

# NEVADA

DIABETES AND CARDIOVASCULAR REPORT™ | 2017



## 11th Edition

► Featuring Demographic, Utilization, Charge, and Pharmacotherapy Data

# NEVADA

## DIABETES AND CARDIOVASCULAR DISEASE REPORT

### ▶ Introduction

Sanofi U.S. (Sanofi), in partnership with the Nevada Business Group on Health (NVBGH), iDo, and HealthInsight, is pleased to present the 11th edition of the **Nevada Diabetes and Cardiovascular Disease Report** for 2017, an overview of key demographic, utilization, charge, pharmacotherapy, and readmission measures for Type 2 diabetes patients in key local markets in Nevada. The report also provides comparisons to Los Angeles, Salt Lake City, state of Nevada, and national benchmarks, which can help providers and employers identify opportunities to better serve the needs of their patients. All data are drawn from the Sanofi **Managed Care Digest Series®**.

Sanofi, as sponsor of this report, maintains an arm’s-length relationship with the organizations that prepare this report and carry out the research. The desire of Sanofi is that the information in this report be completely independent and objective.

This 11th edition features a number of examples of the kinds of disease-specific data on Type 2 diabetes that can be provided by the **Managed Care Digest Series®**. The sponsoring organizations chose Type 2 diabetes (high blood glucose levels caused by either a lack of insulin or the body’s inability to use insulin efficiently) as the focus of this report, as the prevalence of this disease has grown considerably in recent years.

This report also includes reports on cardiovascular diseases and other conditions that often occur as complications and comorbidities of diabetes. Earlier prevention and treatments for Nevada patients with diabetes can delay or avoid these.

The data in this report (covering 2013 through 2016) were gathered by QuintilesIMS, Durham, NC, a leading provider of innovative health care data products and analytic services. The data provide health care providers with independent, third-party information they can use to benchmark their own data on patient demographics, professional and facility charges, utilization, and pharmacotherapy.

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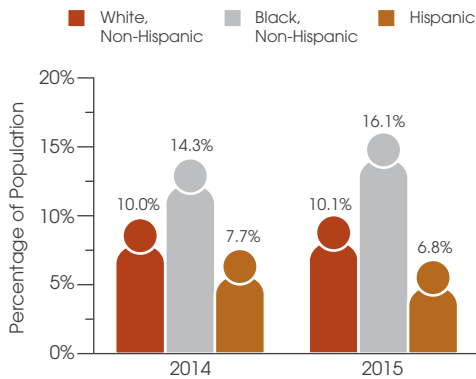
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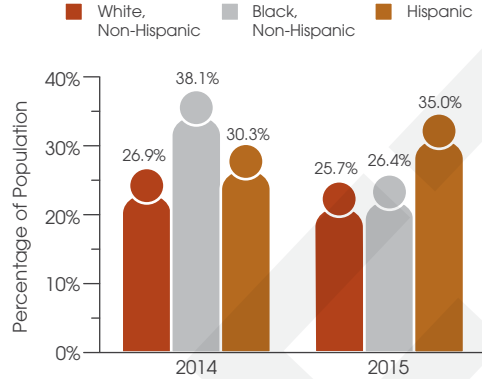
QuintilesIMS, Durham, NC

# PATIENT DEMOGRAPHICS

**PERCENTAGE OF NEVADA POPULATION WITH DIABETES, BY RACE/ETHNICITY, 2014–2015**



**PERCENTAGE OF NEVADA POPULATION WITH OBESITY, BY RACE/ETHNICITY, 2014–2015**



## DIABETES PREVALENCE IS 16.1% FOR BLACK, NON-HISPANIC NEVADANS

In 2015, nearly one in six black, non-Hispanic Nevada residents were told by a physician they had diabetes—a higher share than that of white, non-Hispanic and Hispanic Nevadans. That same year, Nevada residents who were Hispanic were more prone to be obese compared with their non-Hispanic counterparts, whether white or black.

## UNDER-65 SHARE OF NEVADA TYPE 2 DIABETES PATIENTS GROWS TO ALMOST 48%

From 2015 (46.2%) to 2016 (47.9%), the portion of Nevada Type 2 diabetes patients who were under the age of 65 increased noticeably. Correspondingly, the percentage of Type 2 diabetes patients covered by commercial insurance also expanded during this time (to 57.2% from 55.4%), a portion that exceeded that of the nation in 2016 (48.2%). Medicaid managed care plans covered 5.0% of Nevada Type 2 diabetes patients in 2016, an increase from 4.3% the previous year.

<sup>1</sup> On pages 3–10, the percentages are representative of the universe of Type 2 diabetes patients for whom claims data have been collected in a given year.  
<sup>2</sup> Includes HMOs, PPOs, point-of-service plans, and exclusive provider organizations.

