Modular Program Report



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The following report(s) provides findings from an FDA-initiated query using Sentinel. While Sentinel queries may be undertaken to assess potential medical product safety risks, they may also be initiated for various other reasons. Some examples include determining a rate or count of an identified health outcome of interest, examining medical product use, exploring the feasibility of future, more detailed analyses within Sentinel, and seeking to better understand Sentinel capabilities.

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FDA wants to emphasize that the fact that FDA has initiated a query involving a medical product and is reporting findings related to that query does not mean that FDA is suggesting health care practitioners should change their prescribing practices for the medical product or that patients taking the medical product should stop using it. Patients who have questions about the use of an identified medical product should contact their health care practitioners.

The following report contains a description of the request, request specifications, and results from the modular program run(s).

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Request ID: cder mpl1r wp001 nsdp v01

<u>Query Description</u>: This report contains the estimated rates of inpatient rhabdomyolysis and/or creatine kinase (CK) laboratory results following new use of statins or angiotensin-converting enzyme (ACE) inhibitors. This is Report 1 of 2.

<u>Data Source:</u> Data from January 1, 2006 to December 31, 2015 from 11 Data Partners contributing to the Sentinel Distributed Database (SDD) were included in this report. This request was distributed on February 19, 2016. See Appendix A for dates of available data for each Data Partner.

<u>Study Design:</u> This request was designed to identify exposures and follow-up time. The exposure of interest and the occurrence of the health outcome of interest during exposed time were identified. The number of exposure episodes, number of individuals, number of events, and days at risk in the SDD were calculated overall and were stratified by age group, sex, and year.

<u>Exposures of Interest:</u> The exposures of interest were statins and ACE inhibitors, which were defined using National Drug Codes (NDCs). Please refer to Appendix B for generic names evaluated.

Cohort Eligibility Criteria: Patients were required to be continuously enrolled in plans with both medical and drug coverage for at least six months (183 days) before their dispensing date, during which gaps in coverage of up to 45 days were allowed. Members were excluded if they had the exposure of interest, the outcome of interest, an inpatient rhabdomyolysis diagnosis, or a CK laboratory result \geq 1,000 U/L in the six months (183 days) prior to the exposure of interest. The following age groups were included in the cohort: <22, 22-<45, 45-<65, and 65+ years.

Follow-Up Time: Follow-up time for the outcome was determined by the length of the exposure episodes. Exposure episode lengths were defined using outpatient pharmacy dispensing days supplied to create a sequence of continuous exposure. Exposure episodes were considered continuous if gaps in days supply were less than 10 days. The end date of each exposure episode was extended by 10 additional days. Follow-up began on the day on which the first exposure of interest was dispensed and continued until the first occurrence of any of the following: 1) the outcome of interest; 2) any codes defining incidence criteria; 3) disenrollment; 4) the study end date (December 31, 2015); 5) the end date of the data provided by each Data Partner (see Appendix A); or 6) the end of the exposure episode. Only the first valid incident exposure episode that occurred during the study period was included per patient.

Outcome of Interest: There were eight outcome definitions of interest:

- 1) an incident rhabdomyolysis diagnosis (International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code 728.88)
- 2) an incident rhabdomyolysis diagnosis (ICD-9-CM code 728.88) without a CK laboratory value ≥ 1,000 U/L within +/- 14 days
- 3) an incident rhabdomyolysis diagnosis (ICD-9-CM code 728.88) and a CK laboratory value ≥ 0 U/L within +/- 14 days
- 4) an incident rhabdomyolysis diagnosis (ICD-9-CM code 728.88) and a CK laboratory value > 0 U/L and < 1,000 U/L within +/- 14 days
- 5) an incident rhabdomyolysis diagnosis (ICD-9-CM code 728.88) and an incident CK laboratory value ≥ 1,000 U/L within +/- 14 days
- 6) an incident CK laboratory value ≥ 1,000 U/L
- 7) an incident CK laboratory value ≥ 1,000 U/L without a rhabdomyolysis diagnosis (ICD-9-CM code 728.88) within +/- 14 days
- 8) a prevalent CK laboratory value ≥ 0 U/L

Rhabdomyolysis diagnoses were restricted to occurrences in the inpatient setting and were defined by ICD-9-CM diagnosis code 728.88. CK laboratory tests could use any specimen source and CK results with either U/L or unknown result units were evaluated. For outcomes requiring both a diagnosis code and a laboratory result, the first code or result to occur was used as the outcome date.

Please see Appendix C for the specifications of parameters used in the analyses for this request.

<u>Limitations:</u> Algorithms to define exposures and outcomes are imperfect and, therefore, may be misclassified.

<u>Notes:</u> Please contact the Sentinel Operations Center Query Fulfillment Team (qf@sentinelsystem.org) for questions and to provide comments/suggestions for future enhancements to this document.



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Glossary of Terms for Analyses Using Cohort Identification and Descriptive Analysis (CIDA) Tool*

Amount Supplied - number of units (pills, tablets, vials) dispensed. Net amount per NDC per dispensing. This is equivalent to the "RxAmt" value in the Sentinel Common Data Model.

Blackout Period - number of days at the beginning of a treatment episode that events are to be ignored. If an event occurs during the blackout period, the episode is excluded.

Care Setting - type of medical encounter or facility where the exposure, event, or condition code was recorded. Possible care settings include: Inpatient Hospital Stay (IP), Non-Acute Institutional Stay (IS), Emergency Department (ED), Ambulatory Visit (AV), and Other Ambulatory Visit (OA). For laboratory results, possible care settings include: Emergency department (E), Home (H), Inpatient (I), Outpatient (O), or Unknown or Missing (U). Along with the Principal Diagnosis Indicator, forms the Care Setting/PDX parameter.

Ambulatory Visit (AV) - includes visits at outpatient clinics, same-day surgeries, urgent care visits, and other same-day ambulatory hospital encounters, but excludes emergency department encounters.

Emergency Department (ED) - includes ED encounters that become inpatient stays (in which case inpatient stays would be a separate encounter). Excludes urgent care visits.

Inpatient Hospital Stay (IP) - includes all inpatient stays, same-day hospital discharges, hospital transfers, and acute hospital care where the discharge is after the admission date.

Non-Acute Institutional Stay (IS) - includes hospice, skilled nursing facility (SNF), rehab center, nursing home, residential, overnight non-hospital dialysis and other non-hospital stays.

Other Ambulatory Visit (OA) - includes other non overnight AV encounters such as hospice visits, home health visits, skilled nursing facility visits, other non-hospital visits, as well as telemedicine, telephone and email consultations.

Cohort Definition (drug/exposure) - indicates how the cohort will be defined: (1) 01: Cohort includes only the first valid treatment episode during the query period; (2) 02: Cohort includes all valid treatment episodes during the query period; (3) 03: Cohort includes all valid **Days Supplied** - number of days supplied for all dispensings in qualifying treatment episodes.

Eligible Members - number of members eligible for an incident treatment episode (defined by the drug/exposure and event washout periods) with drug and medical coverage during the query period.

Enrollment Gap - number of days allowed between two consecutive enrollment periods without breaking a "continuously enrolled" sequence.

Episode Gap - number of days allowed between two (or more) consecutive exposures (dispensings/procedures) to be considered the same **Episodes** - treatment episodes; length of episode is determined by days supplied in one dispensing or consecutive dispensings bridged by the **Event Deduplication** - specifies how events are counted by the MP algorithm: (0) 0: Counts all occurrences of an HOI during an exposure

episode; (1) 1: de-duplicates occurrences of the same HOI code and code type on the same day; (2) 2: de-duplicates occurrences of the same HOI group on the same day (e.g., de-duplicates at the group level).

Exposure Episode Length - number of days after exposure initiation that is considered "exposed time."

Exposure Extension Period - number of days post treatment period in which the outcomes/events are counted for a treatment episode. Extensions days are added after any episode gaps have been bridged

Lookback Period (pre-existing condition) - number of days wherein a member is required to have evidence of pre-existing condition

Maximum Episode Duration - truncates exposure episodes after a requester-specified number of exposed days. Applied after any gaps are

bridged and extension days added to the length of the exposure episode.

Member-Years - sum of all days of enrollment with medical and drug coverage** in the query period preceded by an exposure washout

Minimum Days Supplied - specifies a minimum number of days in length of the days supplied for the episode to be considered.

Minimum Episode Duration - specifies a minimum number of days in length of the episode for it to be considered. Applied after any gaps are bridged and extension days added to the length of the exposure episode.

Principal Diagnosis (PDX) - diagnosis or condition established to be chiefly responsible for admission of the patient to the hospital. 'P' = principal diagnosis, 'S' = secondary diagnosis, 'X' = unspecified diagnosis, '.' = blank. Along with the Care Setting values, forms the **Query Period** - period in which the modular program looks for exposures and outcomes of interest.

Treatment Episode Truncation Indicator - indicates whether observation of the incident query code during follow-up requires truncation of valid treatment episodes. A value of Y indicates that the treatment episodes should be truncated at the first occurrence of an incident query code. A value of N indicates that the treatment episodes should not be truncated at the occurrence of the incident query code.

Users - number of members with exposure during the query period. Member must have no evidence of exposure(s) of interest (defined by incidence criteria) in the prior washout period. A user may only be counted once in a query period.

Washout Period (drug/exposure)** - number of days a user is required to have no evidence of prior exposure (drug dispensing/procedure) and continuous drug and medical coverage prior to an incident treatment episode.

Washout Period (event/outcome)** - number of days a user is required to have no evidence of a prior event (procedure/diagnosis) and continuous drug and medical coverage prior to an incident treatment episode.



Years at Risk - number of days supplied plus any episode gaps and exposure extension periods all divided by 365.25.

