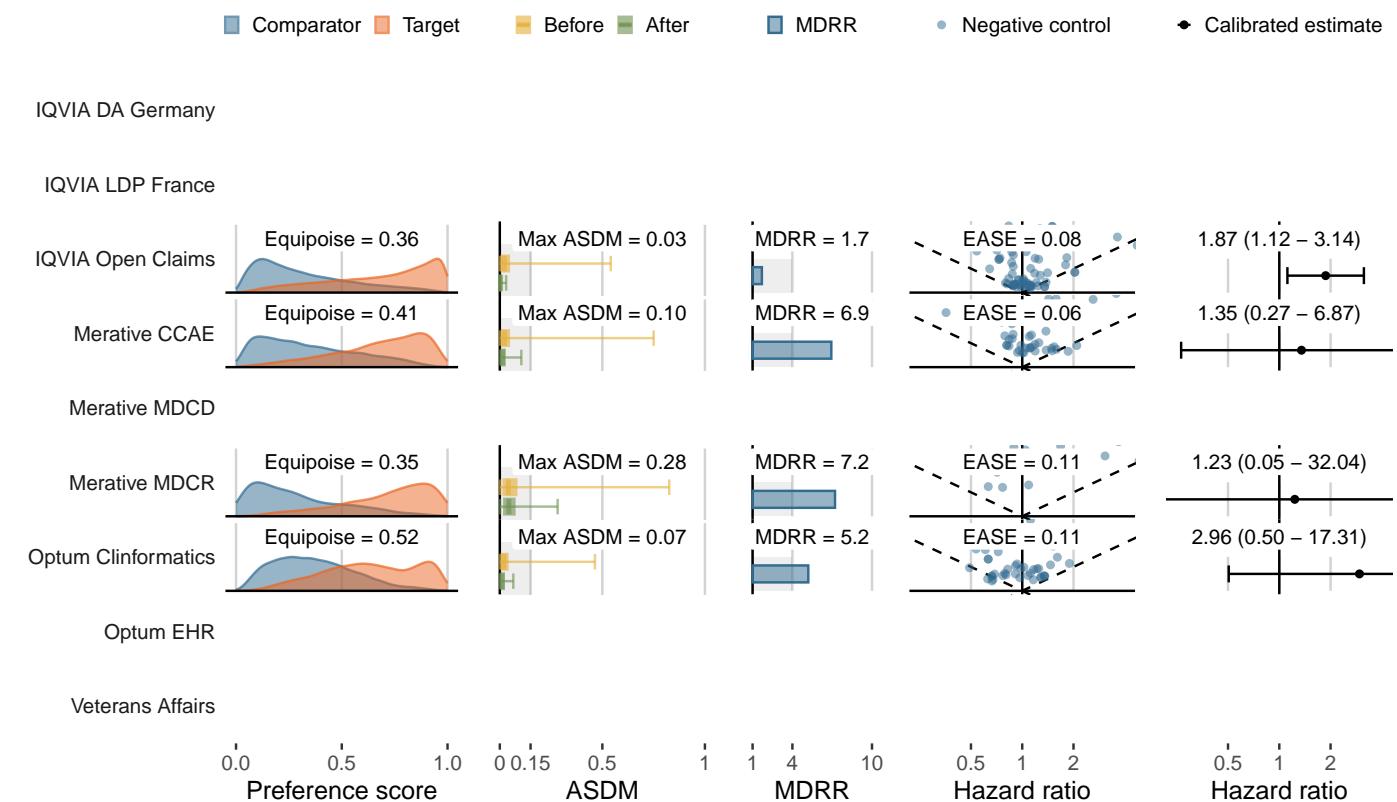
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Renal cancer**

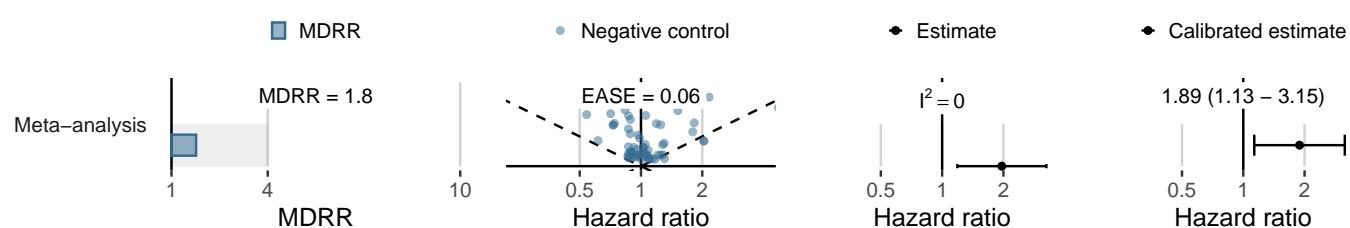
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	59,788	44,672	51	1.14
Merative CCAE	3,117	2,216	5	2.26
Merative MDCD	639	411	-	0.00
Merative MDCR	410	332	<5	<15.07
Optum Clininformatics	6,072	4,450	8	1.80
Optum EHR	4,309	896	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



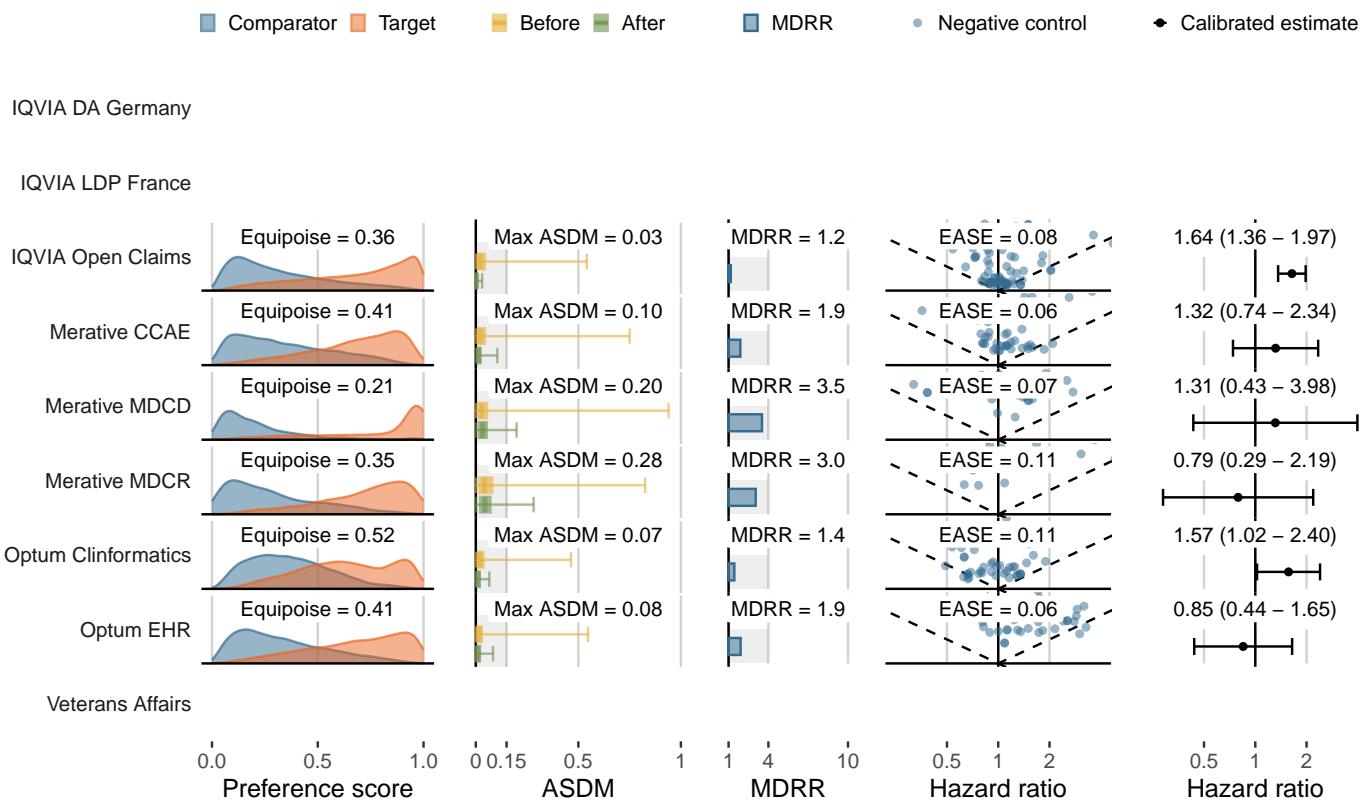
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Acute renal failure**

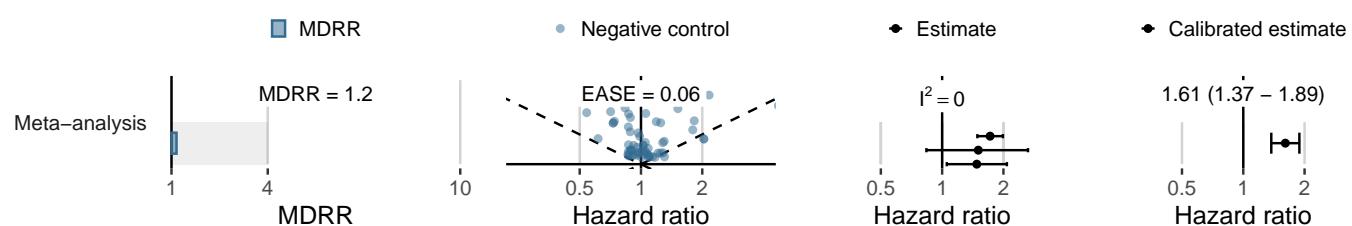
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	57,462	42,560	714	16.78
Merative CCAE	3,081	2,182	34	15.58
Merative MDCD	583	378	10	26.48
Merative MDCR	383	305	13	42.66
Optum Clininformatics	5,782	4,205	120	28.54
Optum EHR	4,244	867	23	26.54
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



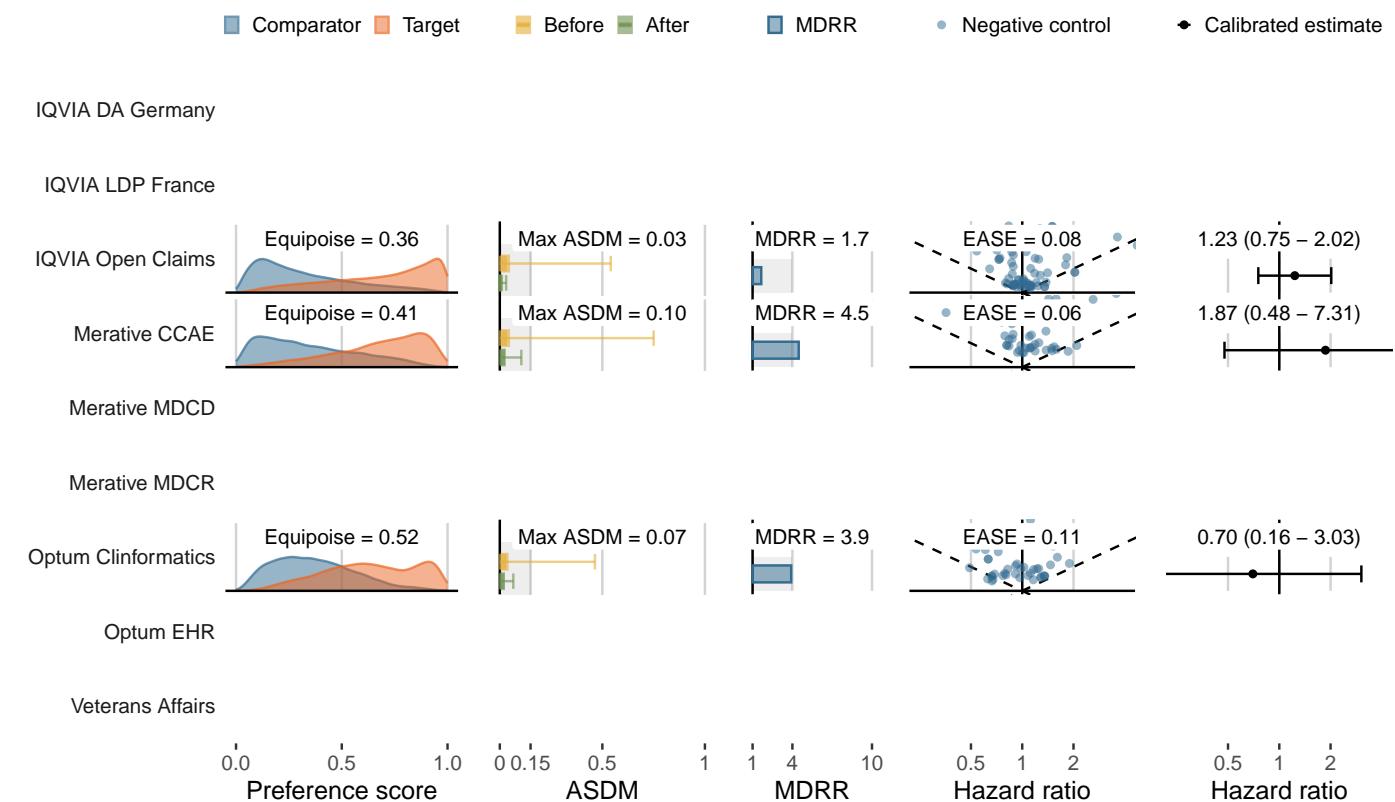
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Thyroid tumor**

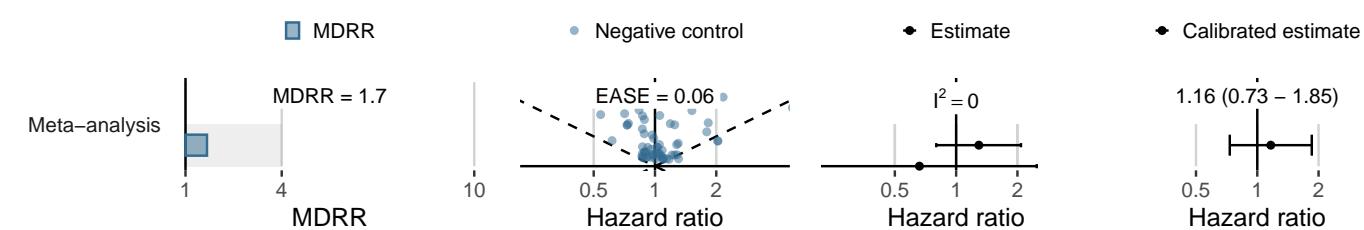
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	59,503	44,485	47	1.06
Merative CCAE	3,111	2,217	5	2.26
Merative MDCC	636	408	<5	<12.24
Merative MDCR	407	328	-	0.00
Optum Clininformatics	6,068	4,459	7	1.57
Optum EHR	4,296	893	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



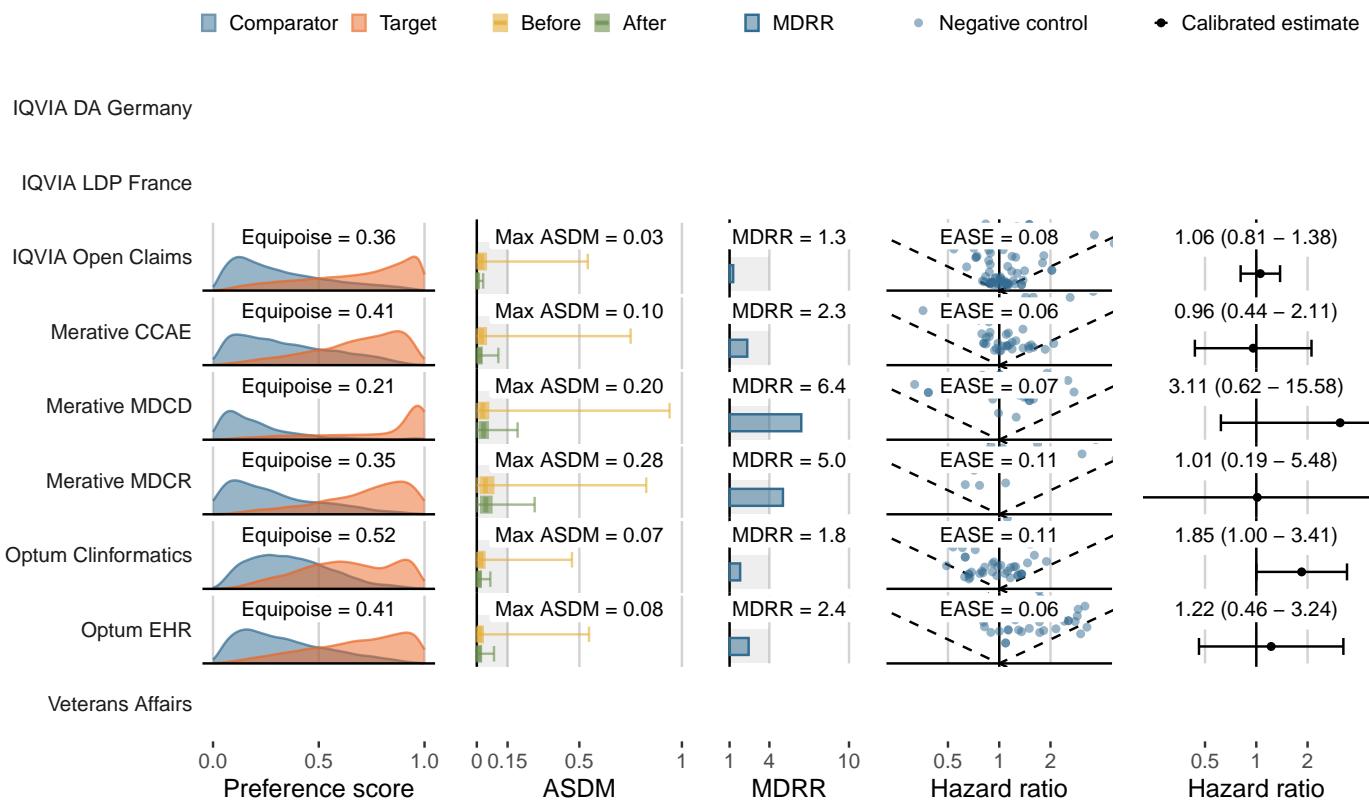
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Venous thromboembolic events**

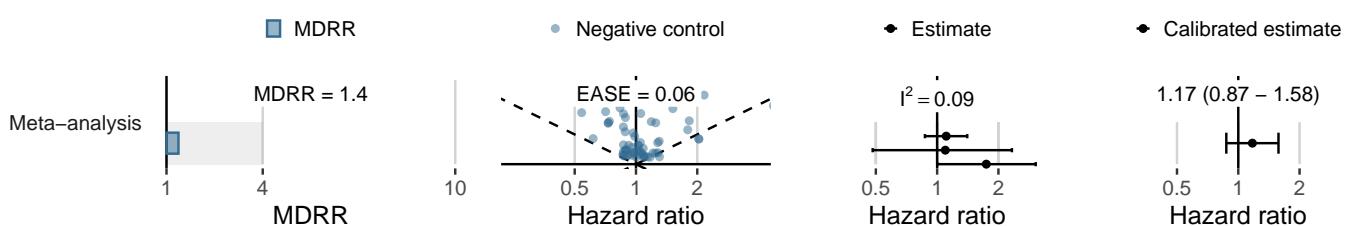
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	57,837	43,245	208	4.81
Merative CCAE	3,044	2,162	14	6.48
Merative MDCD	604	380	5	13.15
Merative MDCR	394	307	<5	<16.28
Optum Clininformatics	5,885	4,290	44	10.26
Optum EHR	4,205	862	10	11.60
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



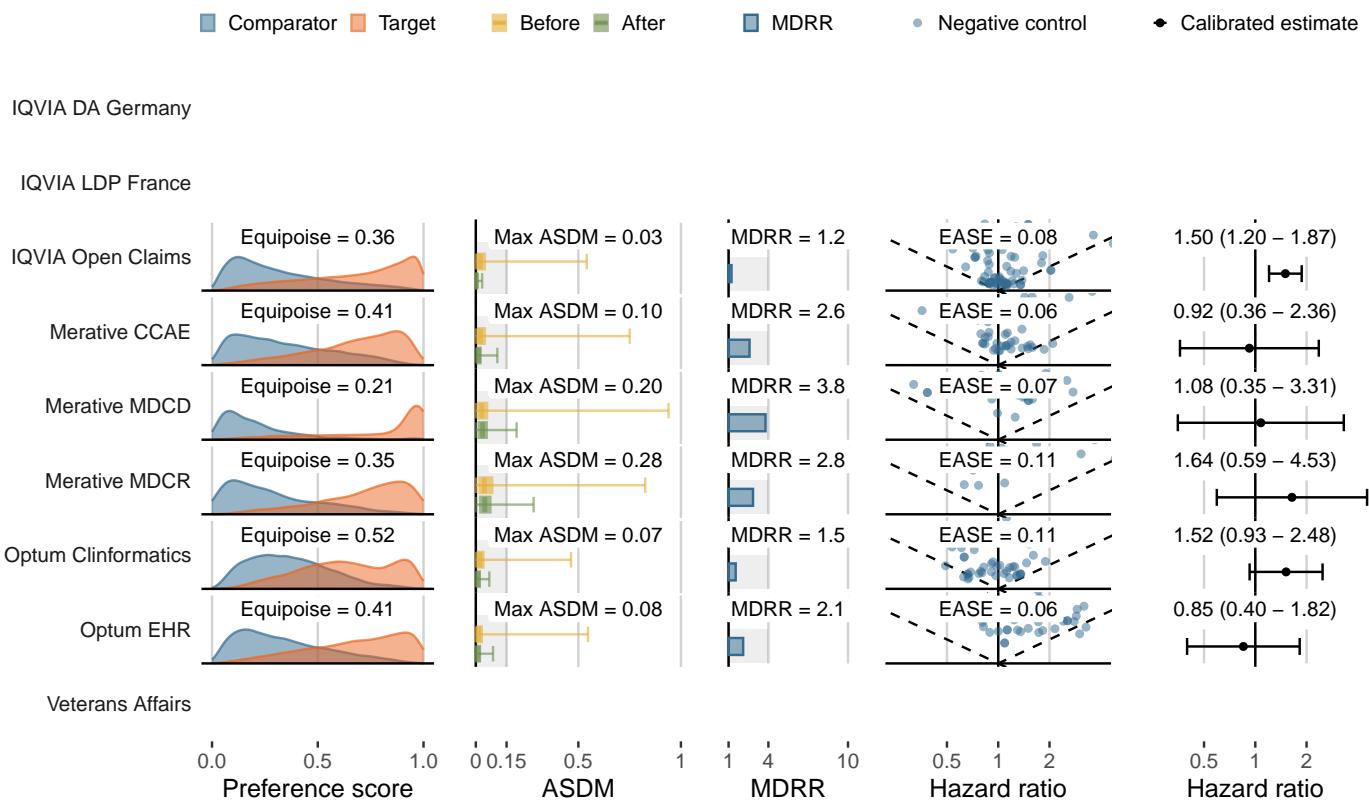
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Hospitalization with heart failure**

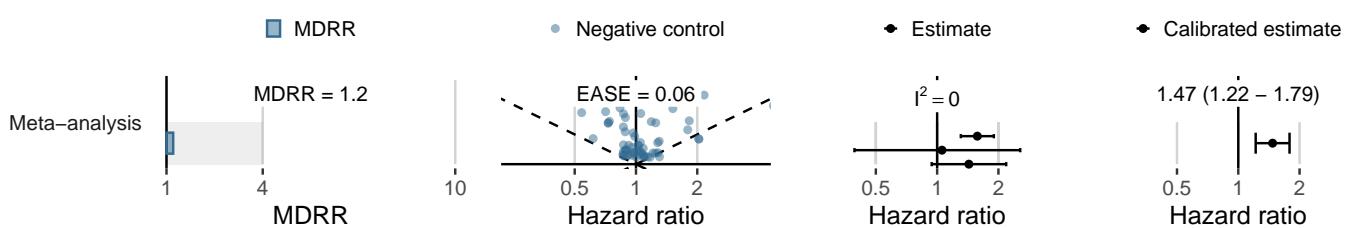
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	57,451	42,790	428	10.00
Merative CCAE	3,039	2,162	14	6.48
Merative MDCD	568	359	7	19.50
Merative MDCR	384	292	15	51.30
Optum Clininformatics	5,796	4,197	77	18.35
Optum EHR	4,217	865	18	20.80
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



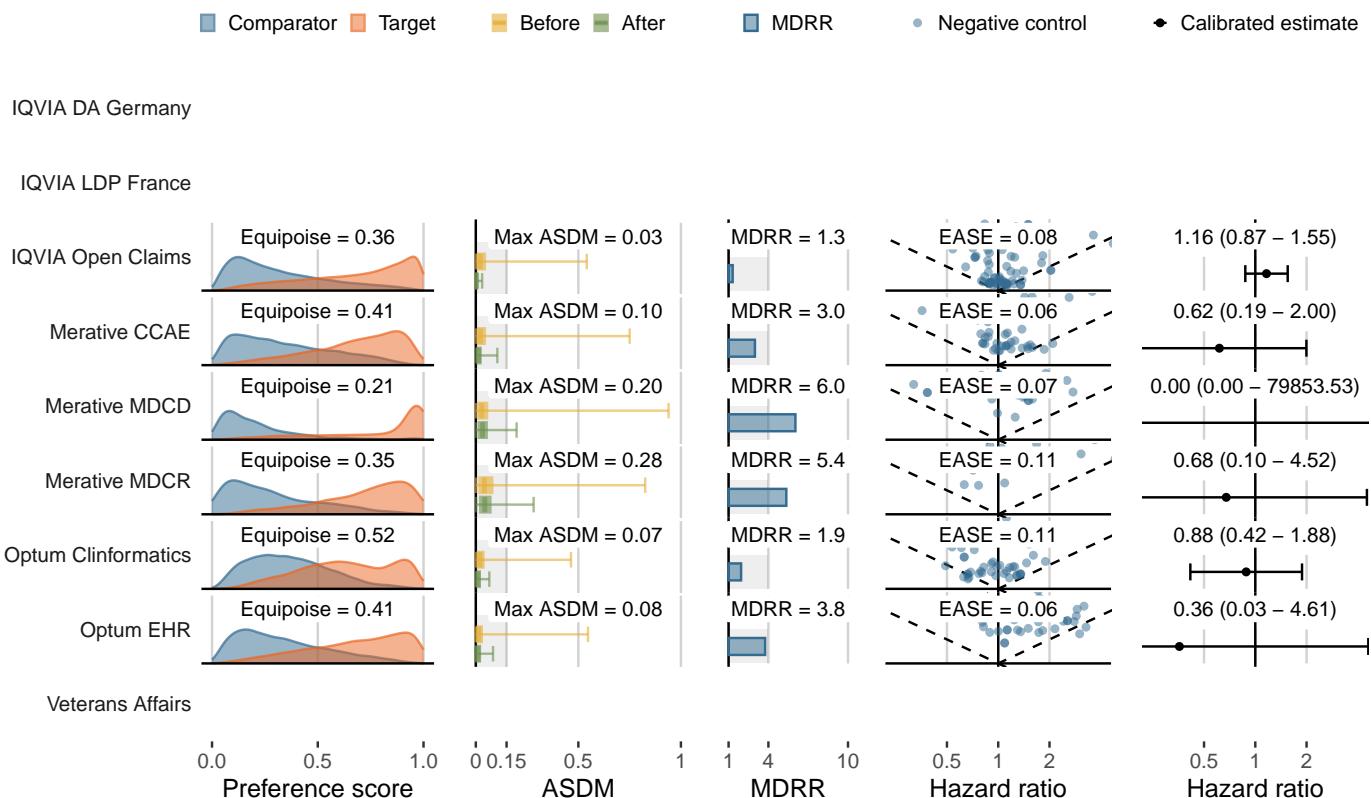
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dulaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Stroke**

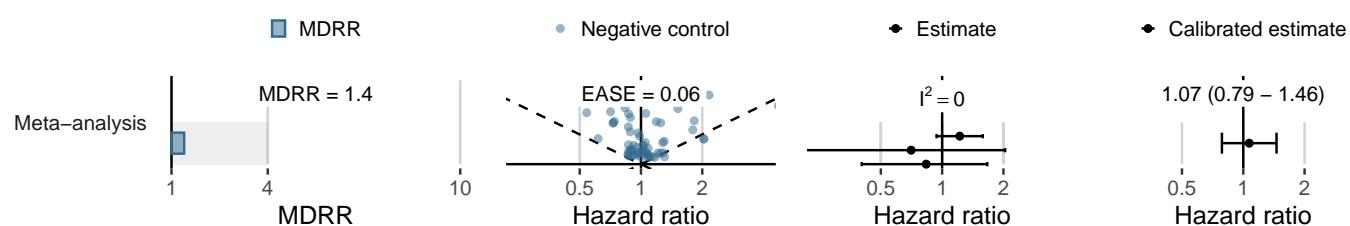
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	58,460	43,702	196	4.48
Merative CCAE	3,087	2,184	10	4.58
Merative MDCD	615	392	<5	<12.75
Merative MDCR	393	320	<5	<15.62
Optum Clininformatics	5,979	4,371	29	6.63
Optum EHR	4,275	884	<5	<5.66
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



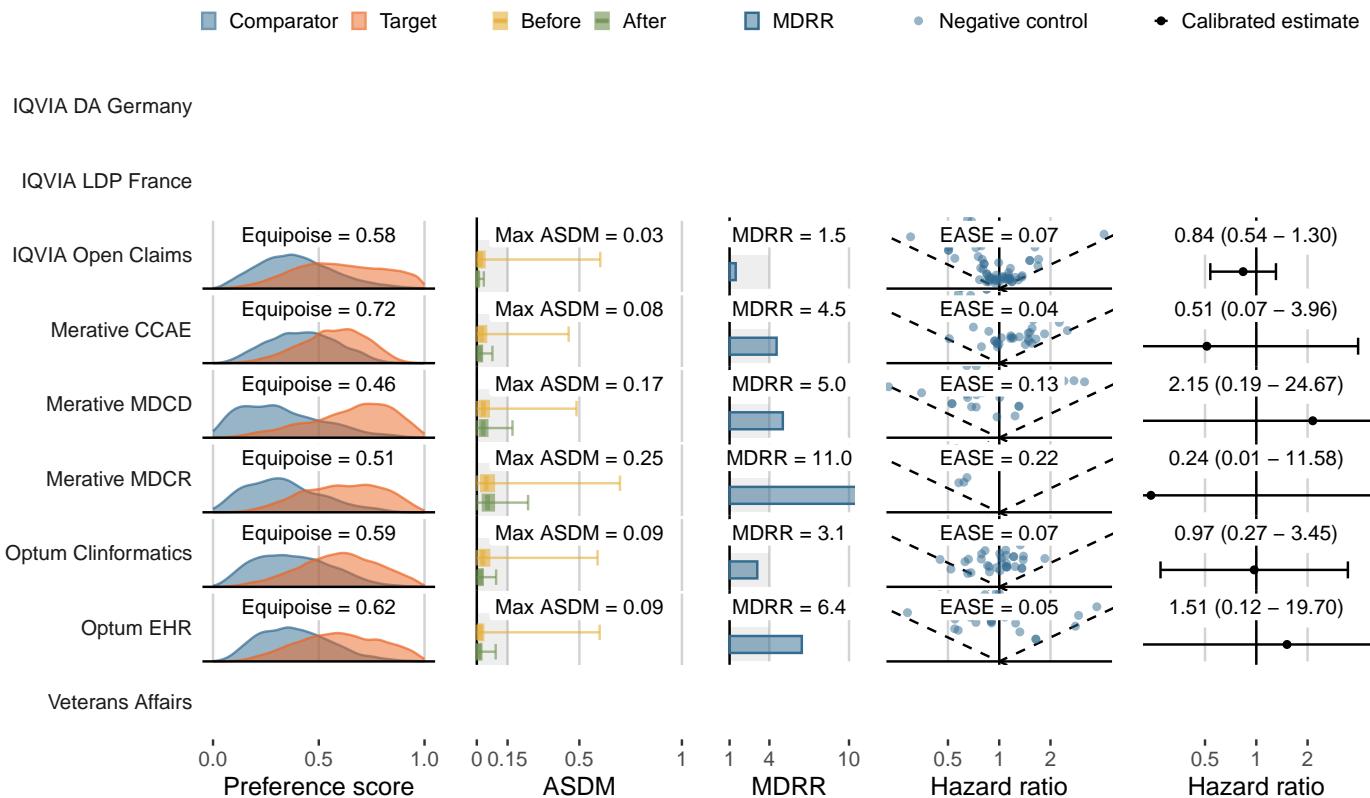
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Exenatide** (GLP-1 Receptor Agonists)
- Outcome: **Acute pancreatitis**

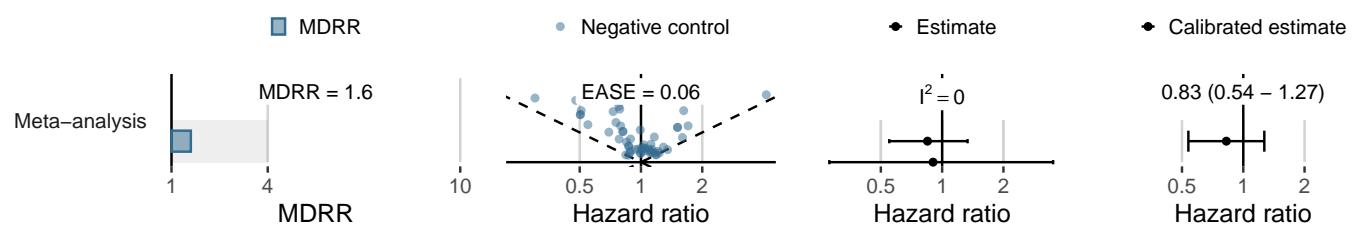
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	126,710	105,516	243	2.30
Merative CCAE	7,317	5,187	10	1.93
Merative MDCD	2,596	1,785	12	6.72
Merative MDCR	1,698	1,682	<5	<2.97
Optum Clininformatics	12,197	9,811	36	3.67
Optum EHR	8,726	1,826	6	3.29
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



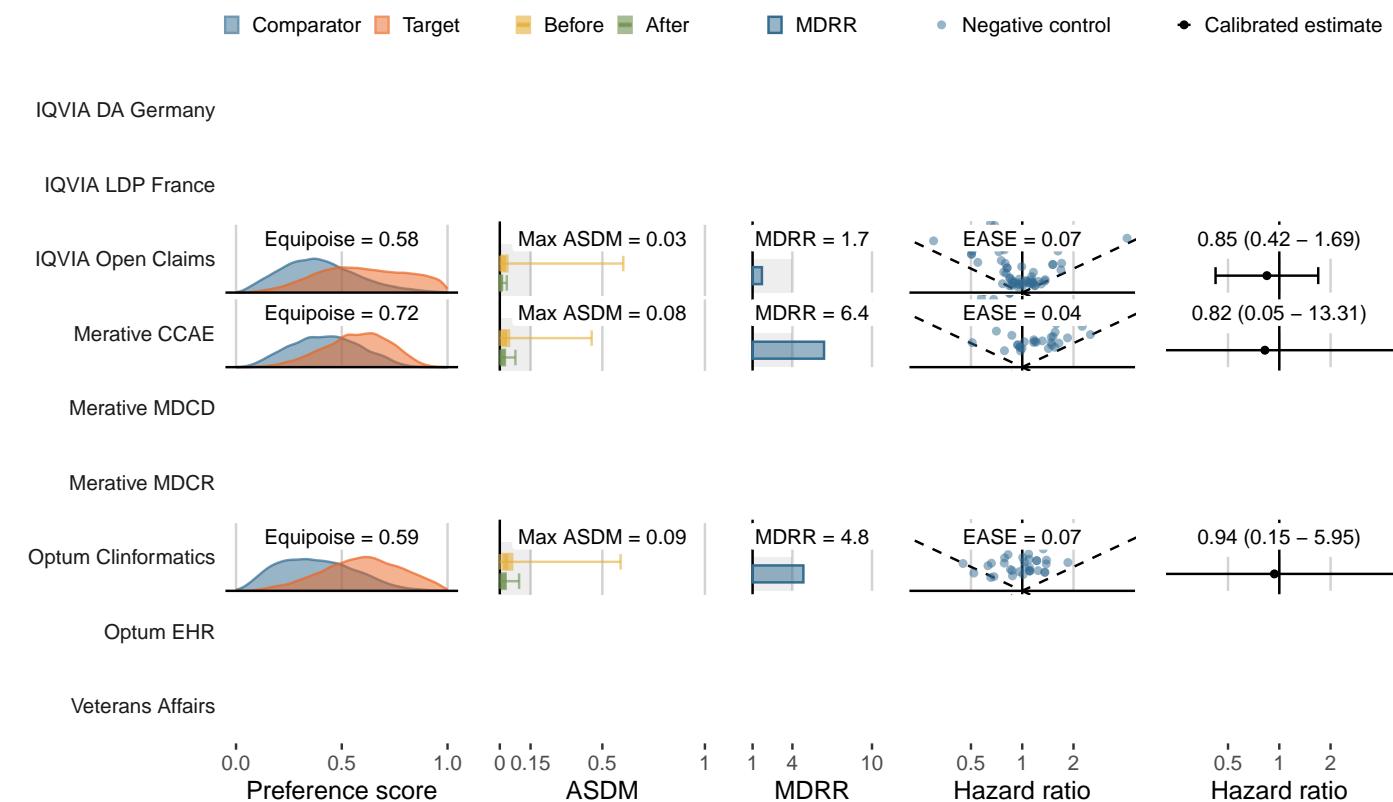
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Exenatide** (GLP-1 Receptor Agonists)
- Outcome: **Bladder cancer**

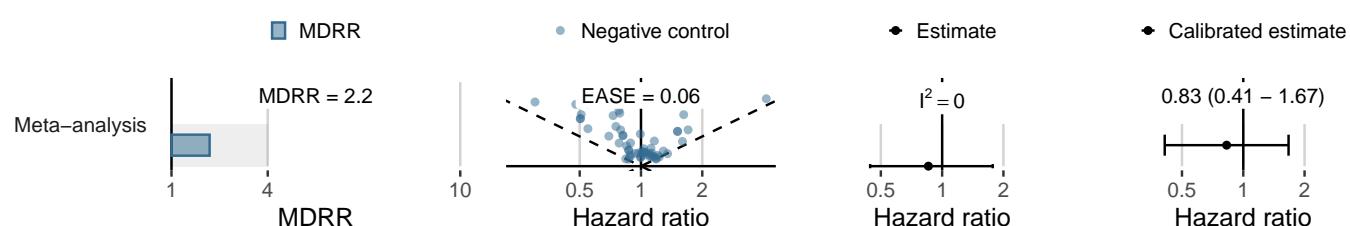
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	127,494	106,047	135	1.27
Merative CCAE	7,353	5,207	<5	<0.96
Merative MDCD	2,643	1,812	<5	<2.76
Merative MDCR	1,695	1,670	<5	<2.99
Optum Clininformatics	12,250	9,854	16	1.62
Optum EHR	8,736	1,825	<5	<2.74
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



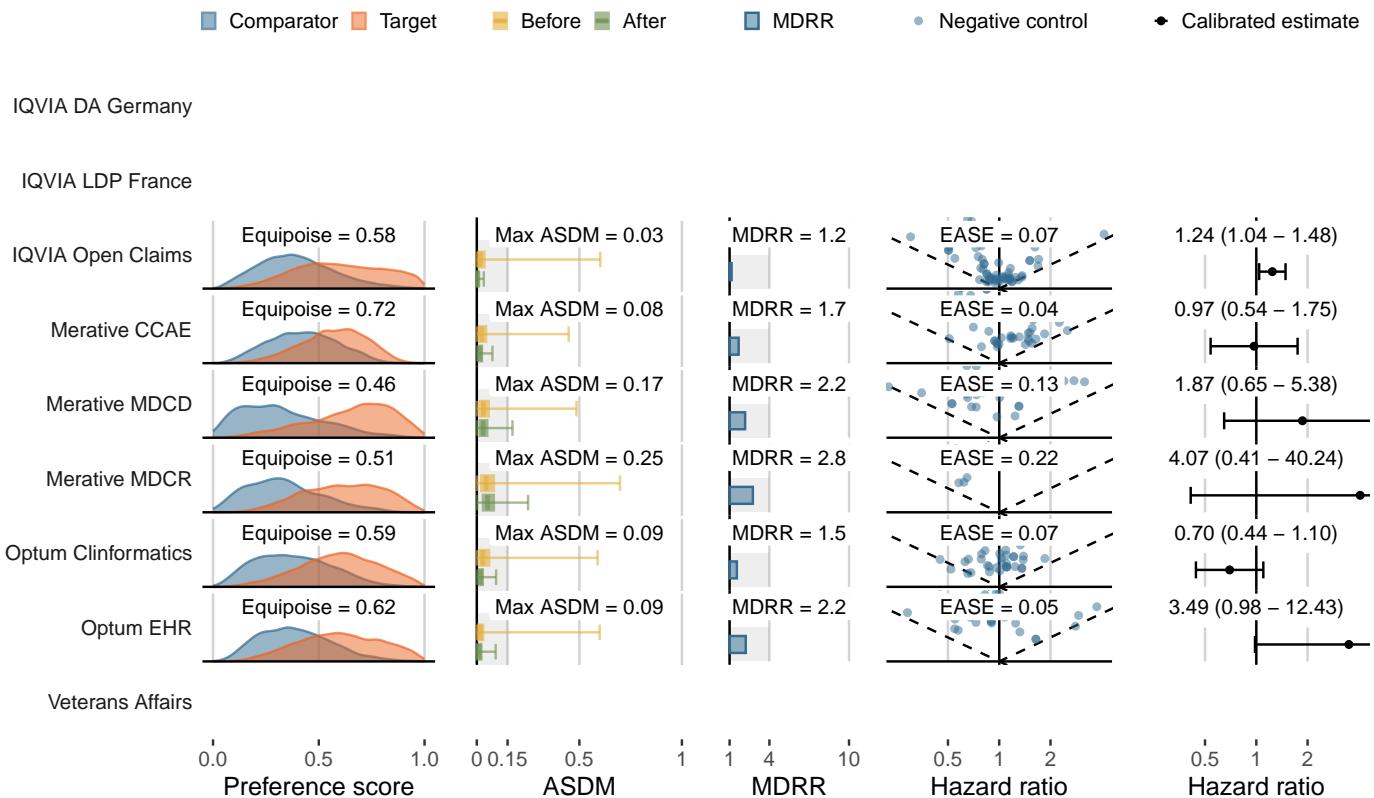
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Exenatide** (GLP-1 Receptor Agonists)
- Outcome: **Bone fracture**

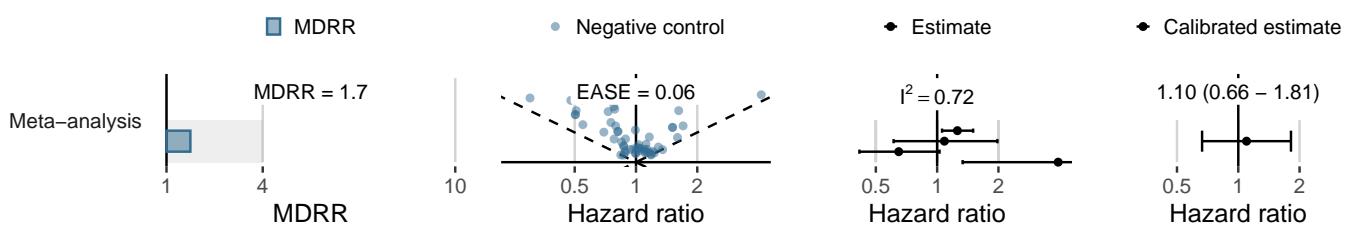
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	111,466	91,582	1,837	20.06
Merative CCAE	6,783	4,701	90	19.15
Merative MDCD	2,311	1,561	67	42.93
Merative MDCR	1,472	1,448	49	33.83
Optum Clininformatics	11,083	8,679	228	26.27
Optum EHR	8,127	1,690	42	24.85
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



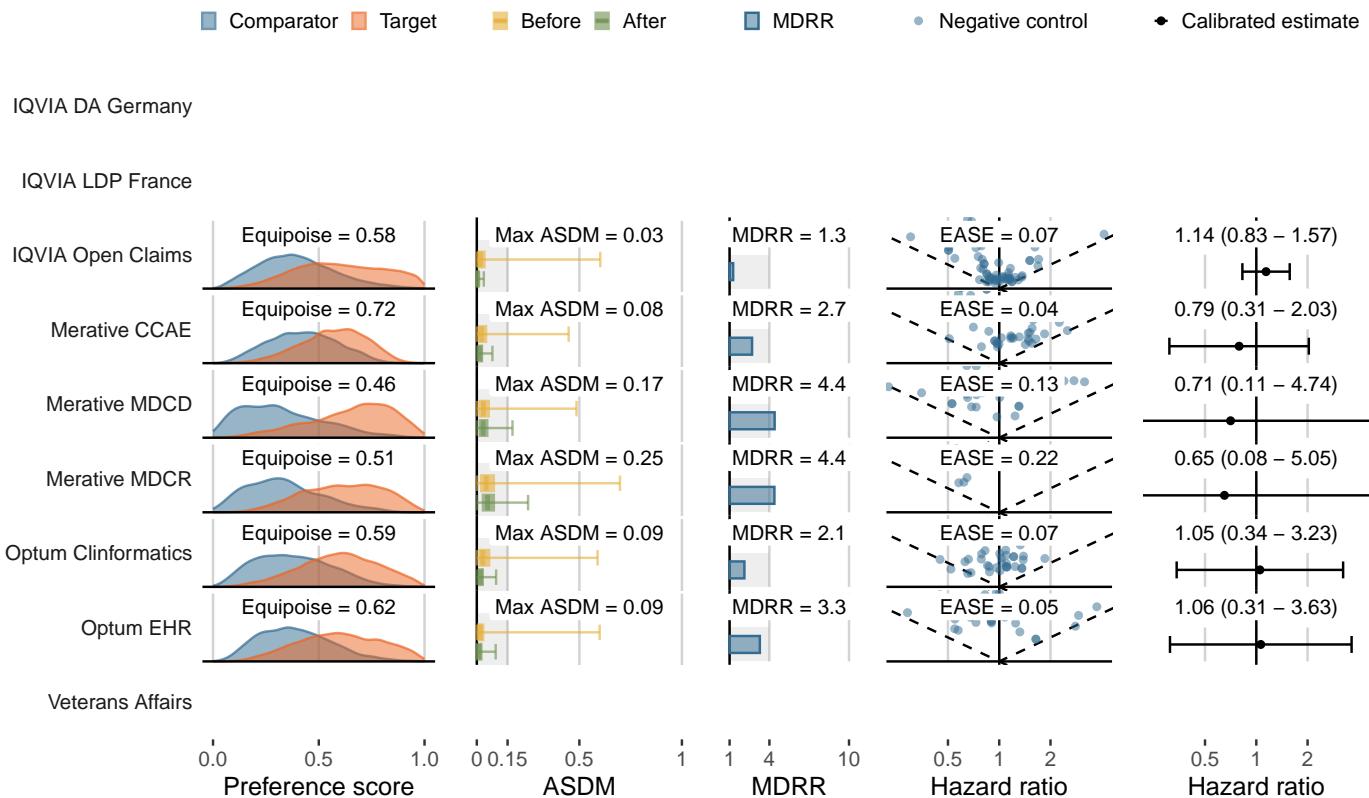
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Exenatide** (GLP-1 Receptor Agonists)
- Outcome: **Acute myocardial infarction**

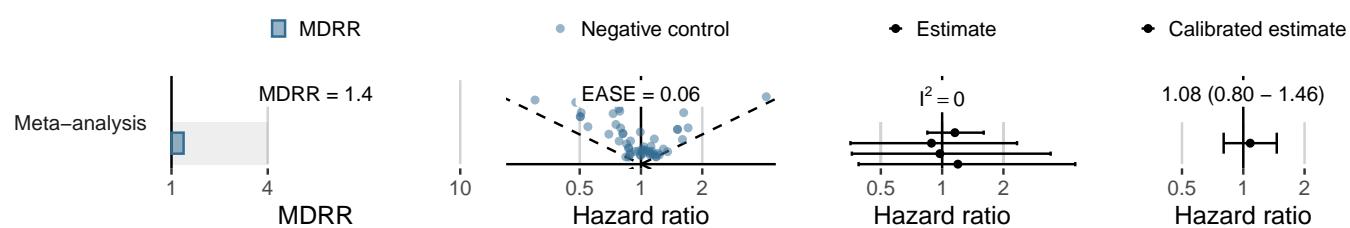
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	123,832	102,798	664	6.46
Merative CCAE	7,218	5,097	24	4.71
Merative MDCD	2,542	1,752	15	8.56
Merative MDCR	1,653	1,638	21	12.82
Optum Clininformatics	11,940	9,546	87	9.11
Optum EHR	8,627	1,794	21	11.71
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



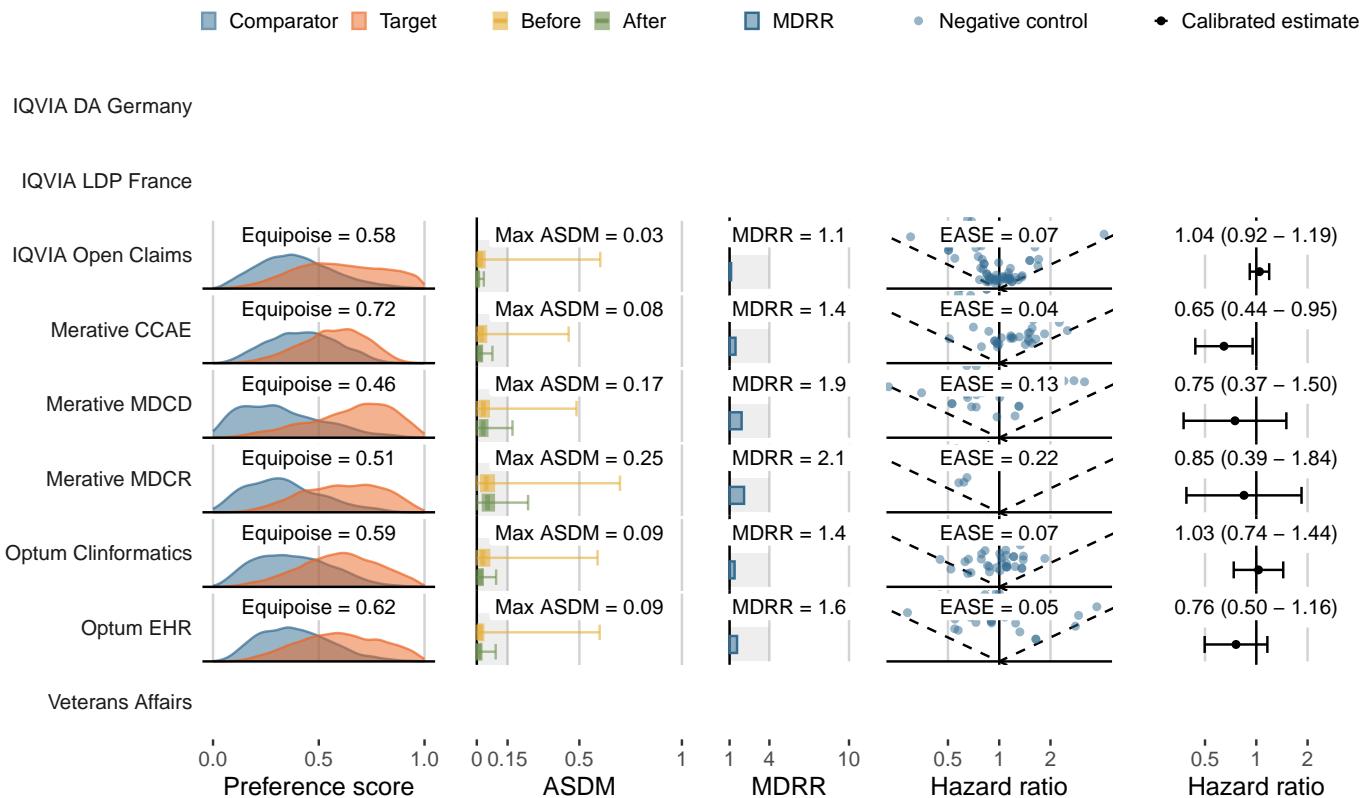
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Exenatide** (GLP-1 Receptor Agonists)
- Outcome: **Genitourinary infection**