- *all terms may not be used in this report
- **incident treatment episodes must be incident to both the exposure and the event



Table 1: Incident Angiotensin-Converting Enzyme (ACE) Inhibitor or Statin Use and Subsequent Inpatient Rhabdomyolysis and/or Creatine Kinase (CK) Laboratory Values in the Sentinel Distributed Database (SDD) between January 1, 2006 and December 31, 2015, by Event Definition and Exposure

	New Users	New Episodes	Dispensings	Days Supplied	Amount Supplied	Years at Risk	New Episodes w/ Events	Eligible Members	Member-Years	New Users / 1K Eligible Members	Days Supplied/ User	Dispensings / User	Days Supplied / Dispensing	New Episodes w/ Events / 10K Years at Risk
Rhabdomyolysis In	ternational C	lassification o	of Diseases, Nir	nth Revision, Clini	cal Modification (I	CD-9-CM) code	728.88						<u> </u>	
ACE Inhibitors	4,094,773	4,094,773	20,052,199	931,473,547	1,005,377,716	2,659,593.7	3,595	73,771,931	181,889,916.1	55.51	227.48	4.90	46.45	13.52
Statins	5,142,847	5,142,847	22,113,053	1,021,059,597	1,009,319,240	2,942,885.5	3,254	72,364,372	174,030,616.8	71.07	198.54	4.30	46.17	11.06
Rhabdomyolysis w	ithout CK valu	ue ≥ 1,000 U/	L within +/- 14	days										
ACE Inhibitors	4,094,773	4,094,773	20,052,199	931,473,547	1,005,377,716	2,659,946.7	3,052	73,771,931	181,889,916.1	55.51	227.48	4.90	46.45	11.47
Statins	5,142,847	5,142,847	22,113,053	1,021,059,597	1,009,319,240	2,943,092.7	2,745	72,364,372	174,030,616.8	71.07	198.54	4.30	46.17	9.33
Rhabdomyolysis ar	nd CK value ≥	0 U/L within	+/- 14 days											
ACE Inhibitors	4,094,764	4,094,764	20,052,186	931,472,773	1,005,377,062	2,660,757.4	788	73,771,929	181,889,910.7	55.51	227.48	4.90	46.45	2.96
Statins	5,142,838	5,142,838	22,113,044	1,021,059,163	1,009,318,806	2,943,800.9	719	72,364,371	174,030,614.5	71.07	198.54	4.30	46.17	2.44
Rhabdomyolysis ar	nd CK value >	0 U/L and < 1	,000 U/L within	n +/- 14 days										
ACE Inhibitors	4,094,764	4,094,764	20,052,186	931,472,773	1,005,377,062	2,660,837.3	618	73,771,929	181,889,910.7	55.51	227.48	4.90	46.45	2.32
Statins	5,142,838	5,142,838	22,113,044	1,021,059,163	1,009,318,806	2,943,852.8	565	72,364,371	174,030,614.5	71.07	198.54	4.30	46.17	1.92
Rhabdomyolysis ar	nd CK value ≥	1,000 U/L wit	thin +/- 14 days	s										
ACE Inhibitors	4,094,773	4,094,773	20,052,199	931,473,547	1,005,377,716	2,660,885.0	567	73,771,931	181,889,916.1	55.51	227.48	4.90	46.45	2.13
Statins	5,142,847	5,142,847	22,113,053	1,021,059,597	1,009,319,240	2,943,907.1	532	72,364,372	174,030,616.8	71.07	198.54	4.30	46.17	1.81
CK value ≥ 1,000 U	/L													
ACE Inhibitors	4,094,773	4,094,773	20,052,199	931,473,547	1,005,377,716	2,659,182.2	2,274	73,771,931	181,889,916.1	55.51	227.48	4.90	46.45	8.55
Statins	5,142,847	5,142,847	22,113,053	1,021,059,597	1,009,319,240	2,942,546.7	2,689	72,364,372	174,030,616.8	71.07	198.54	4.30	46.17	9.14
CK value ≥ 1,000 U	/L without Rh	abdomyolysi	s within +/- 14	days										
ACE Inhibitors	4,094,773	4,094,773	20,052,199	931,473,547	1,005,377,716	2,659,534.4	1,733	73,771,931	181,889,916.1	55.51	227.48	4.90	46.45	6.52
Statins	5,142,847	5,142,847	22,113,053	1,021,059,597	1,009,319,240	2,942,758.0	2,173	72,364,372	174,030,616.8	71.07	198.54	4.30	46.17	7.38
CK value ≥ 0 U/L														
ACE Inhibitors	4,101,748	4,101,748	20,090,215	933,470,561	1,007,665,994	2,495,580.8	149,125	73,773,810	181,920,009.2	55.60	227.58	4.90	46.46	597.56
Statins	5,149,244	5,149,244	22,150,545	1,023,060,966	1,011,307,293	2,710,334.4	251,456	72,366,323	174,060,493.0	71.16	198.68	4.30	46.19	927.77



Table 2: Incident Angiotensin-Converting Enzyme (ACE) Inhibitor or Statin Use and Subsequent Inpatient Rhabdomyolysis and/or Creatine Kinase (CK) Laboratory Values in the Sentinel Distributed Database (SDD) between January 1, 2006 and December 31, 2015, by Event Definition, Exposure, and Age Group

					Amount		New Episodes	Eligible		New Users / 1K Eligible	Days Supplied/	Dispensings /	Days Supplied /	New Episodes w/ Events / 10K Years
	New Users	New Episodes	Dispensings	Days Supplied	Supplied	Years at Risk	w/ Events	Members	Member-Years	Members	User	User	Dispensing	at Risk
Rhabdomyolysis Inte	rnational Cla	ssification of D	Diseases, Nintl	h Revision, Clinic	al Modification	(ICD-9-CM) cod	de 728.88							
ACE Inhibitors		25.075	06.220	2 402 020	5 005 040	0.406.5							0.004	
0-21 Years	25,875	25,875	86,230 2,762,063	3,182,838	5,095,819	9,486.5 318,348.0	4 176	21,737,116	50,886,605.4	1.19	123.01	3.33	36.91	4.22
22-44 Years	715,777	715,777		108,421,540	113,857,552	•		30,605,075	59,661,513.0	23.39	151.47	3.86	39.25	5.53
45-64 Years	2,046,984	2,046,984	10,154,898	449,280,115	479,942,918	1,286,984.2	1,005	21,242,474	51,230,240.9	96.36	219.48	4.96	44.24	7.81
65+ Years	1,306,137	1,306,137	7,049,008	370,589,054	406,481,427	1,044,775.0	2,410	7,610,304	20,111,556.9	171.63	283.73	5.40	52.57	23.07
Statins		40.007	20.076	4 407 500	4 476 226	2 602 6								
0-21 Years	10,897	10,897	30,876	1,197,508	1,176,226	3,603.6	1	21,743,374	50,928,118.8	0.50	109.89	2.83	38.78	2.78
22-44 Years	706,770	706,770	2,334,483	91,310,484	90,574,686	272,220.9	129	30,624,976	59,727,727.4	23.08	129.19	3.30	39.11	4.74
45-64 Years	2,783,318	2,783,318	12,016,271	522,801,096	517,474,383	1,514,469.6	877	20,422,562	47,134,753.1	136.29	187.83	4.32	43.51	5.79
65+ Years	1,641,862	1,641,862	7,731,423	405,750,509	400,093,945	1,152,591.4	2,247	6,701,569	16,240,017.5	245.00	247.13	4.71	52.48	19.50
Rhabdomyolysis with	out CK value	≥ 1,000 U/L w	ithin +/- 14 d	ays										
ACE Inhibitors														
0-21 Years	25,875	25,875	86,230	3,182,838	5,095,819	9,487.2	3	21,737,116	50,886,605.4	1.19	123.01	3.33	36.91	3.16
22-44 Years	715,777	715,777	2,762,063	108,421,540	113,857,552	318,372.2	147	30,605,075	59,661,513.0	23.39	151.47	3.86	39.25	4.62
45-64 Years	2,046,984	2,046,984	10,154,898	449,280,115	479,942,918	1,287,105.9	843	21,242,474	51,230,240.9	96.36	219.48	4.96	44.24	6.55
65+ Years	1,306,137	1,306,137	7,049,008	370,589,054	406,481,427	1,044,981.4	2,059	7,610,304	20,111,556.9	171.63	283.73	5.40	52.57	19.70
Statins														
0-21 Years	10,897	10,897	30,876	1,197,508	1,176,226	3,603.6	1	21,743,374	50,928,118.8	0.50	109.89	2.83	38.78	2.78
22-44 Years	706,770	706,770	2,334,483	91,310,484	90,574,686	272,227.0	102	30,624,976	59,727,727.4	23.08	129.19	3.30	39.11	3.75
45-64 Years	2,783,318	2,783,318	12,016,271	522,801,096	517,474,383	1,514,515.4	744	20,422,562	47,134,753.1	136.29	187.83	4.32	43.51	4.91
65+ Years	1,641,862	1,641,862	7,731,423	405,750,509	400,093,945	1,152,746.6	1,898	6,701,569	16,240,017.5	245.00	247.13	4.71	52.48	16.47
Rhabdomyolysis and	CK value ≥ 0	U/L within +/-	14 days											
ACE Inhibitors														
0-21 Years	25,875	25,875	86,230	3,182,838	5,095,819	9,487.2	1	21,737,116	50,886,605.2	1.19	123.01	3.33	36.91	1.05
22-44 Years	715,777	715,777	2,762,066	108,421,630	113,857,612	318,399.8	43	30,605,074	59,661,512.4	23.39	151.47	3.86	39.25	1.35
45-64 Years	2,046,979	2,046,979	10,154,891	449,279,648	479,942,601	1,287,323.3	229	21,242,474	51,230,240.9	96.36	219.48	4.96	44.24	1.78
65+ Years	1,306,133	1,306,133	7,048,999	370,588,657	406,481,030	1,045,547.1	515	7,610,303	20,111,552.2	171.63	283.73	5.40	52.57	4.93
Statins														
0-21 Years	10,897	10,897	30,876	1,197,508	1,176,226	3,603.7	0	21,743,374	50,928,118.6	0.50	109.89	2.83	38.78	0.00
22-44 Years	706,769	706,769	2,334,482	91,310,454	90,574,656	272,237.1	36	30,624,975	59,727,726.6	23.08	129.19	3.30	39.11	1.32
45-64 Years	2,783,314	2,783,314	12,016,267	522,800,896	517,474,183	1,514,727.1	183	20,422,562	47,134,755.0	136.29	187.83	4.32	43.51	1.21
65+ Years	1,641,858	1,641,858	7,731,419	405,750,305	400,093,741	1,153,233.0	500	6,701,569	16,240,014.3	245.00	247.13	4.71	52.48	4.34



Table 2: Incident Angiotensin-Converting Enzyme (ACE) Inhibitor or Statin Use and Subsequent Inpatient Rhabdomyolysis and/or Creatine Kinase (CK) Laboratory Values in the Sentinel Distributed Database (SDD) between January 1, 2006 and December 31, 2015, by Event Definition, Exposure, and Age Group

					Amount		New Episodes	Eligible		New Users / 1K Eligible	Days	Dispensings /	Days Supplied /	New Episodes w/ Events / 10K Years
	New Users	New Episodes	Dispensings	Days Supplied	Supplied	Years at Risk	w/ Events	Members	Member-Years	Members	User	User	Dispensing	at Risk
Rhabdomyolysis and		<u> </u>					,						, ,	
ACE Inhibitors														
0-21 Years	25,875	25,875	86,230	3,182,838	5,095,819	9,487.2	1	21,737,116	50,886,605.2	1.19	123.01	3.33	36.91	1.05
22-44 Years	715,777	715,777	2,762,066	108,421,630	113,857,612	318,407.6	31	30,605,074	59,661,512.4	23.39	151.47	3.86	39.25	0.97
45-64 Years	2,046,979	2,046,979	10,154,891	449,279,648	479,942,601	1,287,348.7	165	21,242,474	51,230,240.9	96.36	219.48	4.96	44.24	1.28
65+ Years	1,306,133	1,306,133	7,048,999	370,588,657	406,481,030	1,045,593.9	421	7,610,303	20,111,552.2	171.63	283.73	5.40	52.57	4.03
Statins														
0-21 Years	10,897	10,897	30,876	1,197,508	1,176,226	3,603.7	0	21,743,374	50,928,118.6	0.50	109.89	2.83	38.78	0.00
22-44 Years	706,769	706,769	2,334,482	91,310,454	90,574,656	272,239.0	23	30,624,975	59,727,726.6	23.08	129.19	3.30	39.11	0.84
45-64 Years	2,783,314	2,783,314	12,016,267	522,800,896	517,474,183	1,514,742.5	151	20,422,562	47,134,755.0	136.29	187.83	4.32	43.51	1.00
65+ Years	1,641,858	1,641,858	7,731,419	405,750,305	400,093,741	1,153,267.6	391	6,701,569	16,240,014.3	245.00	247.13	4.71	52.48	3.39
Rhabdomyolysis and	l CK value ≥ 1,	000 U/L withi	in +/- 14 days											
ACE Inhibitors														
0-21 Years	25,875	25,875	86,230	3,182,838	5,095,819	9,487.2	1	21,737,116	50,886,605.4	1.19	123.01	3.33	36.91	1.05
22-44 Years	715,777	715,777	2,762,063	108,421,540	113,857,552	318,408.0	30	30,605,075	59,661,513.0	23.39	151.47	3.86	39.25	0.94
45-64 Years	2,046,984	2,046,984	10,154,898	449,280,115	479,942,918	1,287,358.5	169	21,242,474	51,230,240.9	96.36	219.48	4.96	44.24	1.31
65+ Years	1,306,137	1,306,137	7,049,008	370,589,054	406,481,427	1,045,631.3	367	7,610,304	20,111,556.9	171.63	283.73	5.40	52.57	3.51
Statins														
0-21 Years	10,897	10,897	30,876	1,197,508	1,176,226	3,603.7	0	21,743,374	50,928,118.8	0.50	109.89	2.83	38.78	0.00
22-44 Years	706,770	706,770	2,334,483	91,310,484	90,574,686	272,238.4	27	30,624,976	59,727,727.4	23.08	129.19	3.30	39.11	0.99
45-64 Years	2,783,318	2,783,318	12,016,271	522,801,096	517,474,383	1,514,745.8	141	20,422,562	47,134,753.1	136.29	187.83	4.32	43.51	0.93
65+ Years	1,641,862	1,641,862	7,731,423	405,750,509	400,093,945	1,153,319.2	364	6,701,569	16,240,017.5	245.00	247.13	4.71	52.48	3.16
CK value ≥ 1,000 U/L ACE Inhibitors														
		25.075	06.220	2 402 020	5 005 040	0.402.5								
0-21 Years	25,875	25,875	86,230	3,182,838	5,095,819	9,482.5	8	21,737,116	50,886,605.4	1.19	123.01	3.33	36.91	8.44
22-44 Years	715,777	715,777	2,762,063	108,421,540	113,857,552	318,237.4	222	30,605,075	59,661,513.0	23.39	151.47	3.86	39.25	6.98
45-64 Years	2,046,984	2,046,984	10,154,898	449,280,115	479,942,918	1,286,501.2	926	21,242,474	51,230,240.9	96.36	219.48	4.96	44.24	7.20
65+ Years	1,306,137	1,306,137	7,049,008	370,589,054	406,481,427	1,044,961.1	1,118	7,610,304	20,111,556.9	171.63	283.73	5.40	52.57	10.70
Statins 0.31 Voors	10 907	10,897	30,876	1,197,508	1,176,226	3,599.9	4	21 7/2 27/	E0 039 119 9	0.50	109.89	2.83	20 70	11 11
0-21 Years	10,897	•	,	91,310,484		•	310	21,743,374	50,928,118.8				38.78	11.11
22-44 Years	706,770	706,770	2,334,483		90,574,686	272,129.8		30,624,976	59,727,727.4	23.08	129.19	3.30	39.11	11.39
45-64 Years	2,783,318	2,783,318	12,016,271	522,801,096	517,474,383	1,514,052.0	1,165	20,422,562	47,134,753.1	136.29	187.83	4.32	43.51	7.69
65+ Years	1,641,862	1,641,862	7,731,423	405,750,509	400,093,945	1,152,765.0	1,210	6,701,569	16,240,017.5	245.00	247.13	4.71	52.48	10.50



Table 2: Incident Angiotensin-Converting Enzyme (ACE) Inhibitor or Statin Use and Subsequent Inpatient Rhabdomyolysis and/or Creatine Kinase (CK) Laboratory Values in the Sentinel Distributed Database (SDD) between January 1, 2006 and December 31, 2015, by Event Definition, Exposure, and Age Group

							New			New Users /	Days		Days	New Episodes w/
					Amount		Episodes	Eligible		1K Eligible		Dispensings /	Supplied /	Events / 10K Years
		New Episodes	<u> </u>	Days Supplied	Supplied	Years at Risk	w/ Events	Members	Member-Years	Members	User	User	Dispensing	at Risk
CK value ≥ 1,000 U/L	. without Rhab	odomyolysis v	vithin +/- 14 da	ays										
ACE Inhibitors														
0-21 Years	25,875	25,875	86,230	3,182,838	5,095,819	9,483.1	7	21,737,116	50,886,605.4	1.19	123.01	3.33	36.91	7.38
22-44 Years	715,777	715,777	2,762,063	108,421,540	113,857,552	318,259.5	196	30,605,075	59,661,513.0	23.39	151.47	3.86	39.25	6.16
45-64 Years	2,046,984	2,046,984	10,154,898	449,280,115	479,942,918	1,286,616.6	771	21,242,474	51,230,240.9	96.36	219.48	4.96	44.24	5.99
65+ Years	1,306,137	1,306,137	7,049,008	370,589,054	406,481,427	1,045,175.3	759	7,610,304	20,111,556.9	171.63	283.73	5.40	52.57	7.26
Statins														
0-21 Years	10,897	10,897	30,876	1,197,508	1,176,226	3,599.9	4	21,743,374	50,928,118.8	0.50	109.89	2.83	38.78	11.11
22-44 Years	706,770	706,770	2,334,483	91,310,484	90,574,686	272,135.5	287	30,624,976	59,727,727.4	23.08	129.19	3.30	39.11	10.55
45-64 Years	2,783,318	2,783,318	12,016,271	522,801,096	517,474,383	1,514,100.7	1,027	20,422,562	47,134,753.1	136.29	187.83	4.32	43.51	6.78
65+ Years	1,641,862	1,641,862	7,731,423	405,750,509	400,093,945	1,152,921.9	855	6,701,569	16,240,017.5	245.00	247.13	4.71	52.48	7.42
CK value ≥ 0 U/L														
ACE Inhibitors														
0-21 Years	25,926	25,926	86,384	3,190,681	5,107,501	9,365.8	263	21,737,226	50,889,104.1	1.19	123.07	3.33	36.94	280.81
22-44 Years	716,479	716,479	2,765,266	108,591,655	114,045,832	308,066.1	12,712	30,605,583	59,668,304.6	23.41	151.56	3.86	39.27	412.64
45-64 Years	2,049,535	2,049,535	10,168,500	450,093,290	480,878,511	1,209,297.2	68,983	21,242,972	51,238,444.0	96.48	219.61	4.96	44.26	570.44
65+ Years	1,309,808	1,309,808	7,070,065	371,594,935	407,634,149	968,851.6	67,167	7,610,978	20,124,156.6	172.09	283.70	5.40	52.56	693.26
Statins														_
0-21 Years	10,905	10,905	30,889	1,198,350	1,177,048	3,346.9	483	21,743,487	50,930,685.2	0.50	109.89	2.83	38.80	1443.12
22-44 Years	707,288	707,288	2,336,780	91,443,026	90,704,666	257,899.8	23,238	30,625,493	59,734,888.9	23.09	129.29	3.30	39.13	901.05
45-64 Years	2,785,646	2,785,646	12,029,617	523,584,747	518,256,356	1,398,905.4	127,522	20,423,171	47,143,131.8	136.40	187.96	4.32	43.52	911.58
65+ Years	1,645,405	1,645,405	7,753,259	406,834,843	401,169,223	1,050,182.4	100,213	6,702,361	16,251,787.1	245.50	247.26	4.71	52.47	954.24



Table 3: Incident Angiotensin-Converting Enzyme (ACE) Inhibitor or Statin Use and Subsequent Inpatient Rhabdomyolysis and/or Creatine Kinase (CK) Laboratory Values in the Sentinel Distributed Database (SDD) between January 1, 2006 and December 31, 2015, by Event Definition, Exposure, and Sex