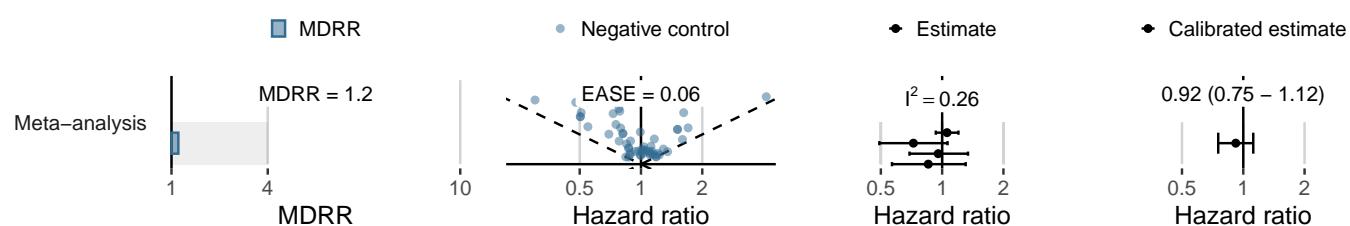
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	95,971	77,714	3,155	40.60
Merative CCAE	5,907	4,099	172	41.96
Merative MDCD	2,022	1,345	85	63.20
Merative MDCR	1,301	1,277	90	70.49
Optum Clininformatics	9,302	7,061	423	59.91
Optum EHR	7,343	1,468	115	78.33
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



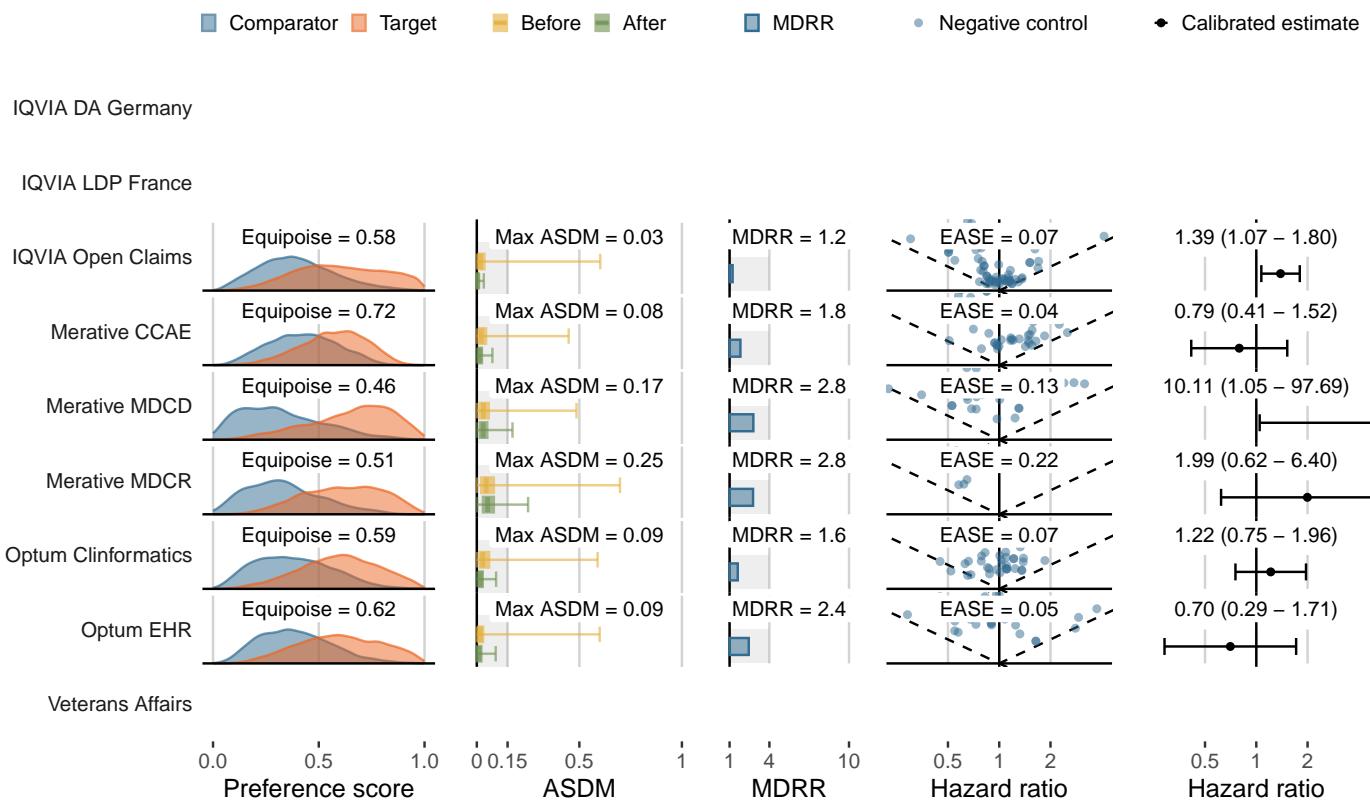
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Exenatide** (GLP-1 Receptor Agonists)
- Outcome: **Joint pain**

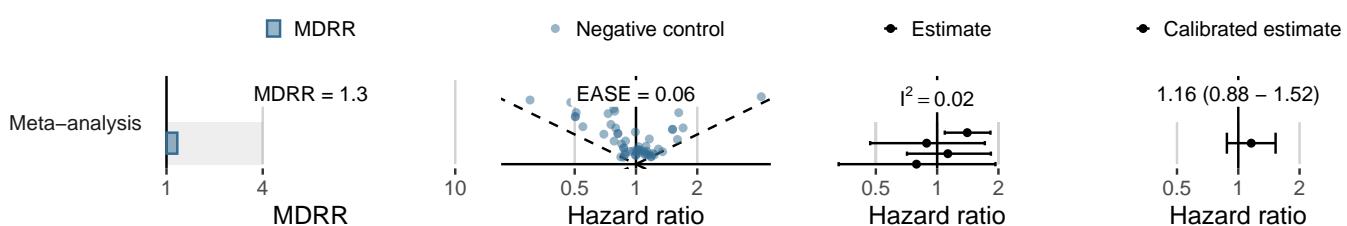
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	120,201	99,494	873	8.77
Merative CCAE	6,933	4,891	66	13.49
Merative MDCD	1,992	1,325	37	27.93
Merative MDCR	1,331	1,317	52	39.50
Optum Clininformatics	10,152	7,843	187	23.84
Optum EHR	8,324	1,737	23	13.24
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



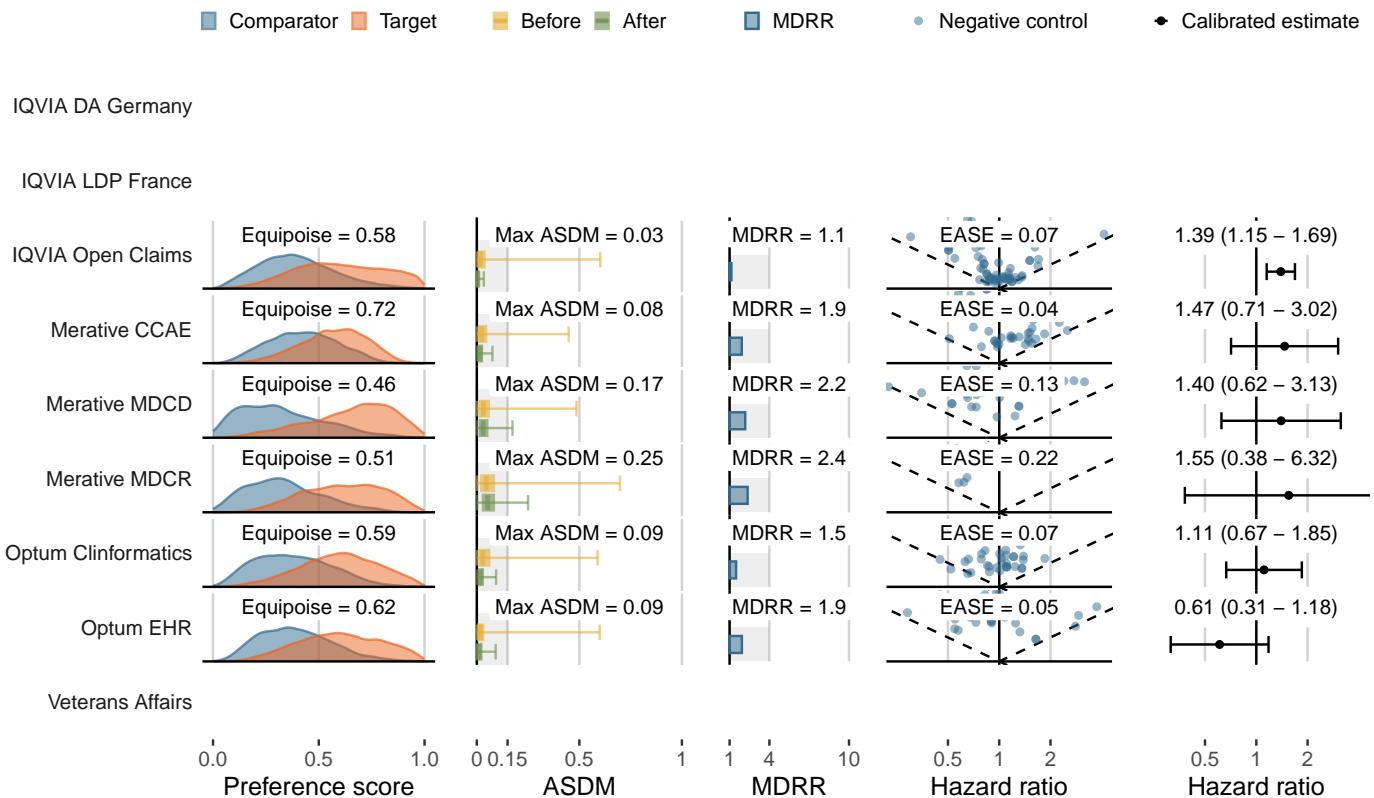
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Exenatide** (GLP-1 Receptor Agonists)
- Outcome: **Acute renal failure**

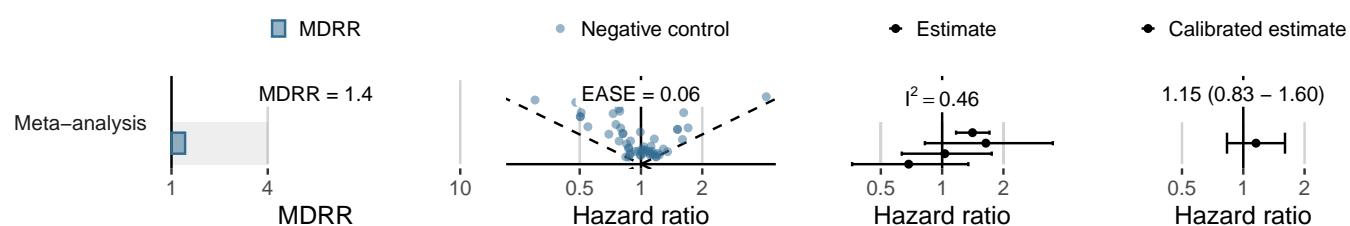
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	121,068	99,570	2,315	23.25
Merative CCAE	7,201	5,081	67	13.19
Merative MDCD	2,461	1,659	59	35.56
Merative MDCR	1,575	1,512	71	46.96
Optum Clininformatics	11,341	8,934	294	32.91
Optum EHR	8,510	1,754	61	34.77
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



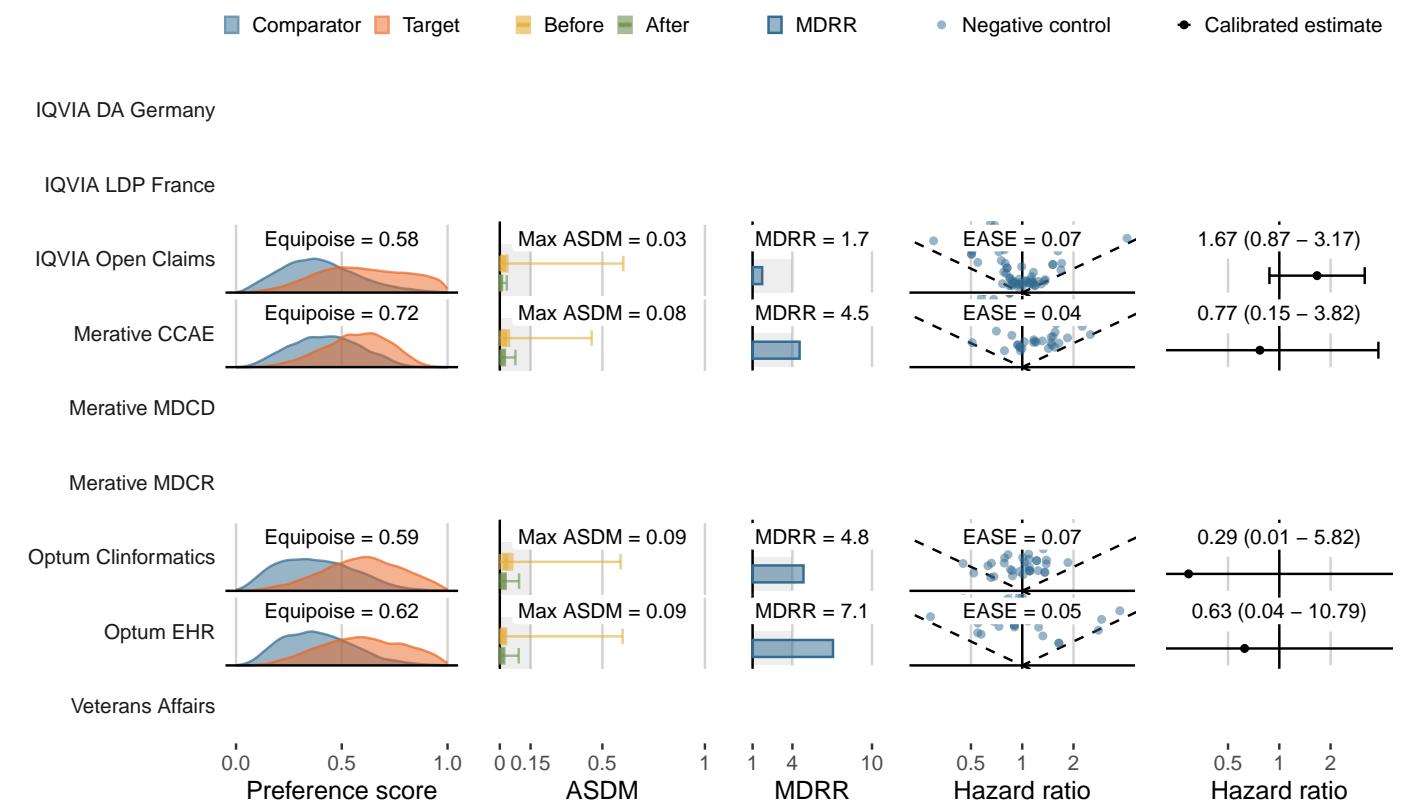
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Exenatide** (GLP-1 Receptor Agonists)
- Outcome: **Thyroid tumor**

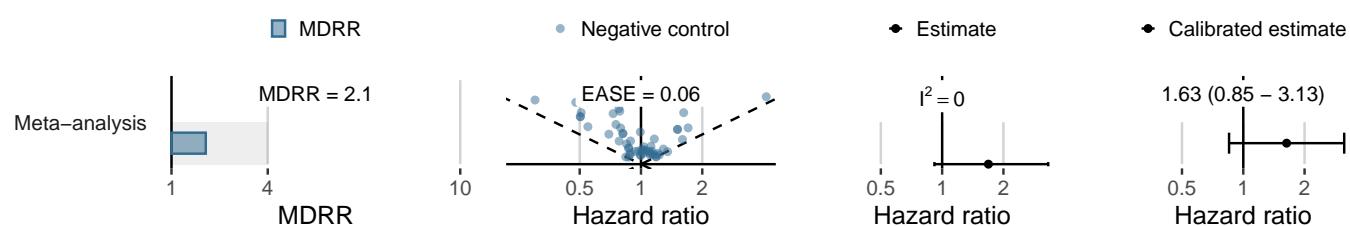
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	127,192	105,788	124	1.17
Merative CCAE	7,331	5,202	10	1.92
Merative MDCD	2,628	1,809	<5	<2.76
Merative MDCR	1,702	1,679	<5	<2.98
Optum Clininformatics	12,222	9,835	16	1.63
Optum EHR	8,725	1,826	<5	<2.74
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



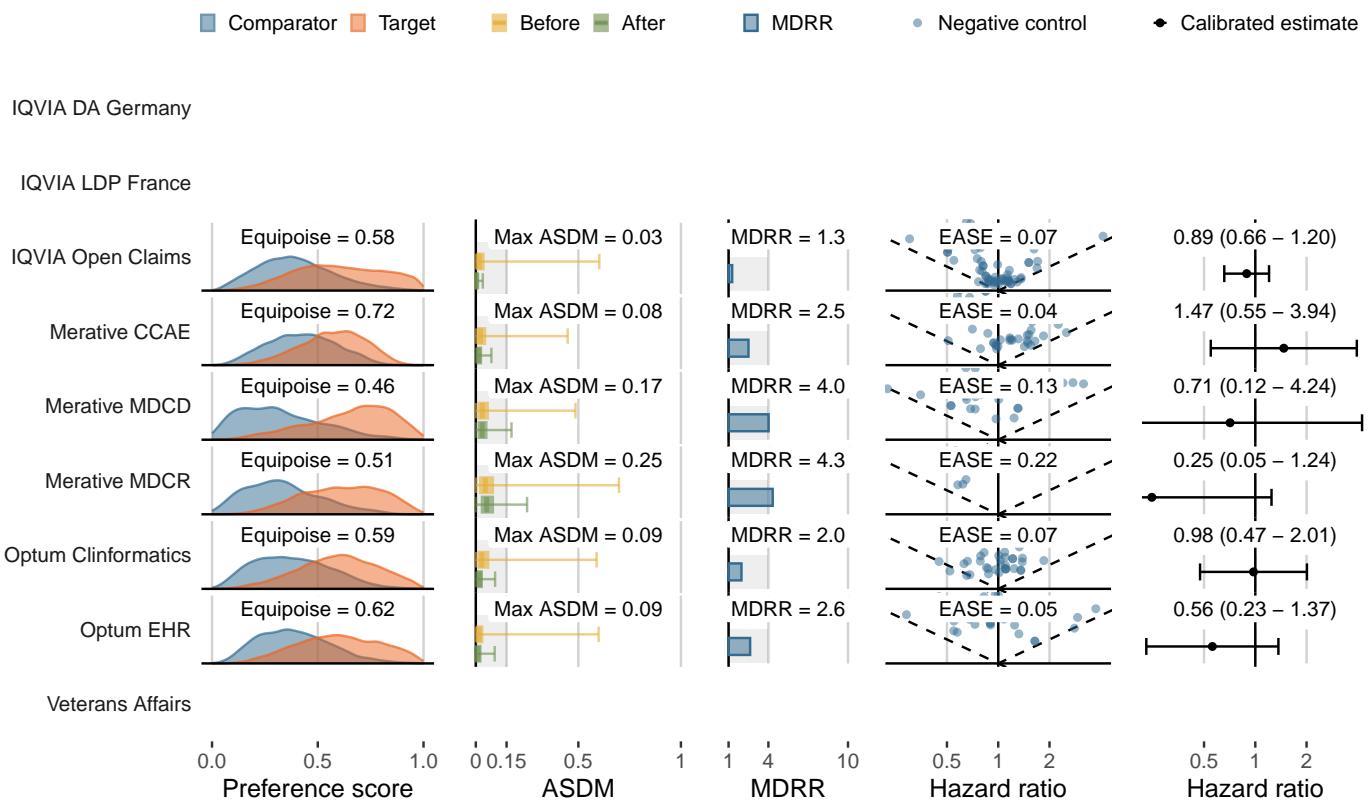
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Exenatide** (GLP-1 Receptor Agonists)
- Outcome: **Venous thromboembolic events**

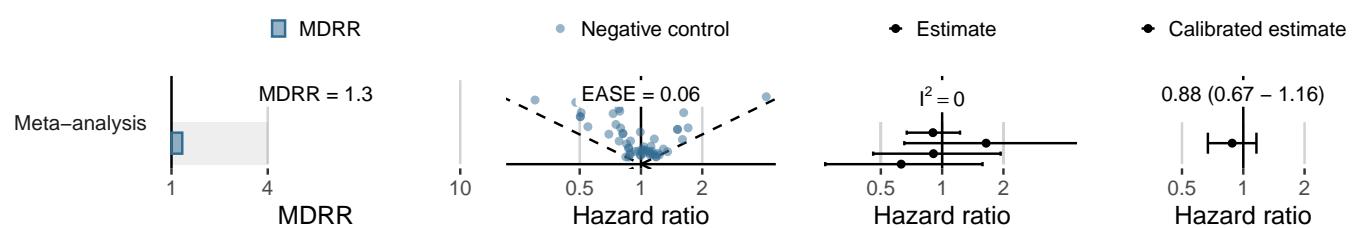
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	123,219	102,302	643	6.29
Merative CCAE	7,170	5,080	32	6.30
Merative MDCD	2,518	1,723	18	10.45
Merative MDCR	1,628	1,603	22	13.72
Optum Clininformatics	11,868	9,470	100	10.56
Optum EHR	8,520	1,749	25	14.29
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



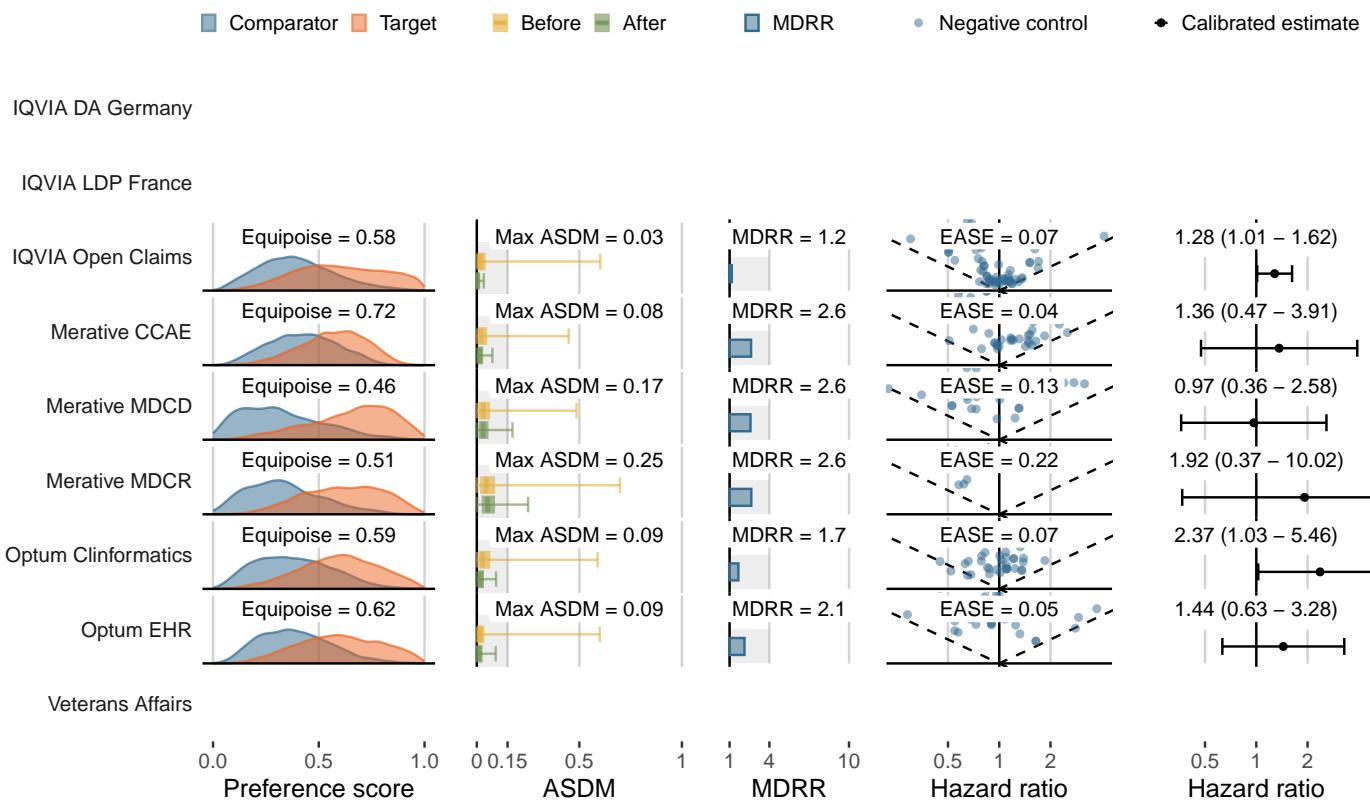
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Exenatide** (GLP-1 Receptor Agonists)
- Outcome: **Hospitalization with heart failure**

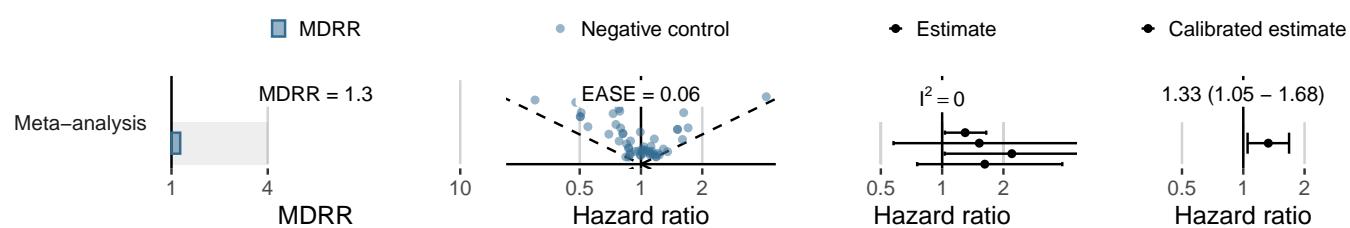
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	120,700	99,860	1,627	16.29
Merative CCAE	7,178	5,091	29	5.70
Merative MDCD	2,389	1,615	38	23.53
Merative MDCR	1,540	1,498	54	36.05
Optum Clininformatics	11,512	9,131	186	20.37
Optum EHR	8,475	1,731	52	30.05
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



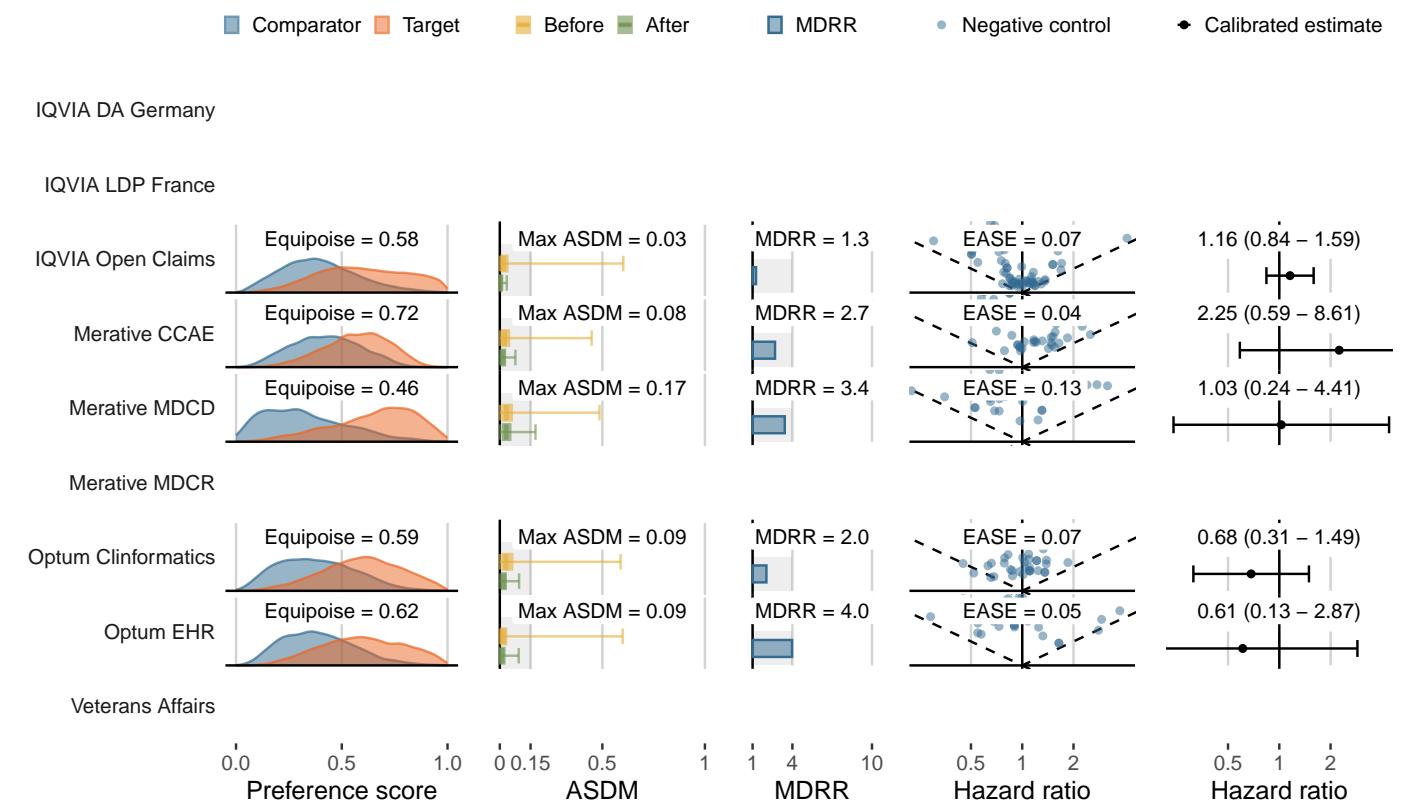
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Exenatide** (GLP-1 Receptor Agonists)
- Outcome: **Stroke**

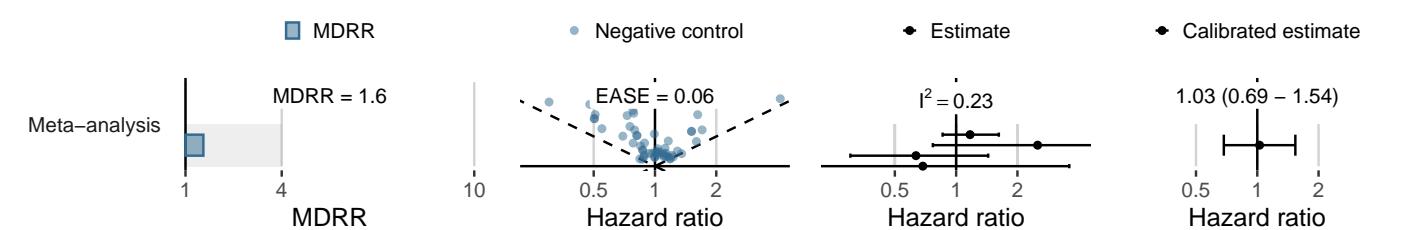
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	123,815	102,948	717	6.96
Merative CCAE	7,269	5,125	28	5.46
Merative MDCD	2,537	1,741	24	13.79
Merative MDCR	1,630	1,613	23	14.25
Optum Clininformatics	11,907	9,585	90	9.39
Optum EHR	8,645	1,799	12	6.67
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



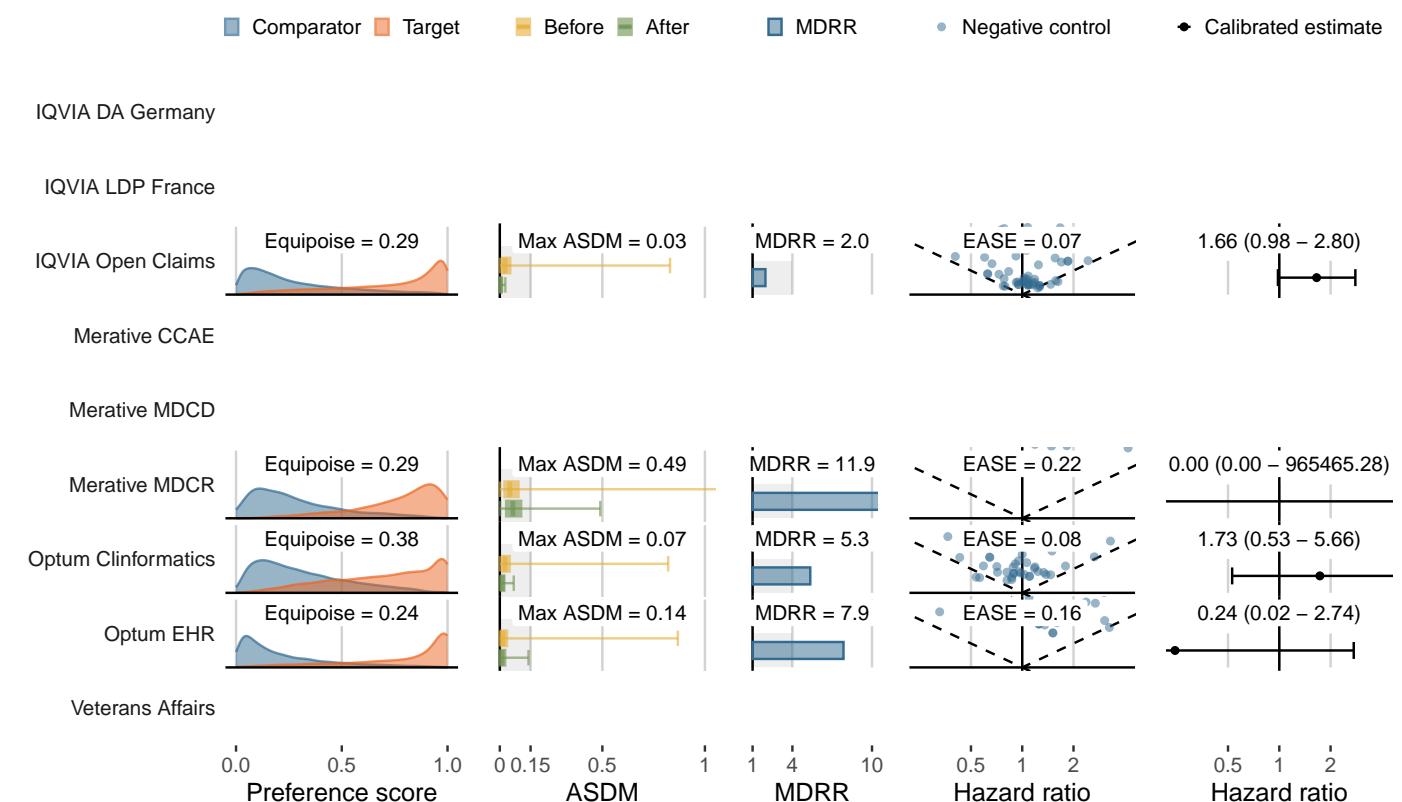
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Acute pancreatitis**

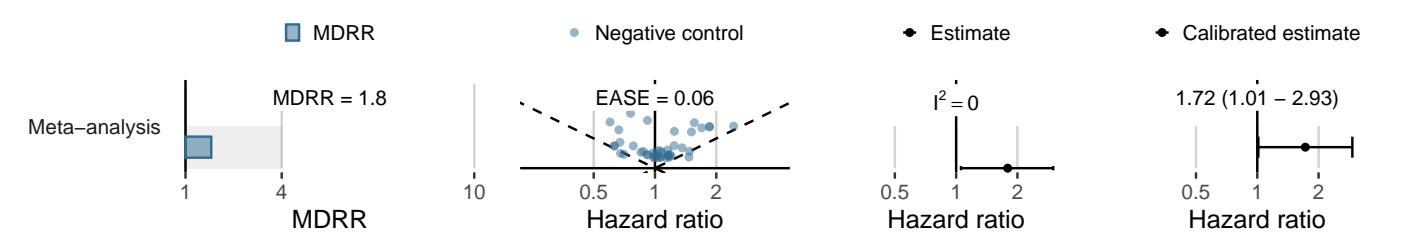
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	30,209	19,666	43	2.19
Merative CCAE	1,098	645	-	0.00
Merative MDCD	-	-	-	-
Merative MDCR	177	101	<5	<49.57
Optum Clininformatics	4,000	2,572	7	2.72
Optum EHR	2,013	393	<5	<12.71
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



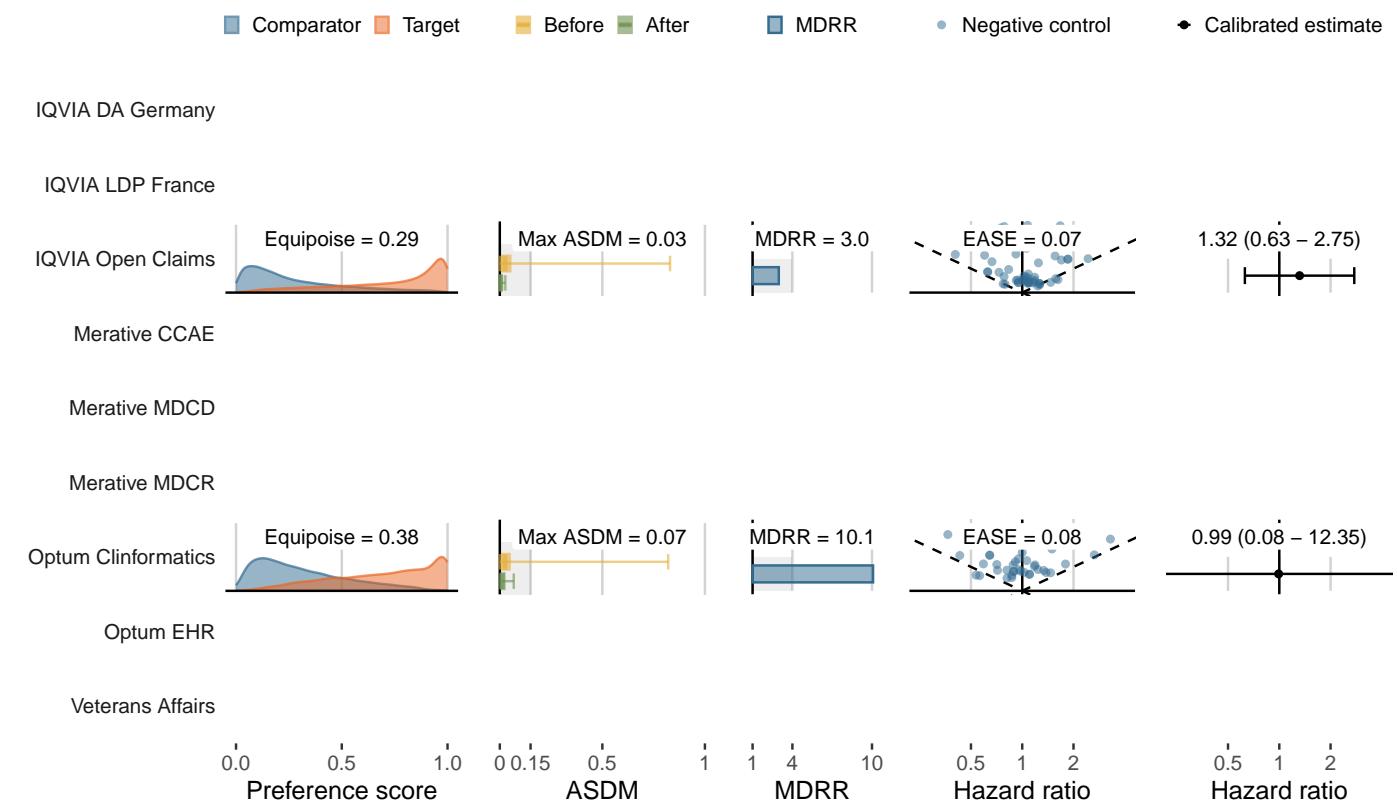
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Bladder cancer**

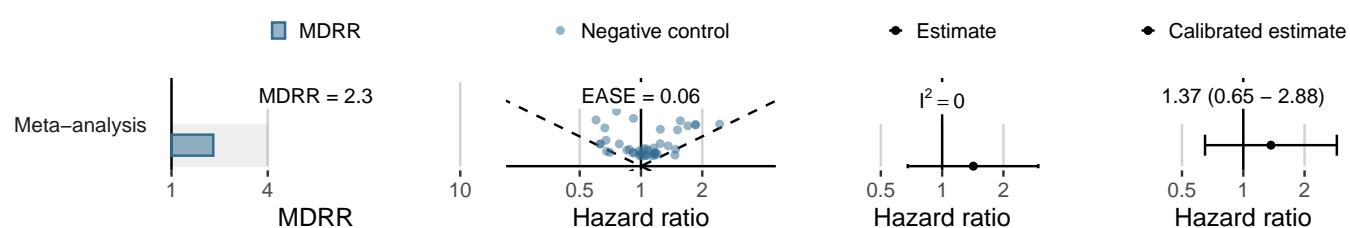
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	30,426	19,811	19	0.96
Merative CCAE	1,106	650	-	0.00
Merative MDCD	-	-	-	-
Merative MDCR	176	103	-	0.00
Optum Clininformatics	4,018	2,592	<5	<1.93
Optum EHR	2,011	391	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



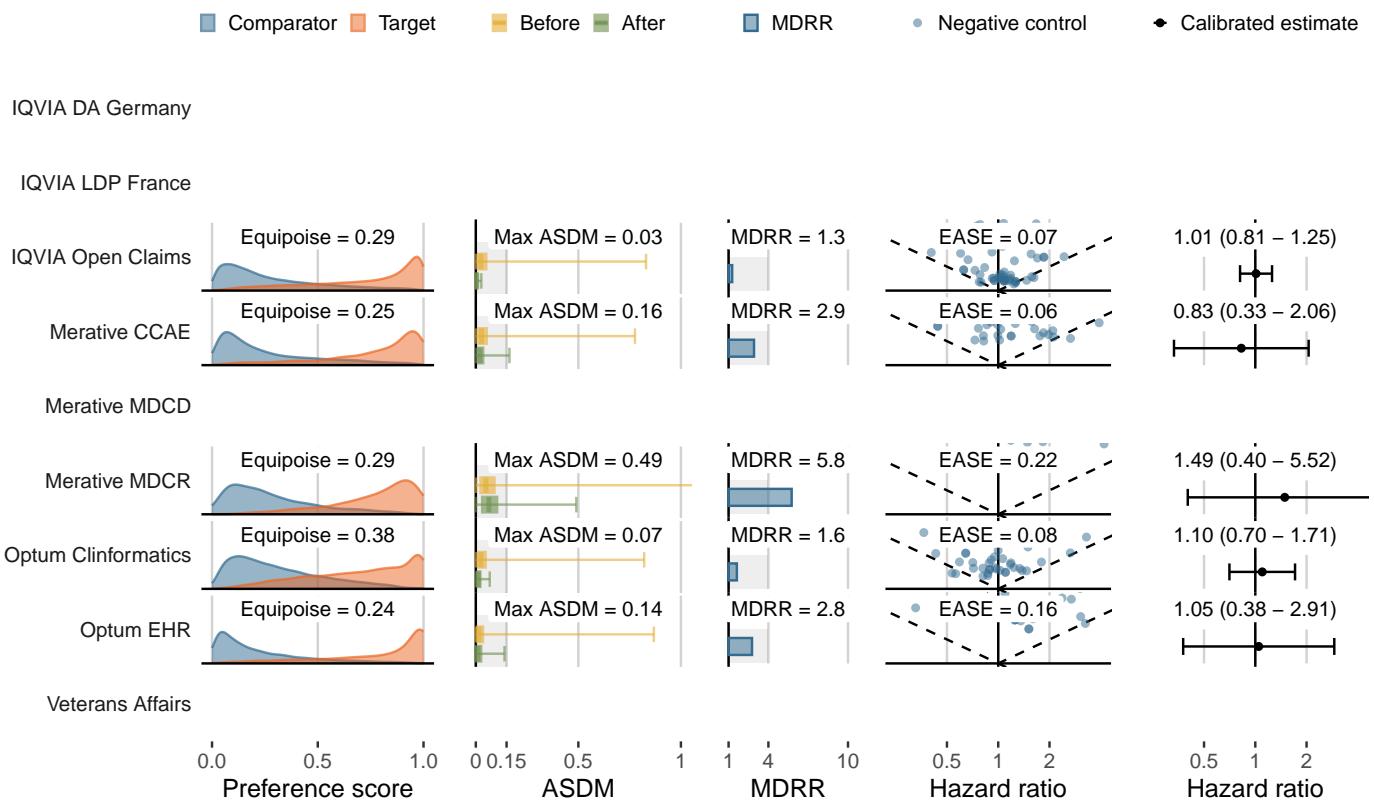
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Bone fracture**

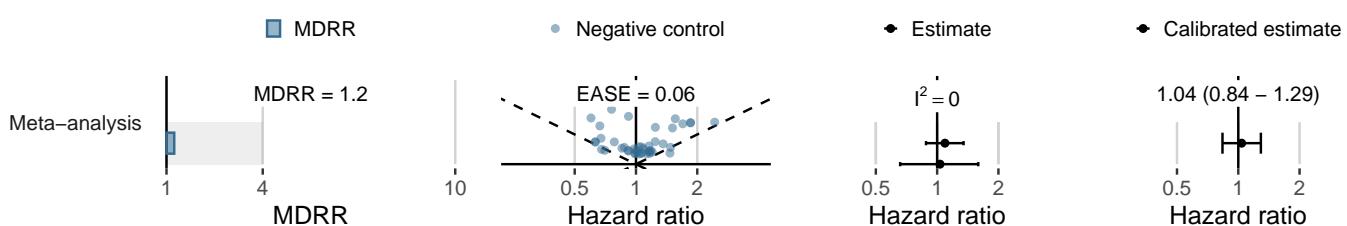
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	26,164	16,811	246	14.63
Merative CCAE	1,014	599	12	20.04
Merative MDCD	-	-	-	-
Merative MDCR	157	89	6	67.79
Optum Clininformatics	3,649	2,312	53	22.93
Optum EHR	1,853	361	10	27.72
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



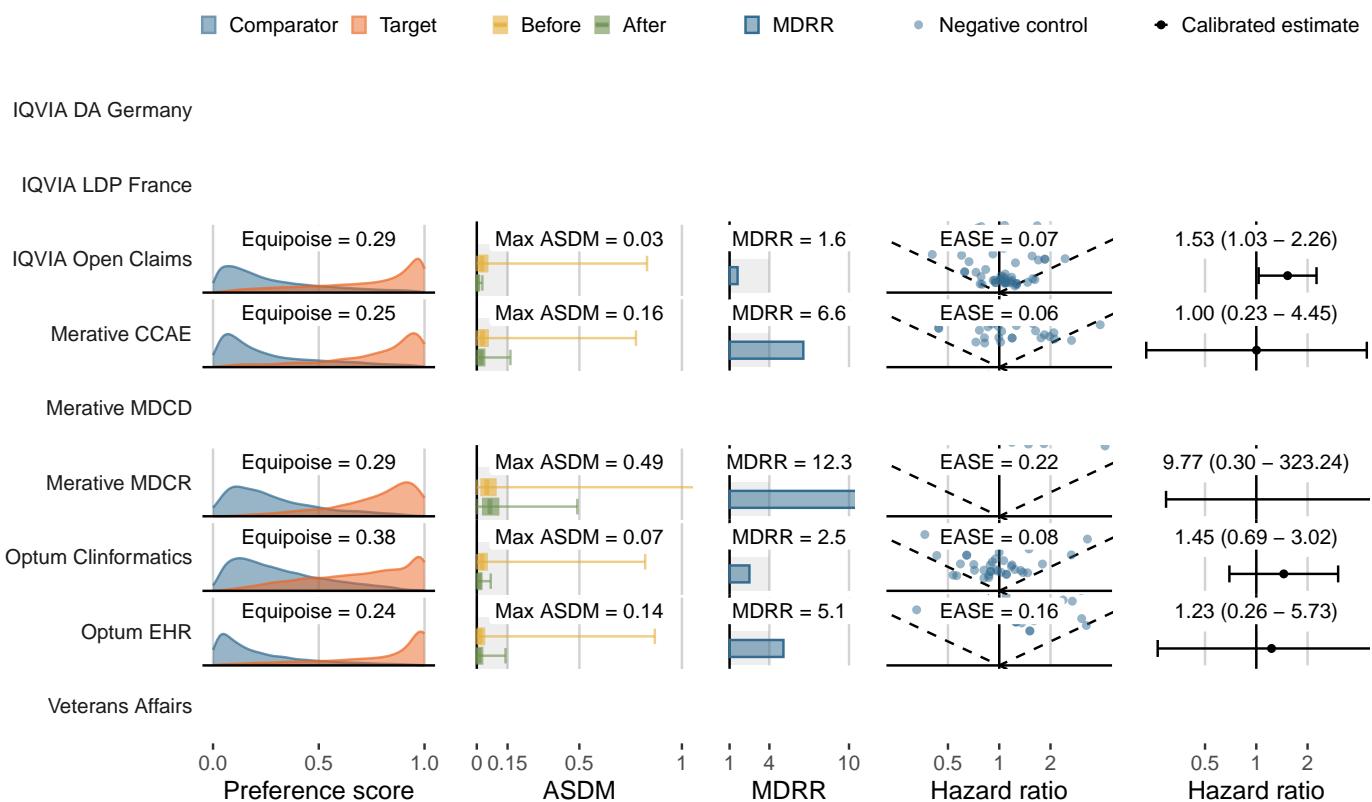
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Acute myocardial infarction**