	Now Hoore	New Episodes	Dienonsings	Days Supplied	Amount Supplied	Years at Risk	New Episodes w/ Events	Eligible Members	Member-Years	New Users / 1K Eligible Members	Days Supplied/ User	Dispensings / User	Days Supplied / Dispensing	New Episodes w/ Events / 10K Years at Risk
Rhabdomyolysis Int		·		, ,,			-	Wellibers	Weiliber-Tears	Wellibers	Osei	Osei	Dispensing	at Nisk
ACE Inhibitors				,										
Female	1,894,695	1,894,695	9,168,336	428,918,984	462,820,825	1,223,637.6	1,690	37,751,084	94,654,213.2	50.19	226.38	4.84	46.78	13.81
Male	2,199,960	2,199,960	10,883,346	502,530,645	542,530,625	1,435,886.8	1,905	36,018,905	87,231,570.4	61.08	228.43	4.95	46.17	13.27
Unknown	118	118	517	23,918	26,267	69.2	0	1,942	4,132.5	60.76	202.69	4.38	46.26	0.00
Statins		2 462 544	40 404 706	400 425 004	405 340 505	4 442 504 0	4.454							
Female	2,463,544	2,463,544	10,484,796	490,425,004	485,319,505	1,412,501.9	1,454	37,105,309	90,739,788.4	66.39	199.07	4.26	46.77	10.29
Male	2,679,153	2,679,153	11,627,694	530,606,238	523,970,259	1,530,301.6	1,800	35,257,142	83,286,813.6	75.99	198.05	4.34	45.63	11.76
Unknown	150	150	563	28,355	29,476	82.1	0	1,921	4,014.8	78.08	189.03	3.75	50.36	0.00
Rhabdomyolysis wi	thout CK value	e ≥ 1,000 U/L v	vithin +/- 14 d	ays										
		4 004 605	0.450.225	420.040.004	462 020 025	4 222 024 0	4.426							
Female	1,894,695	1,894,695	9,168,336	428,918,984	462,820,825	1,223,834.9	1,436	37,751,084	94,654,213.2	50.19	226.38	4.84	46.78	11.73
Male	2,199,960	2,199,960	10,883,346	502,530,645	542,530,625	1,436,042.6	1,616	36,018,905	87,231,570.4	61.08	228.43	4.95	46.17	11.25
Unknown	118	118	517	23,918	26,267	69.2	0	1,942	4,132.5	60.76	202.69	4.38	46.26	0.00
Statins														
Female	2,463,544	2,463,544	10,484,796	490,425,004	485,319,505	1,412,617.6	1,217	37,105,309	90,739,788.4	66.39	199.07	4.26	46.77	8.62
Male	2,679,153	2,679,153	11,627,694	530,606,238	523,970,259	1,530,392.9	1,528	35,257,142	83,286,813.6	75.99	198.05	4.34	45.63	9.98
Unknown	150	150	563	28,355	29,476	82.1	0	1,921	4,014.8	78.08	189.03	3.75	50.36	0.00
Rhabdomyolysis an ACE Inhibitors	d CK value ≥ 0	U/L within +/	- 14 days											
		4 004 602	0.460.222	420.040.022	462.020.674	4 224 404 6	276						44.50	
Female	1,894,692	1,894,692	9,168,332	428,918,833	462,820,674	1,224,181.6	376	37,751,084	94,654,211.0	50.19	226.38	4.84	46.78	3.07
Male	2,199,954	2,199,954	10,883,337	502,530,022	542,530,122	1,436,506.6	412	36,018,903	87,231,567.2	61.08	228.43	4.95	46.17	2.87
Unknown	118	118	517	23,918	26,267	69.2	0	1,942	4,132.5	60.76	202.69	4.38	46.26	0.00
Statins	2 462 540	2 462 540	10 494 702	400 424 754	495 310 355	1 412 010 0	339	27 105 200	00 720 700 0	CC 20	100.07	4.20	46.77	2.40
Female	2,463,540	2,463,540	10,484,792	490,424,754	485,319,255	1,412,919.0		37,105,309	90,739,788.0	66.39	199.07	4.26	46.77	2.40
Male	2,679,148	2,679,148	11,627,689	530,606,054	523,970,075	1,530,799.8	380	35,257,141	83,286,811.7	75.99	198.05	4.34	45.63	2.48
Unknown	150	150	563	28,355	29,476	82.1	0	1,921	4,014.8	78.08	189.03	3.75	50.36	0.00
Rhabdomyolysis an ACE Inhibitors	a CK value > 0	U/L and < 1,0	UU U/L WITNIN	+/- 14 days										
	1 904 603	1,894,692	9,168,332	428,918,833	462,820,674	1,224,219.7	304	27 751 004	04 654 211 0	E0 10	226.20	4.04	46.79	2.49
Female	1,894,692							37,751,084	94,654,211.0	50.19	226.38	4.84	46.78	2.48
Male	2,199,954	2,199,954	10,883,337	502,530,022	542,530,122	1,436,548.3	314	36,018,903	87,231,567.2	61.08	228.43	4.95	46.17	2.19
Unknown	118	118	517	23,918	26,267	69.2	0	1,942	4,132.5	60.76	202.69	4.38	46.26	0.00
<i>Statins</i> Female	2,463,540	2,463,540	10,484,792	490,424,754	485,319,255	1,412,945.1	276	27 10E 200	90,739,788.0	66.39	199.07	4.26	46.77	1.95
		2,463,540	11,627,689		523,970,075		289	37,105,309	, ,					
Male	2,679,148			530,606,054		1,530,825.6		35,257,141	83,286,811.7	75.99	198.05	4.34	45.63	1.89
Unknown CDER_MPL1R_W	150 /P001_NSDF	150 P_V01	563	28,355	29,476	82.1	0	1,921	4,014.8	78.08	189.03	3.75	50.36	0.00



Table 3: Incident Angiotensin-Converting Enzyme (ACE) Inhibitor or Statin Use and Subsequent Inpatient Rhabdomyolysis and/or Creatine Kinase (CK) Laboratory Values in the Sentinel Distributed Database (SDD) between January 1, 2006 and December 31, 2015, by Event Definition, Exposure, and Sex

					Amount		New Episodes	Eligible		New Users / 1K Eligible		Dispensings /	Days Supplied /	New Episodes w/ Events / 10K Years
Rhabdomyolysis an		New Episodes		Days Supplied	Supplied	Years at Risk	w/ Events	Members	Member-Years	Members	User	User	Dispensing	at Risk
ACE Inhibitors	u CK value ≥ 1,	,000 U/L WILII	in +/- 14 days											
Female	1,894,695	1,894,695	9,168,336	428,918,984	462,820,825	1,224,250.5	266	37,751,084	94,654,213.2	50.19	226.38	4.84	46.78	2.17
Male	2,199,960	2,199,960	10,883,346	502,530,645	542,530,625	1,436,565.3	301	36,018,905	87,231,570.4	61.08	228.43	4.95	46.17	2.10
Unknown	118	118	517	23,918	26,267	69.2	0	1,942	4,132.5	60.76	202.69	4.38	46.26	0.00
Statins	110	110	317	23,310	20,207	03.2		1,542	4,132.3	00.70	202.03	4.30	40.20	0.00
Female	2,463,544	2,463,544	10,484,796	490,425,004	485,319,505	1,412,970.0	246	37,105,309	90,739,788.4	66.39	199.07	4.26	46.77	1.74
Male	2,679,153	2,679,153	11,627,694	530,606,238	523,970,259	1,530,855.0	286	35,257,142	83,286,813.6	75.99	198.05	4.34	45.63	1.87
Unknown	150	150	563	28,355	29,476	82.1	0	1,921	4,014.8	78.08	189.03	3.75	50.36	0.00
CK value ≥ 1,000 U/								,-	,-					
ACE Inhibitors														
Female	1,894,695	1,894,695	9,168,336	428,918,984	462,820,825	1,223,799.6	778	37,751,084	94,654,213.2	50.19	226.38	4.84	46.78	6.36
Male	2,199,960	2,199,960	10,883,346	502,530,645	542,530,625	1,435,313.3	1,496	36,018,905	87,231,570.4	61.08	228.43	4.95	46.17	10.42
Unknown	118	118	517	23,918	26,267	69.2	0	1,942	4,132.5	60.76	202.69	4.38	46.26	0.00
Statins														
Female	2,463,544	2,463,544	10,484,796	490,425,004	485,319,505	1,412,644.8	827	37,105,309	90,739,788.4	66.39	199.07	4.26	46.77	5.85
Male	2,679,153	2,679,153	11,627,694	530,606,238	523,970,259	1,529,819.8	1,862	35,257,142	83,286,813.6	75.99	198.05	4.34	45.63	12.17
Unknown	150	150	563	28,355	29,476	82.1	0	1,921	4,014.8	78.08	189.03	3.75	50.36	0.00
CK value ≥ 1,000 U/	L without Rha	bdomyolysis v	within +/- 14 d	ays										
ACE Inhibitors														
Female	1,894,695	1,894,695	9,168,336	428,918,984	462,820,825	1,223,995.9	523	37,751,084	94,654,213.2	50.19	226.38	4.84	46.78	4.27
Male	2,199,960	2,199,960	10,883,346	502,530,645	542,530,625	1,435,469.3	1,210	36,018,905	87,231,570.4	61.08	228.43	4.95	46.17	8.43
Unknown	118	118	517	23,918	26,267	69.2	0	1,942	4,132.5	60.76	202.69	4.38	46.26	0.00
Statins		2 462 544	40 404 706	400 425 004	405 340 505	4 442 762 0	F0.0	.==						
Female	2,463,544	2,463,544	10,484,796	490,425,004	485,319,505	1,412,763.8	586	37,105,309	90,739,788.4	66.39	199.07	4.26	46.77	4.15
Male	2,679,153	2,679,153	11,627,694	530,606,238	523,970,259	1,529,912.1	1,587	35,257,142	83,286,813.6	75.99	198.05	4.34	45.63	10.37
Unknown CK value ≥ 0 U/L	150	150	563	28,355	29,476	82.1	0	1,921	4,014.8	78.08	189.03	3.75	50.36	0.00
ACE Inhibitors														
Female	1,897,193	1,897,193	9,182,333	429,580,785	463,581,596	1,151,560.0	66,723	37,751,823	94,666,761.3	50.25	226.43	4.84	46.78	579.41
Male	2,204,437	2,204,437	10,907,365	503,865,858	544,058,131	1,343,958.9	82,394	36,020,045	87,249,114.4	61.20	228.57	4.95	46.20	613.07
Unknown	118	118	517	23,918	26,267	61.9	8	1,942	4,133.5	60.76	202.69	4.38	46.26	1292.81
Statins	110		<u> </u>	20,010	20,20.	02.0		1,572	7,133.3	00.70	202.03	7.50	70.20	1232.01
Female	2,465,862	2,465,862	10,498,093	491,080,753	485,975,004	1,300,228.5	122,422	37,106,045	90,751,956.0	66.45	199.15	4.26	46.78	941.54
Male	2,683,232	2,683,232	11,651,891	531,951,891	525,302,846	1,410,038.8	129,024	35,258,357	83,304,521.1	76.10	198.25	4.34	45.65	915.04
CDER UNTAPEMA W			561	28,322	29,443	67.1	10	1,921	4,015.9	78.08	188.81	3.74	50.48	1490.45
25 ET VIII ET. K _ VV	. 551_11551	_•••			•			•	,					



Table 4: Incident Angiotensin-Converting Enzyme (ACE) Inhibitor or Statin Use and Subsequent Inpatient Rhabdomyolysis and/or Creatine Kinase (CK) Laboratory Values in the Sentinel Distributed Database (SDD) between January 1, 2006 and December 31, 2015, by Event Definition, Exposure, and Year

							New			New Users / 1K	Days		Days	New Episodes w/
	New Users	New	Diamanainaa	Dava Summlind	Amount	Years at Risk	Episodes w/ Events	Eligible Members	Manahan Vasus	Eligible Members		Dispensings / User		Events / 10K Years at Risk
Rhabdomyolysis		Episodes al Classific	Dispensings	Days Supplied	Supplied ion, Clinical Mo				Member-Years	Wembers	User	User	Dispensing	at RISK
ACE Inhibitors				2000, 11111111111111111			2 5 6, 664	0 / 20:00						
2006	231,516	231,516	1,404,461	82,366,567	90,205,892	231,749.8	241	16,112,493	9,012,706.8	14.37	355.77	6.07	58.65	10.40
2007	337,736	337,736	2,076,408	103,117,003	112,454,447	292,280.8	294	19,938,821	14,237,807.1	16.94	305.32	6.15	49.66	10.06
2008	508,868	508,868	2,881,988	130,927,819	142,537,651	373,054.6	518	29,718,837	20,033,395.7	17.12	257.29	5.66	45.43	13.89
2009	591,924	591,924	3,161,816	142,249,150	154,195,070	406,383.0	542	29,930,372	23,189,425.9	19.78	240.32	5.34	44.99	13.34
2010	523,115	523,115	2,710,763	124,275,738	134,073,250	354,833.6	473	28,179,551	21,949,725.0	18.56	237.57	5.18	45.85	13.33
2011	450,821	450,821	2,246,425	104,344,534	112,219,333	298,032.2	462	26,667,530	20,947,426.6	16.91	231.45	4.98	46.45	15.50
2012	430,924	430,924	2,053,781	93,953,519	100,449,482	268,841.3	404	27,671,353	21,138,874.3	15.57	218.03	4.77	45.75	15.03
2013	428,244	428,244	1,806,905	81,102,237	86,194,403	233,237.7	343	27,663,387	21,616,489.0	15.48	189.38	4.22	44.88	14.71
2014	436,269	436,269	1,433,132	59,296,051	62,751,455	172,343.4	273	29,174,021	21,915,045.3	14.95	135.92	3.28	41.38	15.84
2015	155,356	155,356	276,520	9,840,929	10,296,733	28,837.2	45	22,856,312	7,849,020.5	6.80	63.34	1.78	35.59	15.60
Statins														
2006	310,380	310,380	1,521,886	84,439,130	84,247,373	239,838.1	240	15,757,406	8,759,137.1	19.70	272.05	4.90	55.48	10.01
2007	452,476	452,476	2,294,538	109,826,806	107,141,170	315,144.3	269	19,451,808	13,787,061.5	23.26	242.72	5.07	47.86	8.54
2008	659,330	659,330	3,210,138	144,013,615	142,520,662	415,367.7	426	28,896,841	19,321,163.4	22.82	218.42	4.87	44.86	10.26
2009	734,997	734,997	3,463,179	154,819,337	153,715,910	446,932.1	449	28,972,279	22,266,829.1	25.37	210.64	4.71	44.70	10.05
2010	613,232	613,232	2,826,816	128,797,698	127,915,645	371,107.9	452	27,148,917	20,998,865.1	22.59	210.03	4.61	45.56	12.18
2011	543,987	543,987	2,411,351	111,764,352	110,413,354	321,665.5	373	25,633,955	19,985,772.4	21.22	205.45	4.43	46.35	11.60
2012	538,062	538,062	2,318,076	107,506,187	105,088,647	309,720.1	377	26,568,751	20,126,475.7	20.25	199.80	4.31	46.38	12.17
2013	538,829	538,829	2,084,103	95,032,105	94,058,426	275,059.9	354	26,521,467	20,553,740.3	20.32	176.37	3.87	45.60	12.87
2014	554,453	554,453	1,651,057	72,426,352	71,899,079	211,502.1	269	27,921,722	20,785,507.4	19.86	130.63	2.98	43.87	12.72
2015	197,101	197,101	331,909	12,434,015	12,318,974	36,547.9	45	21,737,731	7,446,064.9	9.07	63.08	1.68	37.46	12.31
Rhabdomyolysis	without CK	value ≥ 1,	000 U/L withi	n +/- 14 days										
ACE Inhibitors														
2006	231,516	231,516	1,404,461	82,366,567	90,205,892	231,844.5	131	16,112,493	9,012,706.8	14.37	355.77	6.07	58.65	5.65
2007	337,736	337,736	2,076,408	103,117,003	112,454,447	292,344.5	202	19,938,821	14,237,807.1	16.94	305.32	6.15	49.66	6.91
2008	508,868	508,868	2,881,988	130,927,819	142,537,651	373,107.4	447	29,718,837	20,033,395.7	17.12	257.29	5.66	45.43	11.98
2009	591,924	591,924	3,161,816	142,249,150	154,195,070	406,420.5	484	29,930,372	23,189,425.9	19.78	240.32	5.34	44.99	11.91
2010	523,115	523,115	2,710,763	124,275,738	134,073,250	354,874.1	420	28,179,551	21,949,725.0	18.56	237.57	5.18	45.85	11.84
2011	450,821	450,821	2,246,425	104,344,534	112,219,333	298,061.3	418	26,667,530	20,947,426.6	16.91	231.45	4.98	46.45	14.02
2012	430,924	430,924	2,053,781	93,953,519	100,449,482	268,855.1	369	27,671,353	21,138,874.3	15.57	218.03	4.77	45.75	13.72
2013	428,244	428,244	1,806,905	81,102,237	86,194,403	233,247.8	308	27,663,387	21,616,489.0	15.48	189.38	4.22	44.88	13.20
2014	436,269	436,269	1,433,132	59,296,051	62,751,455	172,353.0	236	29,174,021	21,915,045.3	14.95	135.92	3.28	41.38	13.69
2015	•	155,356	276,520	9,840,929	10,296,733	28,838.6	37	22,856,312	7,849,020.5	6.80	63.34	1.78	35.59	12.83
	,	•	•			•								



Table 4: Incident Angiotensin-Converting Enzyme (ACE) Inhibitor or Statin Use and Subsequent Inpatient Rhabdomyolysis and/or Creatine Kinase (CK) Laboratory Values in the Sentinel Distributed Database (SDD) between January 1, 2006 and December 31, 2015, by Event Definition, Exposure, and Year

	New Users	New Episodes	Dispensings	Days Supplied	Amount Supplied	Years at Risk	New Episodes w/ Events	Eligible Members	Member-Years	New Users / 1K Eligible Members	Days Supplied/ User	Dispensings / User	Days Supplied / Dispensing	New Episodes w/ Events / 10K Years at Risk
Statins														
2006	310,380	310,380	1,521,886	84,439,130	84,247,373	239,891.8	129	15,757,406	8,759,137.1	19.70	272.05	4.90	55.48	5.38
2007	452,476	452,476	2,294,538	109,826,806	107,141,170	315,175.9	197	19,451,808	13,787,061.5	23.26	242.72	5.07	47.86	6.25
2008	659,330	659,330	3,210,138	144,013,615	142,520,662	415,391.0	368	28,896,841	19,321,163.4	22.82	218.42	4.87	44.86	8.86
2009	734,997	734,997	3,463,179	154,819,337	153,715,910	446,957.2	398	28,972,279	22,266,829.1	25.37	210.64	4.71	44.70	8.90
2010	613,232	613,232	2,826,816	128,797,698	127,915,645	371,134.9	394	27,148,917	20,998,865.1	22.59	210.03	4.61	45.56	10.62
2011	543,987	543,987	2,411,351	111,764,352	110,413,354	321,678.2	337	25,633,955	19,985,772.4	21.22	205.45	4.43	46.35	10.48
2012	538,062	538,062	2,318,076	107,506,187	105,088,647	309,733.3	338	26,568,751	20,126,475.7	20.25	199.80	4.31	46.38	10.91
2013	538,829	538,829	2,084,103	95,032,105	94,058,426	275,073.1	310	26,521,467	20,553,740.3	20.32	176.37	3.87	45.60	11.27
2014	554,453	554,453	1,651,057	72,426,352	71,899,079	211,508.1	238	27,921,722	20,785,507.4	19.86	130.63	2.98	43.87	11.25
2015	197,101	197,101	331,909	12,434,015	12,318,974	36,549.2	36	21,737,731	7,446,064.9	9.07	63.08	1.68	37.46	9.85
Rhabdomyolysis	and CK valu	ie ≥ 0 U/L v	within +/- 14	days										
ACE Inhibitors														
2006	,	231,516	1,404,461	82,366,567	90,205,892	231,801.9	142	16,112,492	9,012,706.1	14.37	355.77	6.07	58.65	6.13
2007	-	337,734	2,076,409	103,116,985	112,454,399	292,355.3	125	19,938,819	14,237,806.5	16.94	305.32	6.15	49.66	4.28
2008	,	508,867	2,881,987	130,927,729	142,537,561	373,265.3	97	29,718,837	20,033,394.8	17.12	257.29	5.66	45.43	2.60
2009	591,922	591,922	3,161,812	142,248,833	154,194,903	406,597.1	88	29,930,372	23,189,425.8	19.78	240.32	5.34	44.99	2.16
2010	523,115	523,115	2,710,763	124,275,738	134,073,250	355,030.1	85	28,179,553	21,949,725.0	18.56	237.57	5.18	45.85	2.39
2011	450,820	450,820	2,246,420	104,344,276	112,219,075	298,184.6	73	26,667,530	20,947,425.7	16.91	231.45	4.98	46.45	2.45
2012	430,923	430,923	2,053,779	93,953,488	100,449,451	268,982.3	59	27,671,352	21,138,873.5	15.57	218.03	4.77	45.75	2.19
2013	428,243	428,243	1,806,904	81,102,207	86,194,373	233,320.1	57	27,663,387	21,616,488.1	15.48	189.38	4.22	44.88	2.44
2014	436,268	436,268	1,433,131	59,296,021	62,751,425	172,381.0	48	29,174,019	21,915,044.5	14.95	135.92	3.28	41.38	2.78
2015	155,356	155,356	276,520	9,840,929	10,296,733	28,839.8	14	22,856,313	7,849,020.7	6.80	63.34	1.78	35.59	4.85
Statins		240.270	4 524 005	04 420 402	04 247 245	220.000.2	4.47							
2006	310,379	310,379	1,521,885	84,439,102	84,247,345	239,868.3	147	15,757,405	8,759,136.7	19.70	272.05	4.90	55.48	6.13
2007	,	452,476	2,294,538	109,826,806	107,141,170	315,210.2	97	19,451,807	13,787,060.8	23.26	242.72	5.07	47.86	3.08
2008		659,326	3,210,134	144,013,349	142,520,396	415,534.5	78	28,896,840	19,321,162.7	22.82	218.43	4.87	44.86	1.88
2009	- ,	734,995	3,463,177	154,819,257	153,715,830	447,082.7	7 5	28,972,279	22,266,829.4	25.37	210.64	4.71	44.70	1.68
2010		613,232	2,826,816	128,797,698	127,915,645	371,269.4	77	27,148,919	20,998,866.0	22.59	210.03	4.61	45.56	2.07
2011	543,987	543,987	2,411,351	111,764,352	110,413,354	321,780.5	61	25,633,956	19,985,771.8	21.22	205.45	4.43	46.35	1.90
2012		538,062	2,318,076	107,506,187	105,088,647	309,825.7	59	26,568,750	20,126,475.0	20.25	199.80	4.31	46.38	1.90
2013		538,828	2,084,102	95,032,075	94,058,396	275,140.4	67	26,521,467	20,553,739.6	20.32	176.37	3.87	45.60	2.44
2014	,	554,452	1,651,056	72,426,322	71,899,049	211,537.9	47	27,921,723	20,785,507.4	19.86	130.63	2.98	43.87	2.22
2015	197,101	197,101	331,909	12,434,015	12,318,974	36,551.2	11	21,737,731	7,446,065.0	9.07	63.08	1.68	37.46	3.01