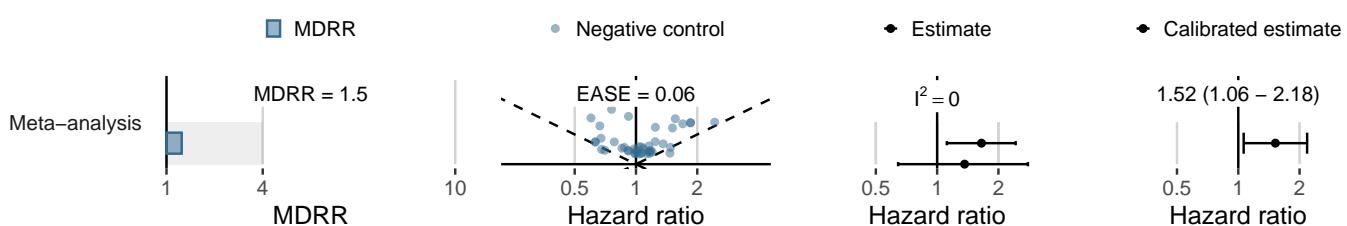
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	29,567	19,201	94	4.90
Merative CCAE	1,088	636	<5	<7.86
Merative MDCD	-	-	-	-
Merative MDCR	168	97	<5	<51.45
Optum Clininformatics	3,927	2,510	23	9.16
Optum EHR	1,985	387	<5	<12.91
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



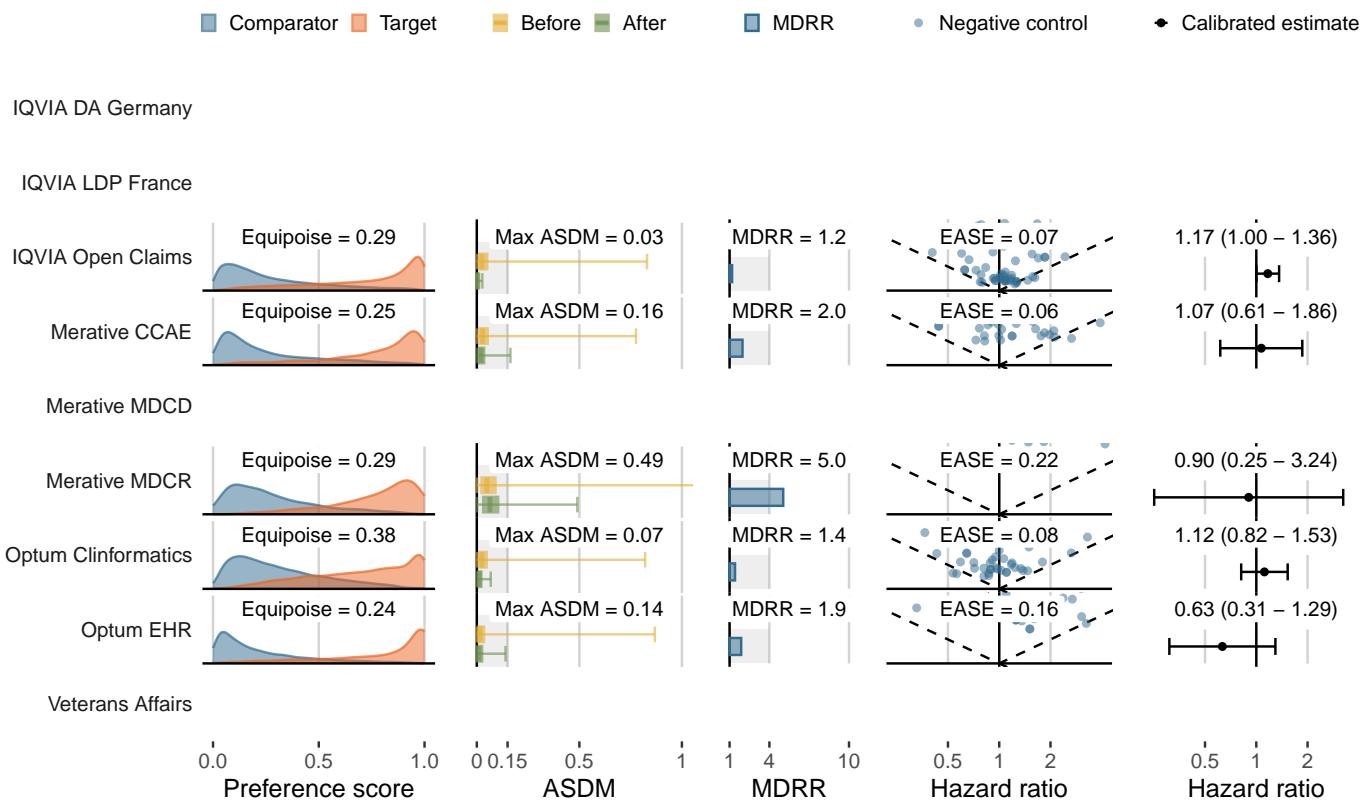
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Genitourinary infection**

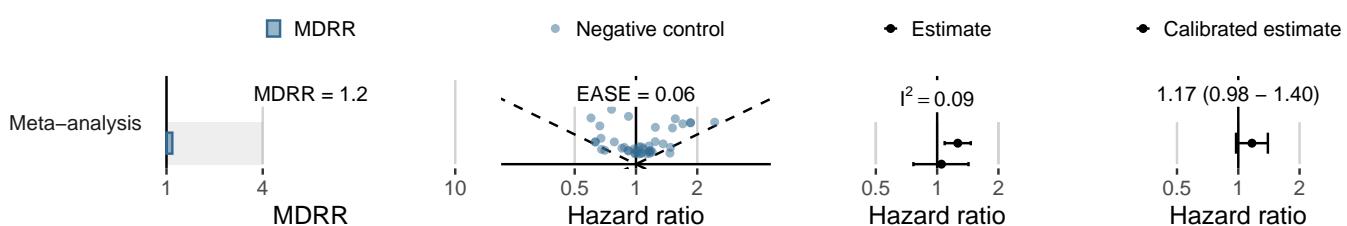
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	22,286	14,322	459	32.05
Merative CCAE	885	521	25	48.02
Merative MDCD	-	-	-	-
Merative MDCR	136	75	5	66.36
Optum Clininformatics	3,091	1,903	112	58.87
Optum EHR	1,700	329	15	45.63
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



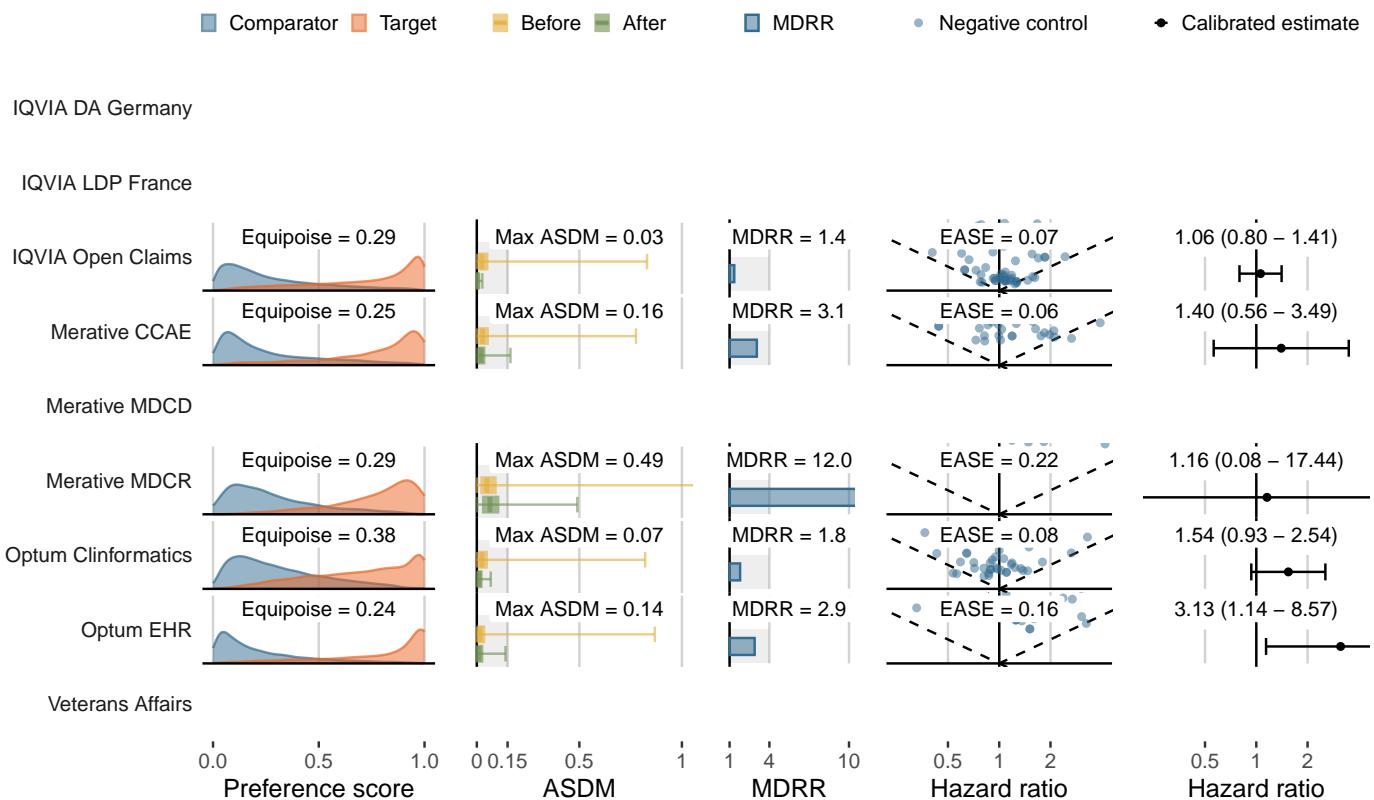
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Joint pain**

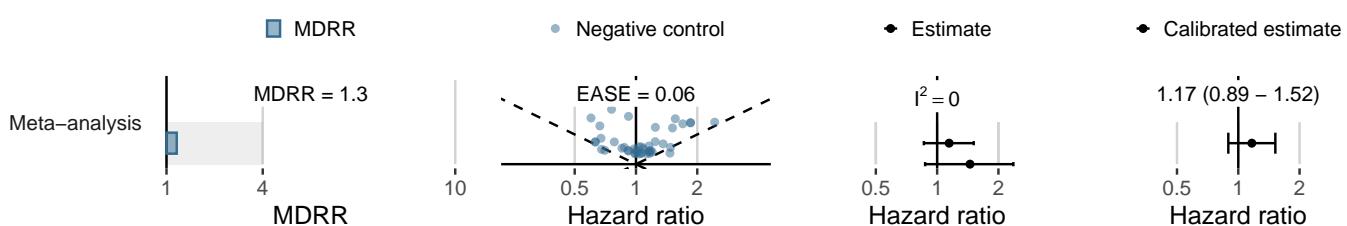
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	28,180	18,232	142	7.79
Merative CCAE	1,034	606	11	18.16
Merative MDCD	-	-	-	-
Merative MDCR	161	95	<5	<52.63
Optum Clininformatics	3,509	2,176	43	19.76
Optum EHR	1,900	360	8	22.24
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



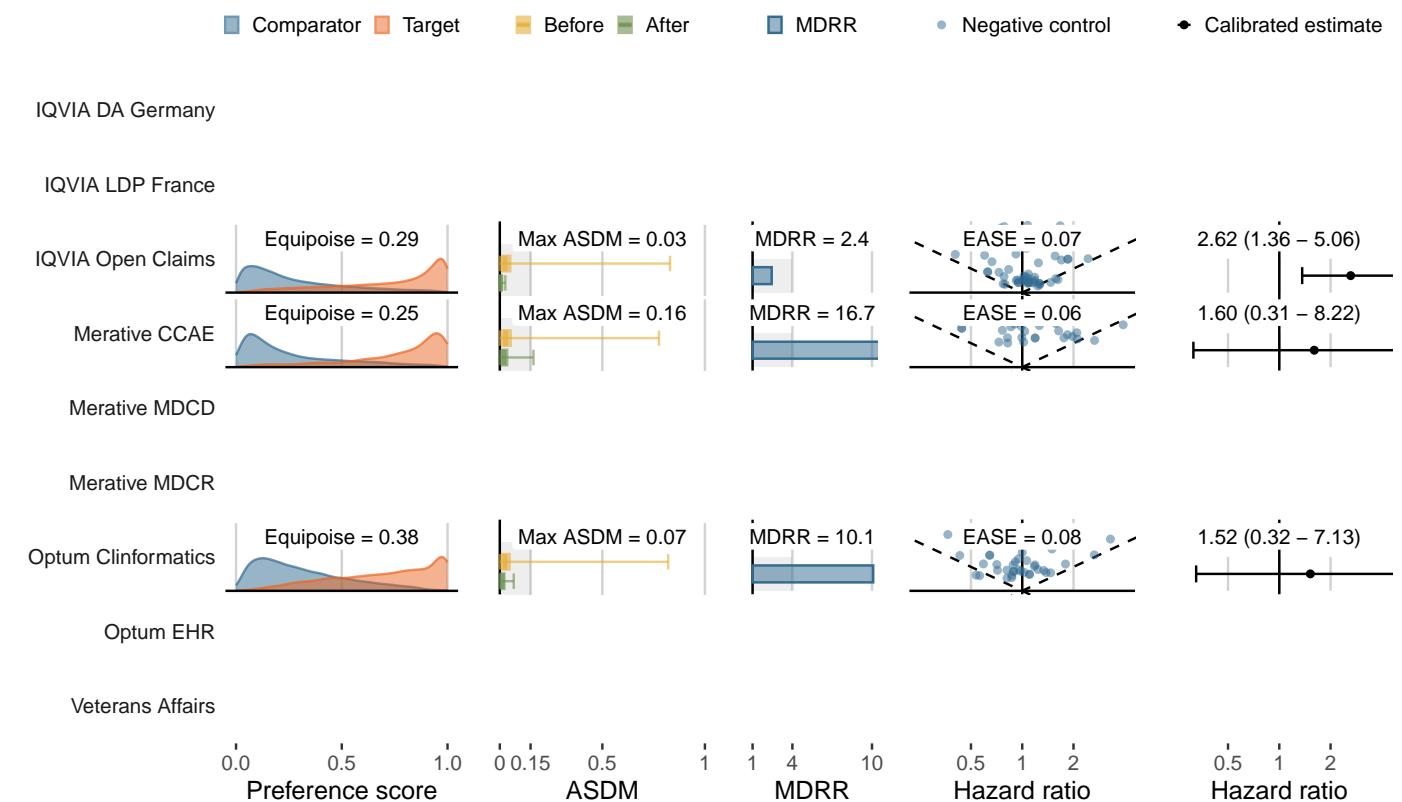
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Renal cancer**

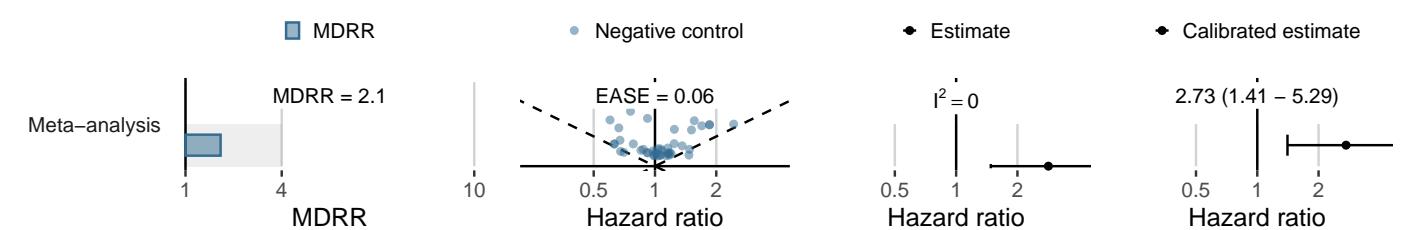
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	30,453	19,829	28	1.41
Merative CCAE	1,105	649	<5	<7.71
Merative MDCD	-	-	-	-
Merative MDCR	178	102	-	0.00
Optum Clininformatics	4,011	2,584	5	1.93
Optum EHR	2,007	392	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



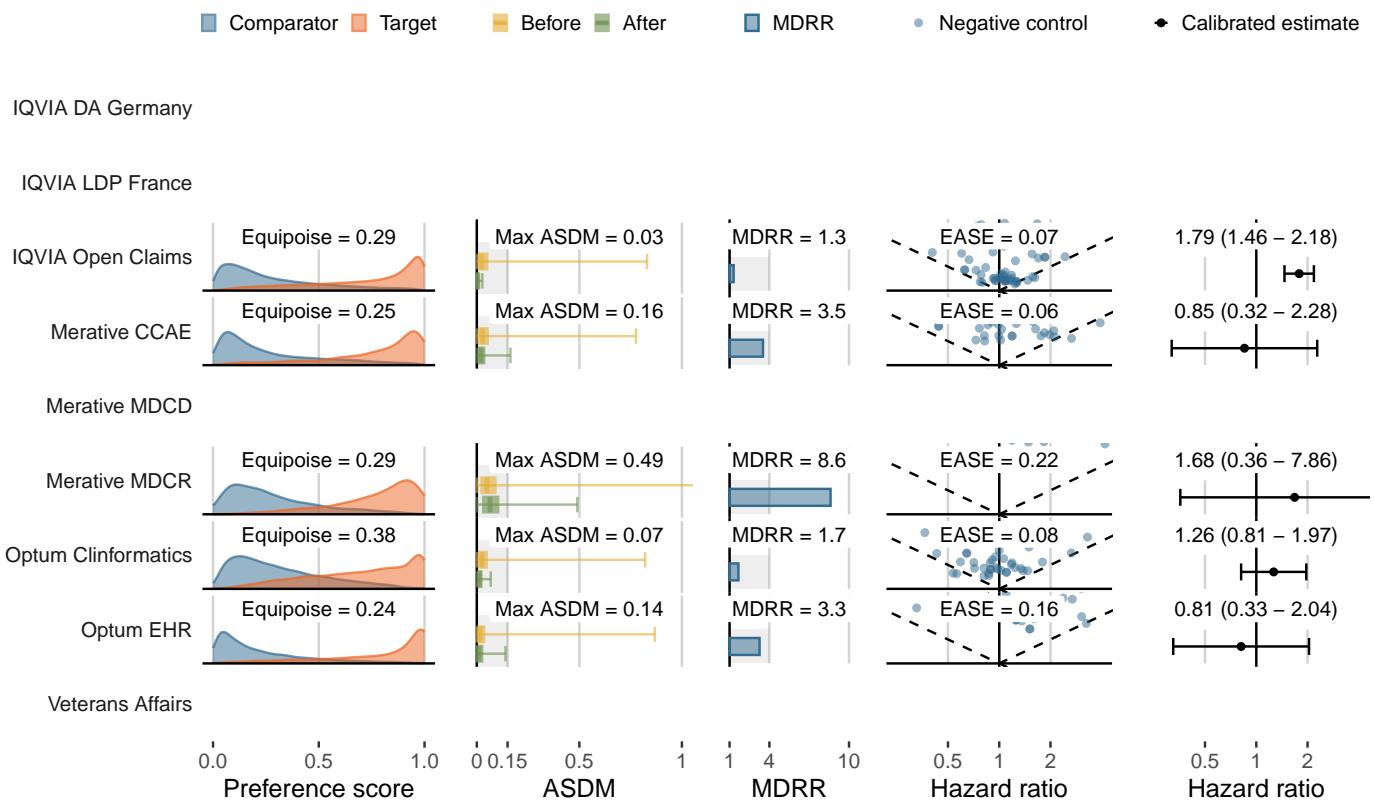
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Acute renal failure**

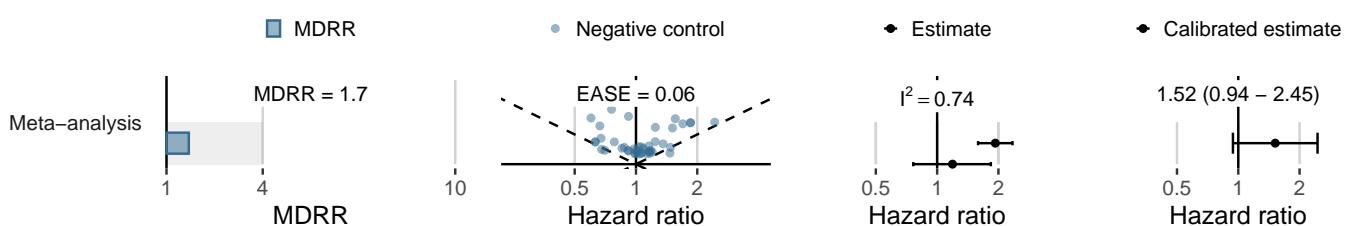
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	28,954	18,769	325	17.32
Merative CCAE	1,076	636	10	15.72
Merative MDCD	-	-	-	-
Merative MDCR	155	87	5	57.68
Optum Clininformatics	3,794	2,412	70	29.03
Optum EHR	1,973	382	9	23.57
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



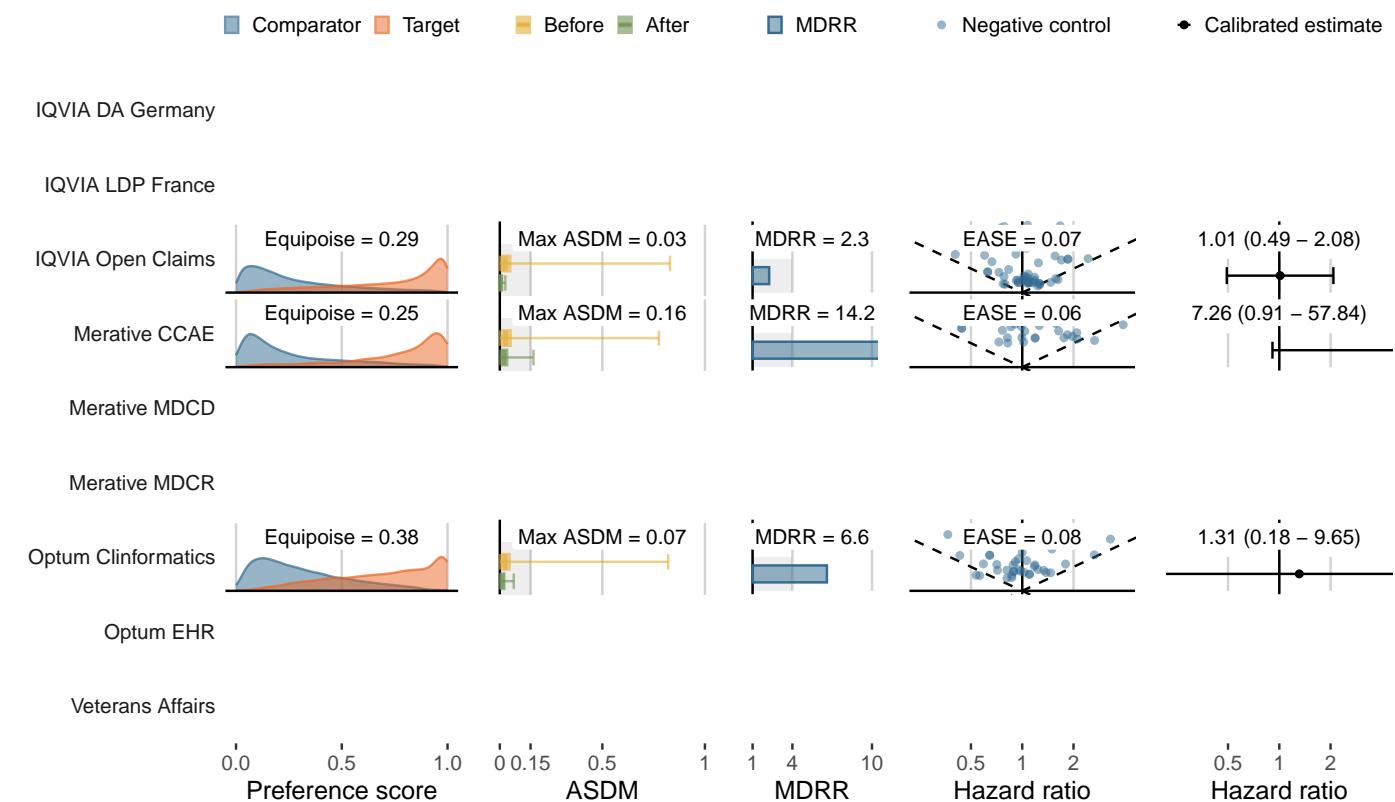
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Thyroid tumor**

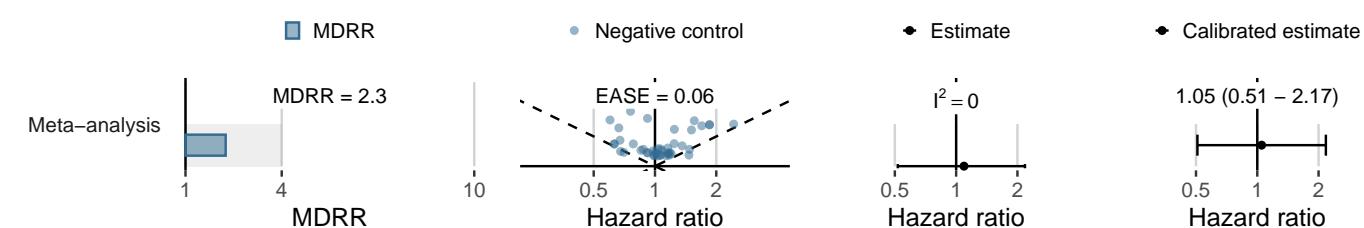
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	30,283	19,689	16	0.81
Merative CCAE	1,102	647	5	7.73
Merative MDCD	-	-	-	-
Merative MDCR	177	100	<5	<50.05
Optum Clininformatics	3,997	2,577	<5	<1.94
Optum EHR	2,013	391	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



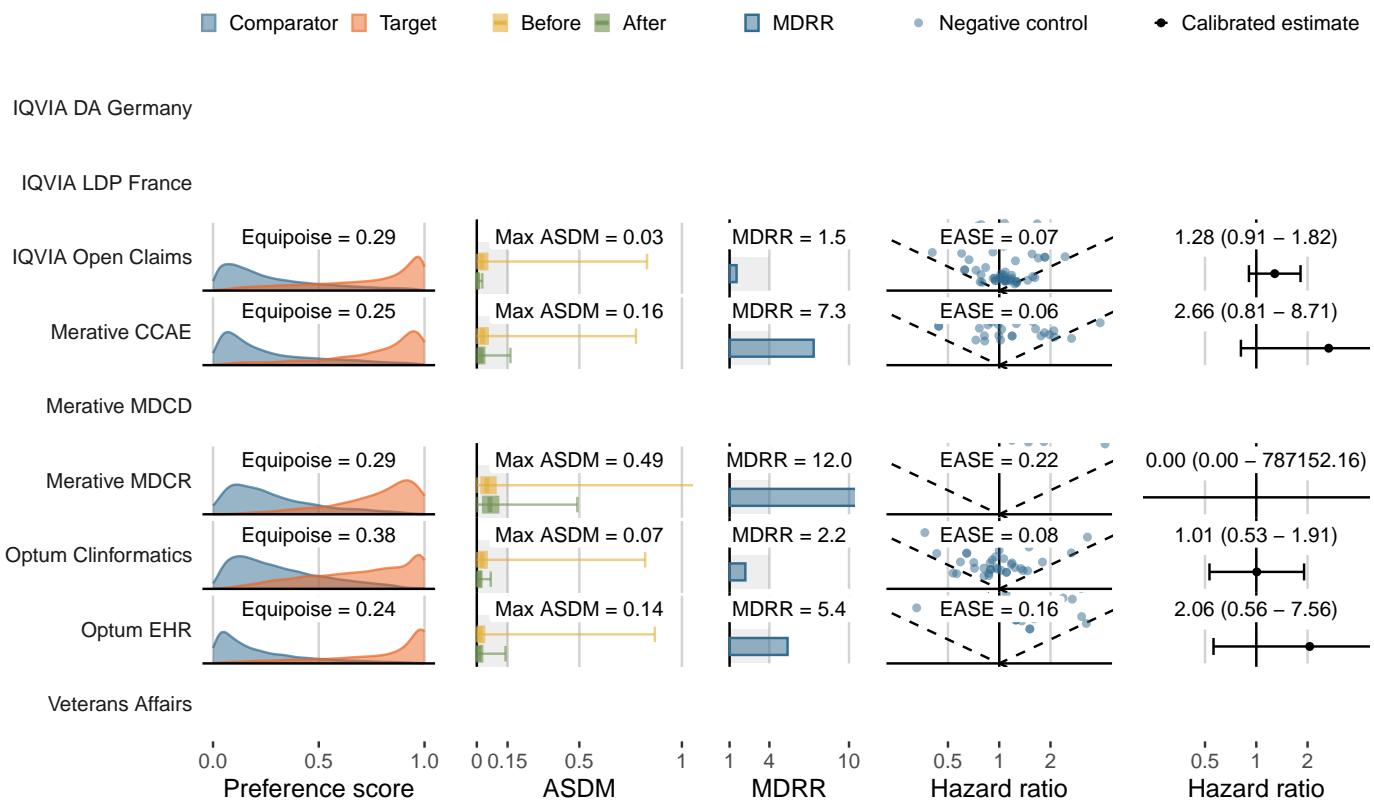
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Venous thromboembolic events**

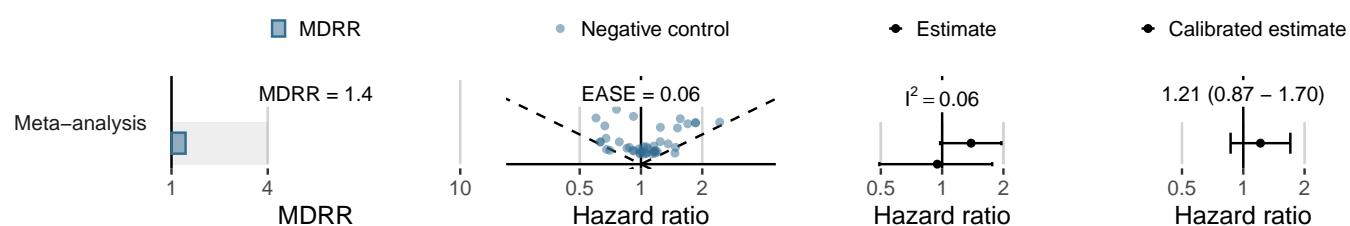
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	29,305	19,055	103	5.41
Merative CCAE	1,073	629	6	9.54
Merative MDCD	-	-	-	-
Merative MDCR	170	98	<5	<51.11
Optum Clininformatics	3,882	2,485	24	9.66
Optum EHR	1,957	379	5	13.18
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



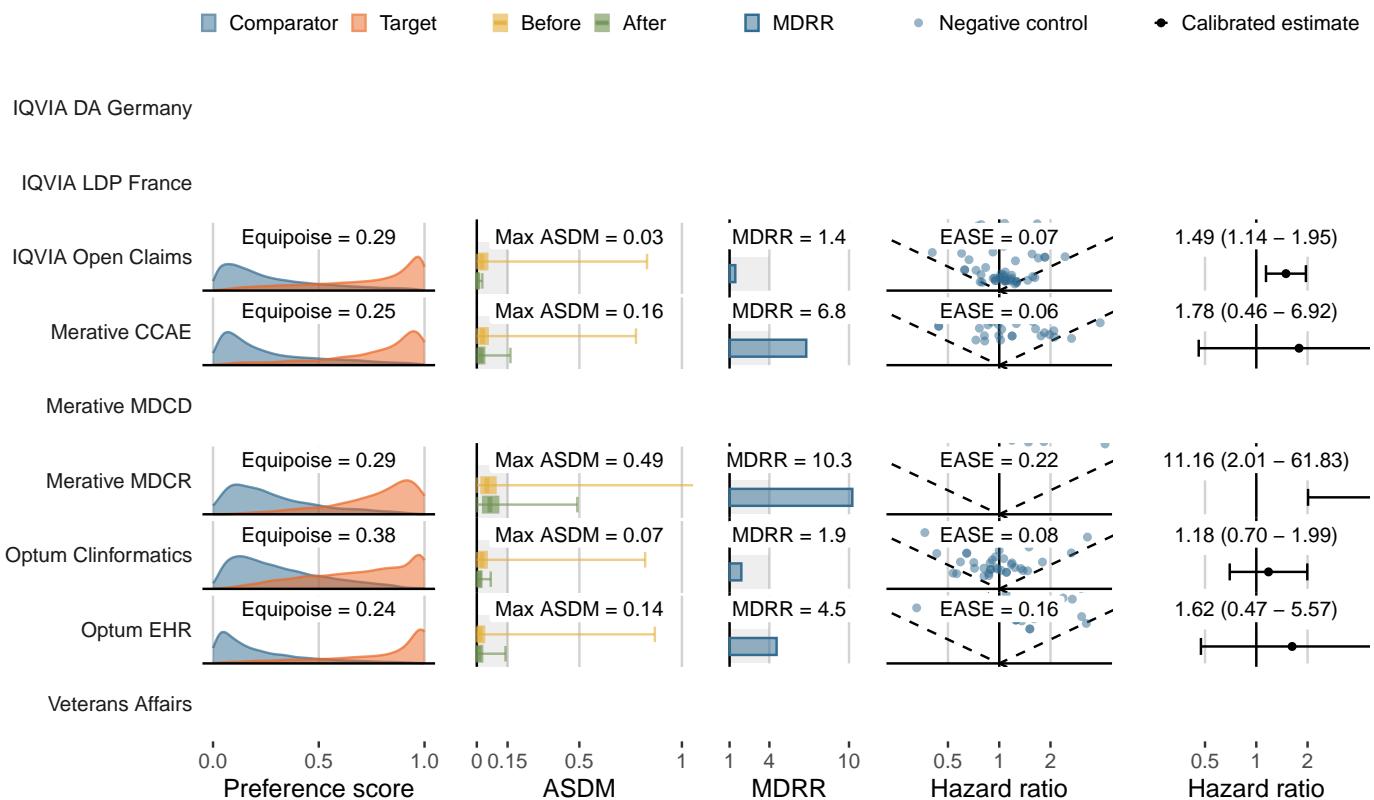
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Hospitalization with heart failure**

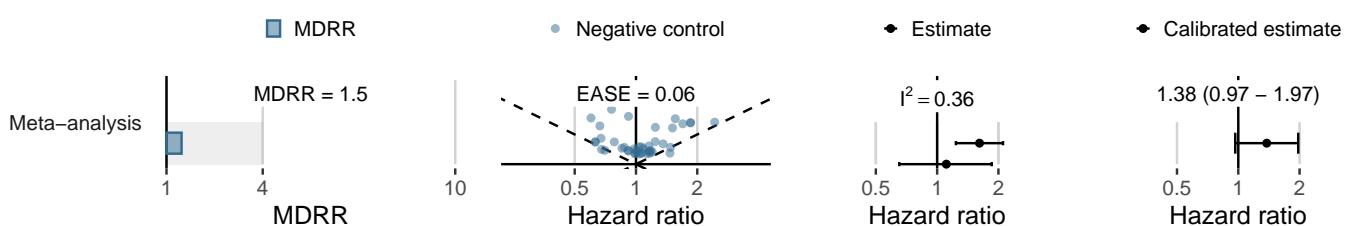
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	29,053	18,900	179	9.47
Merative CCAE	1,068	630	<5	<7.94
Merative MDCD	-	-	-	-
Merative MDCR	153	85	7	82.73
Optum Clininformatics	3,820	2,427	40	16.48
Optum EHR	1,952	380	7	18.41
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



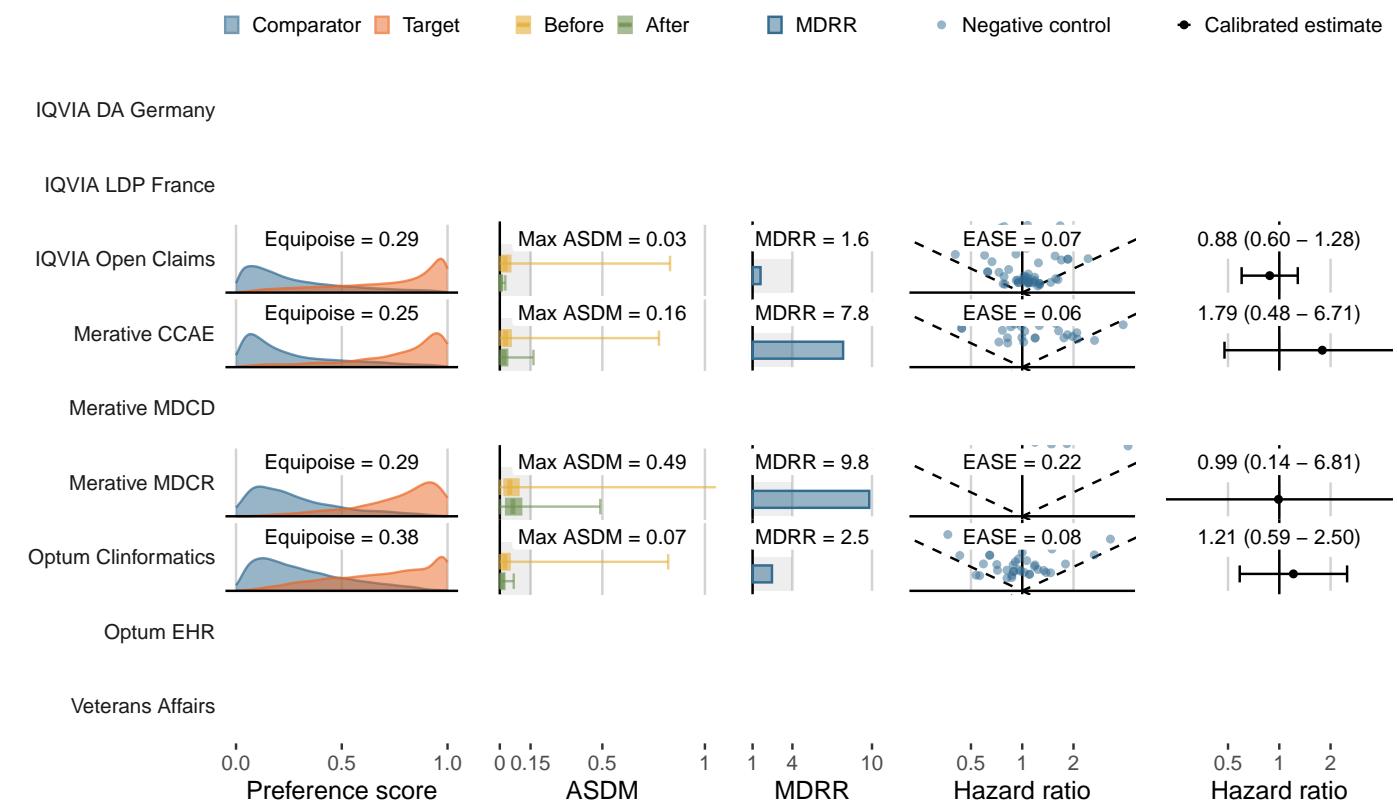
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Semaglutide** (GLP-1 Receptor Agonists)
- Outcome: **Stroke**

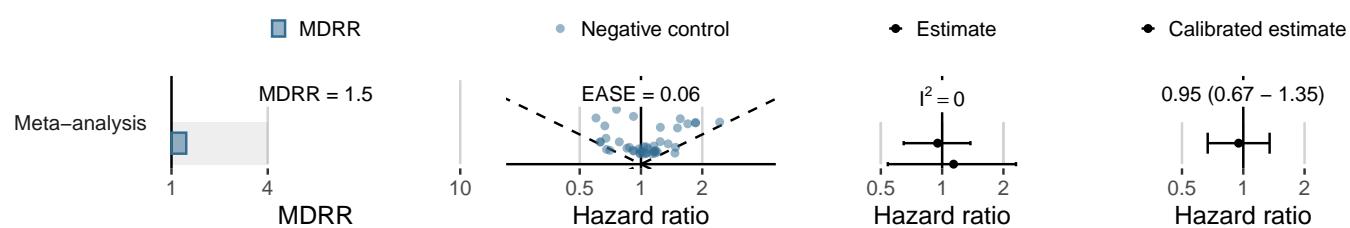
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	29,588	19,256	82	4.26
Merative CCAE	1,091	640	<5	<7.81
Merative MDCD	-	-	-	-
Merative MDCR	169	99	<5	<50.61
Optum Clininformatics	3,939	2,529	18	7.12
Optum EHR	1,988	389	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



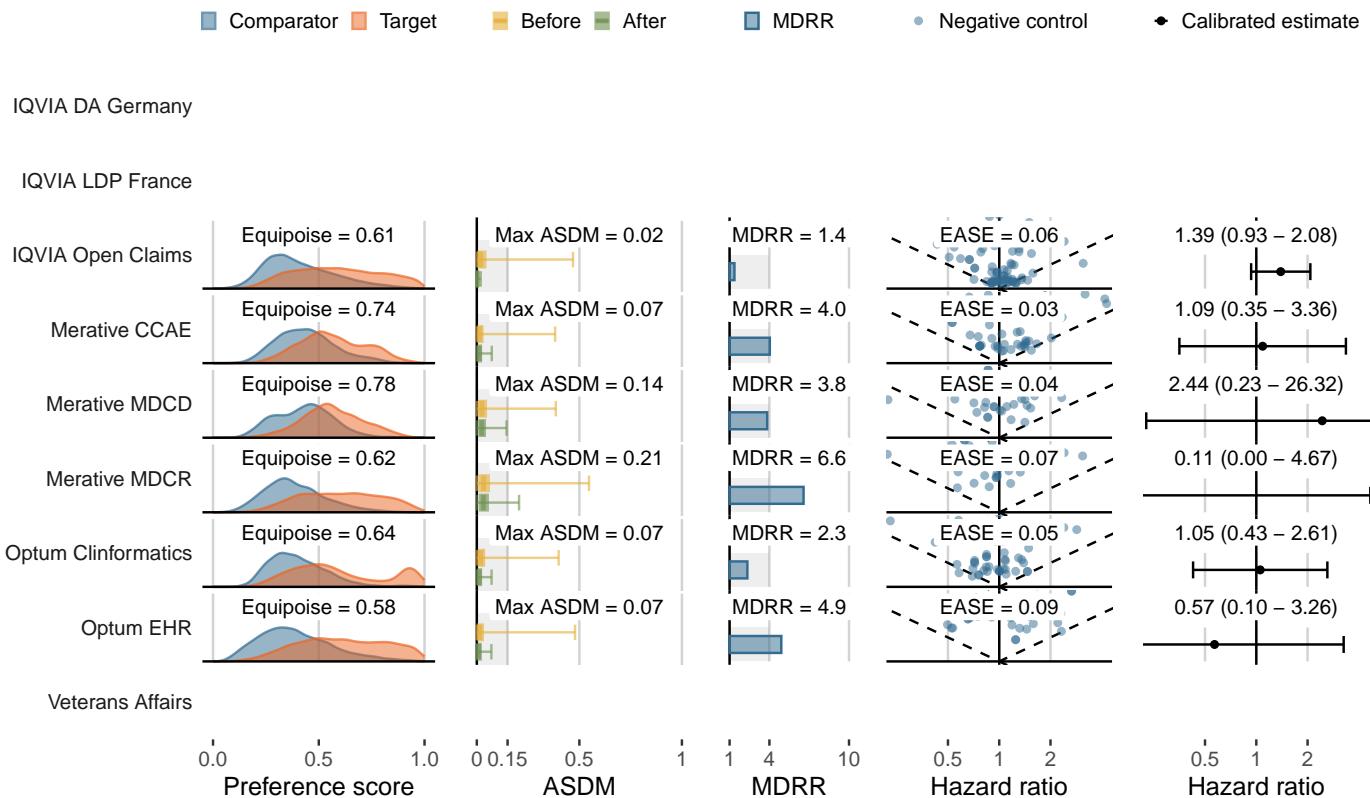
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute pancreatitis**

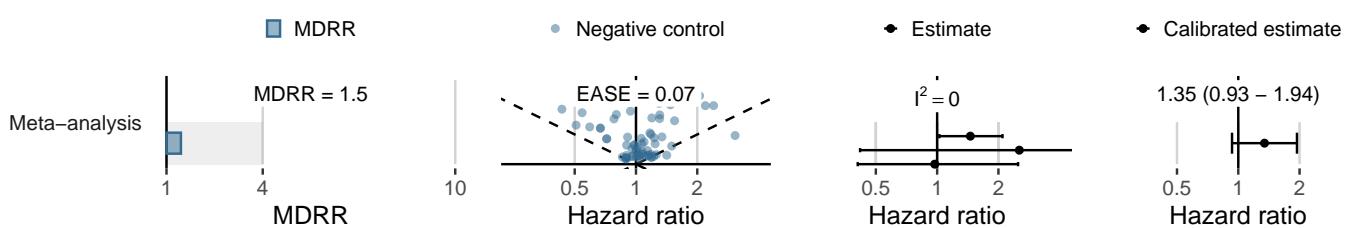
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	126,697	105,223	245	2.33
Merative CCAE	4,782	3,521	6	1.70
Merative MDCD	2,622	1,791	14	7.82
Merative MDCR	1,483	1,470	<5	<3.40
Optum Clininformatics	11,435	9,138	35	3.83
Optum EHR	5,429	1,128	<5	<4.43
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



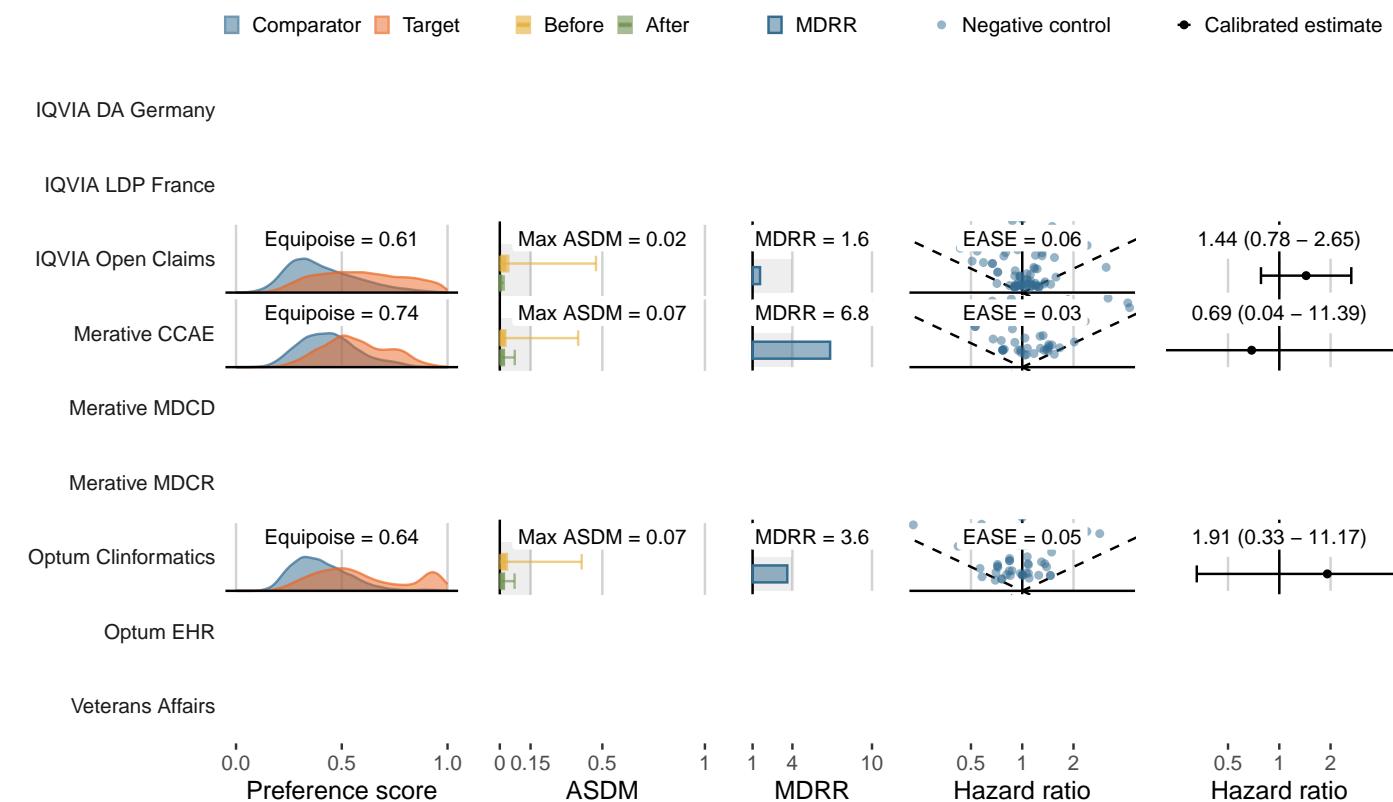
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Bladder cancer**

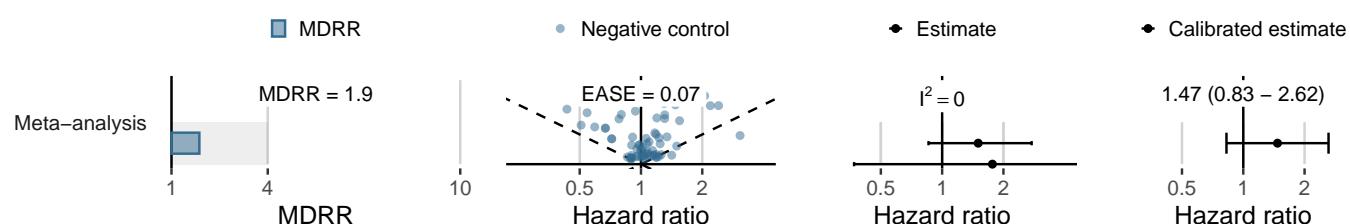
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	127,447	105,728	137	1.30
Merative CCAE	4,808	3,524	<5	<1.42
Merative MDCD	2,670	1,820	<5	<2.75
Merative MDCR	1,481	1,460	<5	<3.42
Optum Clininformatics	11,486	9,180	16	1.74
Optum EHR	5,448	1,140	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



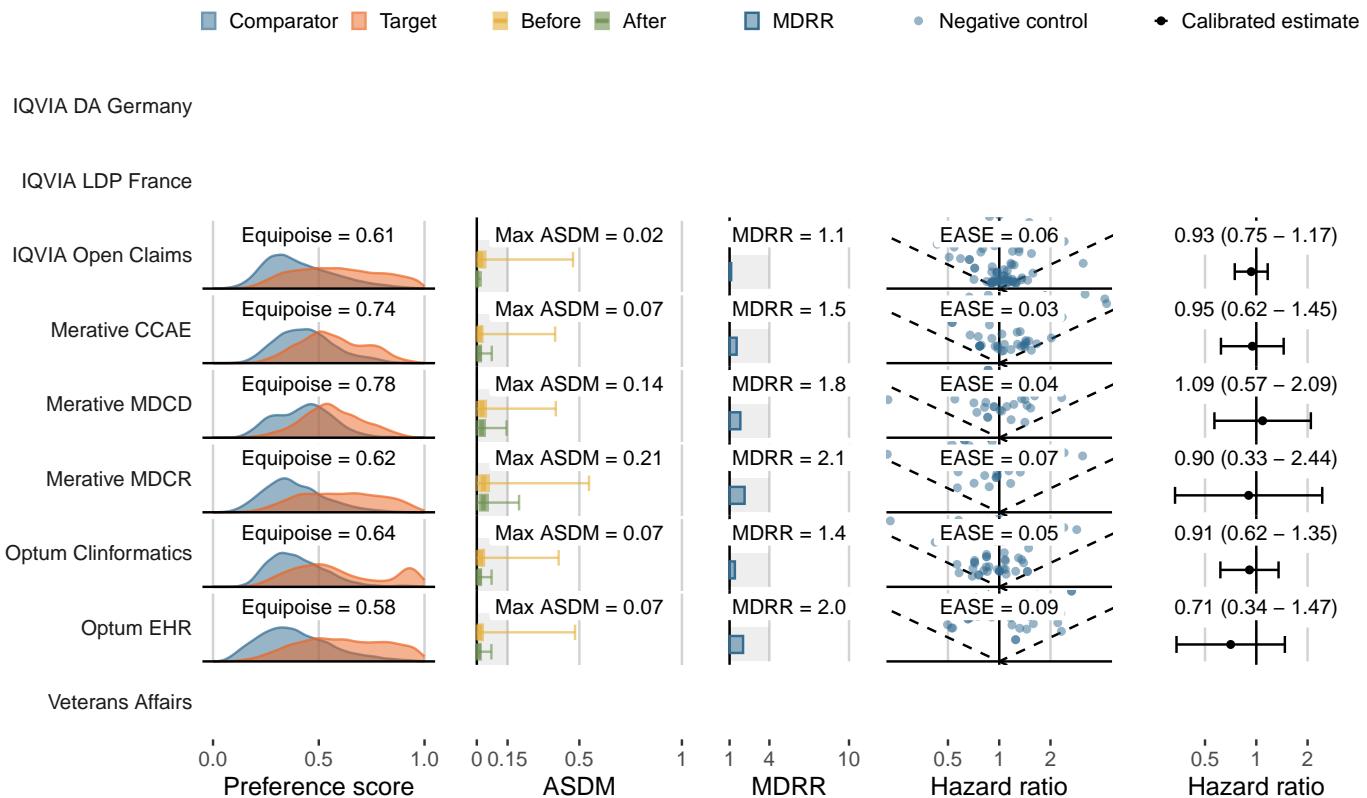
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Bone fracture**

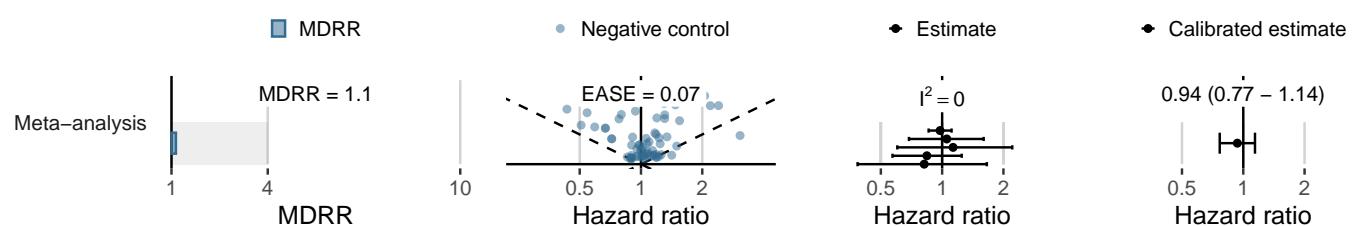
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	111,519	91,363	1,851	20.26
Merative CCAE	4,421	3,170	61	19.24
Merative MDCC	2,334	1,565	69	44.08
Merative MDCR	1,282	1,268	43	33.91
Optum Clininformatics	10,406	8,095	217	26.81
Optum EHR	5,094	1,056	22	20.83
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



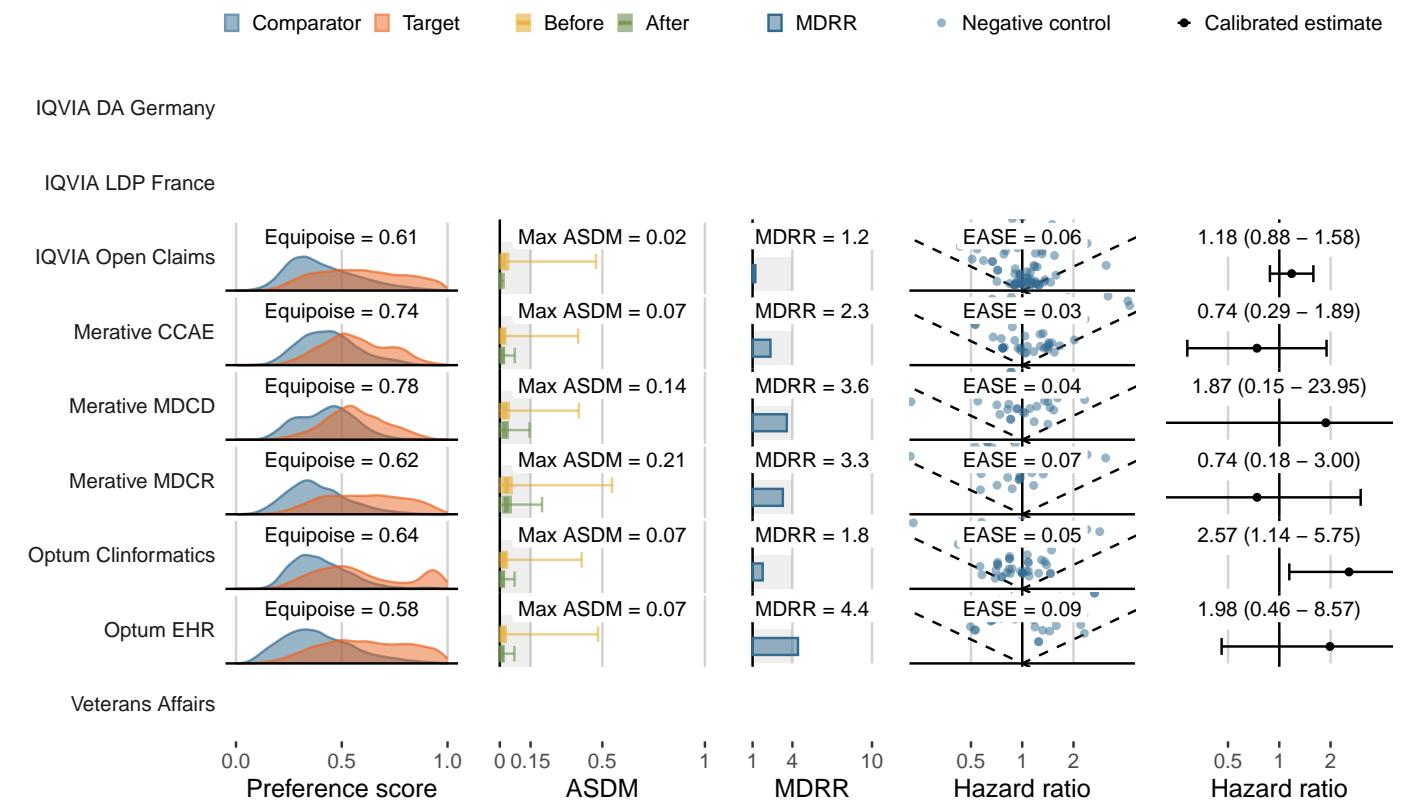
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute myocardial infarction**

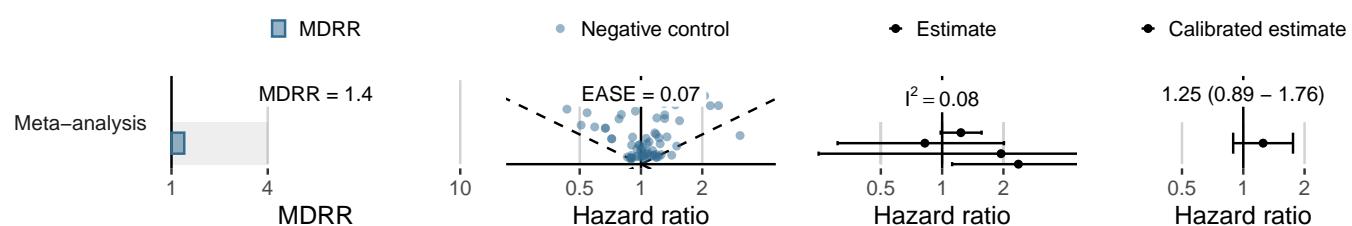
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	123,744	102,459	676	6.60
Merative CCAE	4,727	3,467	13	3.75
Merative MDCD	2,558	1,750	16	9.14
Merative MDCR	1,431	1,421	18	12.67
Optum Clininformatics	11,189	8,887	90	10.13
Optum EHR	5,392	1,119	9	8.04
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



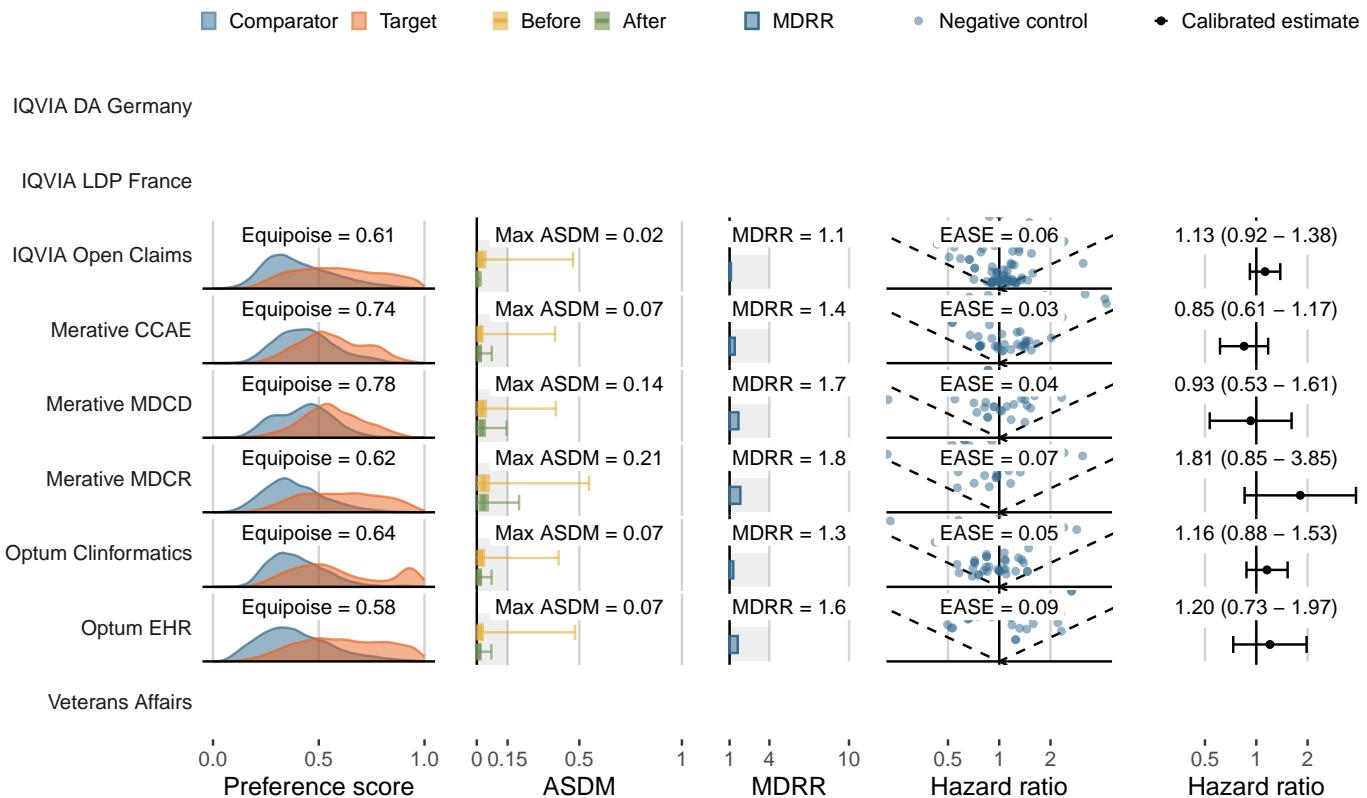
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Genitourinary infection**

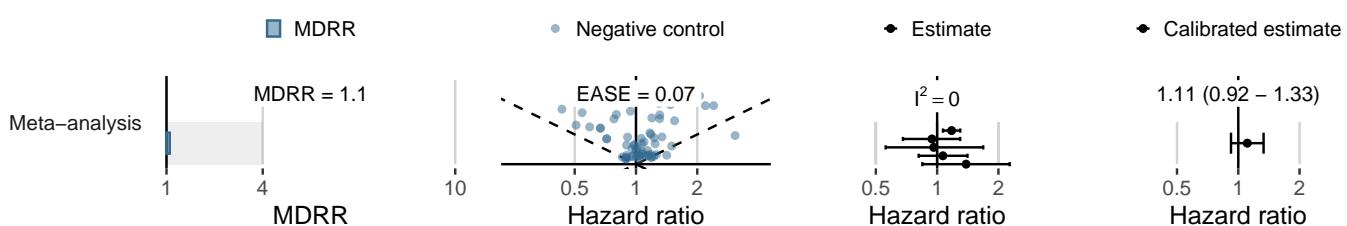
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	64,919	52,602	1,722	32.74
Merative CCAE	3,911	2,805	110	39.22
Merative MDCD	2,043	1,345	85	63.20
Merative MDCR	1,114	1,096	75	68.42
Optum Clininformatics	8,585	6,502	394	60.59
Optum EHR	4,708	959	52	54.20
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



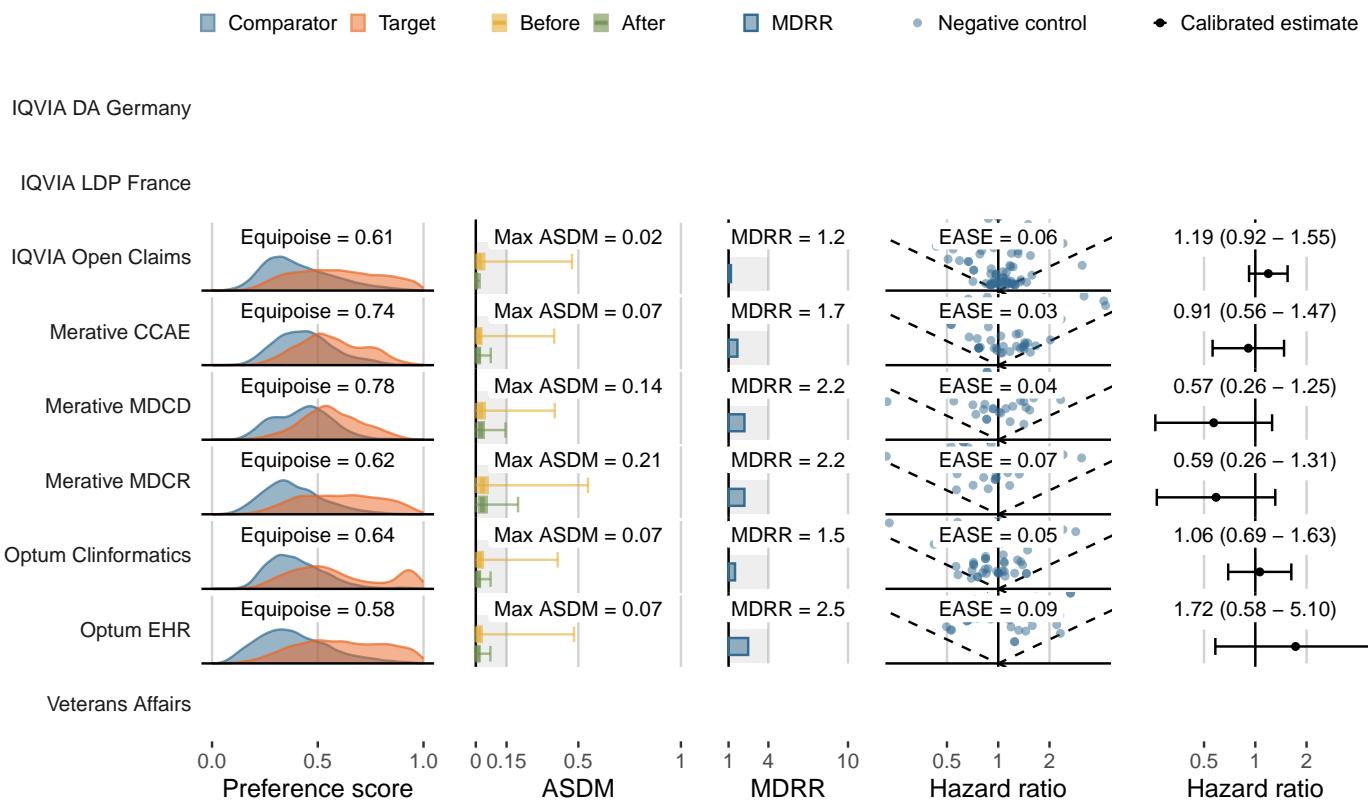
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Joint pain**

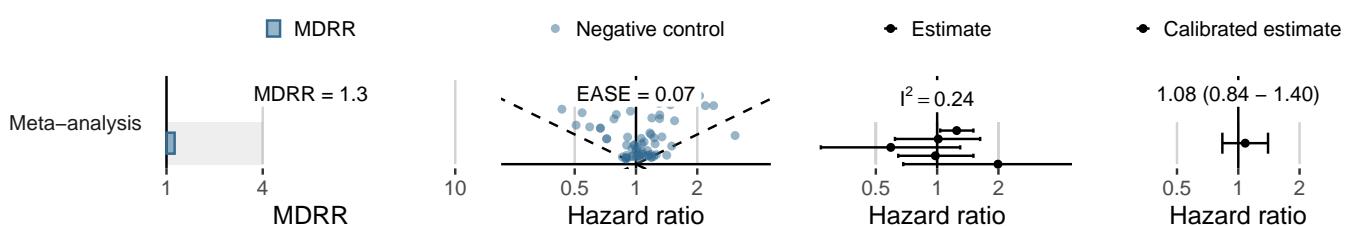
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	120,141	99,155	879	8.86
Merative CCAE	4,537	3,309	48	14.51
Merative MDCD	2,043	1,357	32	23.57
Merative MDCR	1,152	1,144	37	32.35
Optum Clininformatics	9,578	7,389	158	21.38
Optum EHR	5,178	1,081	15	13.88
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



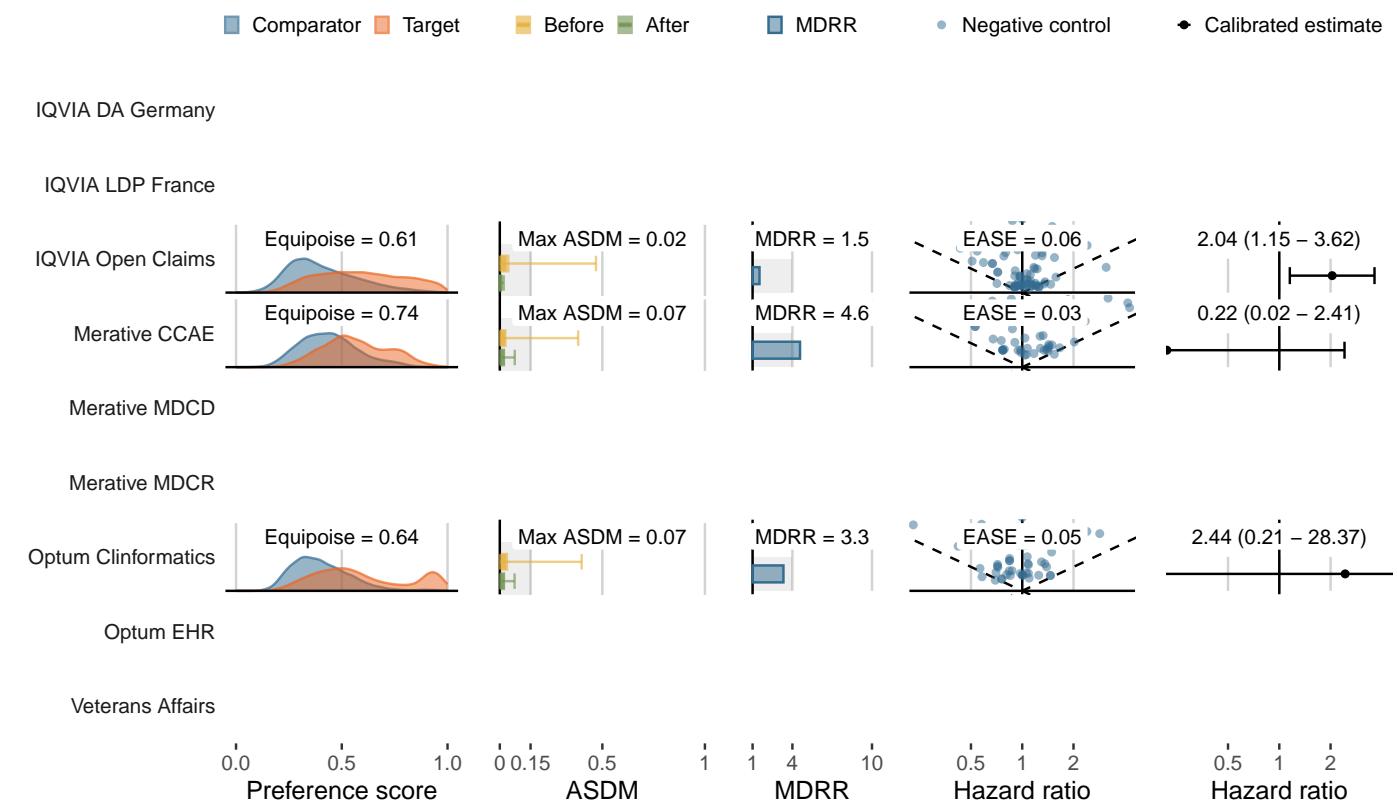
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Renal cancer**

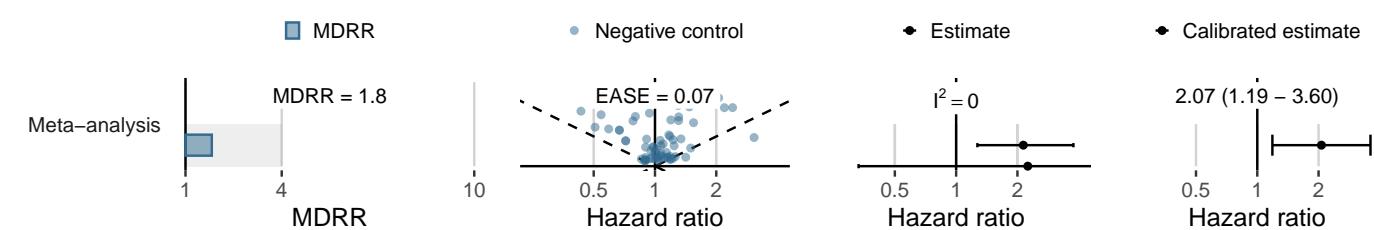
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	127,421	105,604	149	1.41
Merative CCAE	4,805	3,524	<5	<1.42
Merative MDCD	2,665	1,816	<5	<2.75
Merative MDCR	1,488	1,467	<5	<3.41
Optum Clininformatics	11,471	9,169	19	2.07
Optum EHR	5,453	1,133	<5	<4.41
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



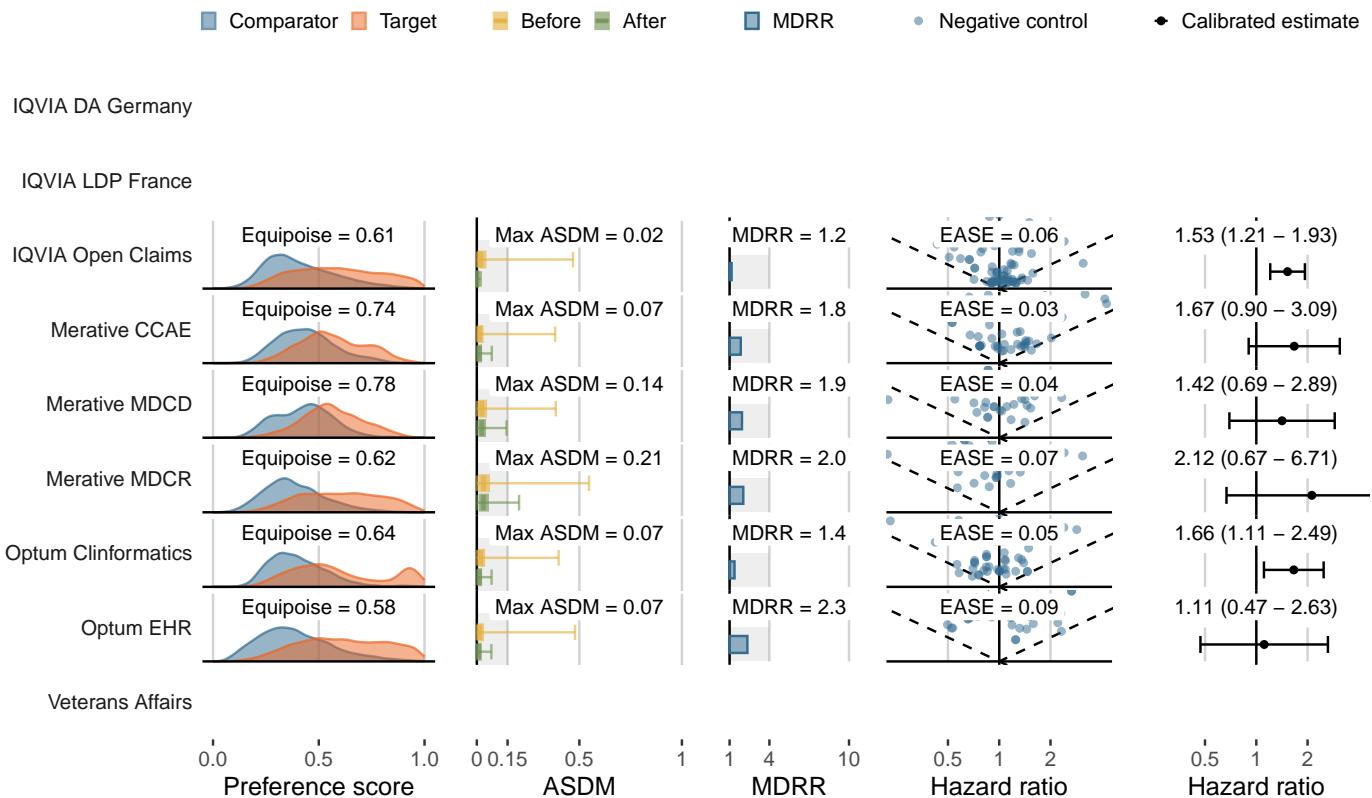
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute renal failure**

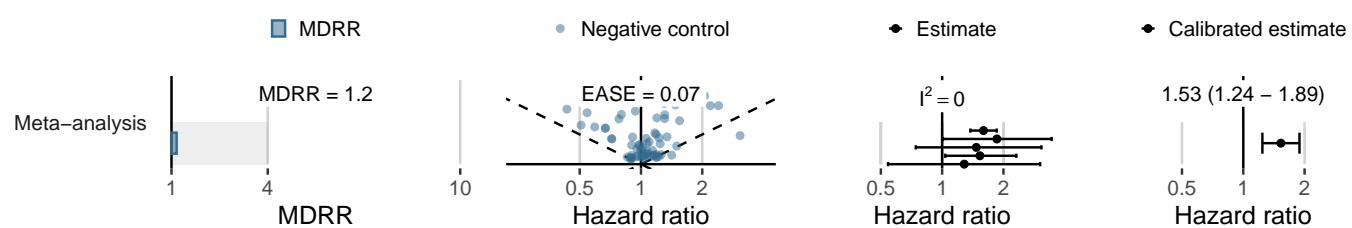
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	79,828	65,531	971	14.82
Merative CCAE	4,755	3,489	44	12.61
Merative MDCD	2,463	1,654	62	37.50
Merative MDCR	1,364	1,325	61	46.04
Optum Clininformatics	10,593	8,295	285	34.36
Optum EHR	5,390	1,117	22	19.69
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



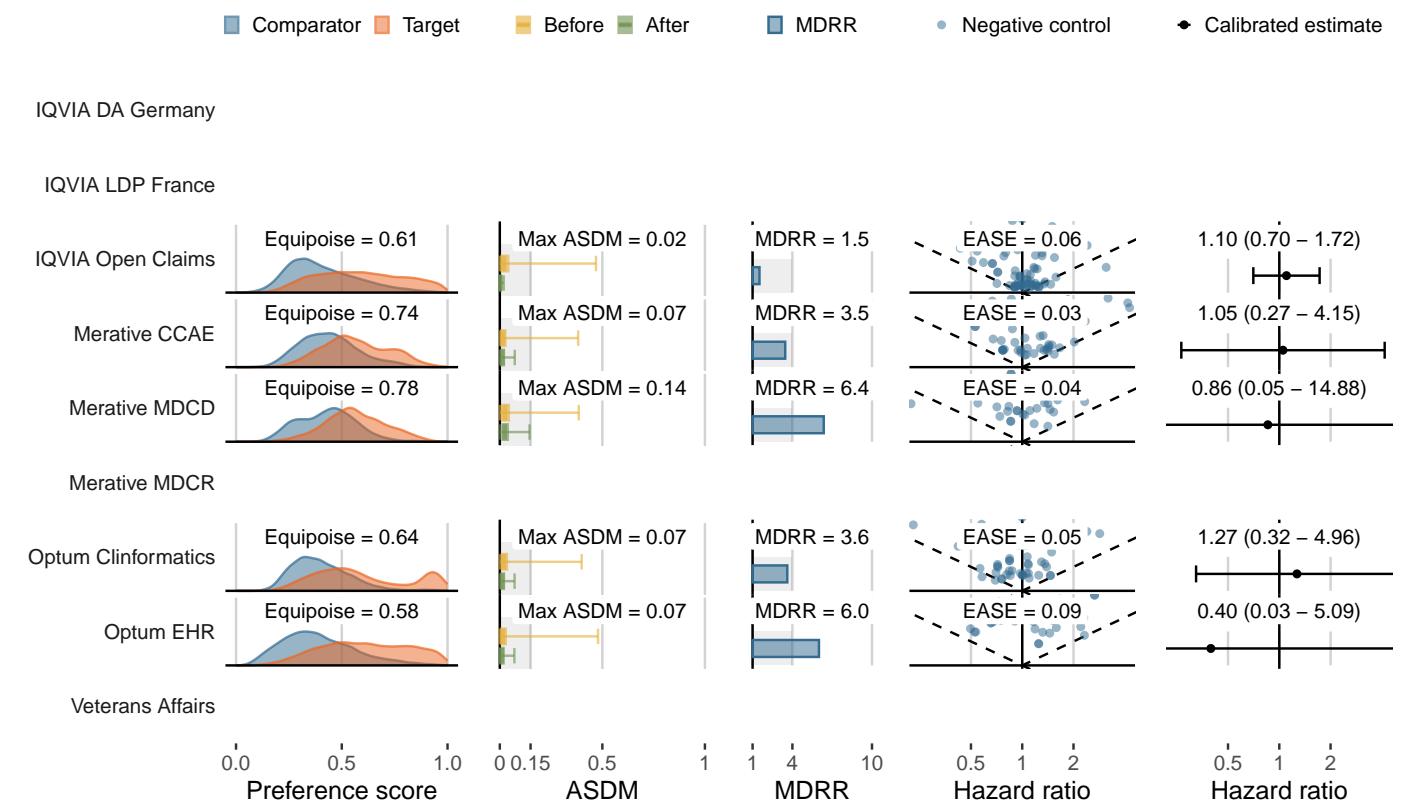
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Thyroid tumor**

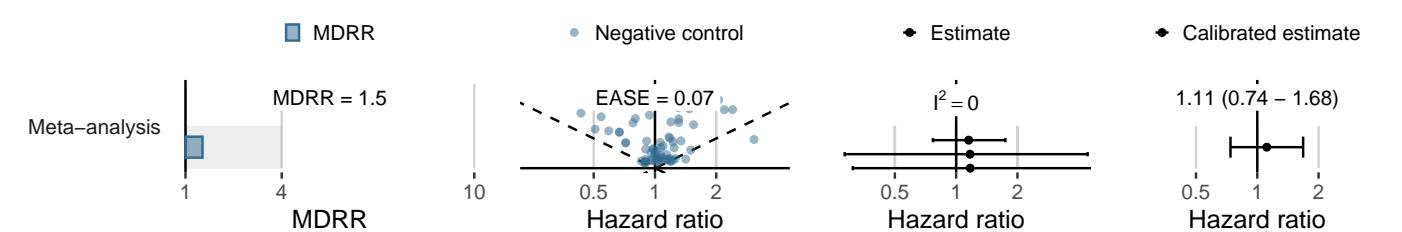
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	127,176	105,483	123	1.17
Merative CCAE	4,793	3,523	6	1.70
Merative MDCD	2,654	1,818	<5	<2.75
Merative MDCR	1,490	1,474	<5	<3.39
Optum Clininformatics	11,462	9,164	16	1.75
Optum EHR	5,438	1,138	<5	<4.39
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



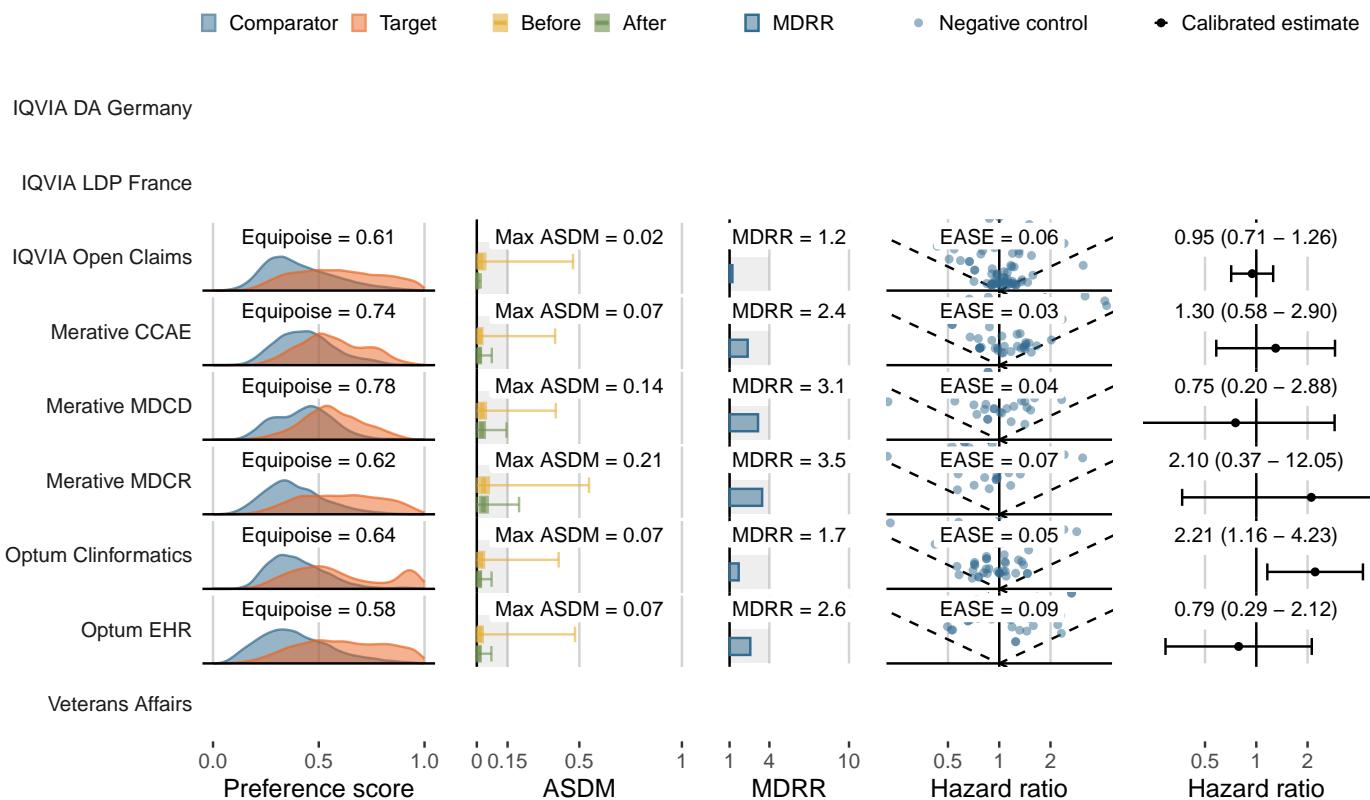
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Venous thromboembolic events**

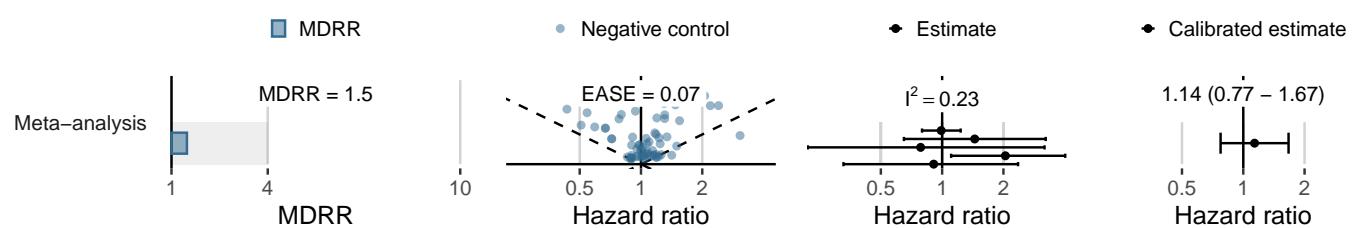
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	123,187	102,012	653	6.40
Merative CCAE	4,703	3,442	21	6.10
Merative MDCD	2,548	1,731	19	10.98
Merative MDCR	1,415	1,388	18	12.97
Optum Clininformatics	11,124	8,817	100	11.34
Optum EHR	5,330	1,095	10	9.13
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



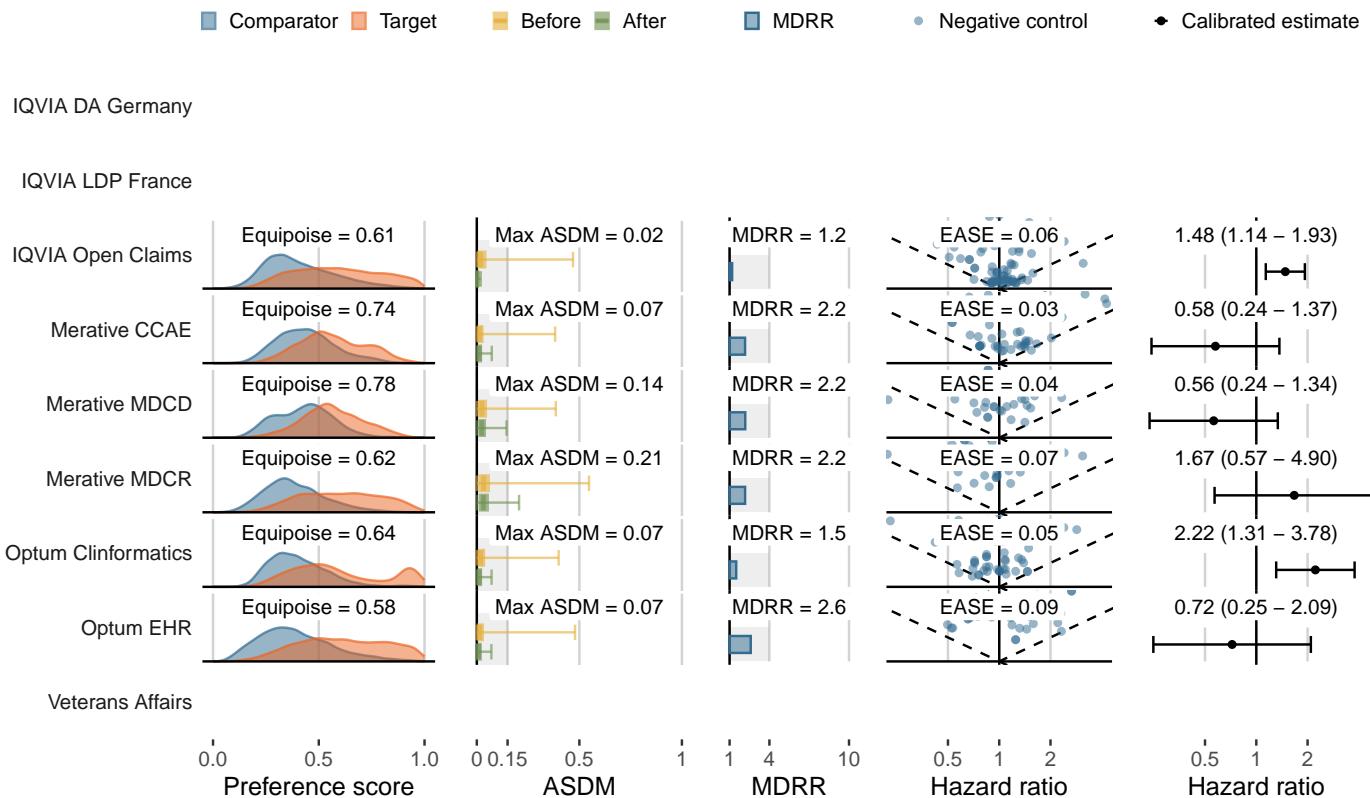
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Hospitalization with heart failure**

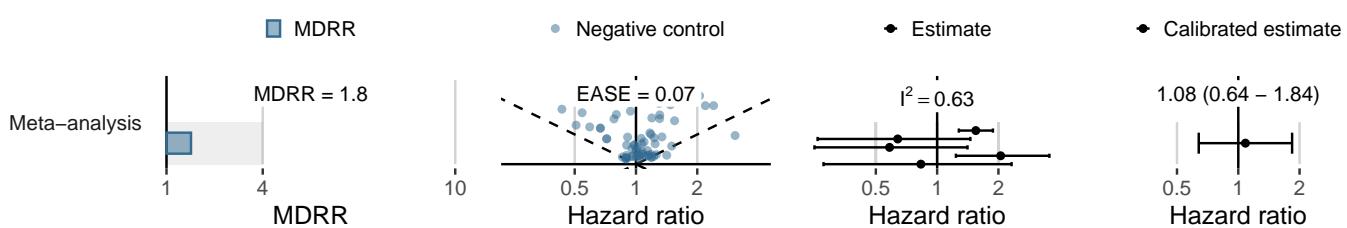
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	79,248	65,426	601	9.19
Merative CCAE	4,719	3,455	22	6.37
Merative MDCD	2,402	1,612	39	24.19
Merative MDCR	1,335	1,315	50	38.02
Optum Clininformatics	10,703	8,449	178	21.07
Optum EHR	5,350	1,101	16	14.54
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



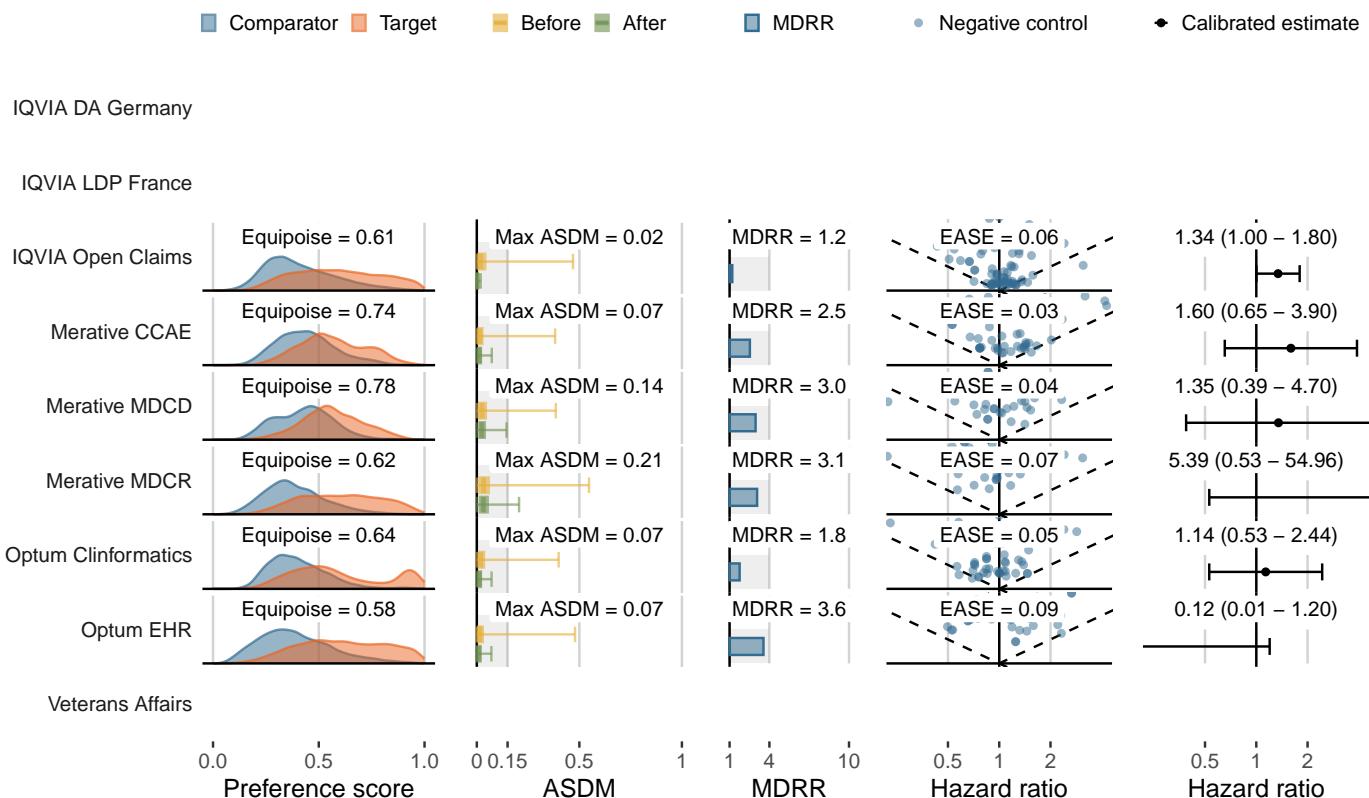
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Canagliflozin** (SGLT2 Inhibitors)
- Outcome: **Stroke**

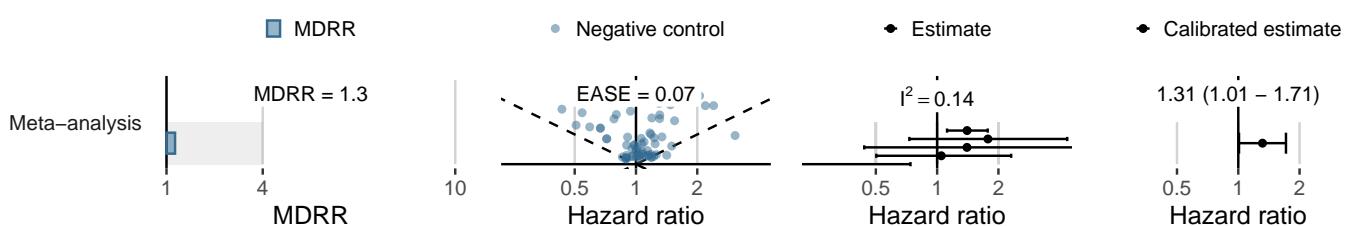
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	123,754	102,635	732	7.13
Merative CCAE	4,759	3,480	18	5.17
Merative MDCD	2,563	1,747	24	13.74
Merative MDCR	1,425	1,404	22	15.66
Optum Clininformatics	11,149	8,917	86	9.64
Optum EHR	5,421	1,126	<5	<4.44
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



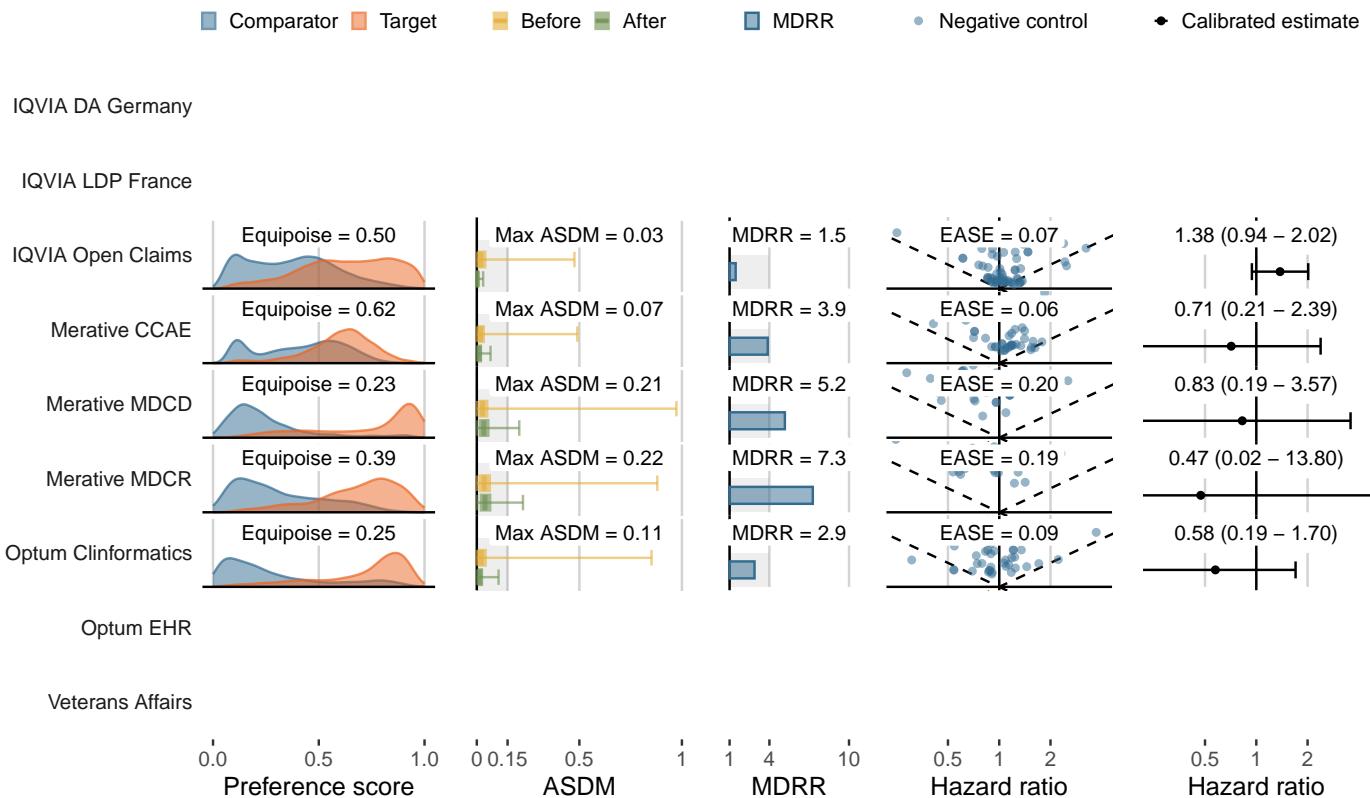
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute pancreatitis**