Table 4: Incident Angiotensin-Converting Enzyme (ACE) Inhibitor or Statin Use and Subsequent Inpatient Rhabdomyolysis and/or Creatine Kinase (CK) Laboratory Values in the Sentinel Distributed Database (SDD) between January 1, 2006 and December 31, 2015, by Event Definition, Exposure, and Year

	New	New			Amount		New Episodes	Eligible		New Users / 1K Eligible	• •	Dispensings /	• • • •	New Episodes w/ Events / 10K Years
Rhabdomyolysis	Users		Dispensings	Days Supplied	Supplied	Years at Risk	w/ Events	Members	Member-Years	Members	User	User	Dispensing	at Risk
ACE Inhibitors	and CR vaic	ie > 0 U/L	anu < 1,000 0	/ L WICHIII +/ - 14	uays									
2006	231.516	231,516	1,404,461	82,366,567	90,205,892	231,817.0	115	16,112,492	9,012,706.1	14.37	355.77	6.07	58.65	4.96
2007	337.734	337,734	2,076,409	103,116,985	112,454,399	292,370.7	97	19,938,819	14,237,806.5	16.94	305.32	6.15	49.66	3.32
2008	508,867	508,867	2,881,987	130,927,729	142,537,561	373,282.2	78	29,718,837	20,033,394.8	17.12	257.29	5.66	45.43	2.09
2009	591,922	591,922	3,161,812	142,248,833	154,194,903	406,608.0	73	29,930,372	23,189,425.8	19.78	240.32	5.34	44.99	1.80
2010	523,115	523,115	2,710,763	124,275,738	134,073,250	355,033.5	72	28,179,553	21,949,725.0	18.56	237.57	5.18	45.85	2.03
2011	450,820	450,820	2,246,420	104,344,276	112,219,075	298,190.4	58	26,667,530	20,947,425.7	16.91	231.45	4.98	46.45	1.95
2012	430,923	430,923	2,053,779	93,953,488	100,449,451	268,987.1	45	27,671,352	21,138,873.5	15.57	218.03	4.77	45.75	1.67
2013	428,243	428,243	1,806,904	81,102,207	86,194,373	233,323.2	42	27,663,387	21,616,488.1	15.48	189.38	4.22	44.88	1.80
2014	436,268	436,268	1,433,131	59,296,021	62,751,425	172,384.5	29	29,174,019	21,915,044.5	14.95	135.92	3.28	41.38	1.68
2015	155,356	155,356	276,520	9,840,929	10,296,733	28,840.7	9	22,856,313	7,849,020.7	6.80	63.34	1.78	35.59	3.12
Statins														
2006	,	310,379	1,521,885	84,439,102	84,247,345	239,882.7	125	15,757,405	8,759,136.7	19.70	272.05	4.90	55.48	5.21
2007	,	452,476	2,294,538	109,826,806	107,141,170	315,218.4	78	19,451,807	13,787,060.8	23.26	242.72	5.07	47.86	2.47
2008	-	659,326	3,210,134	144,013,349	142,520,396	415,537.5	63	28,896,840	19,321,162.7	22.82	218.43	4.87	44.86	1.52
2009	,	734,995	3,463,177	154,819,257	153,715,830	447,089.5	62	28,972,279	22,266,829.4	25.37	210.64	4.71	44.70	1.39
2010	,	613,232	2,826,816	128,797,698	127,915,645	371,275.0	54	27,148,919	20,998,866.0	22.59	210.03	4.61	45.56	1.45
2011	543,987	-	2,411,351	111,764,352	110,413,354	321,785.1	47	25,633,956	19,985,771.8	21.22	205.45	4.43	46.35	1.46
2012	538,062	538,062	2,318,076	107,506,187	105,088,647	309,828.3	42	26,568,750	20,126,475.0	20.25	199.80	4.31	46.38	1.36
2013	538,828	538,828	2,084,102	95,032,075	94,058,396	275,144.1	53	26,521,467	20,553,739.6	20.32	176.37	3.87	45.60	1.93
2014	554,452	554,452	1,651,056	72,426,322	71,899,049	211,540.4	34	27,921,723	20,785,507.4	19.86	130.63	2.98	43.87	1.61
2015		197,101	331,909	12,434,015	12,318,974	36,551.9	7	21,737,731	7,446,065.0	9.07	63.08	1.68	37.46	1.92
Rhabdomyolysis a ACE Inhibitors	and CK valu	ie ≥ 1,000	U/L within +/	- 14 days										
2006	221 516	231,516	1,404,461	82,366,567	90,205,892	231,818.7	117	16,112,493	9,012,706.8	14.37	355.77	6.07	58.65	5.05
2007	337,736	337,736	2,076,408	103,117,003	112,454,447	292,379.5	92	19,938,821	14,237,807.1	16.94	305.32	6.15	49.66	3.15
2007	508,868	508,868	2,881,988	130,927,819	142,537,651	373,283.9	73	29,718,837	20,033,395.7	17.12	257.29	5.66	45.43	1.96
2009	591,924	591,924	3,161,816	142,249,150	154,195,070	406,614.2	60	29,930,372	23,189,425.9	19.78	240.32	5.34	44.99	1.48
2010	523,115	523,115	2,710,763	124,275,738	134,073,250	355,047.3	56	28,179,551	21,949,725.0	18.56	237.57	5.18	45.85	1.58
2010	450,821	450,821	2,246,425	104,344,534	112,219,333	298,192.7	46	26,667,530	20,947,426.6	16.91	231.45	4.98	46.45	1.54
2012	430,924	430,924	2,053,781	93,953,519	100,449,482	268,996.1	38	27,671,353	21,138,874.3	15.57	218.03	4.77	45.75	1.41
2012	428,244	428,244	1,806,905	81,102,237	86,194,403	233,329.3	38	27,663,387	21,616,489.0	15.48	189.38	4.22	44.88	1.63
2014	436,269	436,269	1,433,132	59,296,051	62,751,455	172,383.1	39	29,174,021	21,915,045.3	14.95	135.92	3.28	41.38	2.26
2015	,	155,356	276,520	9,840,929	10,296,733	28,840.2	8	22,856,312	7,849,020.5	6.80	63.34	1.78	35.59	2.77
2013	100,000	,	,	-,5,5=5	,,,,	_=,,,	2	,000,012	7,043,020.3	0.00	03.37	1.70	33.33	2.//



Table 4: Incident Angiotensin-Converting Enzyme (ACE) Inhibitor or Statin Use and Subsequent Inpatient Rhabdomyolysis and/or Creatine Kinase (CK) Laboratory Values in the Sentinel Distributed Database (SDD) between January 1, 2006 and December 31, 2015, by Event Definition, Exposure, and Year