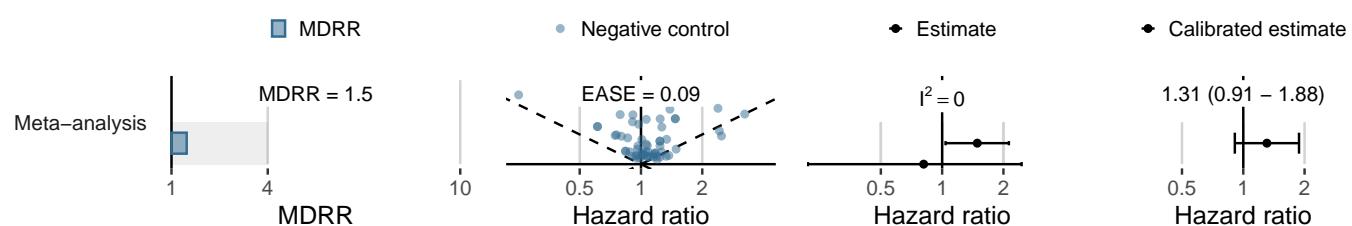
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	75,727	59,050	106	1.80
Merative CCAE	4,348	3,200	5	1.56
Merative MDCC	2,469	1,695	13	7.67
Merative MDCR	1,250	1,232	<5	<4.06
Optum Clininformatics	10,923	8,668	32	3.69
Optum EHR	4,733	971	<5	<5.15
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



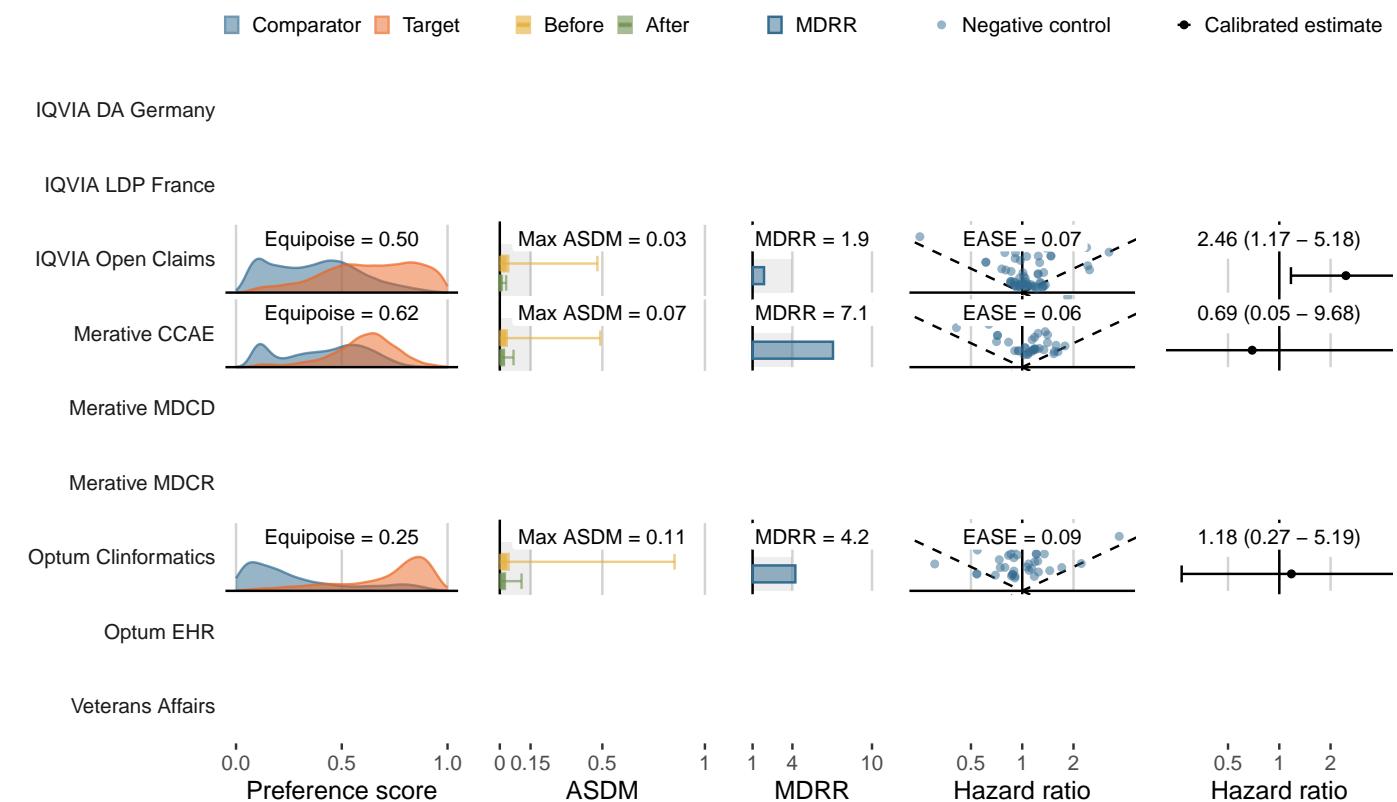
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Bladder cancer**

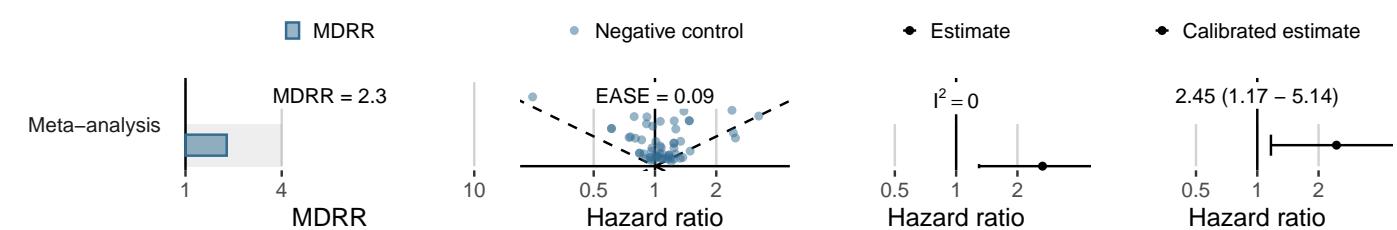
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	76,373	59,431	53	0.89
Merative CCAE	4,370	3,210	<5	<1.56
Merative MDCC	2,510	1,721	<5	<2.91
Merative MDCR	1,248	1,227	<5	<4.08
Optum Clininformatics	10,971	8,708	16	1.84
Optum EHR	4,741	974	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



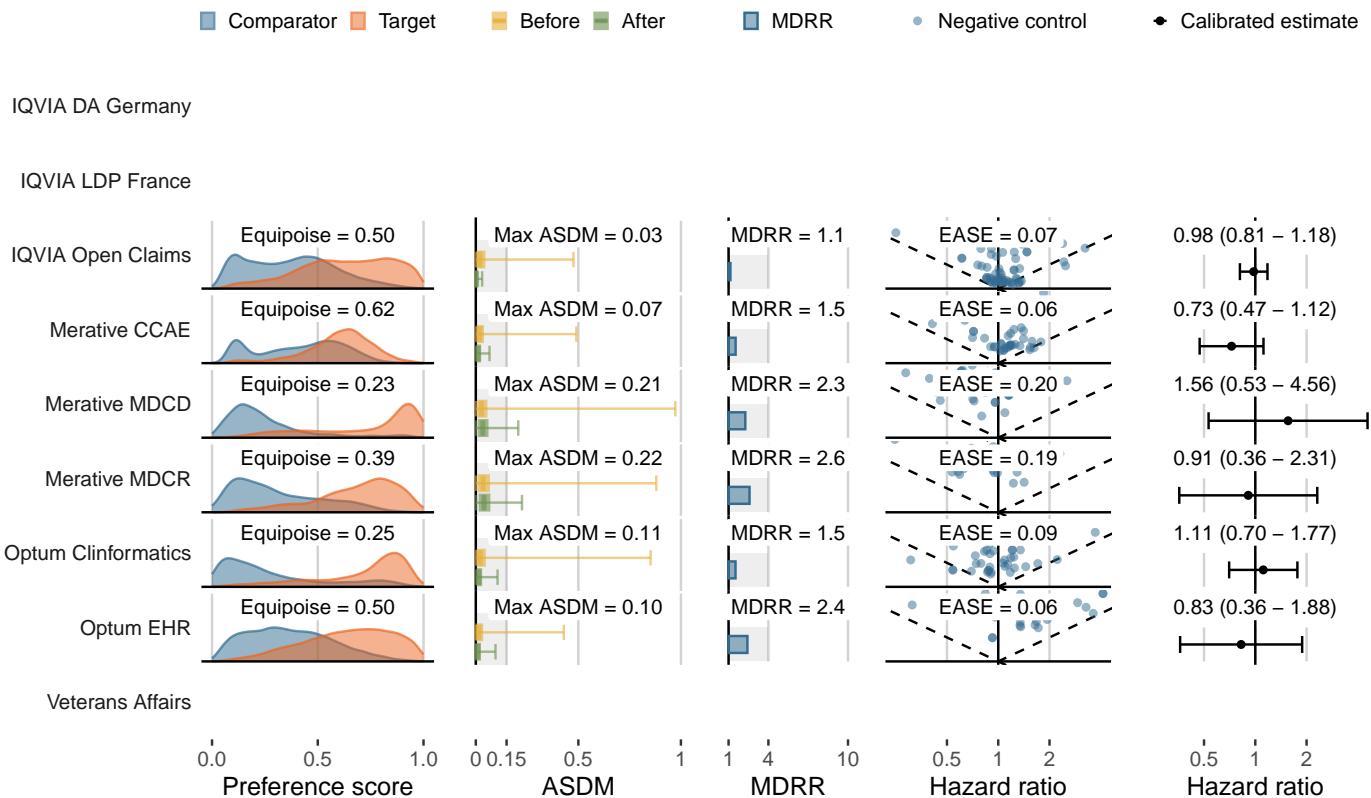
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Bone fracture**

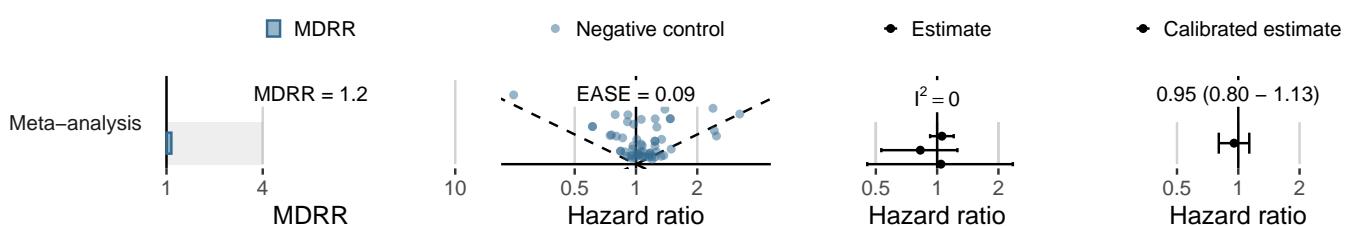
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	67,362	51,769	796	15.38
Merative CCAE	4,017	2,897	52	17.95
Merative MDCD	2,207	1,492	63	42.22
Merative MDCR	1,086	1,082	32	29.58
Optum Clininformatics	9,920	7,684	211	27.46
Optum EHR	4,432	892	20	22.41
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



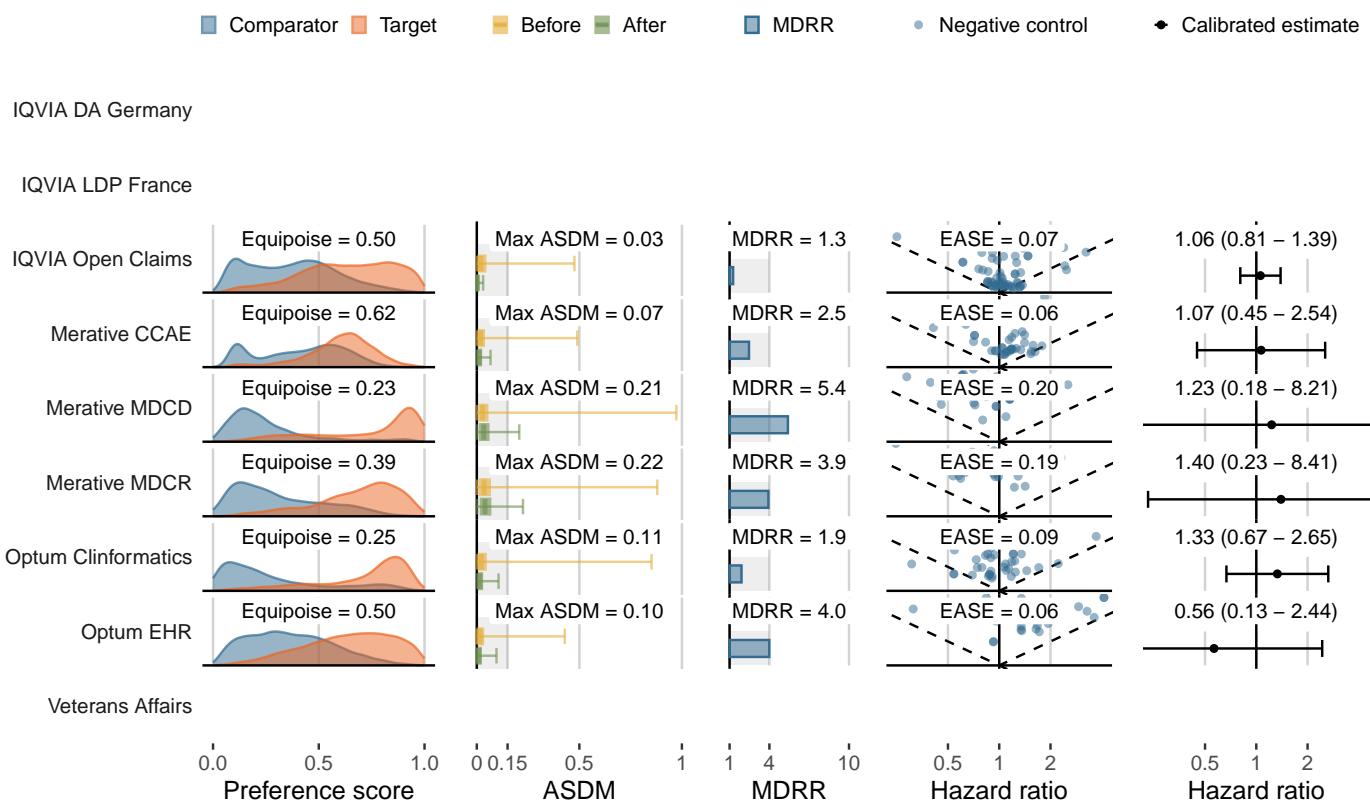
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute myocardial infarction**

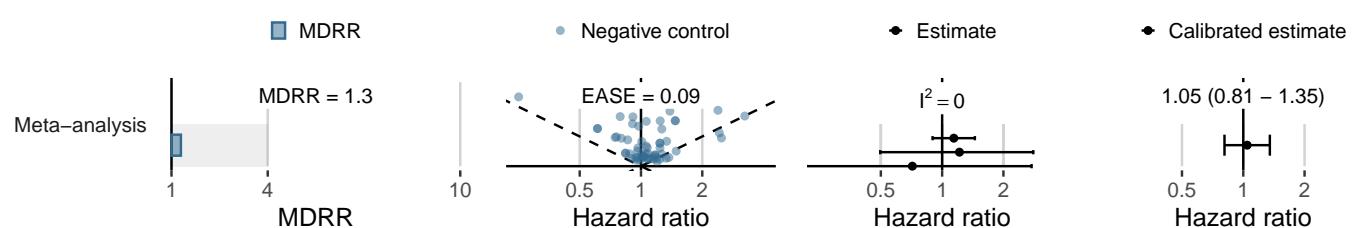
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	74,523	57,831	246	4.25
Merative CCAE	4,300	3,138	15	4.78
Merative MDCD	2,410	1,659	12	7.23
Merative MDCR	1,199	1,187	16	13.48
Optum Clininformatics	10,675	8,433	88	10.44
Optum EHR	4,677	960	6	6.25
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



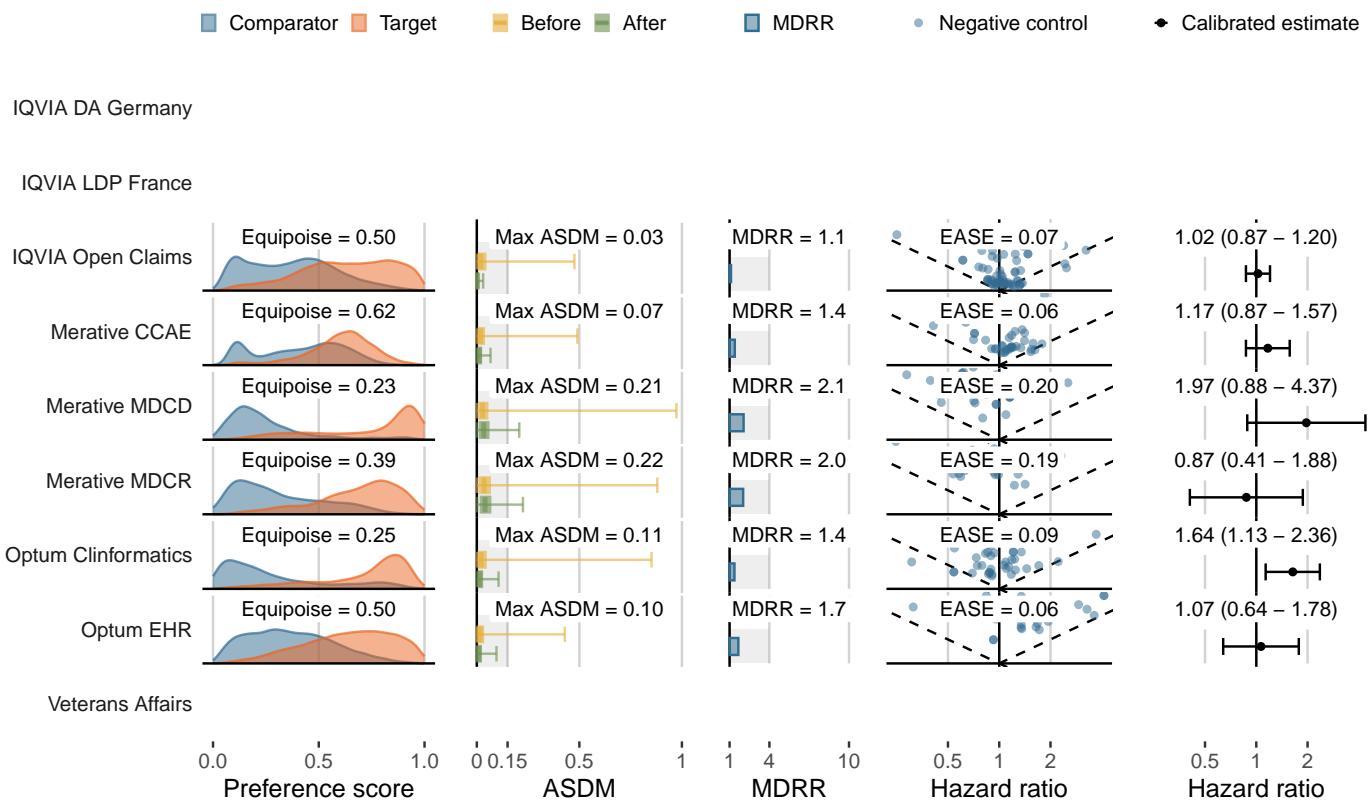
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Genitourinary infection**

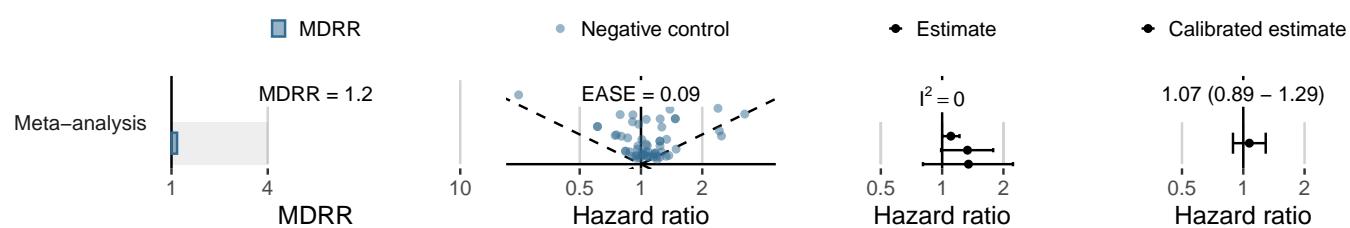
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	59,206	45,415	1,361	29.97
Merative CCAE	3,538	2,528	106	41.93
Merative MDCD	1,925	1,275	79	61.96
Merative MDCR	923	889	64	71.96
Optum Clininformatics	8,308	6,204	380	61.25
Optum EHR	4,083	823	46	55.88
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



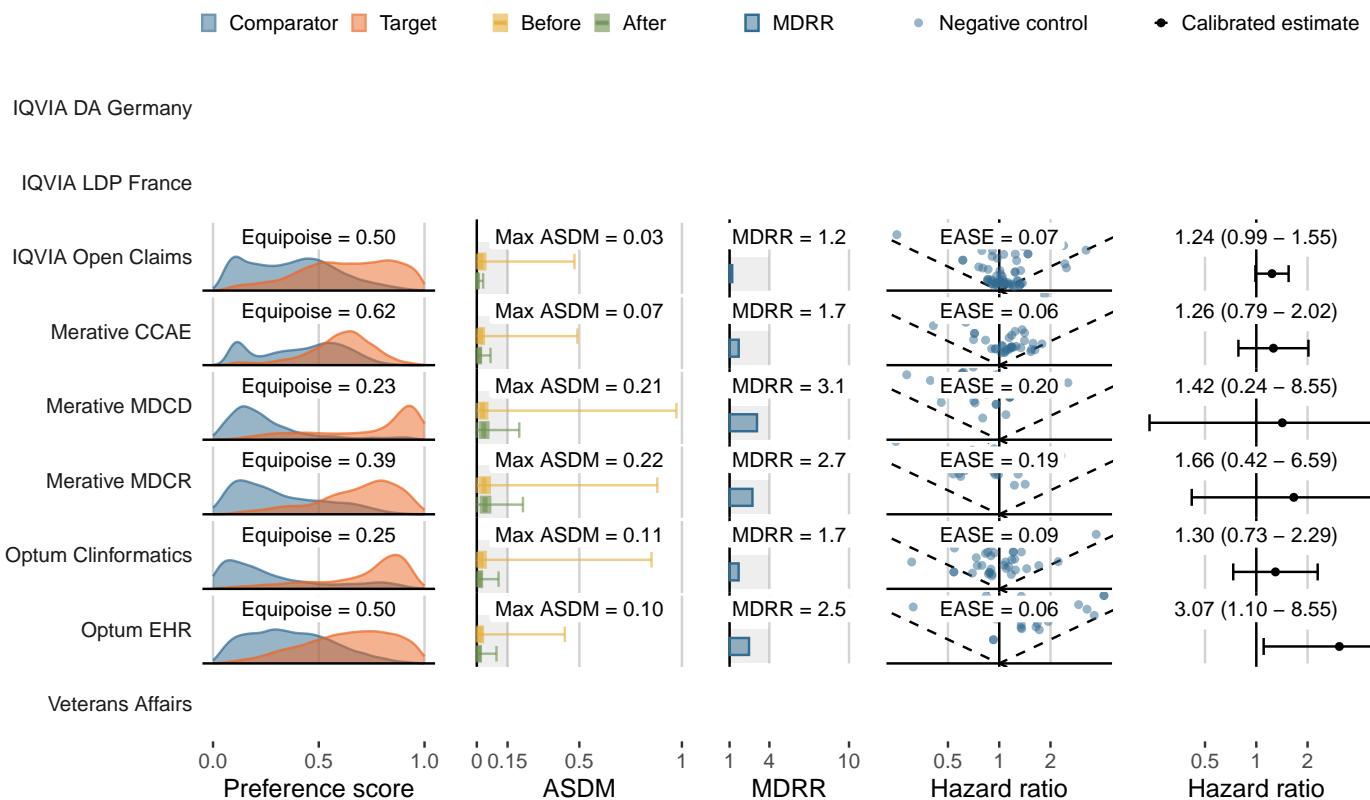
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Joint pain**

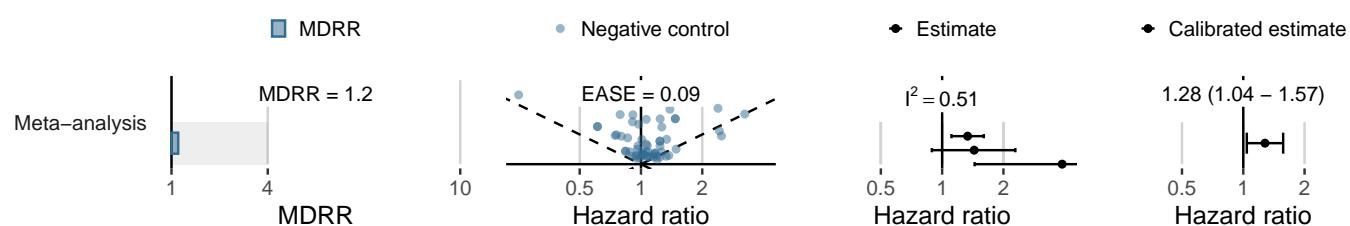
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	71,802	55,820	425	7.61
Merative CCAE	4,096	2,994	48	16.03
Merative MDCD	1,880	1,247	32	25.66
Merative MDCR	997	980	33	33.69
Optum Clininformatics	9,143	7,005	136	19.41
Optum EHR	4,499	924	13	14.07
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Renal cancer**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	76,387	59,432	71	1.19
Merative CCAE	4,357	3,212	7	2.18
Merative MDCD	2,505	1,716	<5	<2.91
Merative MDCR	1,257	1,234	<5	<4.05
Optum Clininformatics	10,954	8,697	19	2.18
Optum EHR	4,732	965	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ● Negative control ◆ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France

IQVIA Open Claims
Merative CCAE

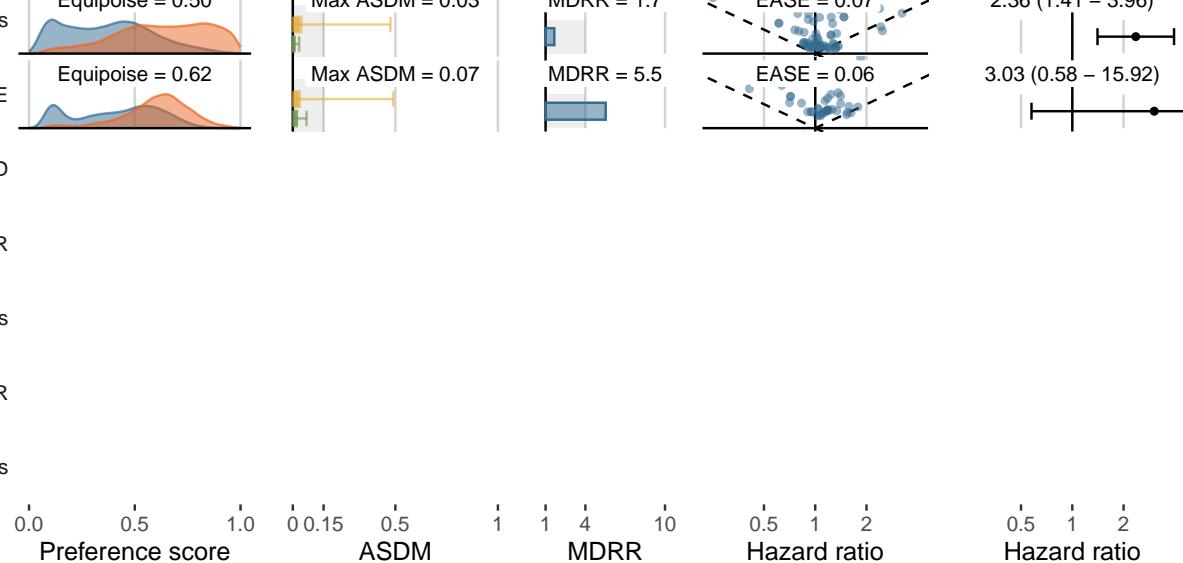
Merative MDCD

Merative MDCR

Optum Clininformatics

Optum EHR

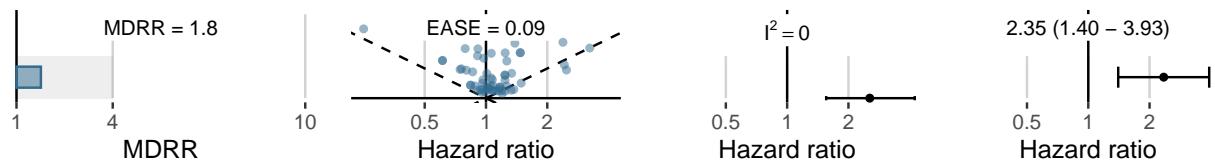
Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ● Negative control ◆ Estimate ◆ Calibrated estimate

Meta-analysis



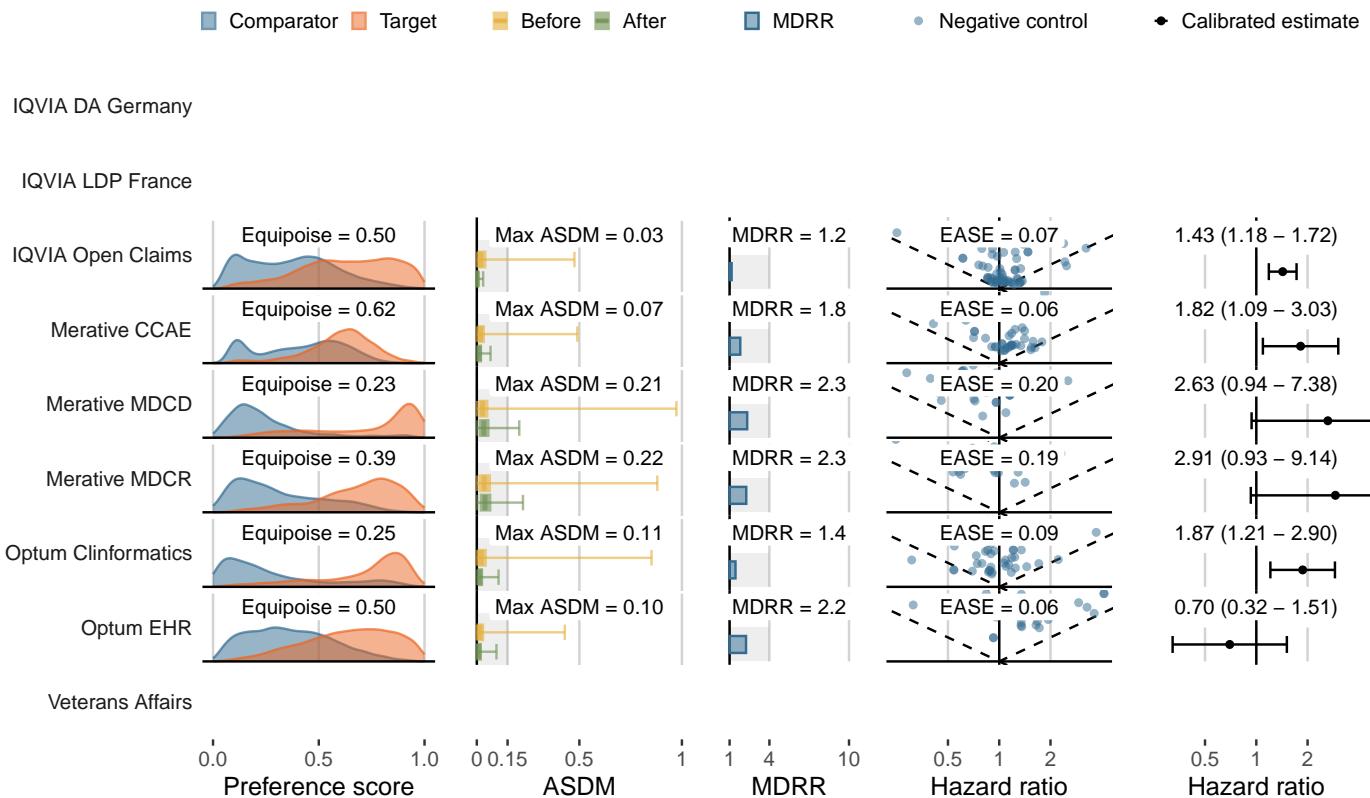
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute renal failure**

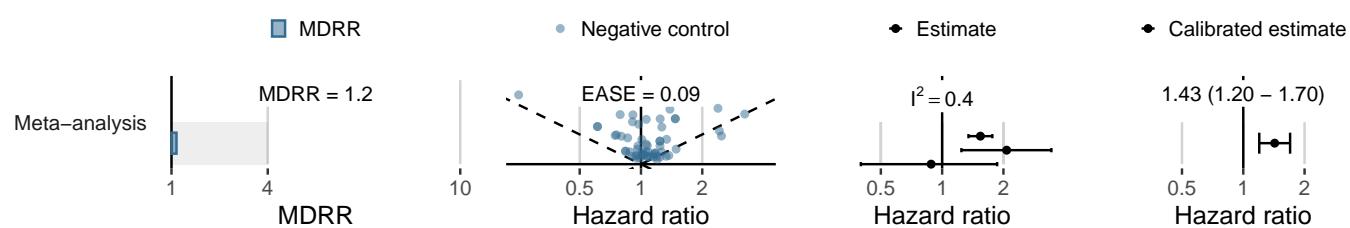
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	73,935	57,261	830	14.49
Merative CCAE	4,307	3,163	44	13.91
Merative MDCD	2,331	1,573	60	38.14
Merative MDCR	1,105	1,076	48	44.62
Optum Clininformatics	10,074	7,832	276	35.24
Optum EHR	4,684	951	21	22.07
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



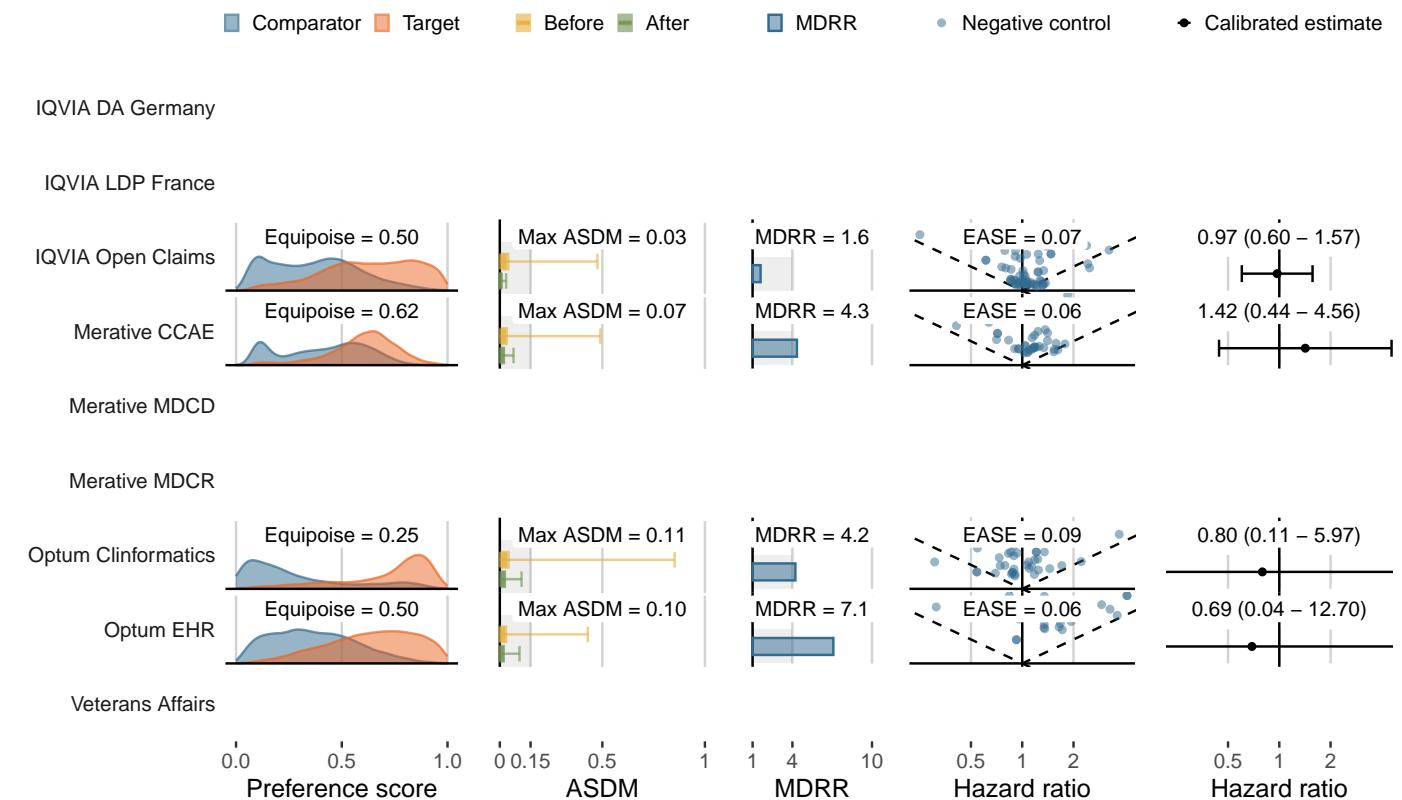
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Thyroid tumor**

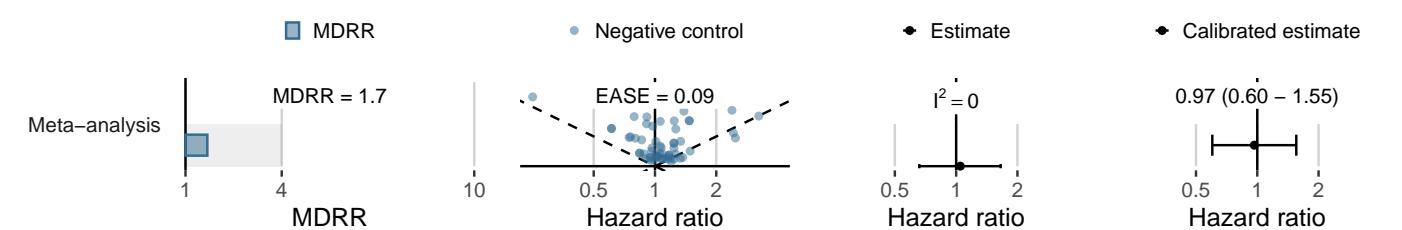
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	76,006	59,140	61	1.03
Merative CCAE	4,359	3,210	7	2.18
Merative MDCD	2,498	1,721	<5	<2.90
Merative MDCR	1,255	1,236	<5	<4.04
Optum Clininformatics	10,949	8,695	16	1.84
Optum EHR	4,720	975	<5	<5.13
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



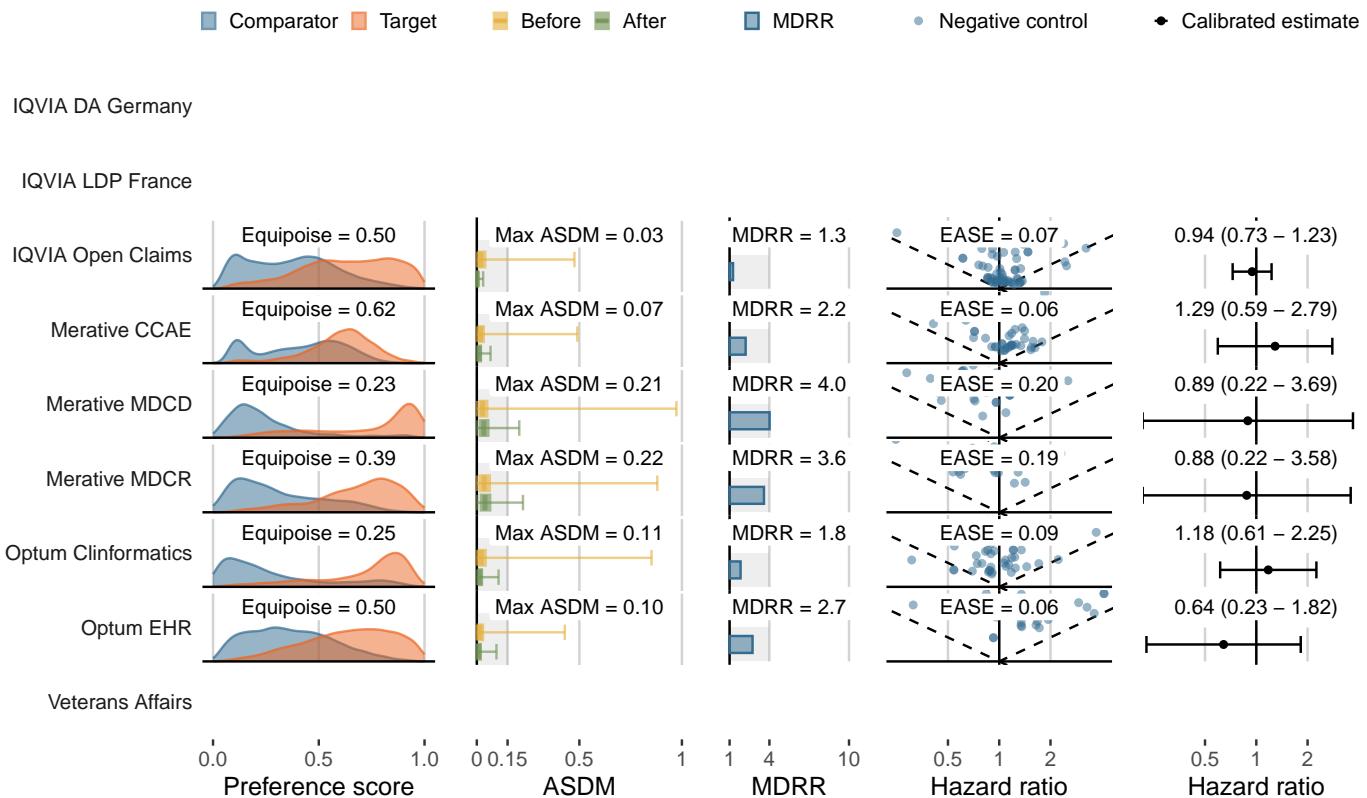
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Venous thromboembolic events**

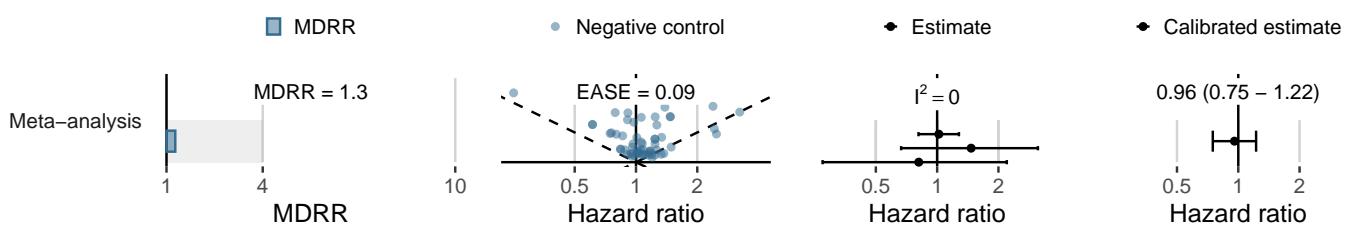
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	74,173	57,670	245	4.25
Merative CCAE	4,278	3,146	19	6.04
Merative MDCD	2,402	1,639	19	11.59
Merative MDCR	1,192	1,167	19	16.29
Optum Clininformatics	10,617	8,364	96	11.48
Optum EHR	4,639	938	9	9.60
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



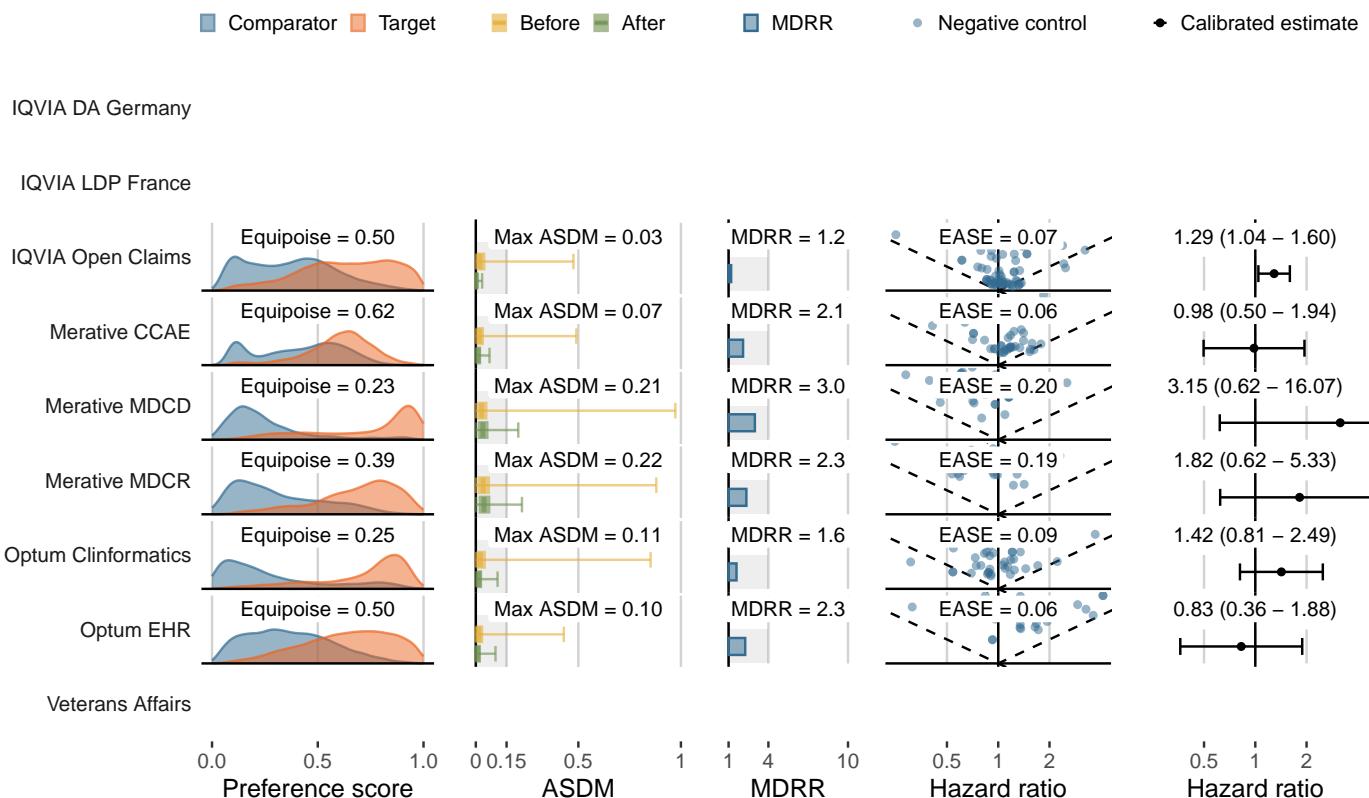
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Hospitalization with heart failure**

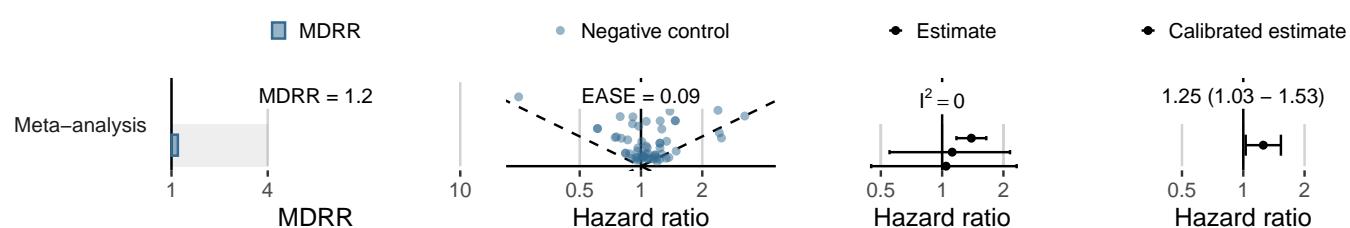
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	73,547	57,194	509	8.90
Merative CCAE	4,274	3,135	20	6.38
Merative MDCD	2,266	1,533	36	23.48
Merative MDCR	1,119	1,100	44	40.01
Optum Clininformatics	10,251	8,044	170	21.13
Optum EHR	4,631	938	20	21.31
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



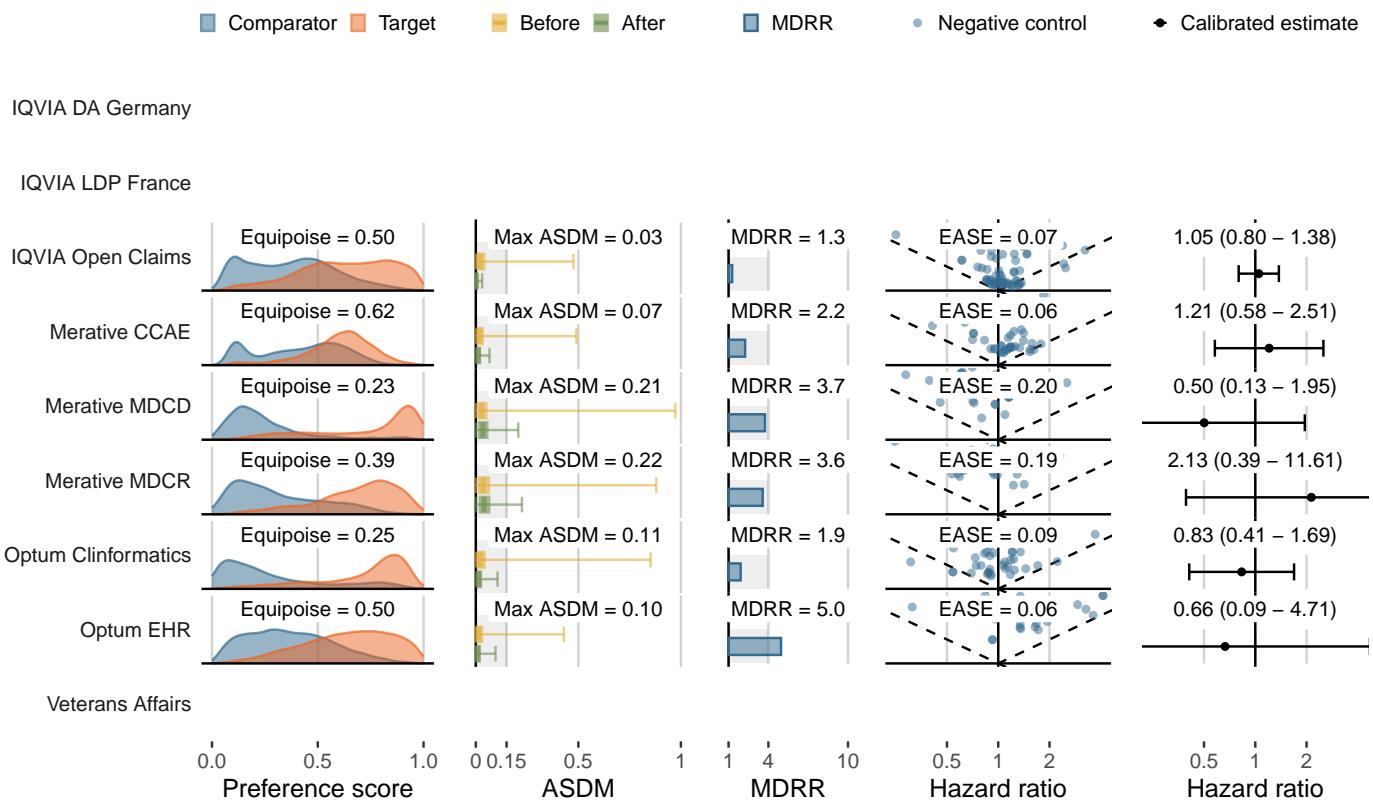
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Dapagliflozin** (SGLT2 Inhibitors)
- Outcome: **Stroke**

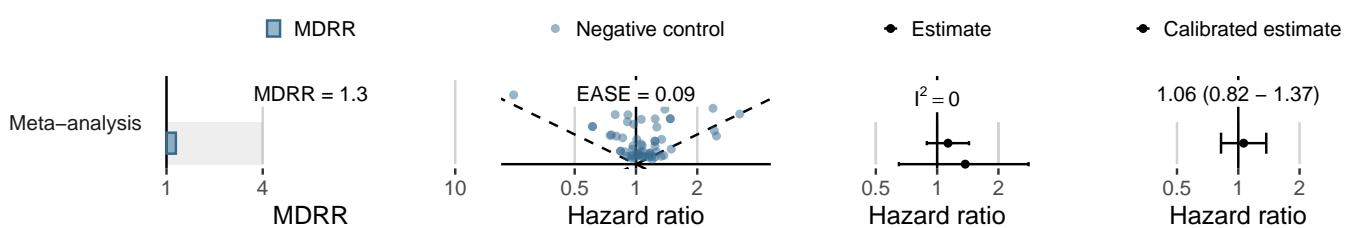
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	74,775	58,205	251	4.31
Merative CCAE	4,315	3,157	17	5.38
Merative MDCD	2,417	1,655	23	13.89
Merative MDCR	1,199	1,178	19	16.13
Optum Clininformatics	10,634	8,460	82	9.69
Optum EHR	4,699	962	5	5.20
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



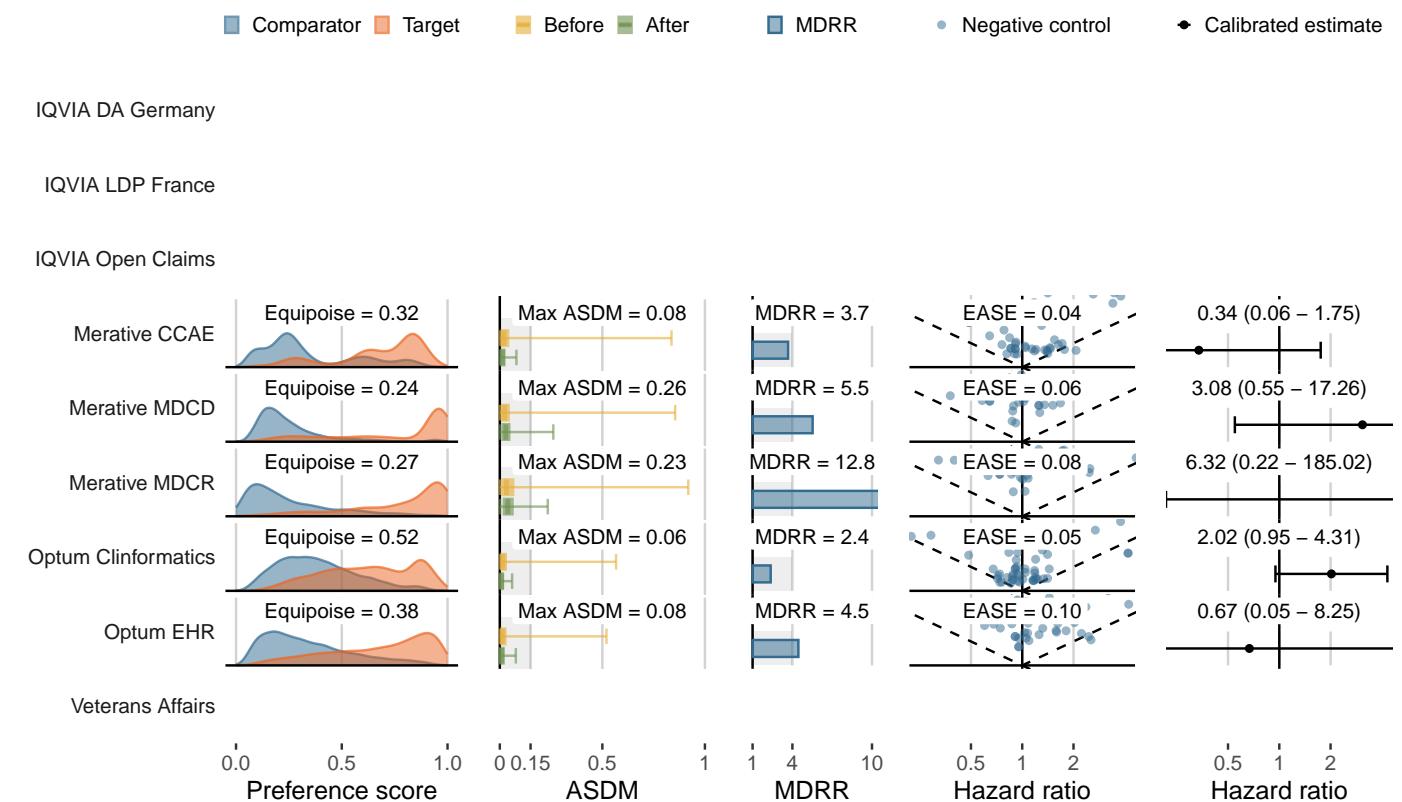
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute pancreatitis**

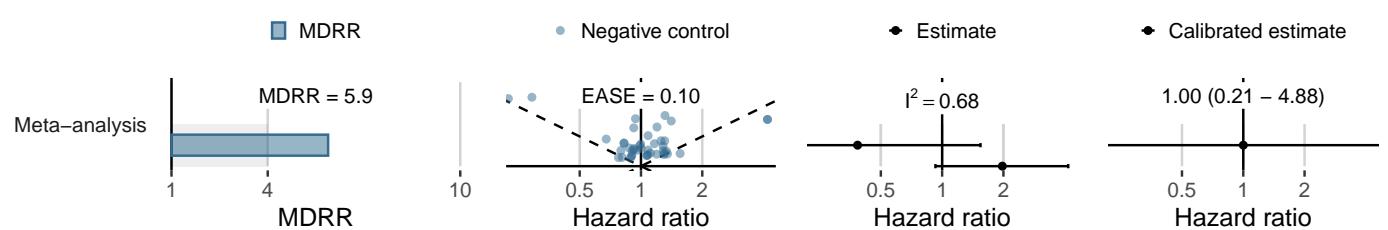
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	3,776	2,739	5	1.83
Merative MDCD	851	557	6	10.77
Merative MDCR	510	419	<5	<11.93
Optum Clininformatics	8,438	6,369	23	3.61
Optum EHR	5,178	1,093	<5	<4.58
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Bladder cancer**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	3,799	2,753	<5	<1.82
Merative MDCD	868	572	-	0.00
Merative MDCR	513	423	-	0.00
Optum Clininformatics	8,481	6,415	10	1.56
Optum EHR	5,181	1,090	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)

■ Comparator ■ Target ■ Before ■ After ■ MDRR ■ Negative control ■ Calibrated estimate

IQVIA DA Germany

IQVIA LDP France

IQVIA Open Claims



Merative MDCD

Merative MDCR



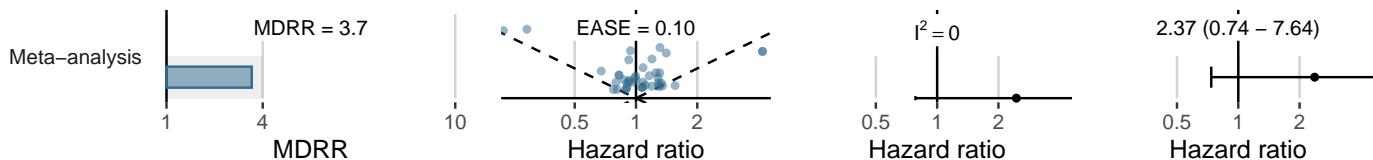
Optum EHR

Veterans Affairs



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

■ MDRR ■ Negative control ■ Estimate ■ Calibrated estimate



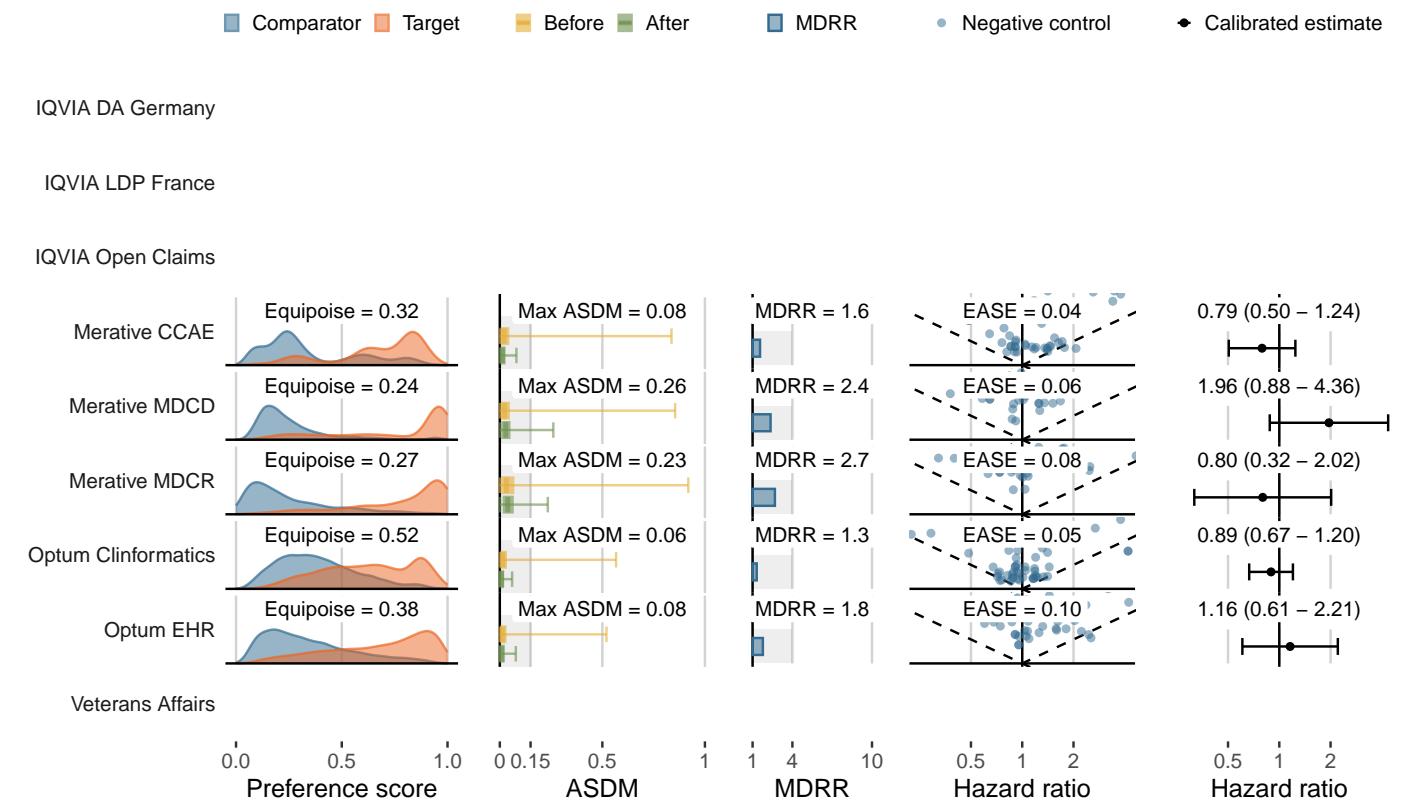
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Bone fracture**

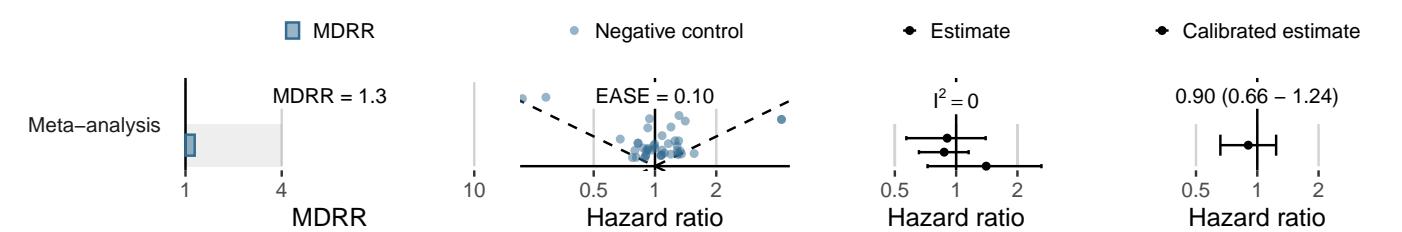
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	3,477	2,463	42	17.05
Merative MDCD	738	484	25	51.65
Merative MDCR	446	378	9	23.79
Optum Clininformatics	7,696	5,658	145	25.63
Optum EHR	4,836	1,014	24	23.67
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



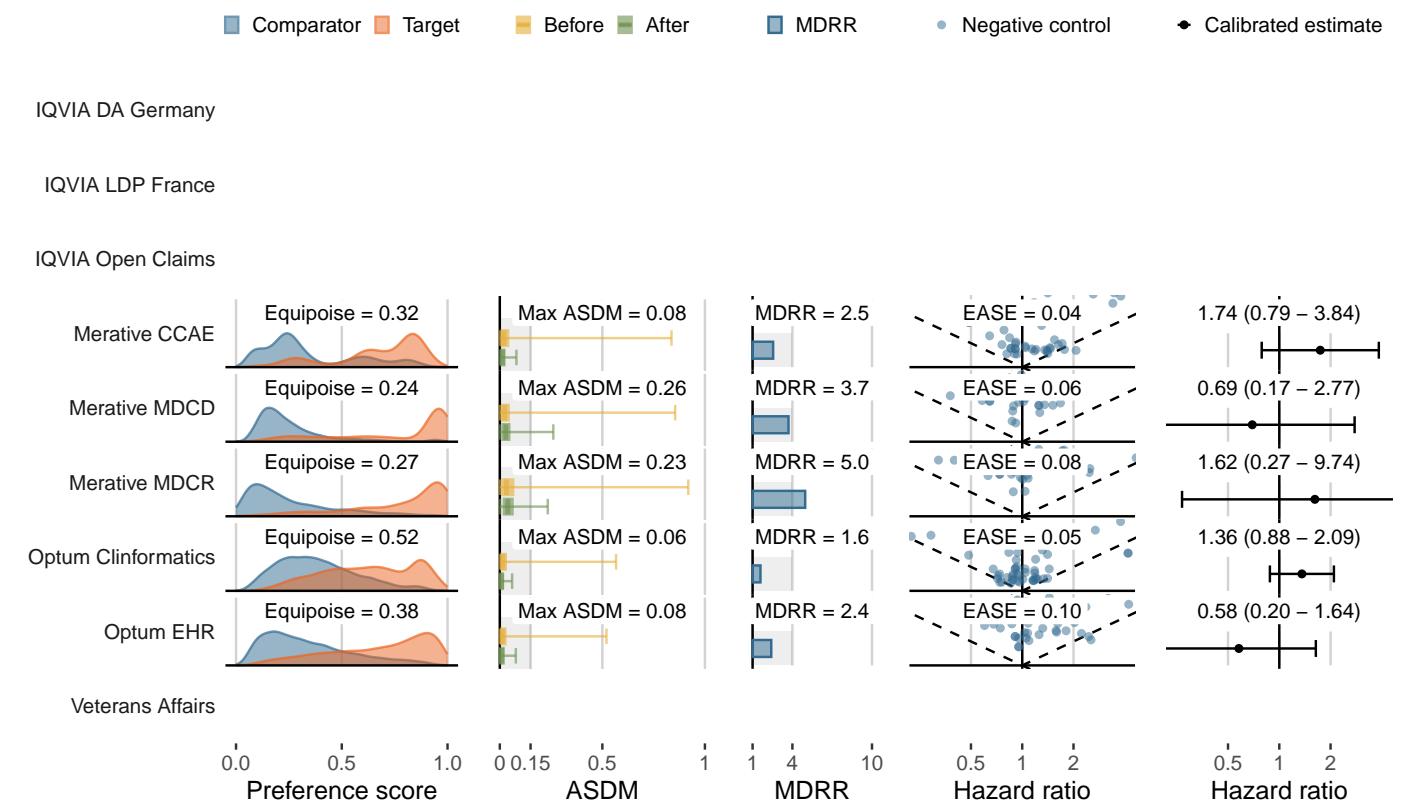
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute myocardial infarction**

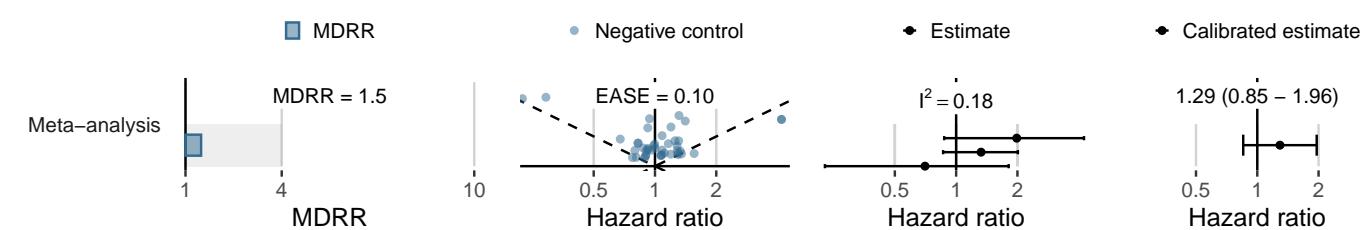
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	3,736	2,707	15	5.54
Merative MDCD	835	554	5	9.03
Merative MDCR	496	414	5	12.09
Optum Clininformatics	8,257	6,205	63	10.15
Optum EHR	5,119	1,078	8	7.42
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



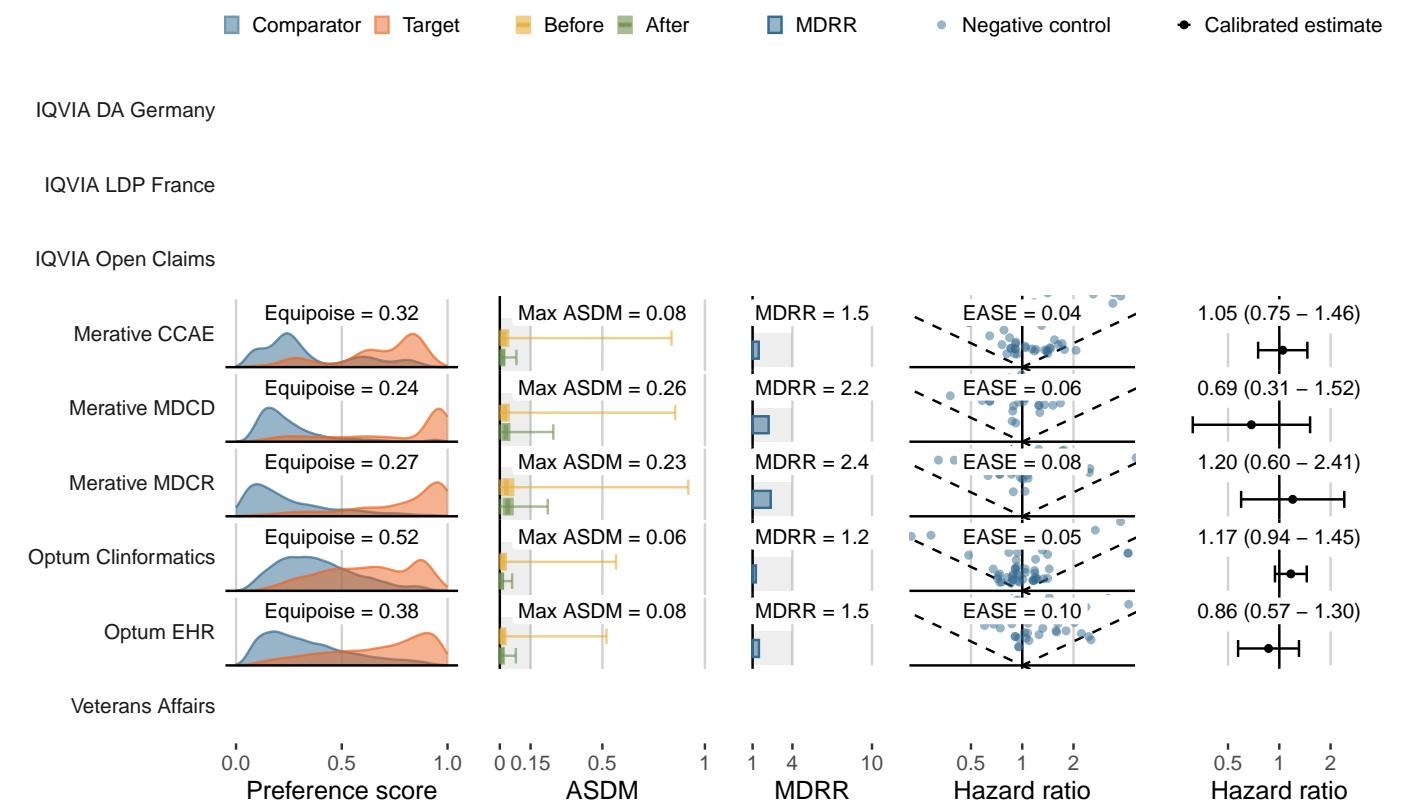
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Genitourinary infection**

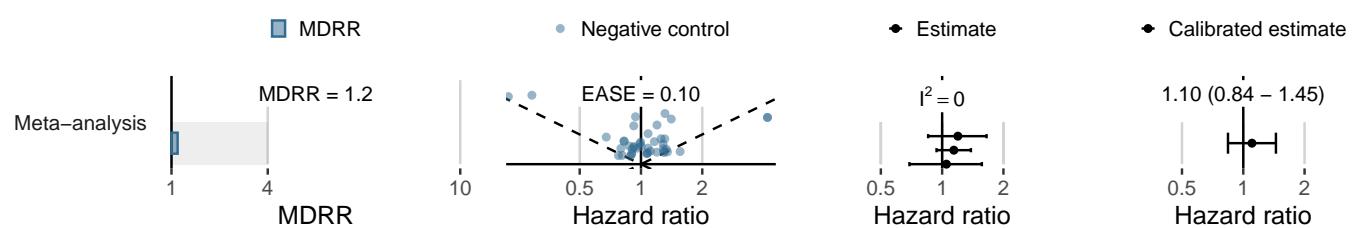
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	3,064	2,179	94	43.13
Merative MDCD	652	418	20	47.85
Merative MDCR	404	319	22	69.06
Optum Clininformatics	6,576	4,757	268	56.34
Optum EHR	4,411	887	53	59.78
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



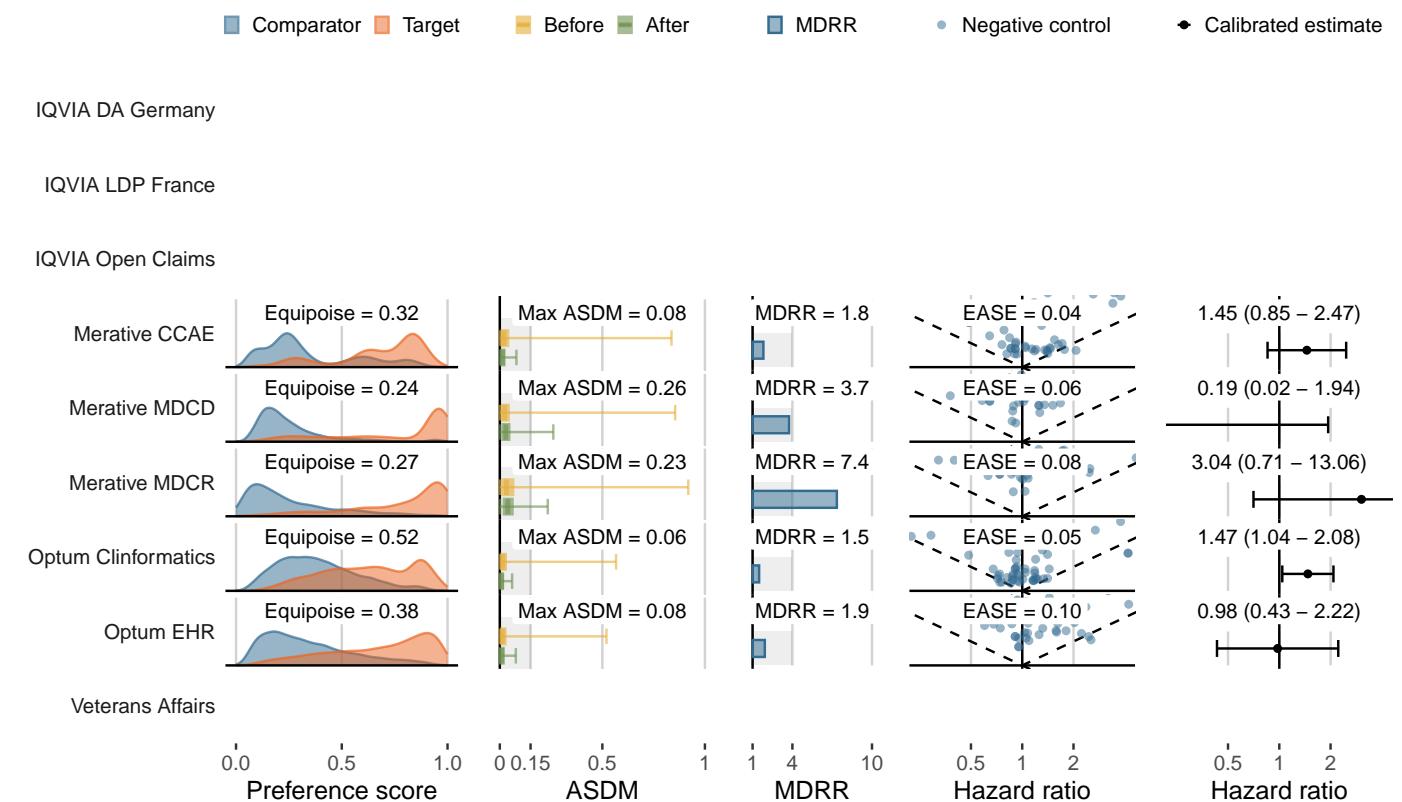
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Joint pain**

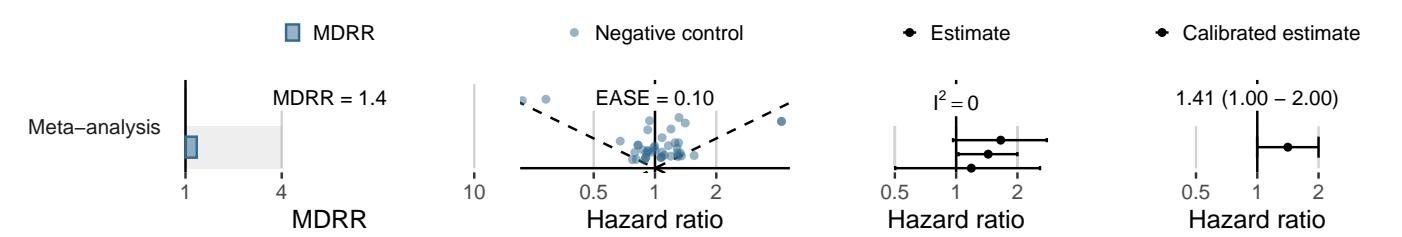
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	3,558	2,562	42	16.39
Merative MDCD	697	475	6	12.63
Merative MDCR	449	363	6	16.53
Optum Clininformatics	7,272	5,307	93	17.52
Optum EHR	4,927	1,038	10	9.63
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



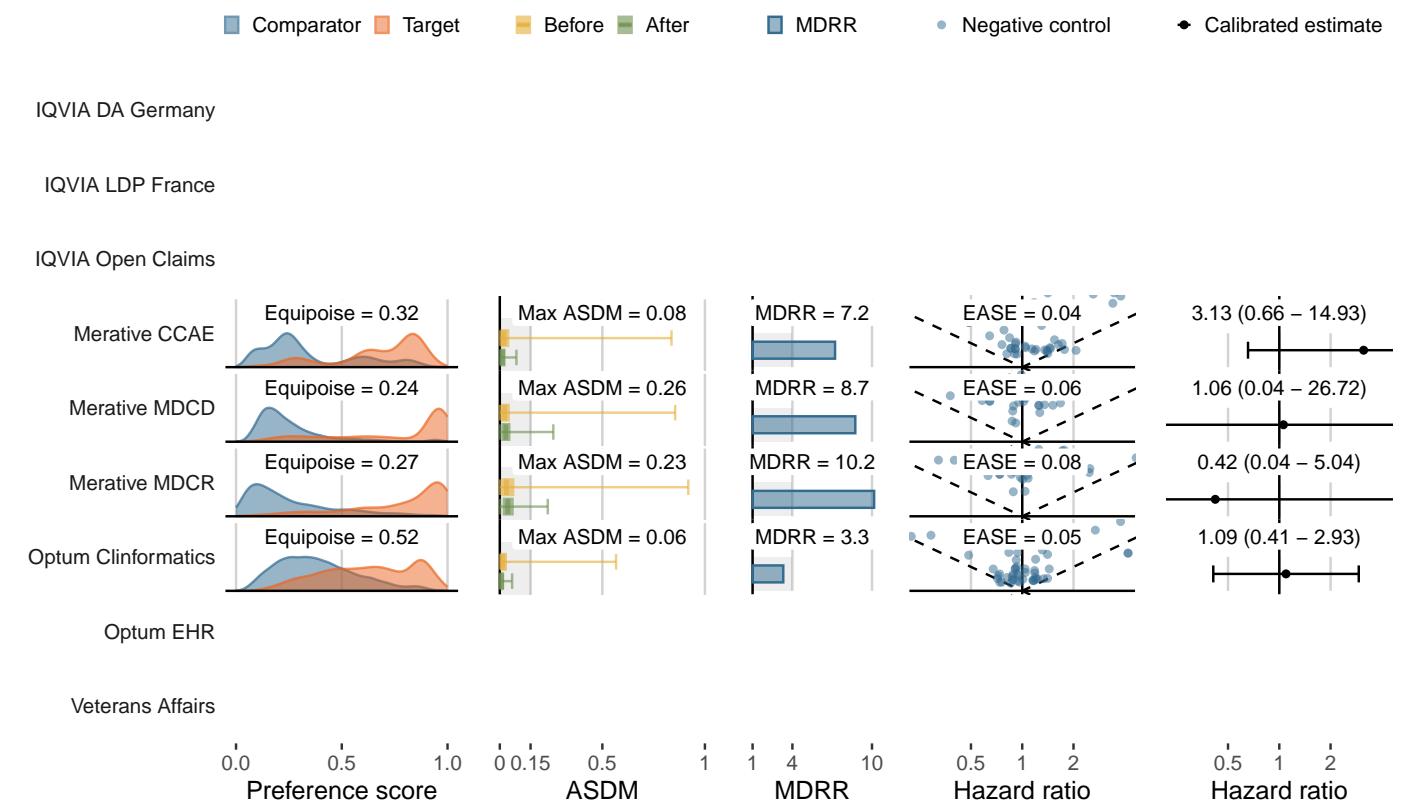
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Renal cancer**

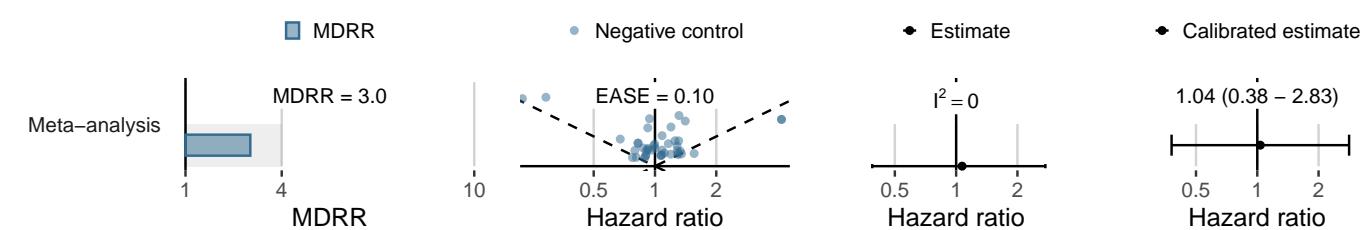
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	3,788	2,752	6	2.18
Merative MDCD	865	570	<5	<8.76
Merative MDCR	516	420	<5	<11.89
Optum Clininformatics	8,472	6,413	10	1.56
Optum EHR	5,172	1,086	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



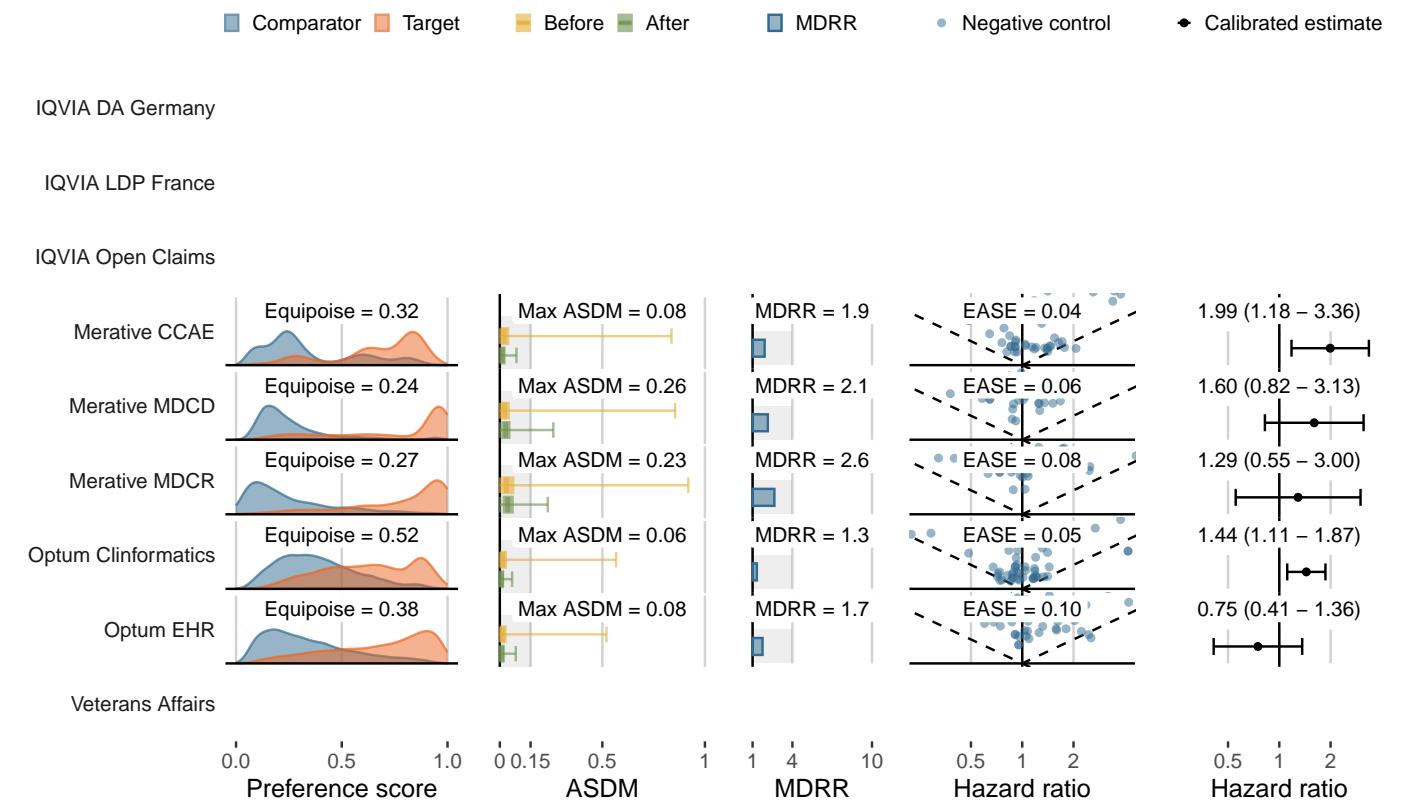
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Acute renal failure**

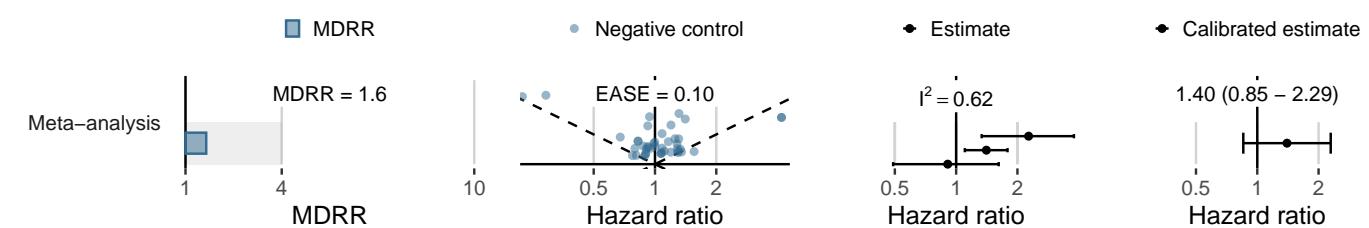
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	3,741	2,713	45	16.58
Merative MDCD	794	528	22	41.68
Merative MDCR	476	394	19	48.28
Optum Clininformatics	7,994	5,990	180	30.05
Optum EHR	5,090	1,061	26	24.50
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



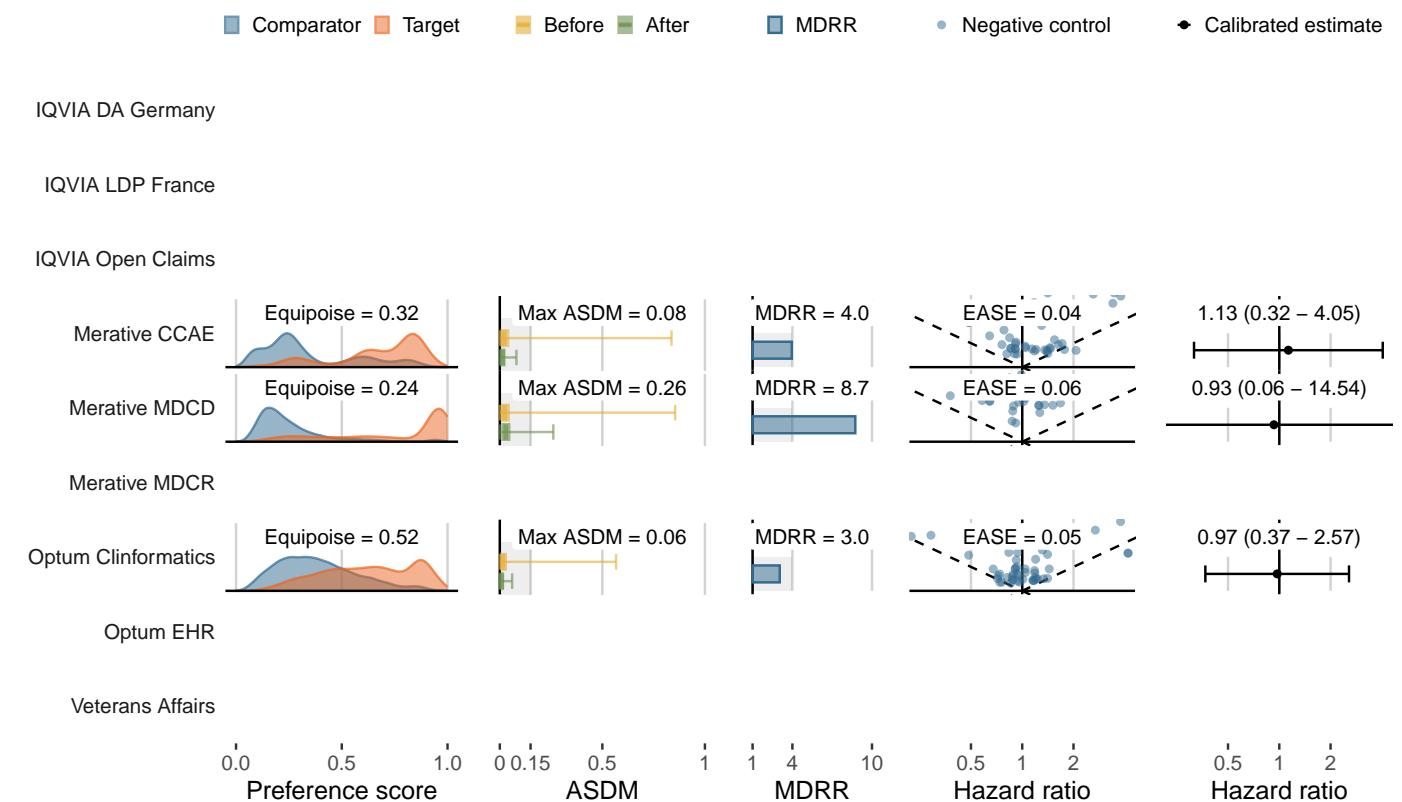
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Thyroid tumor**

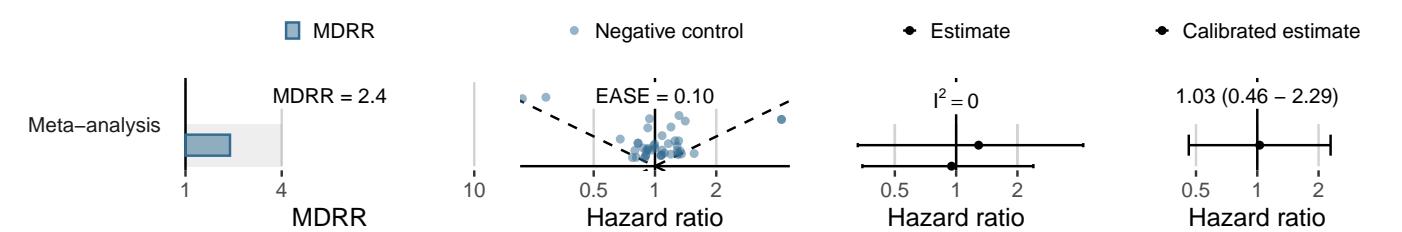
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	3,783	2,751	6	2.18
Merative MDCD	860	570	<5	<8.77
Merative MDCR	514	420	<5	<11.91
Optum Clininformatics	8,451	6,393	12	1.88
Optum EHR	5,167	1,088	-	0.00
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



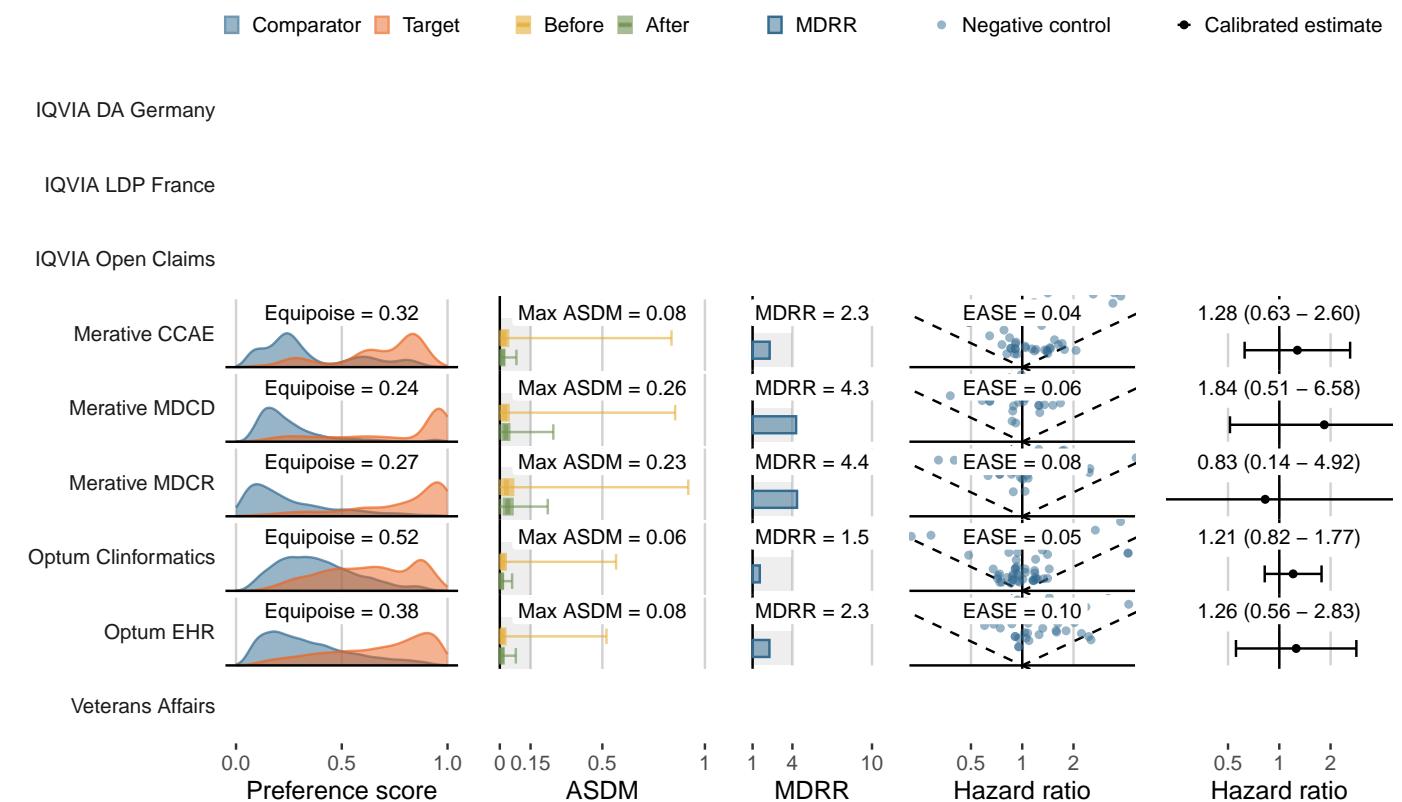
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Venous thromboembolic events**

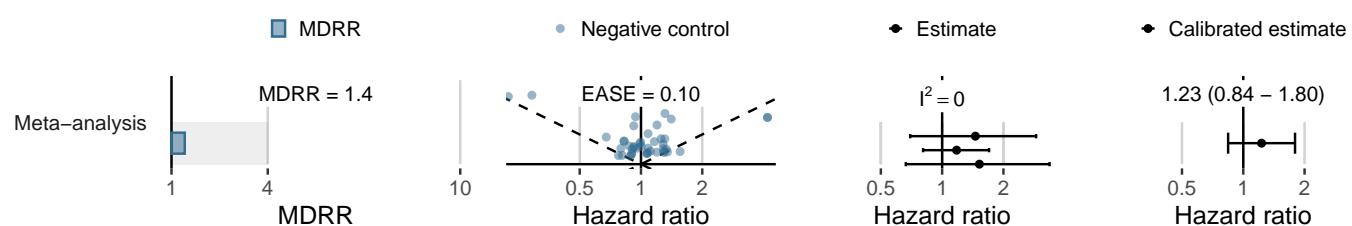
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	3,700	2,686	15	5.58
Merative MDCD	826	551	7	12.71
Merative MDCR	496	408	<5	<12.26
Optum Clininformatics	8,207	6,169	69	11.18
Optum EHR	5,053	1,042	15	14.40
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