	New Users	New Episodes	Dispensings	Days Supplied	Amount Supplied	Years at Risk	New Episodes w/ Events	Eligible Members	Member-Years	New Users / 1K Eligible Members	Days Supplied/ User	Dispensings / User	Days Supplied / Dispensing	New Episodes w/ Events / 10K Years at Risk
Statins		•		, ,,										
2006	310,380	310,380	1,521,886	84,439,130	84,247,373	239,889.3	118	15,757,406	8,759,137.1	19.70	272.05	4.90	55.48	4.92
2007	452,476	452,476	2,294,538	109,826,806	107,141,170	315,223.9	75	19,451,808	13,787,061.5	23.26	242.72	5.07	47.86	2.38
2008	659,330	659,330	3,210,138	144,013,615	142,520,662	415,543.9	61	28,896,841	19,321,163.4	22.82	218.42	4.87	44.86	1.47
2009	734,997	734,997	3,463,179	154,819,337	153,715,910	447,097.8	52	28,972,279	22,266,829.1	25.37	210.64	4.71	44.70	1.16
2010	613,232	613,232	2,826,816	128,797,698	127,915,645	371,280.8	58	27,148,917	20,998,865.1	22.59	210.03	4.61	45.56	1.56
2011	543,987	543,987	2,411,351	111,764,352	110,413,354	321,797.6	37	25,633,955	19,985,772.4	21.22	205.45	4.43	46.35	1.15
2012	538,062	538,062	2,318,076	107,506,187	105,088,647	309,834.8	41	26,568,751	20,126,475.7	20.25	199.80	4.31	46.38	1.32
2013	538,829	538,829	2,084,103	95,032,105	94,058,426	275,146.0	46	26,521,467	20,553,740.3	20.32	176.37	3.87	45.60	1.67
2014	554,453	554,453	1,651,057	72,426,352	71,899,079	211,541.8	34	27,921,722	20,785,507.4	19.86	130.63	2.98	43.87	1.61
2015	197,101	197,101	331,909	12,434,015	12,318,974	36,551.2	10	21,737,731	7,446,064.9	9.07	63.08	1.68	37.46	2.74
CK value ≥ 1,000 l	J/L													
ACE Inhibitors														
2006	•	231,516	1,404,461	82,366,567	90,205,892	231,376.2	466	16,112,493	9,012,706.8	14.37	355.77	6.07	58.65	20.14
2007	337,736	337,736	2,076,408	103,117,003	112,454,447	292,034.6	373	19,938,821	14,237,807.1	16.94	305.32	6.15	49.66	12.77
2008	508,868	508,868	2,881,988	130,927,819	142,537,651	373,033.1	288	29,718,837	20,033,395.7	17.12	257.29	5.66	45.43	7.72
2009	591,924	591,924	3,161,816	142,249,150	154,195,070	406,424.9	256	29,930,372	23,189,425.9	19.78	240.32	5.34	44.99	6.30
2010	523,115	523,115	2,710,763	124,275,738	134,073,250	354,880.1	226	28,179,551	21,949,725.0	18.56	237.57	5.18	45.85	6.37
2011	450,821		2,246,425	104,344,534	112,219,333	298,061.0	199	26,667,530	20,947,426.6	16.91	231.45	4.98	46.45	6.68
2012	430,924		2,053,781	93,953,519	100,449,482	268,910.2	163	27,671,353	21,138,874.3	15.57	218.03	4.77	45.75	6.06
2013	428,244	428,244	1,806,905	81,102,237	86,194,403	233,268.0	165	27,663,387	21,616,489.0	15.48	189.38	4.22	44.88	7.07
2014	436,269	436,269	1,433,132	59,296,051	62,751,455	172,357.5	111	29,174,021	21,915,045.3	14.95	135.92	3.28	41.38	6.44
2015	155,356	155,356	276,520	9,840,929	10,296,733	28,836.7	27	22,856,312	7,849,020.5	6.80	63.34	1.78	35.59	9.36
Statins	240 200	310,380	1,521,886	84,439,130	84,247,373	239,561.4	499	45 757 406	0.750.427.4	40.70	272.05	4.00	FF 40	20.02
2006	310,380					•		15,757,406	8,759,137.1	19.70	272.05	4.90	55.48	20.83
2007	452,476	452,476	2,294,538	109,826,806	107,141,170	314,997.3	383	19,451,808	13,787,061.5	23.26	242.72	5.07	47.86	12.16
2008	659,330	659,330	3,210,138	144,013,615	142,520,662	415,365.8	321	28,896,841	19,321,163.4	22.82	218.42	4.87	44.86	7.73
2009	734,997	734,997	3,463,179	154,819,337	153,715,910	446,911.6	314	28,972,279	22,266,829.1	25.37	210.64	4.71	44.70	7.03
2010	613,232	613,232	2,826,816	128,797,698	127,915,645	371,152.9	286	27,148,917	20,998,865.1	22.59	210.03	4.61	45.56	7.71
2011	543,987	543,987	2,411,351	111,764,352	110,413,354	321,695.8	227	25,633,955	19,985,772.4	21.22	205.45	4.43	46.35	7.06
2012	538,062	538,062	2,318,076	107,506,187	105,088,647	309,741.8	247	26,568,751	20,126,475.7	20.25	199.80	4.31	46.38	7.97
2013	538,829	538,829	2,084,103	95,032,105	94,058,426	275,064.9	206	26,521,467	20,553,740.3	20.32	176.37	3.87	45.60	7.49
2014	554,453	554,453	1,651,057	72,426,352	71,899,079	211,509.5	157	27,921,722	20,785,507.4	19.86	130.63	2.98	43.87	7.42
2015	197,101	197,101	331,909	12,434,015	12,318,974	36,545.8	49	21,737,731	7,446,064.9	9.07	63.08	1.68	37.46	13.41



Table 4: Incident Angiotensin-Converting Enzyme (ACE) Inhibitor or Statin Use and Subsequent Inpatient Rhabdomyolysis and/or Creatine Kinase (CK) Laboratory Values in the Sentinel Distributed Database (SDD) between January 1, 2006 and December 31, 2015, by Event Definition, Exposure, and Year

	New Users	New Episodes	Dispensings	Days Supplied	Amount Supplied	Years at Risk	New Episodes w/ Events	Eligible Members	Member-Years	New Users / 1K Eligible Members	Days Supplied/ User	Dispensings / User	Days Supplied / Dispensing	New Episodes w/ Events / 10K Years at Risk
CK value ≥ 1,000 l					Зиррпец	rears at misk	W/ LVEIIL3	Wichibers	Weinber-Tears	Wellibers	O S C I	Osei	Dispensing	at Nisk
ACE Inhibitors			, ,											
2006	231,516	231,516	1,404,461	82,366,567	90,205,892	231,472.3	354	16,112,493	9,012,706.8	14.37	355.77	6.07	58.65	15.29
2007	337,736	337,736	2,076,408	103,117,003	112,454,447	292,091.6	288	19,938,821	14,237,807.1	16.94	305.32	6.15	49.66	9.86
2008	508,868	508,868	2,881,988	130,927,819	142,537,651	373,089.8	218	29,718,837	20,033,395.7	17.12	257.29	5.66	45.43	5.84
2009	591,924	591,924	3,161,816	142,249,150	154,195,070	406,461.8	199	29,930,372	23,189,425.9	19.78	240.32	5.34	44.99	4.90
2010	523,115	523,115	2,710,763	124,275,738	134,073,250	354,920.6	171	28,179,551	21,949,725.0	18.56	237.57	5.18	45.85	4.82
2011	450,821	450,821	2,246,425	104,344,534	112,219,333	298,090.5	154	26,667,530	20,947,426.6	16.91	231.45	4.98	46.45	5.17
2012	430,924	430,924	2,053,781	93,953,519	100,449,482	268,924.2	126	27,671,353	21,138,874.3	15.57	218.03	4.77	45.75	4.69
2013	428,244	428,244	1,806,905	81,102,237	86,194,403	233,278.5	129	27,663,387	21,616,489.0	15.48	189.38	4.22	44.88	5.53
2014	436,269	436,269	1,433,132	59,296,051	62,751,455	172,367.1	75	29,174,021	21,915,045.3	14.95	135.92	3.28	41.38	4.35
2015	155,356	155,356	276,520	9,840,929	10,296,733	28,838.1	19	22,856,312	7,849,020.5	6.80	63.34	1.78	35.59	6.59
Statins														
2006	310,380	310,380	1,521,886	84,439,130	84,247,373	239,619.4	383	15,757,406	8,759,137.1	19.70	272.05	4.90	55.48	15.98
2007	452,476	452,476	2,294,538	109,826,806	107,141,170	315,027.3	312	19,451,808	13,787,061.5	23.26	242.72	5.07	47.86	9.90
2008	659,330	659,330	3,210,138	144,013,615	142,520,662	415,392.6	263	28,896,841	19,321,163.4	22.82	218.42	4.87	44.86	6.33
2009	734,997	734,997	3,463,179	154,819,337	153,715,910	446,937.0	262	28,972,279	22,266,829.1	25.37	210.64	4.71	44.70	5.86
2010	613,232	613,232	2,826,816	128,797,698	127,915,645	371,176.9	230	27,148,917	20,998,865.1	22.59	210.03	4.61	45.56	6.20
2011	543,987	543,987	2,411,351	111,764,352	110,413,354	321,708.5	191	25,633,955	19,985,772.4	21.22	205.45	4.43	46.35	5.94
2012	538,062	538,062	2,318,076	107,506,187	105,088,647	309,754.6	208	26,568,751	20,126,475.7	20.25	199.80	4.31	46.38	6.71
2013	538,829	538,829	2,084,103	95,032,105	94,058,426	275,078.8	162	26,521,467	20,553,740.3	20.32	176.37	3.87	45.60	5.89
2014	554,453	554,453	1,651,057	72,426,352	71,899,079	211,515.7	123	27,921,722	20,785,507.4	19.86	130.63	2.98	43.87	5.82
2015	197,101	197,101	331,909	12,434,015	12,318,974	36,547.2	39	21,737,731	7,446,064.9	9.07	63.08	1.68	37.46	10.67
CK value ≥ 0 U/L														
ACE Inhibitors														
2006	- ,	232,199	1,408,655	82,656,082	90,555,788	193,057.1	25,370	16,112,900	9,014,382.1	14.41	355.97	6.07	58.68	1314.12
2007	338,452	338,452	2,080,965	103,401,808	112,786,477	262,123.2	21,638	19,939,633	14,240,215.5	16.97	305.51	6.15	49.69	825.49
2008	509,746	509,746	2,887,734	131,231,306	142,879,171	348,192.5	19,565	29,719,245	20,036,717.0	17.15	257.44	5.67	45.44	561.90
2009	592,750	592,750	3,166,866	142,511,750	154,505,462	385,056.0	18,959	29,930,389	23,192,931.4	19.80	240.42	5.34	45.00	492.37
2010	523,832	523,832	2,715,115	124,484,833	134,310,390	337,363.4	16,714	28,179,320	21,952,934.9	18.59	237.64	5.18	45.85	495.43
2011	451,585	451,585	2,250,406	104,538,459	112,437,379	285,155.5	13,904	26,667,210	20,950,853.6	16.93	231.49	4.98	46.45	487.59
2012	431,655	431,655	2,057,676	94,128,306	100,650,357	259,774.7	11,828	27,670,897	21,142,484.2	15.60	218.06	4.77	45.74	455.32
2013	428,946	428,946	1,810,292	81,260,214	86,359,545	226,997.0	10,693	27,662,843	21,620,280.1	15.51	189.44	4.22	44.89	471.06
2014	436,965	436,965	1,435,489	59,398,380	62,864,038	169,306.2	8,558	29,173,529	21,918,842.0	14.98	135.93	3.29	41.38	505.47
2015	155,618	155,618	277,017	9,859,423	10,317,387	28,555.3	1,896	22,856,953	7,850,368.6	6.81	63.36	1.78	35.59	663.98
Statins		244 005	4 500 05-	04 700 07 :	04 500 765	101 201 5	25.444							
2006	311,006	311,006	1,526,057	84,720,974	84,538,792	194,394.6	36,144	15,757,836	8,760,667.6	19.74	272.41	4.91	55.52	1859.31
2007	453,144	453,144	2,298,953	110,115,736	107,424,134	277,105.9	33,217	19,452,689	13,789,280.1	23.29	243.00	5.07	47.90	1198.71
CDER_MPL1R_ 2009	660,073 WP001	660,073 N <u>SD</u> P_V0	3,214,943)1	144,272,754	142,773,916	380,660.6	32,813	28,897,461	19,324,346.2	22.84	218.57	4.87	44.88	862.00
- 2009 -	735,681	735,681	3,467,465	155,049,618	153,946,159	413,595.6	34,124	28,972,706	22,270,292.3	25.39	210.76	4.71	44.72	825.06



Table 4: Incident Angiotensin-Converting Enzyme (ACE) Inhibitor or Statin Use and Subsequent Inpatient Rhabdomyolysis and/or Creatine Kinase (CK) Laboratory Values in the Sentinel Distributed Database (SDD) between January 1, 2006 and December 31, 2015, by Event Definition, Exposure, and Year

							New			New Users / 1K	Days		Days	New Episodes w/
	New	New			Amount	Episodes		Eligible		Eligible	Supplied/	Dispensings /	Supplied /	Events / 10K Years
	Users	Episodes	Dispensings	Days Supplied	Supplied	Years at Risk	w/ Events	Members	Member-Years	Members	User	User	Dispensing	at Risk
2010	613,833	613,833	2,831,084	129,006,665	128,121,853	345,374.5	28,169	27,149,136	21,002,118.8	22.61	210.17	4.61	45.57	815.61
2011	544,669	544,669	2,415,261	111,964,436	110,607,730	301,364.8	24,207	25,634,129	19,989,224.3	21.25	205.56	4.43	46.36	803.25
2012	538,774	538,774	2,322,681	107,721,784	105,294,288	292,903.3	22,603	26,568,907	20,130,104.2	20.28	199.94	4.31	46.38	771.69
2013	539,537	539,537	2,087,828	95,208,979	94,237,602	263,234.5	20,204	26,521,580	20,557,616.2	20.34	176.46	3.87	45.60	767.53
2014	555,169	555,169	1,653,830	72,546,600	72,023,233	205,701.6	16,283	27,921,920	20,789,407.1	19.88	130.67	2.98	43.87	791.58
2015	197,358	197,358	332,443	12,453,420	12,339,586	35,998.9	3,692	21,738,851	7,447,436.3	9.08	63.10	1.68	37.46	1025.59



Appendix A. Dates of Available Data for Each Data Partner up to Request Send Date (February 19, 2016)

DP ID	Start Date	End Date				
DP0001	1/1/2006	7/31/2014				
DP0002	1/1/2006	4/30/2015				
DP0003	1/1/2006	10/31/2014				
DP0004	1/1/2006	6/30/2015				
DP0005	1/1/2006	6/30/2012				
DP0006	1/1/2006	7/31/2015				
DP0007	1/1/2006	5/31/2015				
DP0008	1/1/2006	6/30/2015				
DP0009	1/1/2006	4/30/2015				
DP0010	1/1/2006	7/31/2015				
DP0011	1/1/2006	7/31/2015				



Appendix B. Generic Drug Names used for Exposures in this Request

Generic Name

ACE Inhibitors

AMLODIPINE BESYLATE/BENAZEPRIL HCL

BENAZEPRIL HCL

BENAZEPRIL HCL/HYDROCHLOROTHIAZIDE

CAPTOPRIL

CAPTOPRIL/HYDROCHLOROTHIAZIDE

ENALAPRIL MALEATE

ENALAPRIL MALEATE/FELODIPINE

ENALAPRIL MALEATE/HYDROCHLOROTHIAZIDE

ENALAPRILAT DIHYDRATE

FOSINOPRIL SODIUM

FOSINOPRIL SODIUM/HYDROCHLOROTHIAZIDE

LISINOPRIL

LISINOPRIL/DIETARY SUPPLEMENT, COMB. 10

LISINOPRIL/HYDROCHLOROTHIAZIDE

MOEXIPRIL HCL

MOEXIPRIL HCL/HYDROCHLOROTHIAZIDE

PERINDOPRIL ARGININE/AMLODIPINE BESYLATE

PERINDOPRIL ERBUMINE

QUINAPRIL HCL

QUINAPRIL HCL/HYDROCHLOROTHIAZIDE

RAMIPRIL

TRANDOLAPRIL

TRANDOLAPRIL/VERAPAMIL HCL

Statins

AMLODIPINE BESYLATE/ATORVASTATIN CALCIUM

ATORVASTATIN CALCIUM

EZETIMIBE/ATORVASTATIN CALCIUM

EZETIMIBE/SIMVASTATIN

FLUVASTATIN SODIUM

LOVASTATIN

NIACIN/SIMVASTATIN

PITAVASTATIN CALCIUM

PRAVASTATIN SODIUM

ROSUVASTATIN CALCIUM

SIMVASTATIN

SITAGLIPTIN PHOSPHATE/SIMVASTATIN



Appendix C. Specifications for Request ID: cder_mpl1r_wp001_nsdp_v01

This request was executed using the Cohort Identification and Descriptive Analysis (CIDA) tool to investigate rhabdomyolysis events following new use of statins or angiotensin-converting enzyme (ACE) inhibitors in the Sentinel Distributed Database (SDD). This request also utilizes creatine kinase (CK) to select the cohort and identify events.

Enrollment Gap: 45 Days

 Age Groups:
 <22, 22- <45, 45-<65, 65+ years</td>

 Query Period:
 January 1, 2006 - December 31, 2015

Coverage Requirement: Medical and Drug Coverage

Pre-Exposure Enrollment Requirement: 183 days

Laboratory Date Algorithm: Lab Date, Order Date, Result Date

				Drug/Exp	osure					Event/Outcome							
Scenario	Incident exposure	Incident w/ respect to:	Washout (days)	Cohort Definition	Episode Gap	Exposure Extension Period	Minimum Days Supplied	Minimum Episode Duration	Episode Truncation by Evidence of Death	Event	Care Setting	Time Window	Event Date	Incident w/ respect to:	Incident Care Setting	Blackout Period	Washout (days)
1	Statins	Statins	183	01	10	10	1	1	No	Rhabdomyolysis	Inpatient (IP)	N/A	N/A	Rhabdomyolysis, or CK value ≥ 1,000 U/L*	IP Any	0	183
2	Statins	Statins	183	01	10	10	1	1	No	Rhabdomyolysis WITHOUT CK value ≥ 1,000 U/L*	IP Any	+/- 14 days	Diagnosis (DX) date	Rhabdomyolysis, or CK value ≥ 1,000 U/L*	IP Any	0	183
3	Statins	Statins	183	01	10	10	1	1	No	Rhabdomyolysis AND CK value ≥ 0 U/L*	IP Any	+/- 14 days	First occurrence	Rhabdomyolysis, or CK value ≥ 1,000 U/L*	IP Any	0	183
4	Statins	Statins	183	01	10	10	1	1	No	Rhabdomyolysis AND CK value > 0 and < 1,000 U/L*	IP Any	+/- 14 days	First occurrence	Rhabdomyolysis, or CK value ≥ 1,000 U/L*	IP Any	0	183
5	Statins	Statins	183	01	10	10	1	1	No	Rhabdomyolysis AND CK value ≥ 1,000 U/L*	IP Any	+/- 14 days	First occurrence	Rhabdomyolysis, or CK value ≥ 1,000 U/L*	IP Any	0	183
6	Statins	Statins	183	01	10	10	1	1	No	CK value ≥ 1,000 U/L*	Any	N/A	N/A	Rhabdomyolysis, or CK value ≥ 1,000 U/L*	IP Any	0	183
7	Statins	Statins	183	01	10	10	1	1	No	CK value ≥ 1,000 U/L* WITHOUT Rhabdomyolysis	Any IP	+/- 14 days	Lab date	Rhabdomyolysis, or CK value ≥ 1,000 U/L*	IP Any	0	183
8	Statins	Statins	183	01	10	10	1	1	No	CK value ≥ 0 U/L*	Any	N/A	N/A	N/A	N/A	0	0
9	ACE Inhibitors	ACE Inhibitors	183	01	10	10	1	1	No	Rhabdomyolysis	IP	N/A	N/A	Rhabdomyolysis, or CK value ≥ 1,000 U/L*	IP Any	0	183
10	ACE Inhibitors	ACE Inhibitors	183	01	10	10	1	1	No	Rhabdomyolysis WITHOUT CK value ≥ 1,000 U/L*	IP Any	+/- 14 days	DX date	Rhabdomyolysis, or CK value ≥ 1,000 U/L*	IP Any	0	183
11	ACE Inhibitors	ACE Inhibitors	183	01	10	10	1	1	No	Rhabdomyolysis AND CK value ≥ 0 U/L*	IP Any	+/- 14 days	First occurrence	Rhabdomyolysis, or CK value ≥ 1,000 U/L*	IP Any	0	183
12	ACE Inhibitors	ACE Inhibitors	183	01	10	10	1	1	No	Rhabdomyolysis AND CK value > 0 and < 1,000 U/L*	IP Any	+/- 14 days	First occurrence	Rhabdomyolysis, or CK value ≥ 1,000 U/L*	IP Any	0	183
13	ACE Inhibitors	ACE Inhibitors	183	01	10	10	1	1	No	Rhabdomyolysis AND CK value ≥ 1,000 U/L*	IP Any	+/- 14 days	First occurrence	Rhabdomyolysis, or CK value ≥ 1,000 U/L*	IP Any	0	183
14	ACE Inhibitors	ACE Inhibitors	183	01	10	10	1	1	No	CK value ≥ 1,000 U/L*	Any	N/A	N/A	Rhabdomyolysis, or CK value ≥ 1,000 U/L*	IP Any	0	183
15	ACE Inhibitors	ACE Inhibitors	183	01	10	10	1	1	No	CK value ≥ 1,000 U/L* WITHOUT Rhabdomyolysis	Any IP	+/- 14 days	Lab date	Rhabdomyolysis, or CK value ≥ 1,000 U/L*	IP Any	0	183
16	ACE Inhibitors	ACE Inhibitors	183	01	10	10	1	1	No	CK value ≥ 0 U/L*	Any	N/A	N/A	N/A	N/A	0	0
*Creatine	kinase (CK) I	aboratory res	ults in this	request will	l include v	alues where	e the result	unit is eithe	er U/L or UNKN	IOWN.							