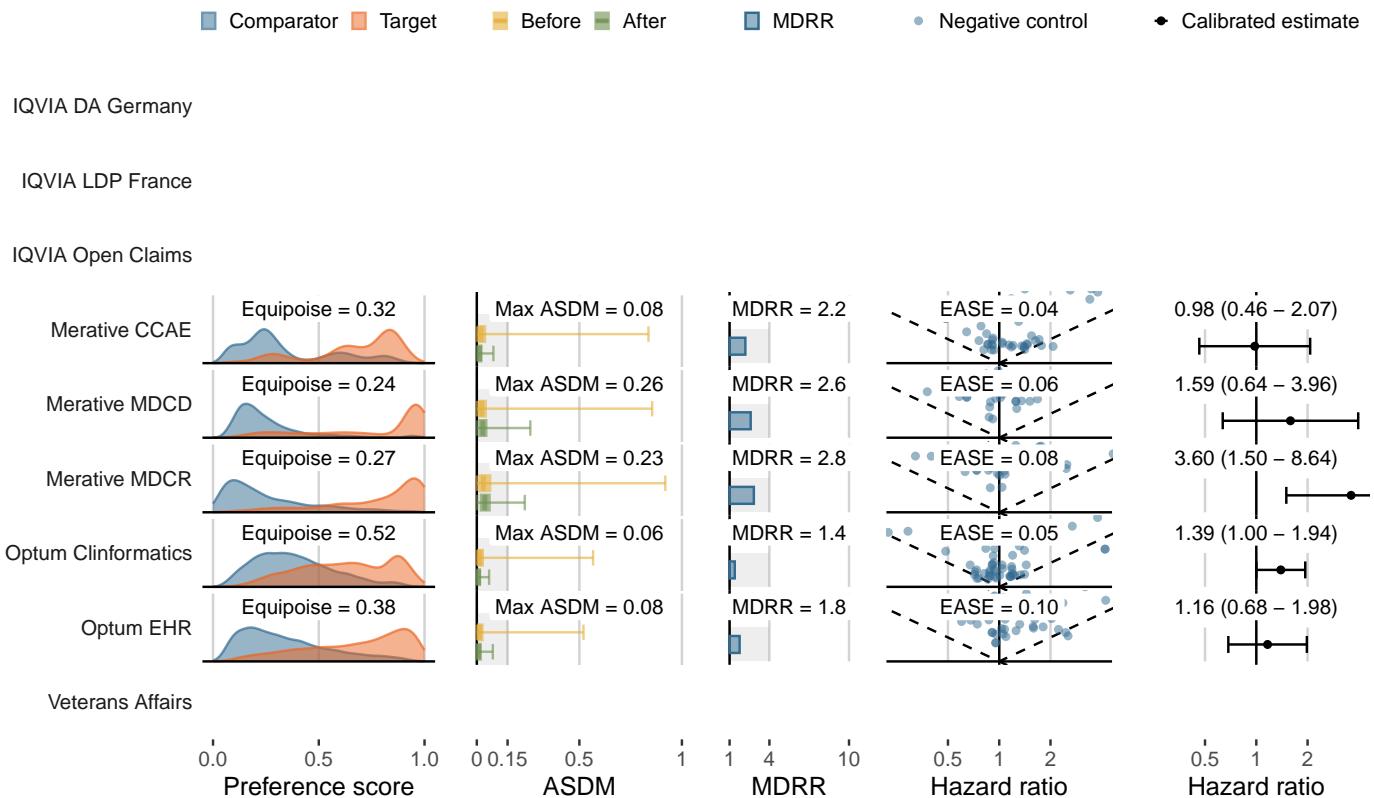
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Hospitalization with heart failure**

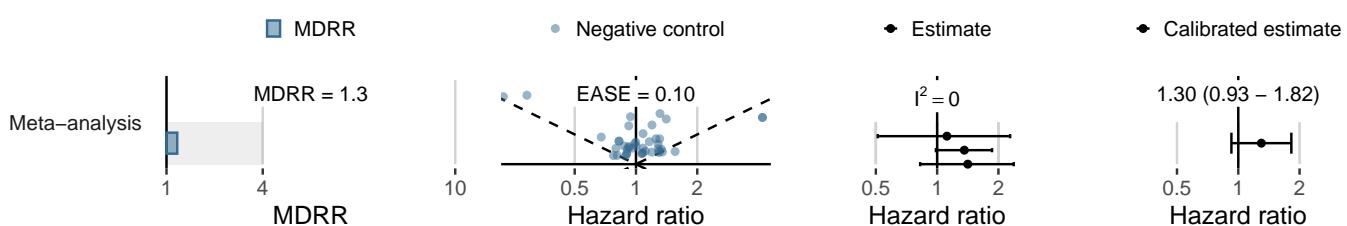
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	3,693	2,689	17	6.32
Merative MDCD	777	509	18	35.35
Merative MDCR	463	380	17	44.78
Optum Clininformatics	7,993	5,968	112	18.77
Optum EHR	5,043	1,042	28	26.87
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



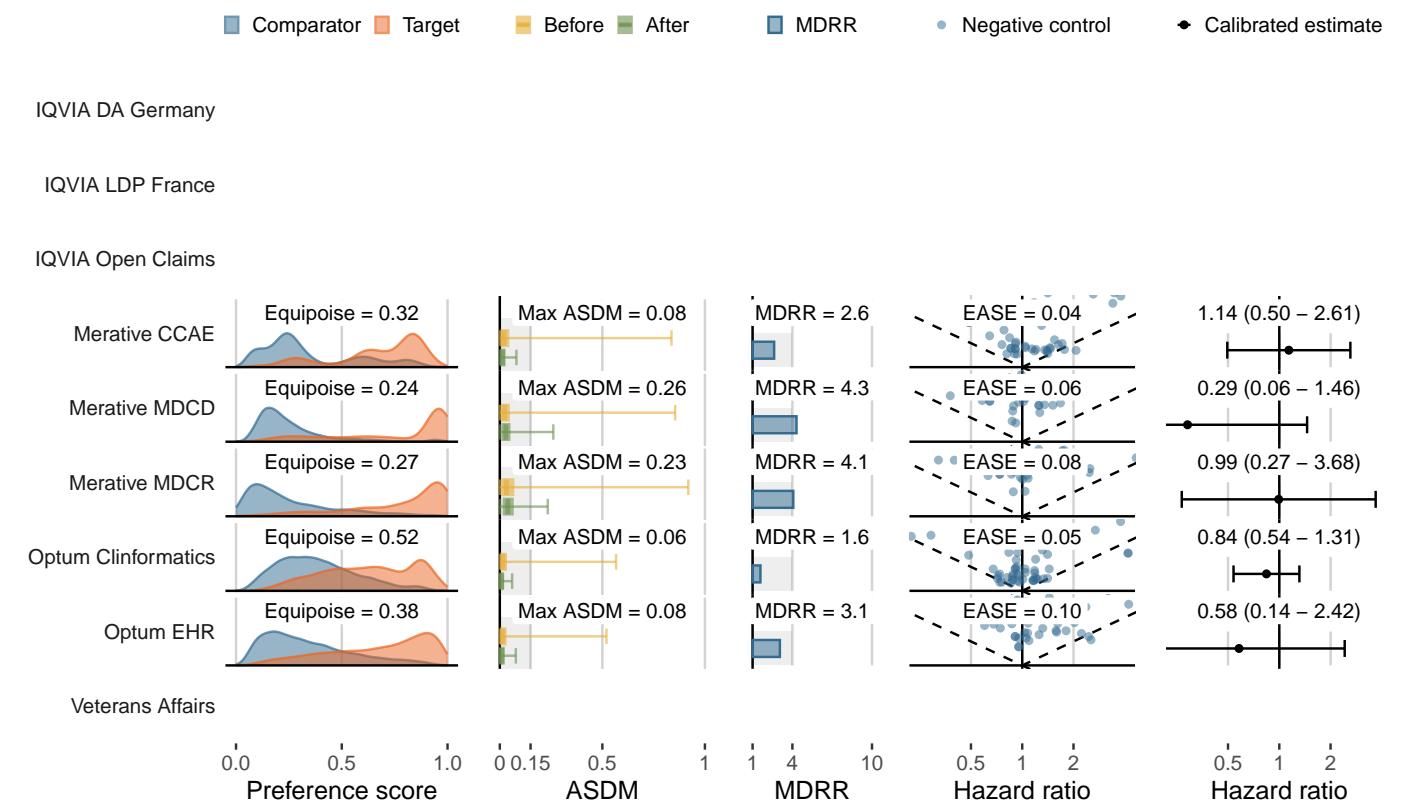
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Empagliflozin** (SGLT2 Inhibitors)
- Outcome: **Stroke**

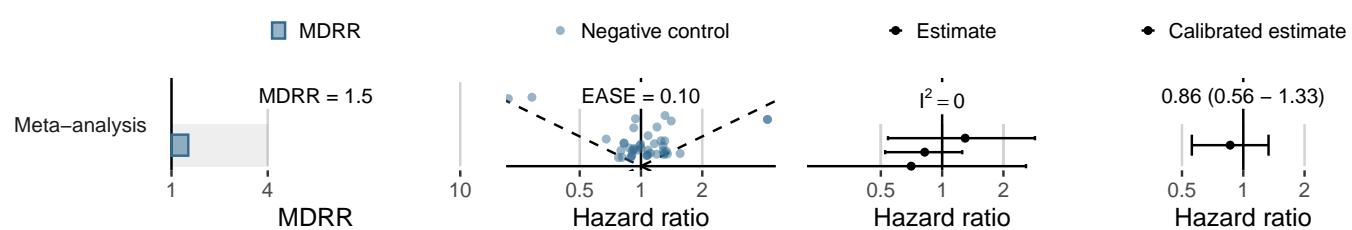
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	3,757	2,715	12	4.42
Merative MDCD	823	532	6	11.27
Merative MDCR	497	401	7	17.47
Optum Clininformatics	8,258	6,270	53	8.45
Optum EHR	5,128	1,077	<5	<4.64
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



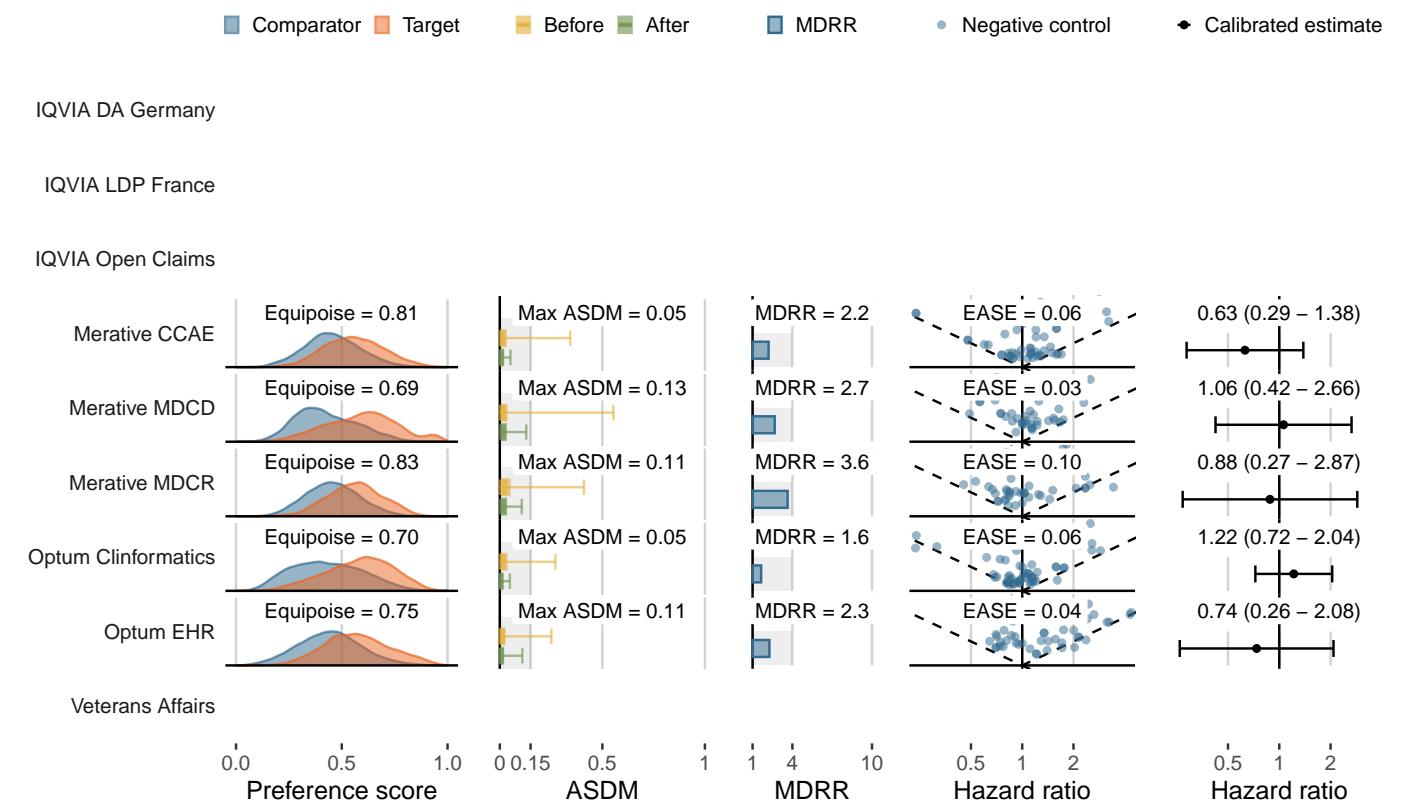
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Acute pancreatitis**

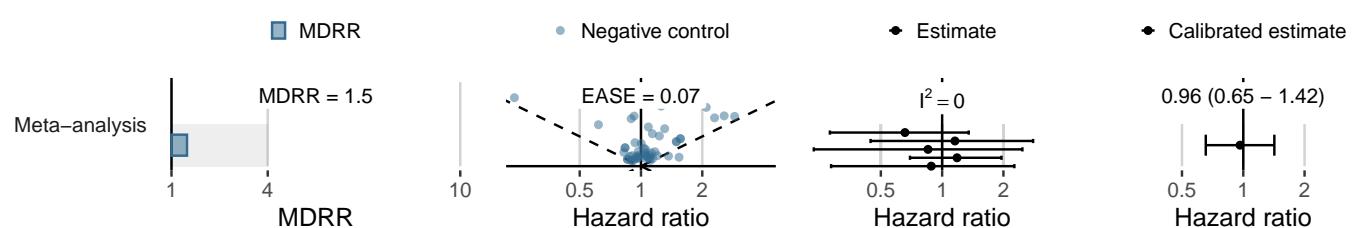
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	7,264	5,144	10	1.94
Merative MDCD	2,366	1,626	11	6.77
Merative MDCR	1,833	1,799	<5	<2.78
Optum Clininformatics	11,920	9,561	36	3.77
Optum EHR	8,609	1,798	5	2.78
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



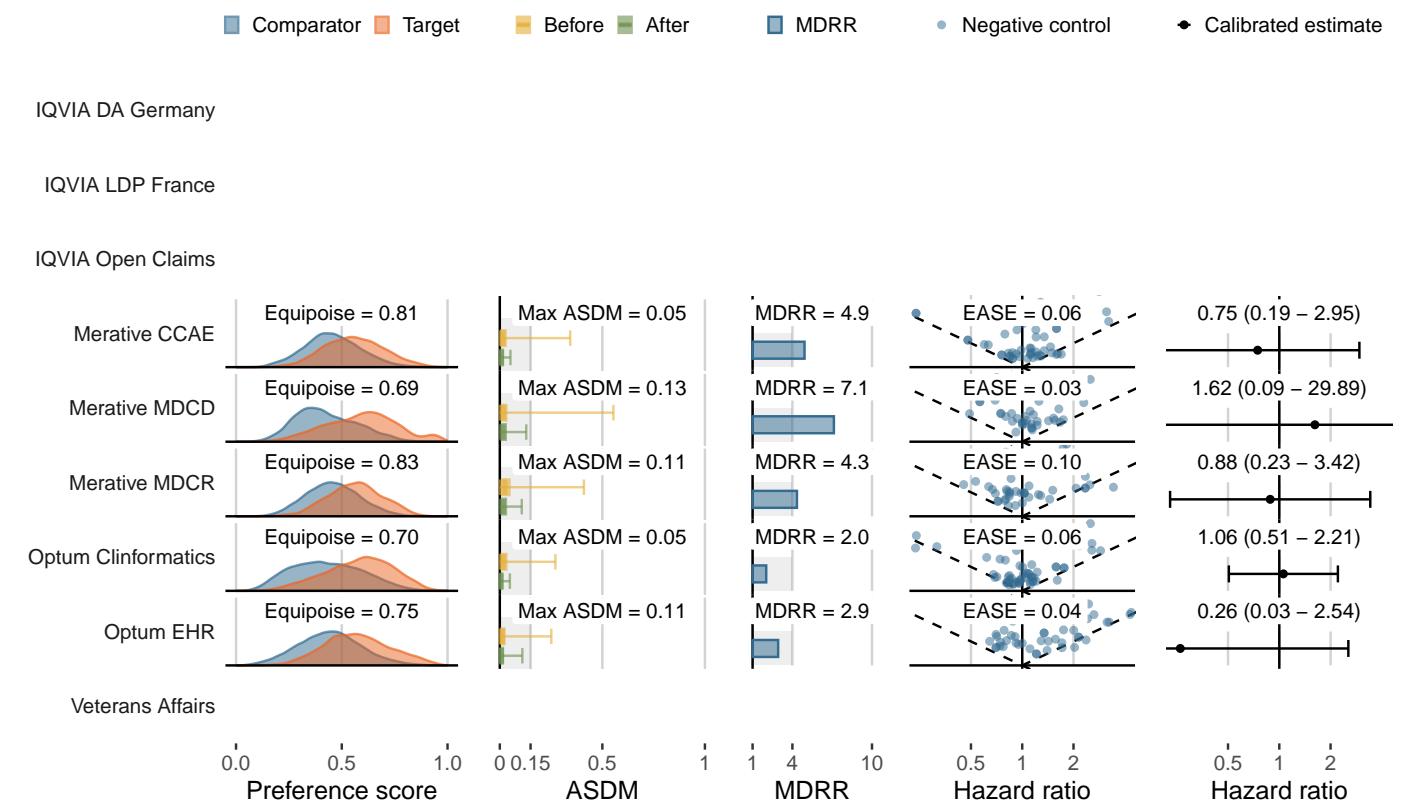
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Bladder cancer**

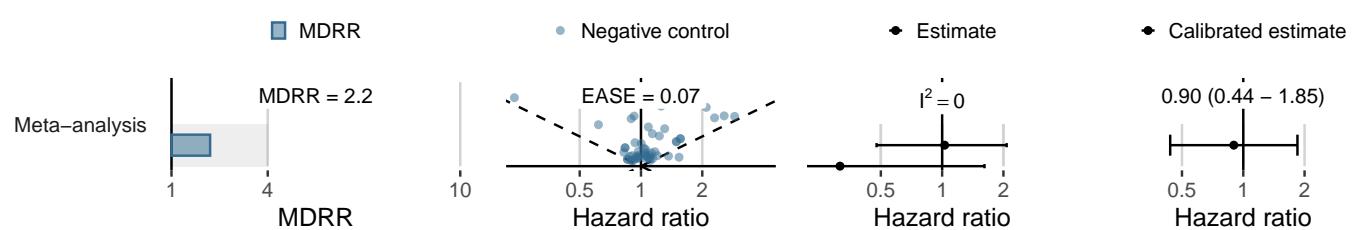
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	7,306	5,169	<5	<0.97
Merative MDCD	2,415	1,658	<5	<3.02
Merative MDCR	1,831	1,781	<5	<2.81
Optum Clininformatics	11,960	9,596	16	1.67
Optum EHR	8,621	1,798	<5	<2.78
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



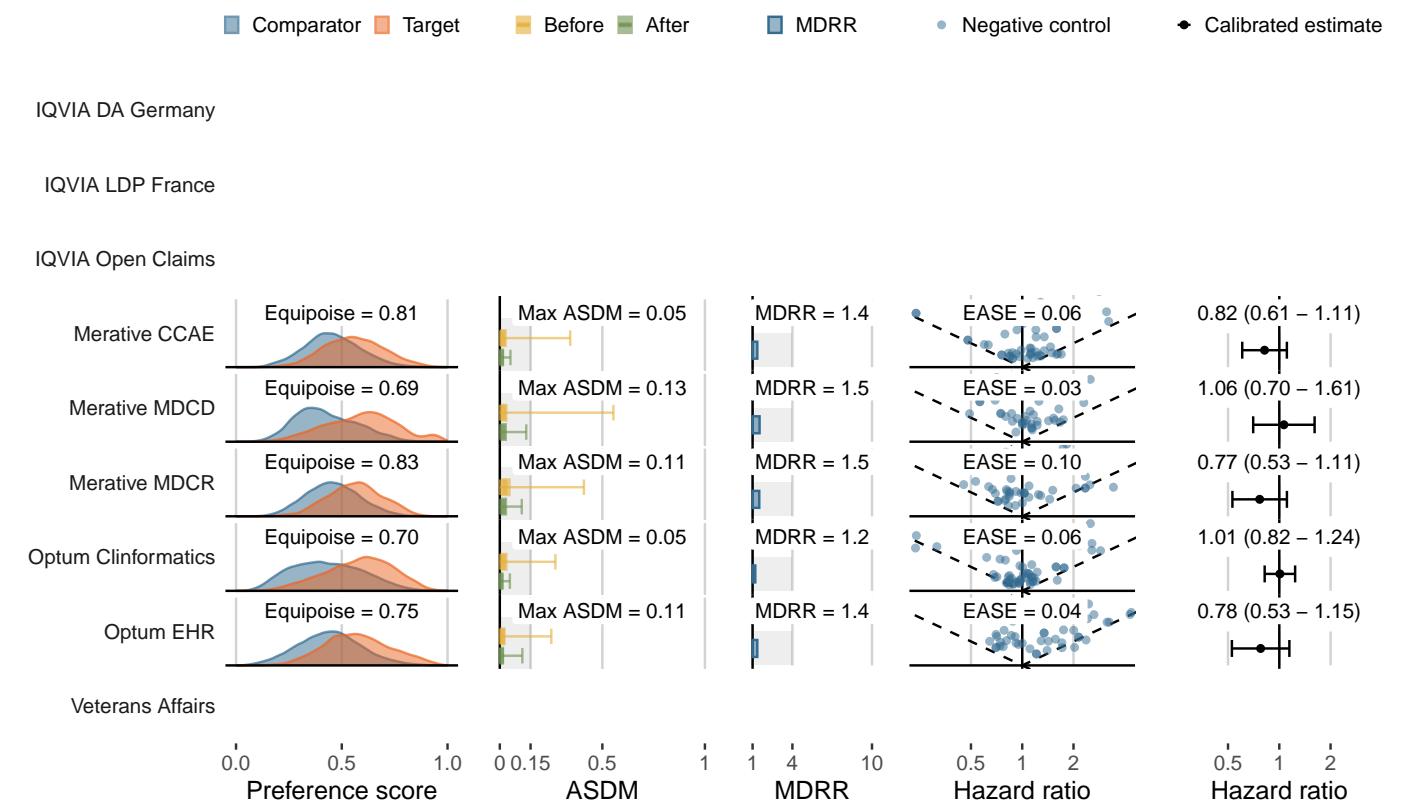
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Bone fracture**

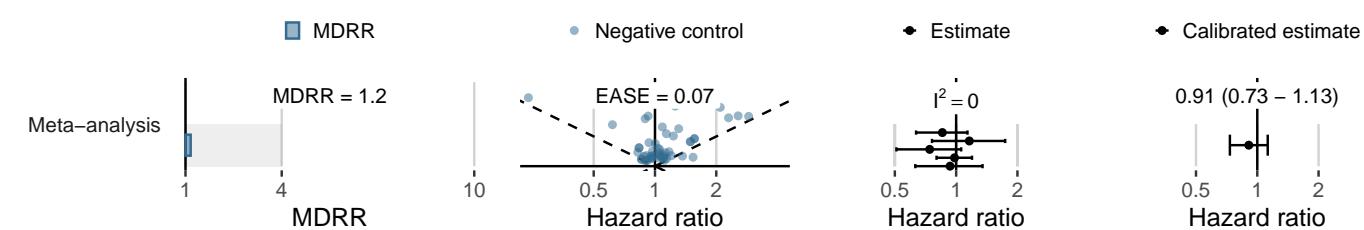
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	6,738	4,663	91	19.51
Merative MDCD	2,117	1,420	62	43.66
Merative MDCR	1,587	1,551	57	36.74
Optum Clininformatics	10,852	8,477	223	26.31
Optum EHR	8,011	1,662	42	25.26
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



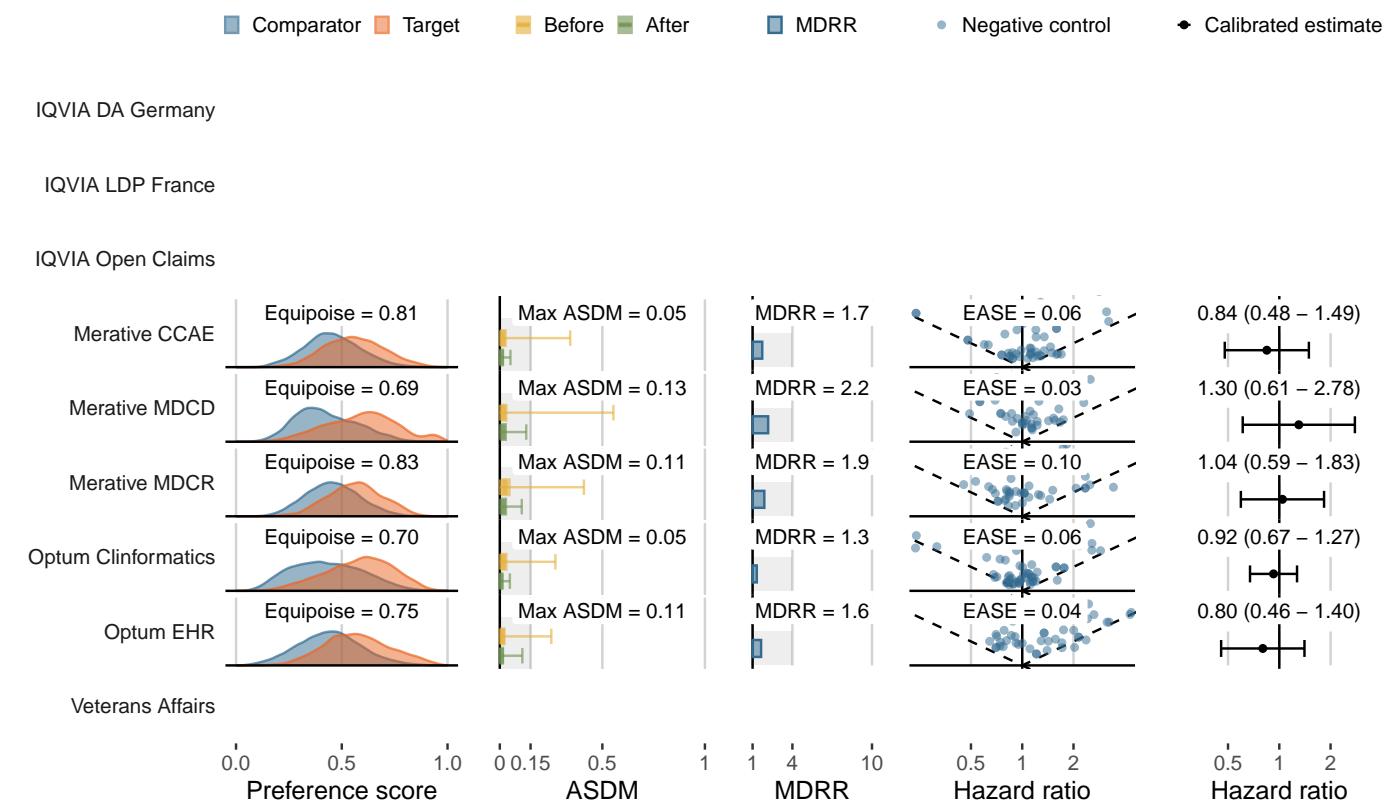
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Acute myocardial infarction**

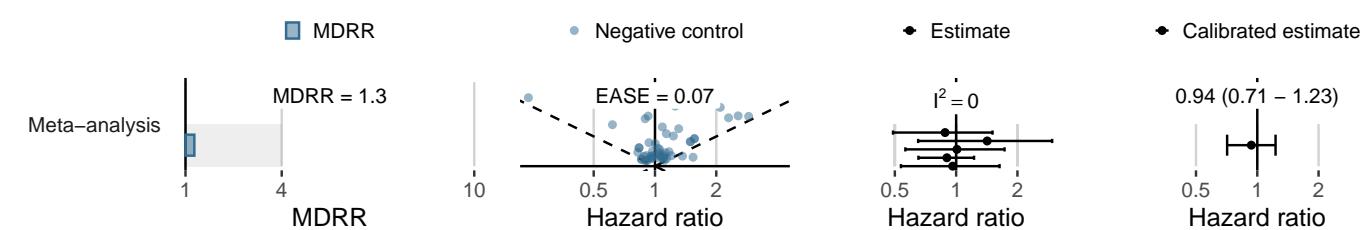
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	7,171	5,056	24	4.75
Merative MDCD	2,314	1,600	15	9.37
Merative MDCR	1,771	1,741	24	13.79
Optum Clininformatics	11,646	9,284	88	9.48
Optum EHR	8,516	1,773	19	10.72
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



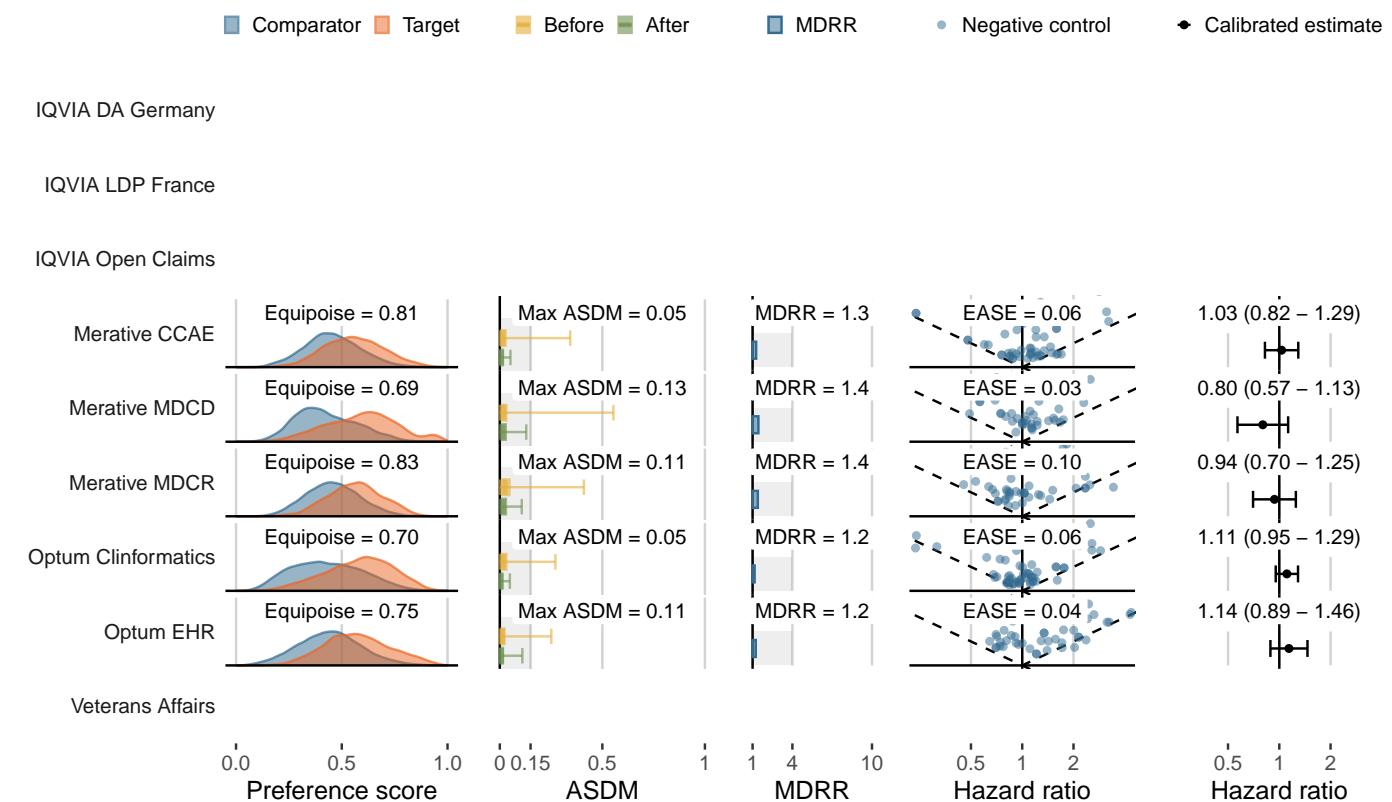
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Genitourinary infection**

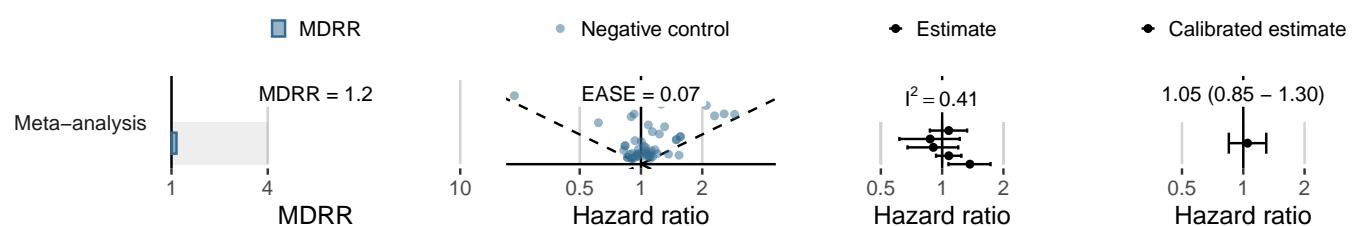
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	5,864	4,063	169	41.60
Merative MDCD	1,821	1,207	73	60.49
Merative MDCR	1,392	1,348	96	71.21
Optum Clininformatics	9,087	6,889	413	59.95
Optum EHR	7,257	1,453	112	77.07
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



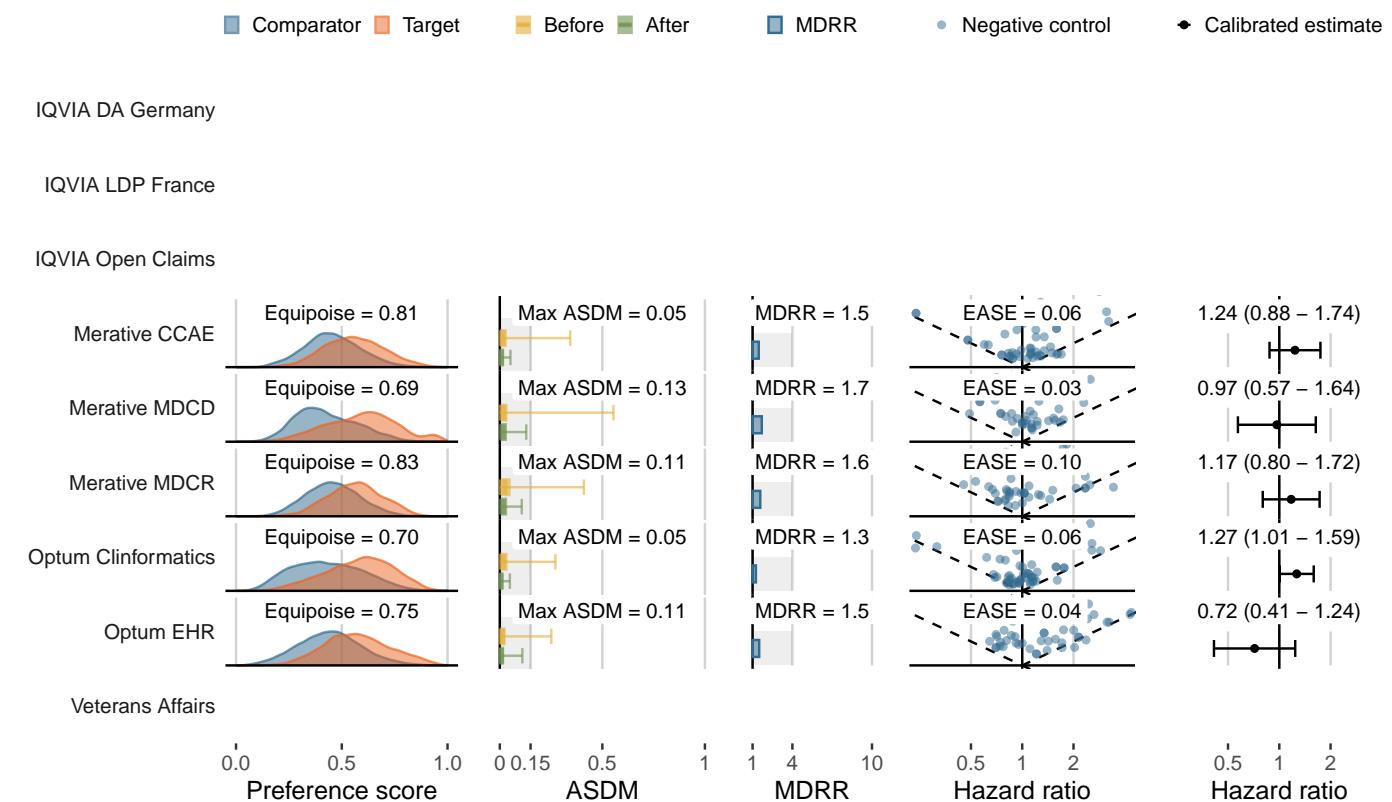
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Joint pain**

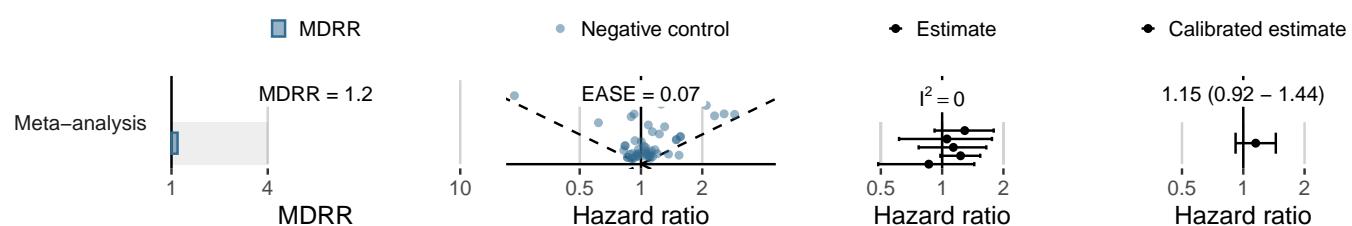
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	6,883	4,845	67	13.83
Merative MDCD	1,790	1,205	36	29.88
Merative MDCR	1,432	1,390	50	35.98
Optum Clininformatics	9,946	7,645	181	23.68
Optum EHR	8,211	1,713	23	13.43
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



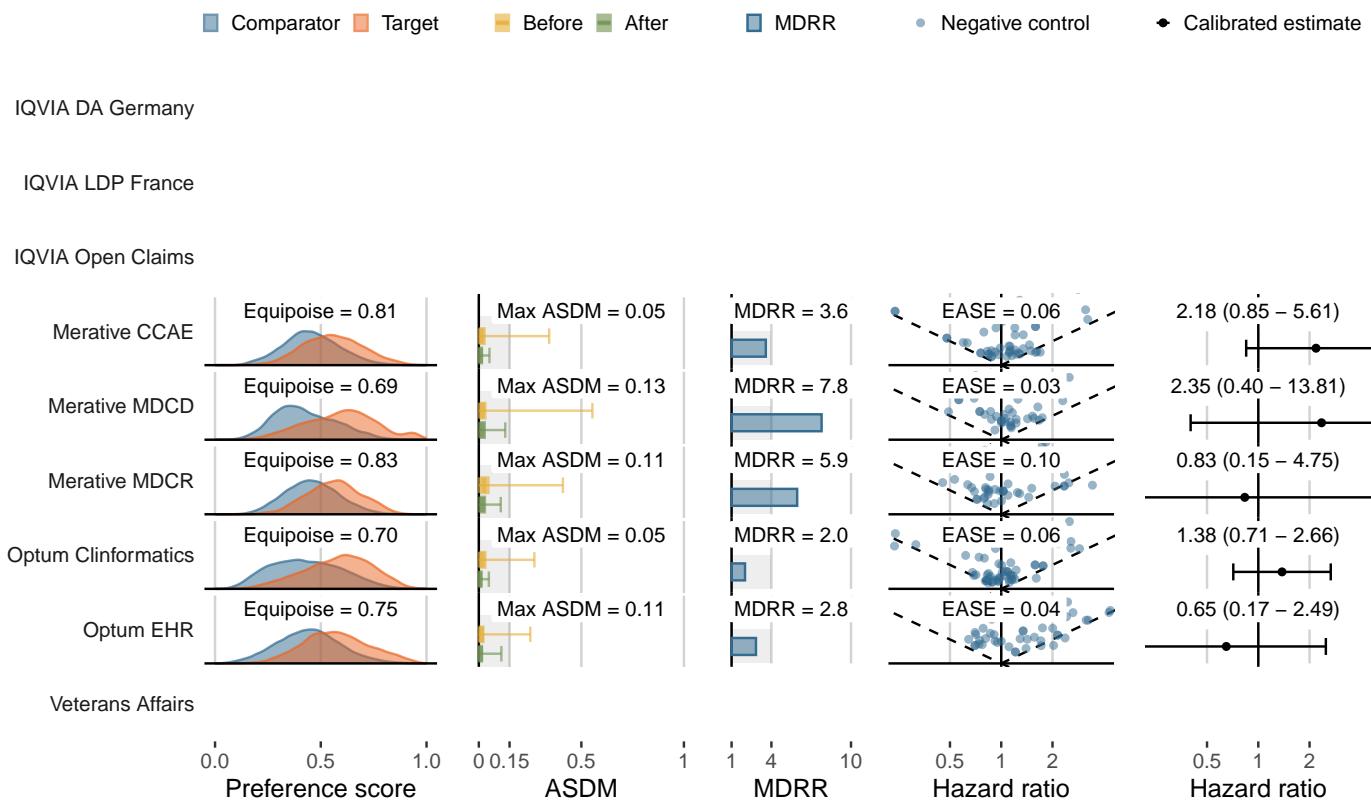
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Renal cancer**

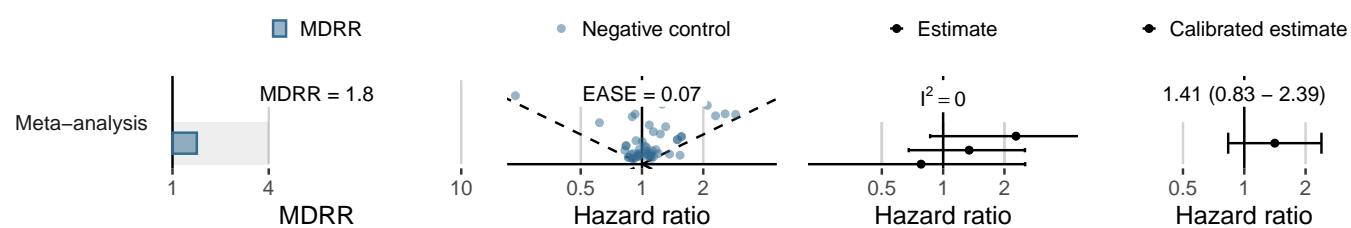
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	7,286	5,155	11	2.13
Merative MDCD	2,410	1,654	<5	<3.02
Merative MDCR	1,840	1,792	<5	<2.79
Optum Clininformatics	11,943	9,589	19	1.98
Optum EHR	8,592	1,785	<5	<2.80
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



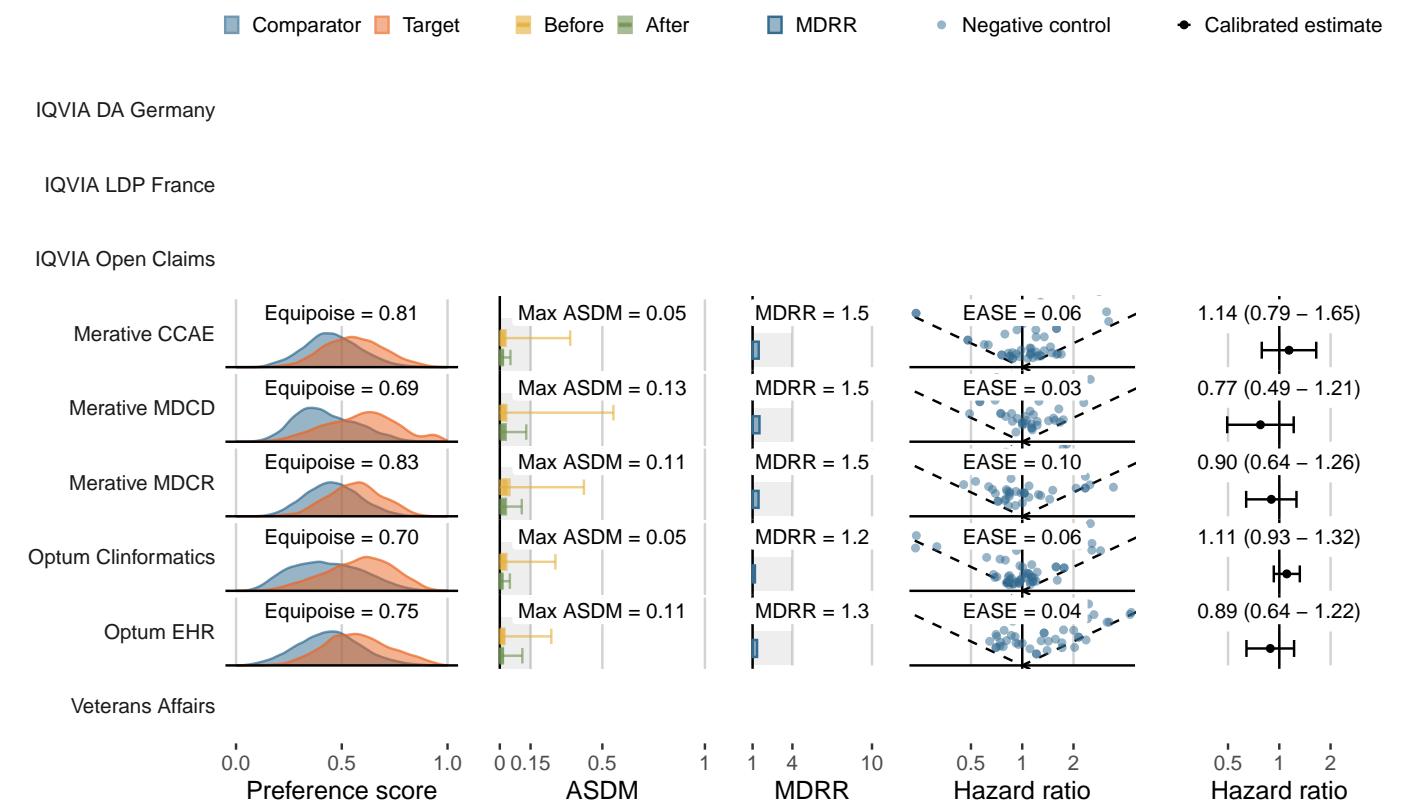
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Acute renal failure**

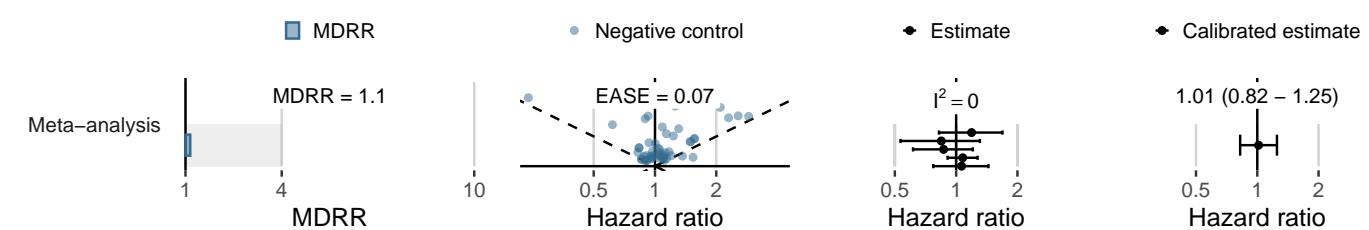
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	7,152	5,045	65	12.88
Merative MDCD	2,234	1,518	53	34.93
Merative MDCR	1,658	1,583	79	49.91
Optum Clininformatics	11,139	8,720	298	34.17
Optum EHR	8,399	1,730	61	35.27
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



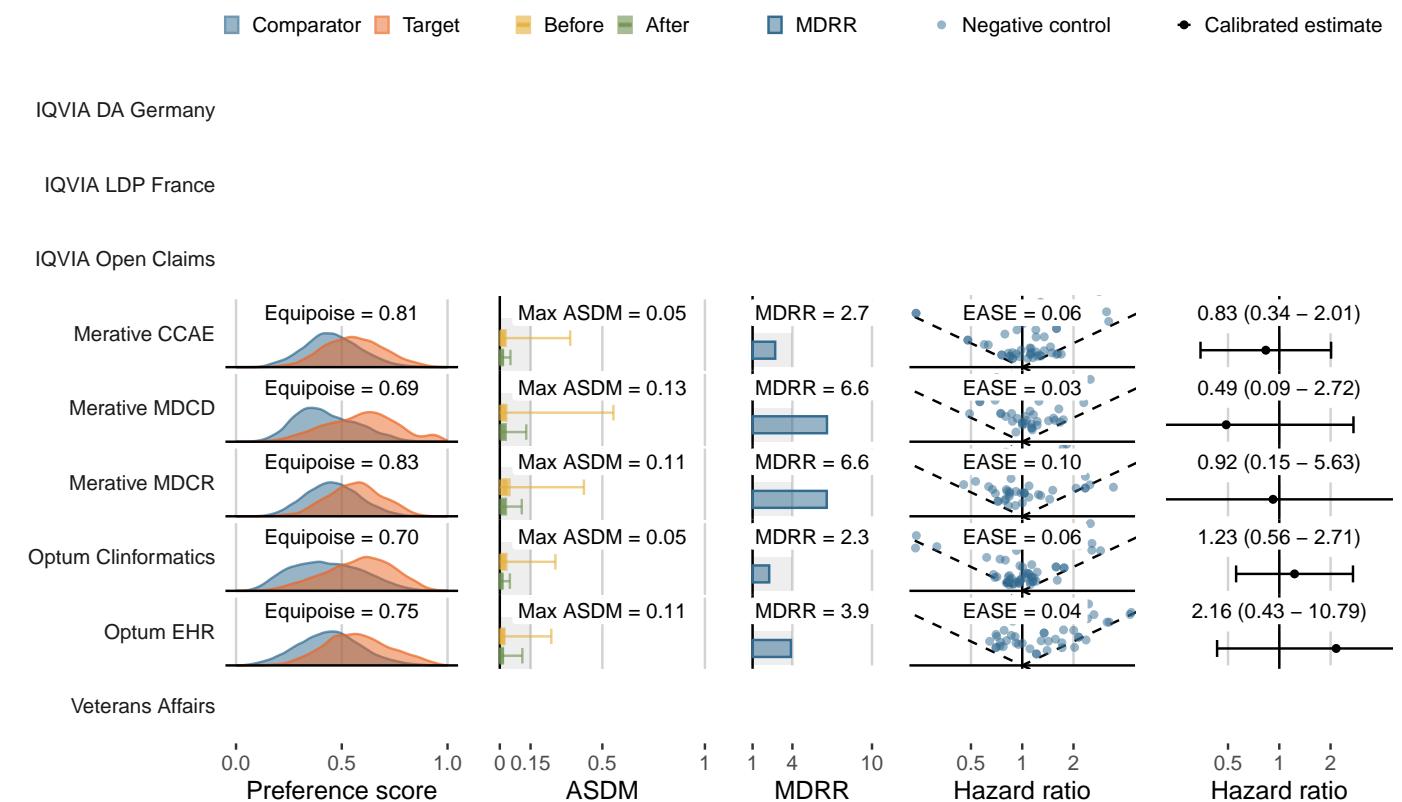
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Thyroid tumor**

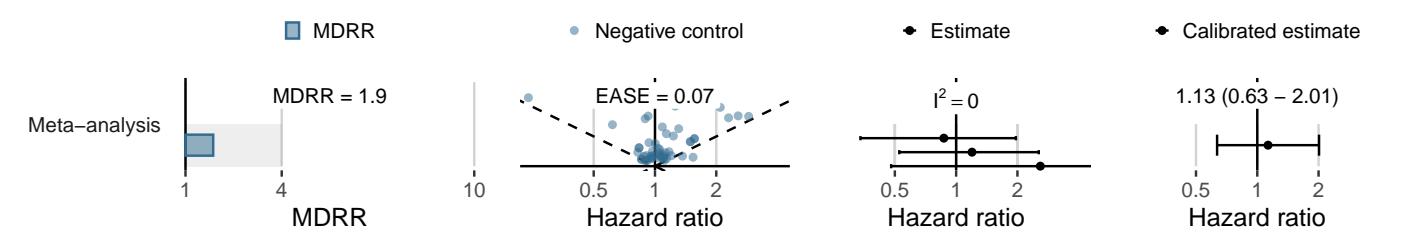
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	7,287	5,171	9	1.74
Merative MDCD	2,402	1,653	<5	<3.02
Merative MDCR	1,839	1,796	<5	<2.78
Optum Clininformatics	11,942	9,584	16	1.67
Optum EHR	8,618	1,800	<5	<2.78
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



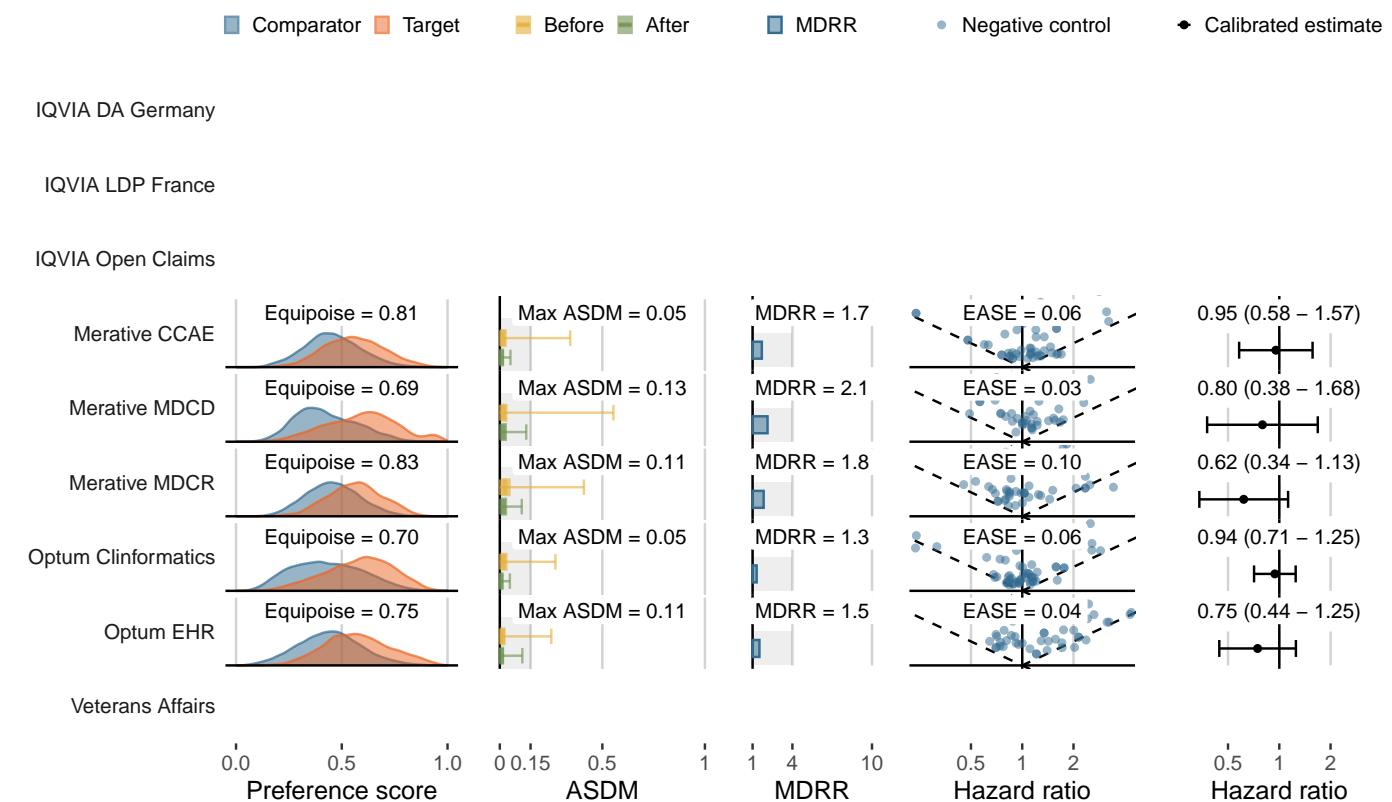
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Venous thromboembolic events**

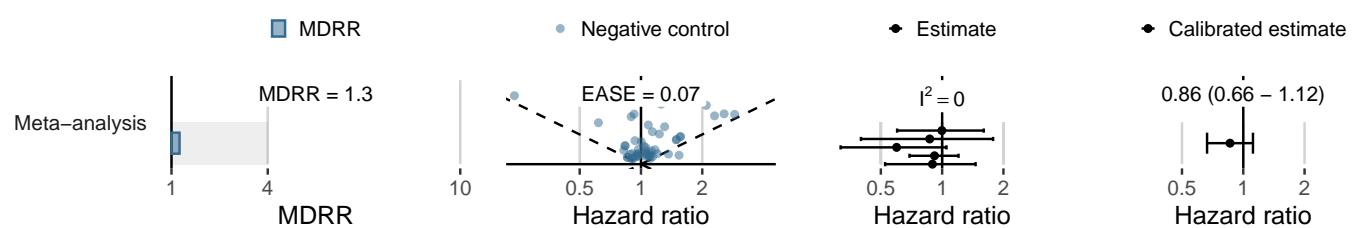
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	7,130	5,046	32	6.34
Merative MDCD	2,304	1,579	16	10.13
Merative MDCR	1,754	1,697	25	14.73
Optum Clininformatics	11,579	9,217	99	10.74
Optum EHR	8,402	1,722	25	14.52
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



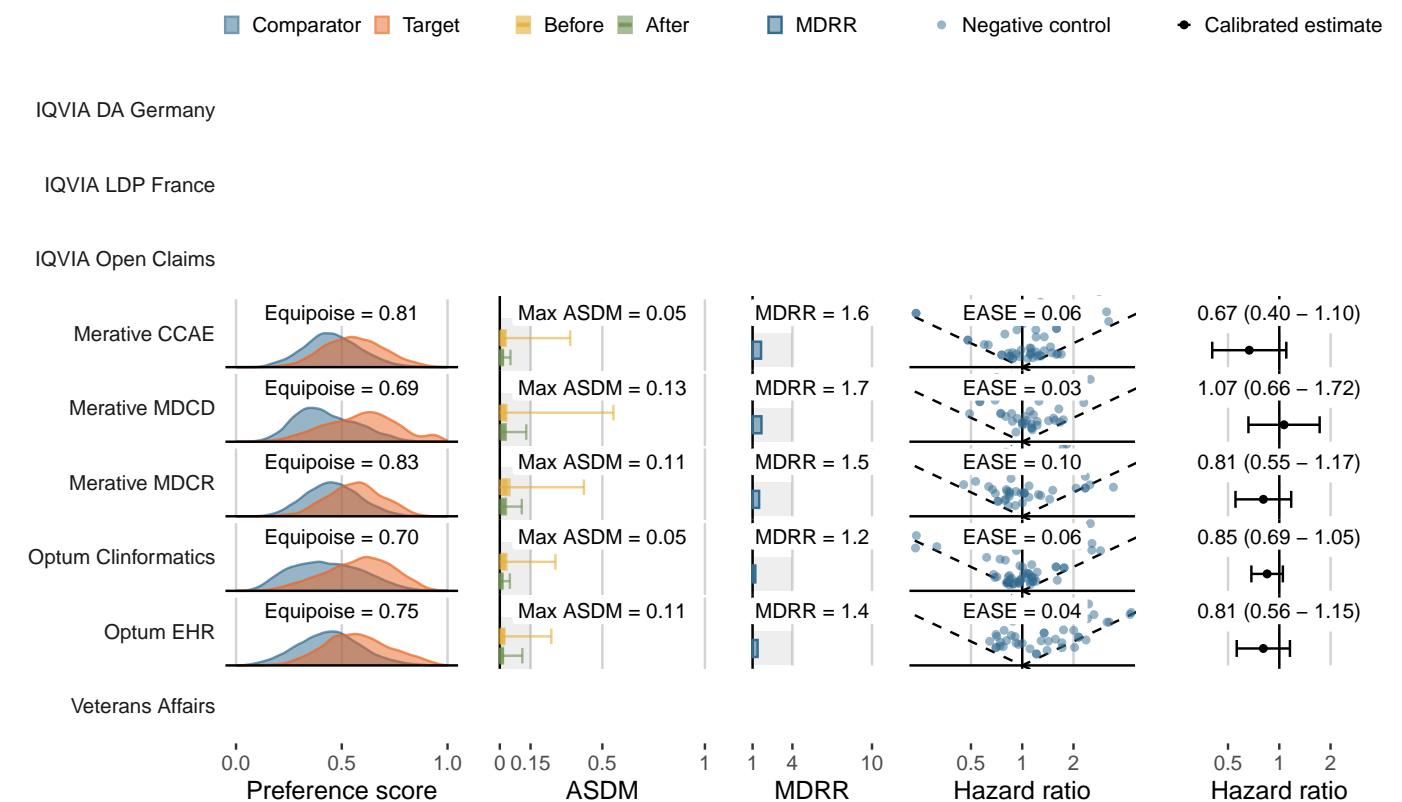
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Hospitalization with heart failure**

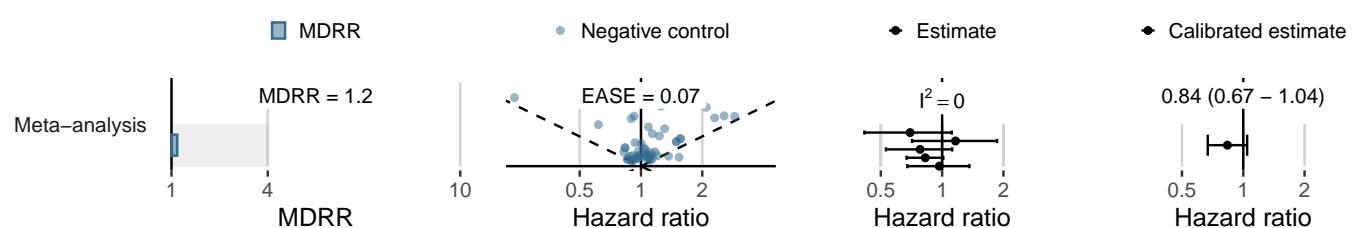
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	7,125	5,055	30	5.94
Merative MDCD	2,164	1,466	38	25.92
Merative MDCR	1,631	1,574	62	39.38
Optum Clininformatics	11,232	8,875	183	20.62
Optum EHR	8,345	1,704	48	28.18
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



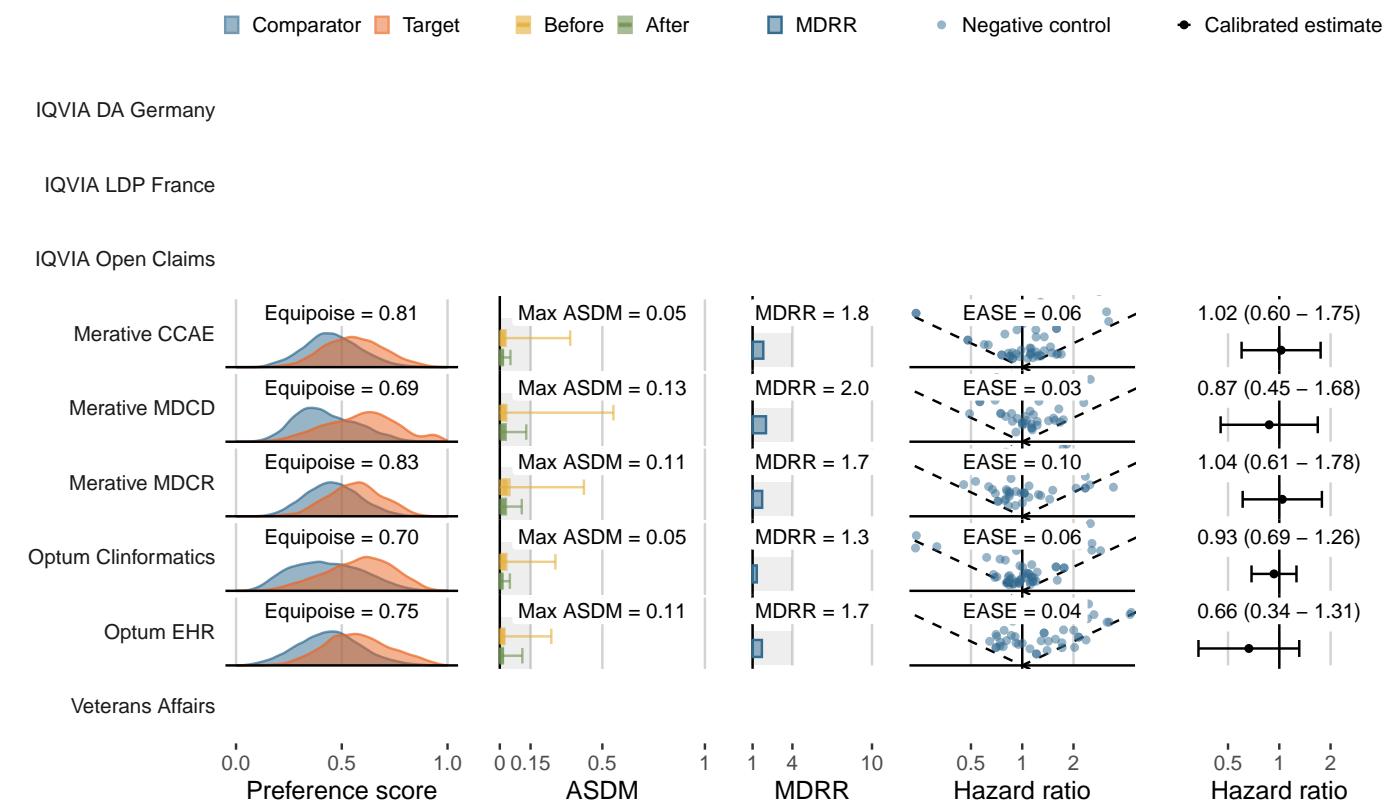
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glimepiride** (Sulfonylureas)
- Outcome: **Stroke**

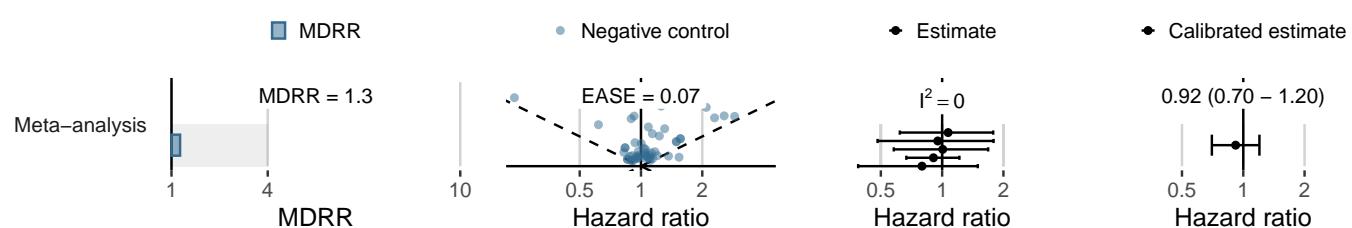
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	7,222	5,090	28	5.50
Merative MDCD	2,300	1,580	19	12.03
Merative MDCR	1,752	1,714	25	14.58
Optum Clininformatics	11,622	9,330	92	9.86
Optum EHR	8,525	1,770	12	6.78
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



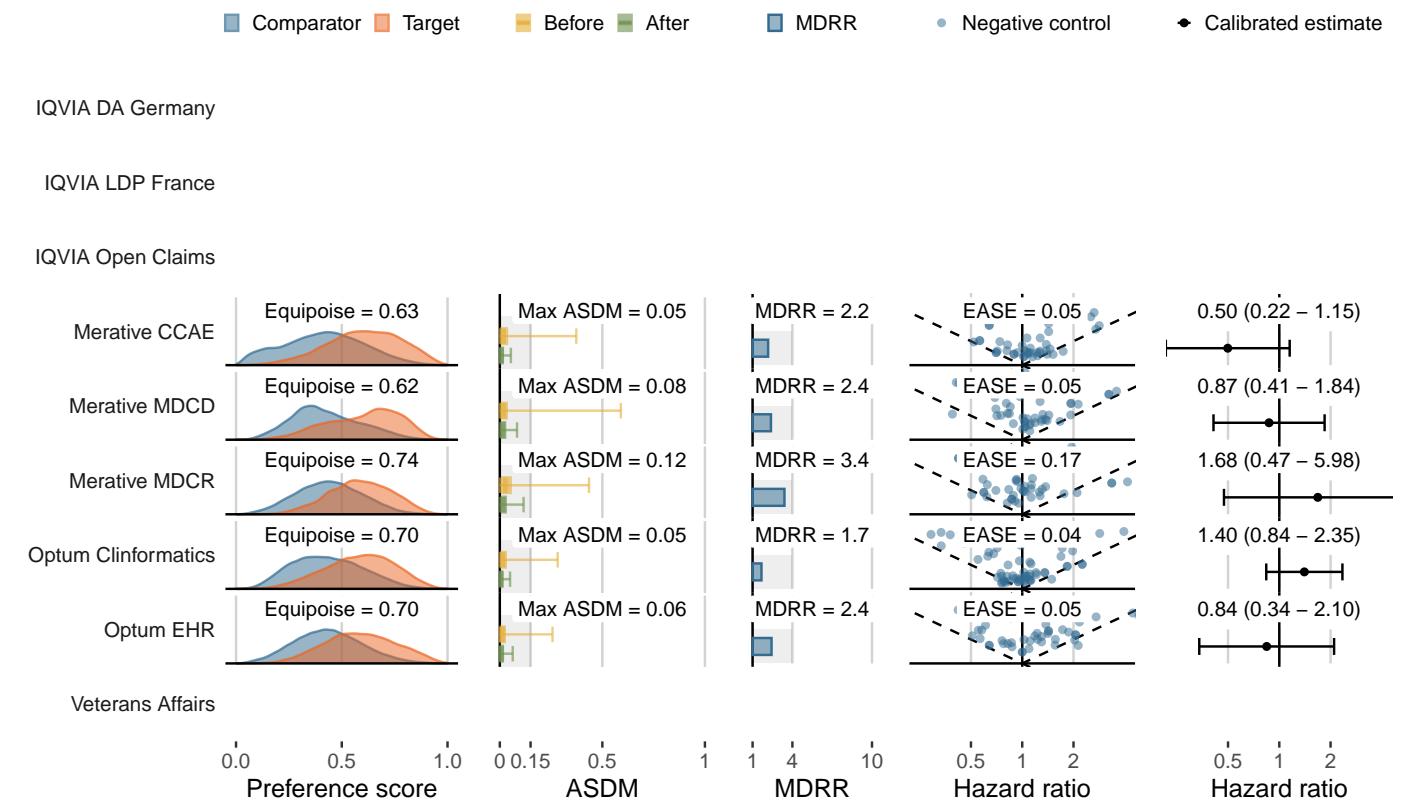
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Acute pancreatitis**

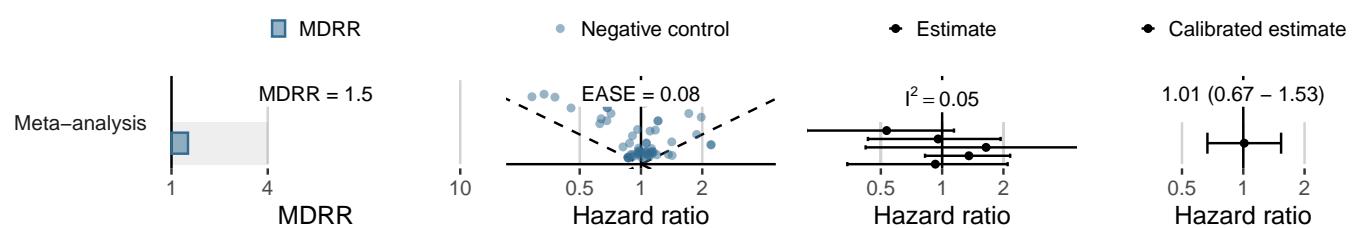
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	7,238	5,118	10	1.95
Merative MDCD	2,557	1,732	13	7.50
Merative MDCR	1,821	1,786	<5	<2.80
Optum Clininformatics	12,142	9,726	36	3.70
Optum EHR	8,726	1,820	6	3.30
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



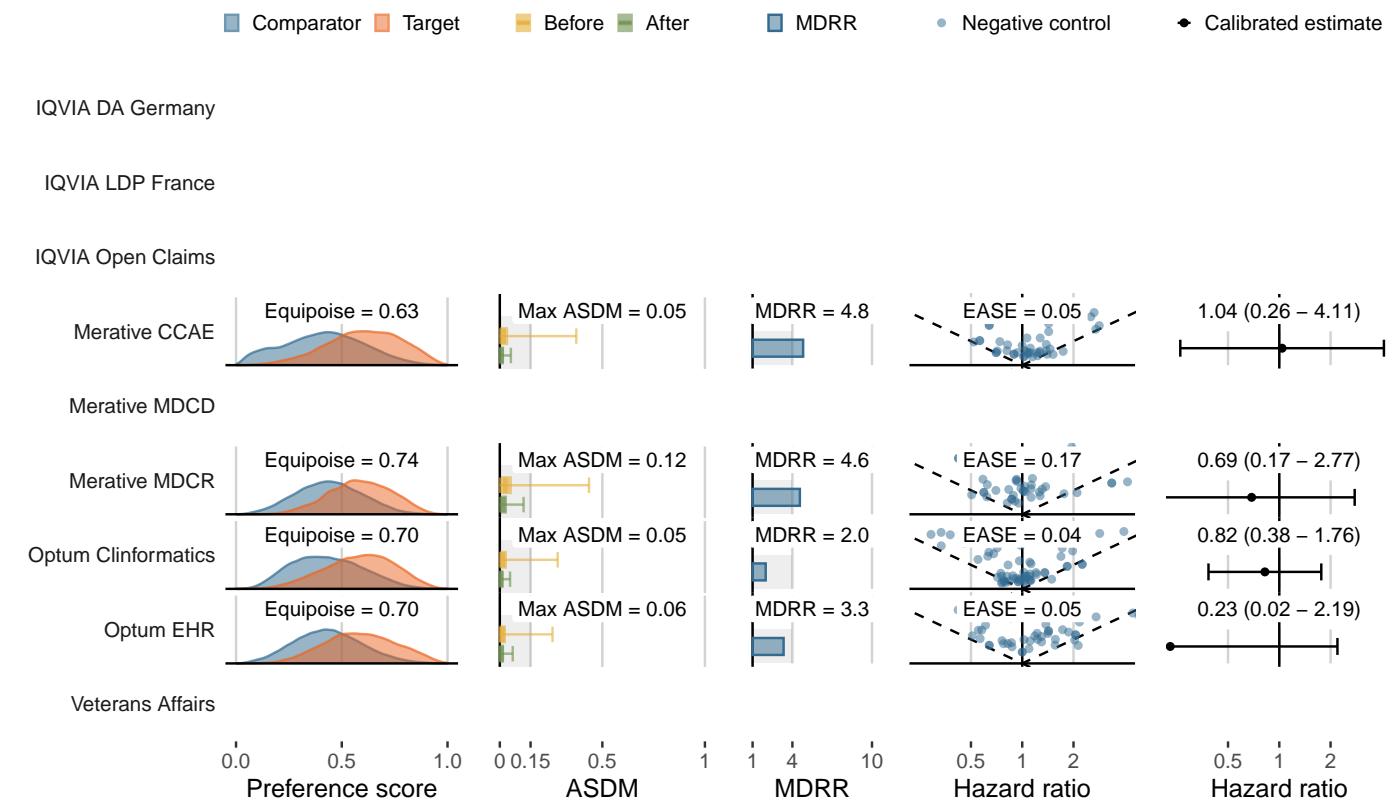
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Bladder cancer**

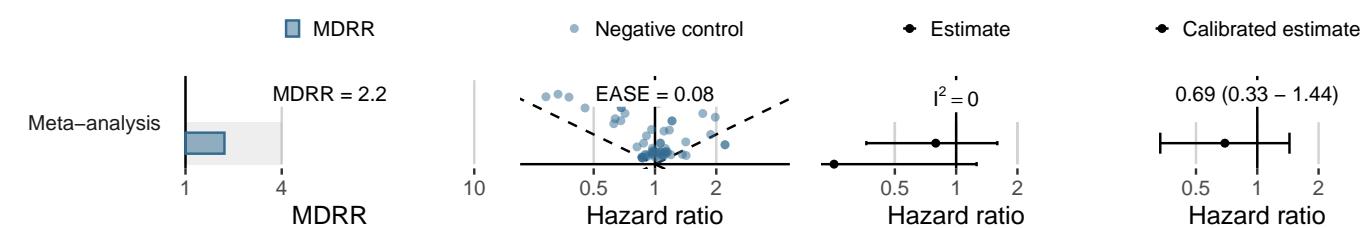
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	7,274	5,140	<5	<0.97
Merative MDCD	2,601	1,761	<5	<2.84
Merative MDCR	1,824	1,775	<5	<2.82
Optum Clininformatics	12,183	9,753	16	1.64
Optum EHR	8,735	1,821	<5	<2.75
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



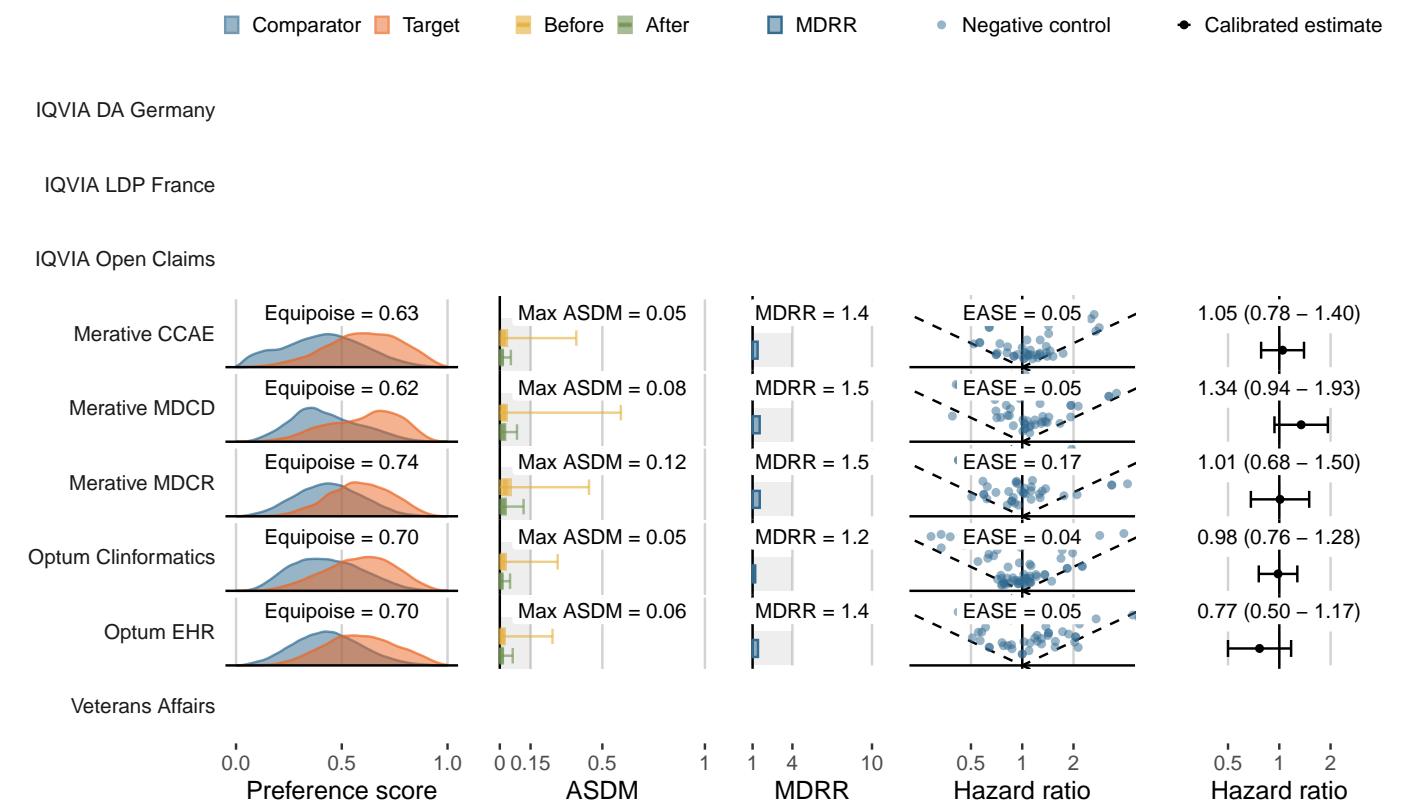
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Bone fracture**

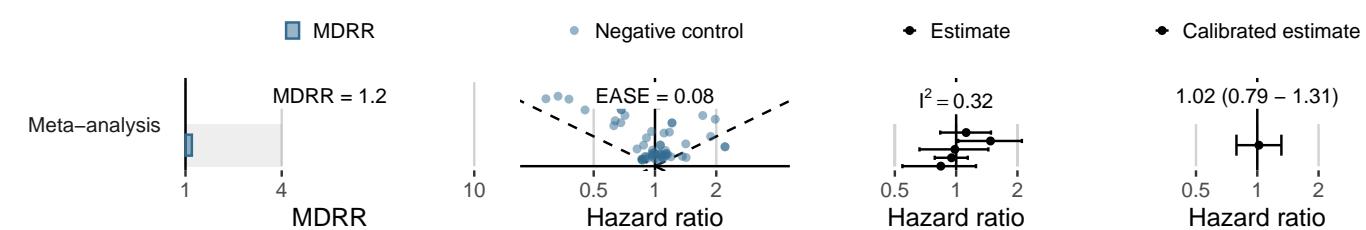
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	6,710	4,642	90	19.39
Merative MDCD	2,268	1,504	65	43.21
Merative MDCR	1,585	1,549	56	36.15
Optum Clininformatics	11,048	8,608	227	26.37
Optum EHR	8,132	1,690	42	24.86
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



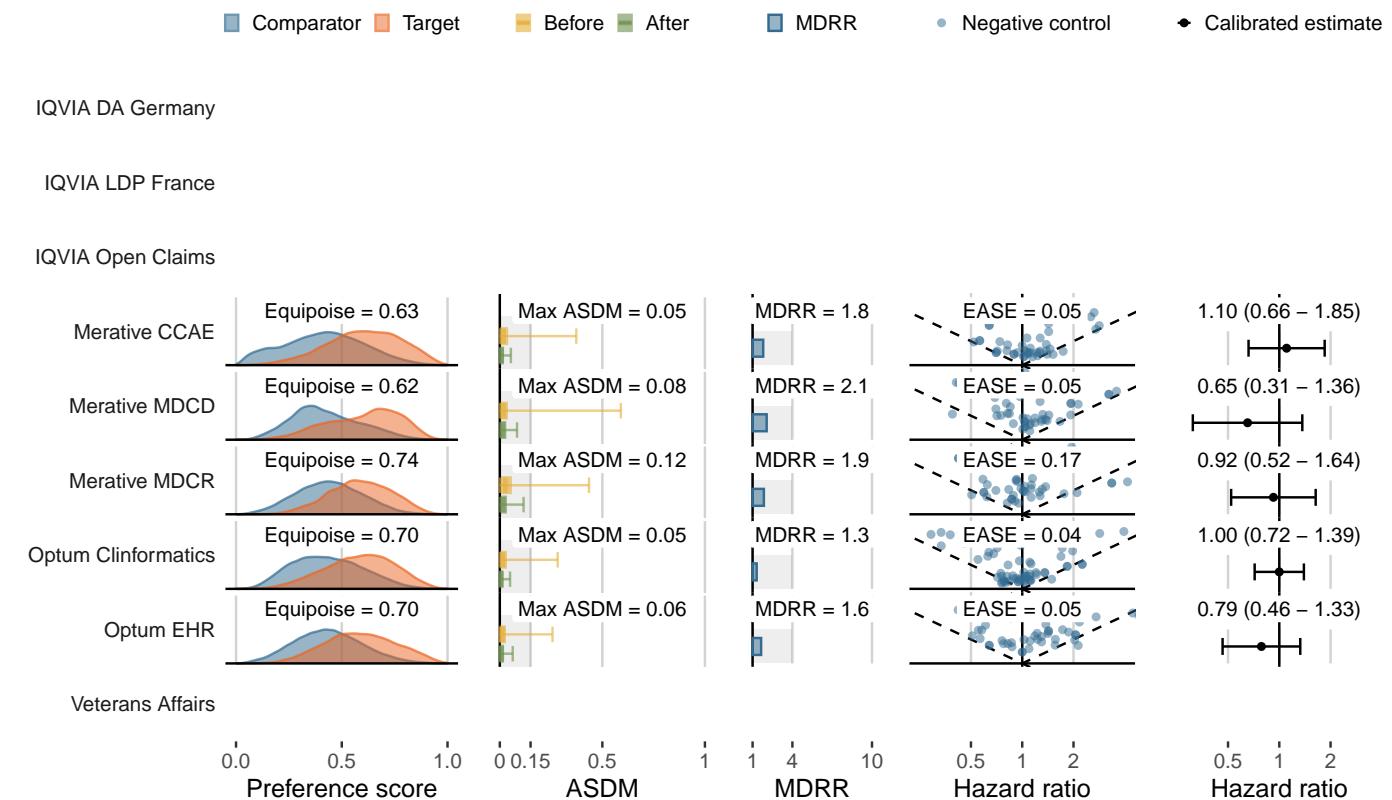
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Acute myocardial infarction**

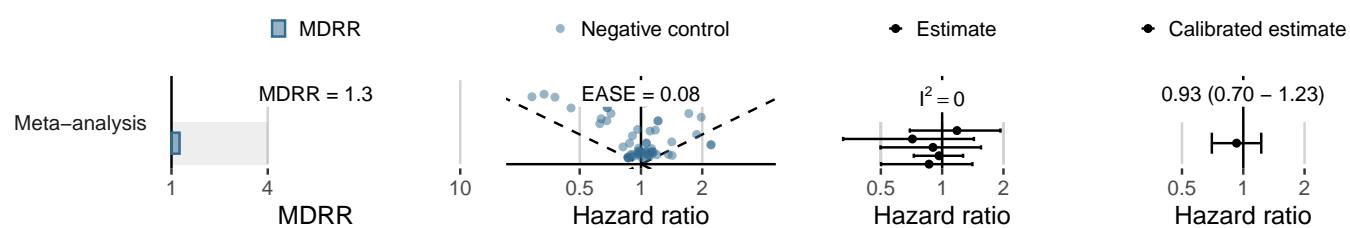
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	7,144	5,035	24	4.77
Merative MDCD	2,486	1,689	15	8.88
Merative MDCR	1,766	1,738	24	13.81
Optum Clininformatics	11,858	9,430	94	9.97
Optum EHR	8,625	1,790	21	11.73
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



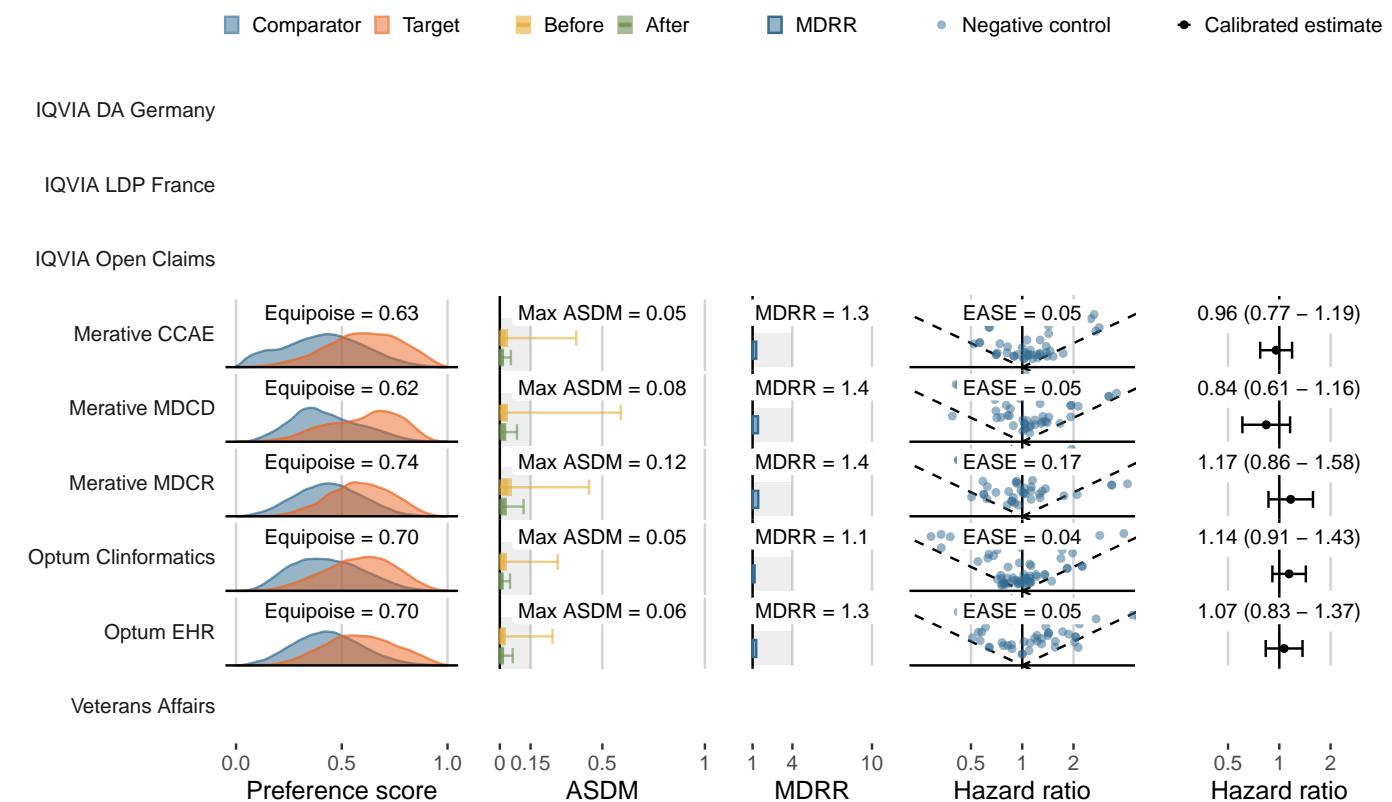
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Genitourinary infection**

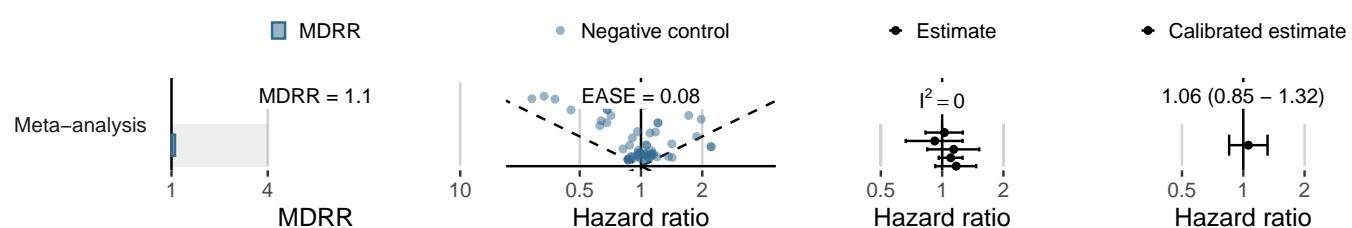
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	5,854	4,055	169	41.67
Merative MDCD	1,985	1,295	83	64.08
Merative MDCR	1,389	1,345	98	72.87
Optum Clininformatics	9,202	6,965	421	60.45
Optum EHR	7,358	1,473	113	76.71
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



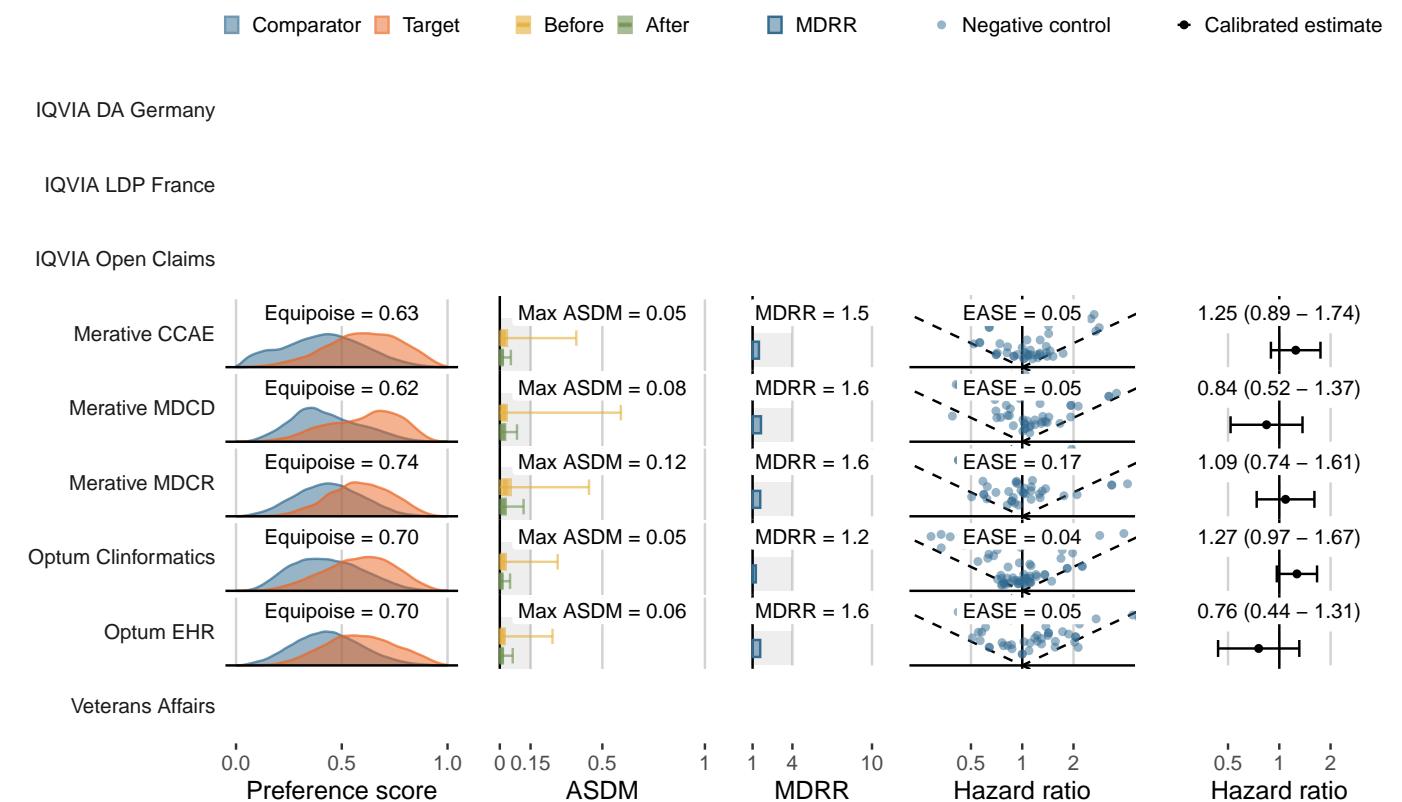
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Joint pain**

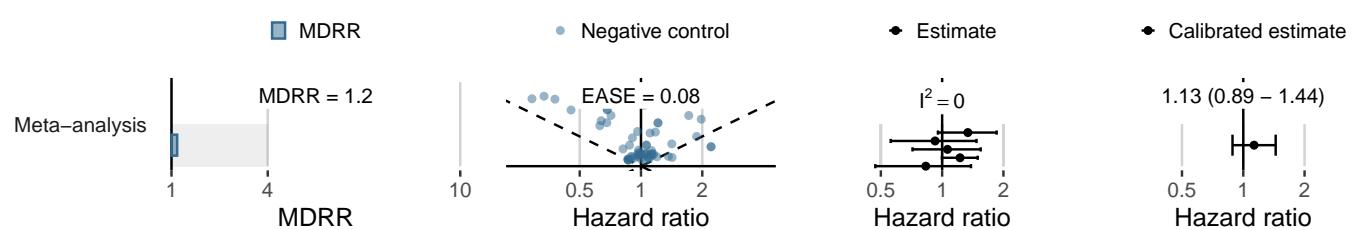
How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	6,864	4,831	67	13.87
Merative MDCD	1,977	1,302	35	26.87
Merative MDCR	1,431	1,388	51	36.74
Optum Clininformatics	10,100	7,777	186	23.92
Optum EHR	8,327	1,734	23	13.26
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)



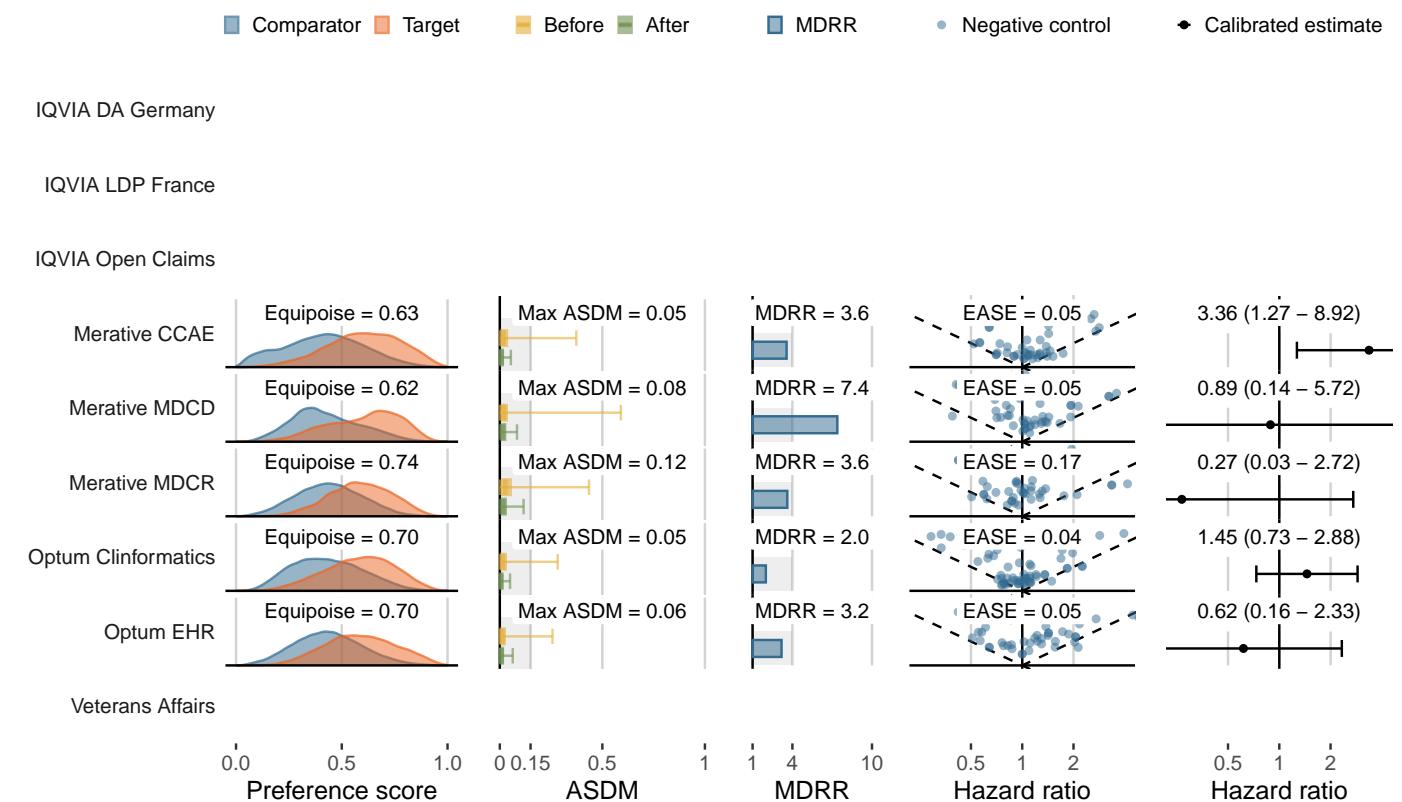
LEGEND-T2DM Evidence Dissemination Summary

- Target (class): **Linagliptin** (DPP-4 inhibitors)
- Comparator (class): **Glipizide** (Sulfonylureas)
- Outcome: **Renal cancer**

How Often? (Incidence rates in the PS-matched target cohorts)

Data source	Persons exposed	Person-time (yrs)	Persons with outcome	IR (/1,000 PY)
IQVIA DA Germany	-	-	-	-
IQVIA LDP France	-	-	-	-
IQVIA Open Claims	-	-	-	-
Merative CCAE	7,253	5,123	11	2.15
Merative MDCD	2,596	1,758	<5	<2.84
Merative MDCR	1,831	1,788	<5	<2.80
Optum Clininformatics	12,163	9,738	19	1.95
Optum EHR	8,713	1,809	<5	<2.76
Veterans Affairs	-	-	-	-

How Reliable Are the Effect Estimates? (Objective diagnostics)



What have we learned from the OHDSI Network? (Meta-analysis diagnostics and estimate)