<sup>3</sup> “Primary care” consists of both general and family practitioners.  
 NOTE: Medicaid managed care and Medicaid fee-for-service percentages may sum to a higher percentage than Medicaid overall, as some patients have both over the course of a year. Throughout this report, the Los Angeles market includes Long Beach, and Salt Lake City includes Ogden.

Data source: Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, 2016. Data shown are the most current available.

**PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY AGE, GENDER AND PAYER, 2015–2016<sup>1</sup>**

	Las Vegas		Reno		Los Angeles		Salt Lake City		Nevada		NATION	
	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
<b>AGE</b>												
0–17	0.7%	1.0%	1.0%	1.5%	1.1%	1.8%	1.1%	1.1%	0.8%	1.1%	1.0%	1.4%
18–35	3.0	3.0	2.8	2.7	3.4	3.8	3.6	3.4	2.9	3.0	3.0	3.0
36–64	42.5	43.7	41.6	42.4	44.9	45.2	46.4	46.8	42.5	43.8	45.0	44.7
65–79	42.5	41.3	42.8	41.9	36.0	35.6	38.0	38.0	42.4	41.4	38.4	38.7
80+	11.4	10.9	11.9	11.5	14.7	13.6	10.9	10.7	11.3	10.8	12.7	12.2
<b>GENDER</b>												
Male	50.0%	50.0%	50.1%	49.6%	46.8%	46.8%	49.0%	48.9%	49.9%	49.8%	46.9%	47.1%
Female	50.0	50.0	49.9	50.4	53.2	53.2	51.0	51.1	50.1	50.2	53.1	52.9
<b>PAYER</b>												
Commercial Insurance <sup>2</sup>	54.8%	57.5%	51.2%	48.9%	52.5%	56.5%	60.1%	59.5%	55.4%	57.2%	48.2%	48.2%
Medicare	34.3	31.3	39.8	41.3	31.8	26.5	30.9	30.5	35.1	32.6	38.1	37.2
Medicaid Overall	9.4	9.7	7.6	8.5	15.3	16.6	7.5	8.5	8.1	8.8	12.5	13.3
Medicaid Fee-for-Service	4.1	3.9	5.1	4.6	2.1	1.8	3.0	3.0	4.7	4.6	3.9	3.8
Medicaid Managed Care	6.2	6.6	3.4	4.8	13.6	15.3	5.8	6.8	4.3	5.0	9.6	10.5

**PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY DIAGNOSING SPECIALIST, 2015–2016**

	Primary Care <sup>3</sup>		Internal Medicine		Cardiology		Endocrinology	
	2015	2016	2015	2016	2015	2016	2015	2016
<b>MARKET</b>								
Las Vegas	23.6%	23.1%	28.1%	26.5%	4.2%	4.1%	3.3%	3.1%
Reno	32.4	33.1	16.1	15.8	3.7	3.6	4.5	3.9
Los Angeles	22.7	23.2	21.3	20.6	4.9	4.5	4.1	4.0
Salt Lake City	35.5	37.2	18.1	17.3	2.6	2.4	3.6	3.4
<b>Nevada</b>	25.0	24.4	25.7	24.5	3.8	3.7	3.7	3.4
<b>NATION</b>	27.6%	27.7%	23.4%	23.0%	4.5%	4.4%	4.6%	4.5%

Data source: QuintilesIMS © 2017

# COMPLICATIONS/COMORBIDITIES

## SHARE OF NV TYPE 2 DIABETES PTS. WITH >2 COMPLICATIONS TOPS NATIONAL AVERAGE

In 2016, the percentage of Type 2 diabetes patients in Nevada with more than two complications (31.9%) exceeded the corresponding national benchmark (27.8%) by 4.1 percentage points.

PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY NUMBER OF COMPLICATIONS, 2015–2016 <sup>1</sup>								
	0		1		2		>2	
MARKET	2015	2016	2015	2016	2015	2016	2015	2016
Las Vegas	38.0%	40.4%	15.7%	15.6%	10.1%	10.0%	36.2%	34.0%
Reno	47.8	49.0	18.1	17.1	10.7	10.0	23.5	24.0
Los Angeles	46.7	50.3	16.8	16.1	9.7	9.1	26.8	24.5
Salt Lake City	52.0	50.8	18.2	17.3	9.7	10.0	20.1	21.9
<b>Nevada</b>	<b>40.6</b>	<b>42.3</b>	<b>16.2</b>	<b>15.9</b>	<b>10.1</b>	<b>10.0</b>	<b>33.2</b>	<b>31.9</b>
<b>NATION</b>	<b>45.5%</b>	<b>45.7%</b>	<b>17.3%</b>	<b>16.6%</b>	<b>10.2%</b>	<b>9.9%</b>	<b>27.0%</b>	<b>27.8%</b>

PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY ACTUAL COMPLICATION, 2016 <sup>1</sup>								
MARKET	AMI	Congestive Heart Failure	Cardiovascular Disease	Nephropathy	Neuropathy	PAD	Retinopathy	Severe Hypoglycemia
Las Vegas	3.4%	12.3%	39.8%	40.1%	38.5%	18.6%	13.0%	3.3%
Reno	3.1	10.3	32.9	31.3	29.4	8.8	15.8	3.3
Los Angeles	2.8	12.4	33.4	35.2	32.7	15.4	17.6	2.8
Salt Lake City	1.3	9.1	27.4	30.6	35.7	8.3	14.5	3.1
<b>Nevada</b>	<b>3.3</b>	<b>12.0</b>	<b>38.8</b>	<b>39.0</b>	<b>36.7</b>	<b>17.4</b>	<b>13.6</b>	<b>3.4</b>
<b>NATION</b>	<b>2.6%</b>	<b>13.0%</b>	<b>38.2%</b>	<b>31.7%</b>	<b>33.2%</b>	<b>14.2%</b>	<b>15.5%</b>	<b>3.5%</b>

PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY NUMBER OF COMORBIDITIES, 2015–2016 <sup>2</sup>								
	0		1		2		>2	
MARKET	2015	2016	2015	2016	2015	2016	2015	2016
Las Vegas	32.4%	32.6%	13.6%	13.9%	12.5%	11.7%	41.5%	41.8%
Reno	46.1	45.4	13.6	14.3	10.6	10.5	29.7	29.8
Los Angeles	44.9	46.6	14.6	14.4	10.8	10.8	29.8	28.1
Salt Lake City	48.8	45.7	14.7	14.6	12.5	12.3	24.0	27.4
<b>Nevada</b>	<b>35.8</b>	<b>35.4</b>	<b>13.7</b>	<b>14.2</b>	<b>12.2</b>	<b>11.5</b>	<b>38.2</b>	<b>38.9</b>
<b>NATION</b>	<b>38.7%</b>	<b>39.4%</b>	<b>13.4%</b>	<b>13.1%</b>	<b>12.2%</b>	<b>11.5%</b>	<b>35.8%</b>	<b>36.0%</b>

PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY PAYER AND ACTUAL COMORBIDITY, 2016 <sup>2</sup>												
MARKET	Depression			Hyperlipidemia			Hypertension			Obesity		
	Commer- cial	Medicare	Medicaid	Commer- cial	Medicare	Medicaid	Commer- cial	Medicare	Medicaid	Commer- cial	Medicare	Medicaid
Las Vegas	9.0%	8.2%	13.8%	69.5%	57.0%	53.9%	79.7%	86.3%	79.1%	20.5%	14.8%	25.2%
Reno	10.6	8.7	21.5	58.6	51.1	42.3	74.3	77.8	72.6	26.0	21.7	28.9
Los Angeles	9.5	7.7	11.3	59.3	49.0	45.4	75.6	81.0	75.6	22.9	13.8	23.4
Salt Lake City	14.4	12.6	22.4	54.1	48.0	42.2	67.2	74.2	65.5	29.8	22.8	29.7
<b>Nevada</b>	<b>9.2</b>	<b>8.0</b>	<b>14.9</b>	<b>68.1</b>	<b>54.5</b>	<b>50.2</b>	<b>78.8</b>	<b>84.3</b>	<b>76.9</b>	<b>21.1</b>	<b>15.1</b>	<b>15.7</b>
<b>NATION</b>	<b>10.9%</b>	<b>10.8%</b>	<b>16.8%</b>	<b>63.0%</b>	<b>57.4%</b>	<b>53.1%</b>	<b>79.5%</b>	<b>84.5%</b>	<b>79.7%</b>	<b>23.8%</b>	<b>18.8%</b>	<b>27.3%</b>

Data source: QuintilesIMS © 2017

<sup>1</sup> A complication is defined as a patient condition caused by the Type 2 diabetes of the patient. These conditions are a direct result of having Type 2 diabetes. Complications of Type 2 diabetes include, but are not limited to, acute myocardial infarction (AMI), cardiovascular disease, congestive heart failure, nephropathy, neuropathy, peripheral artery disease (PAD), and retinopathy, and severe hypoglycemia.

<sup>2</sup> A comorbidity is a condition a Type 2 diabetes patient may also have, which is not directly related to the diabetes. Comorbidities were narrowed down to a subset of conditions that are typically present in patients with Type 2 diabetes. Comorbidities of Type 2 diabetes may include, but are not limited to, depression, hyperlipidemia, hypertension, and obesity. NOTE: Cardiovascular (CV) disease complication rates differ from previous years because AMI and stroke have been removed from the CV disease complication category and now appear as individual complications. In October 2015, hospitals converted from ICD-9 to ICD-10 coding. As a result, complication and comorbidity rates may differ from 2015 to 2016.

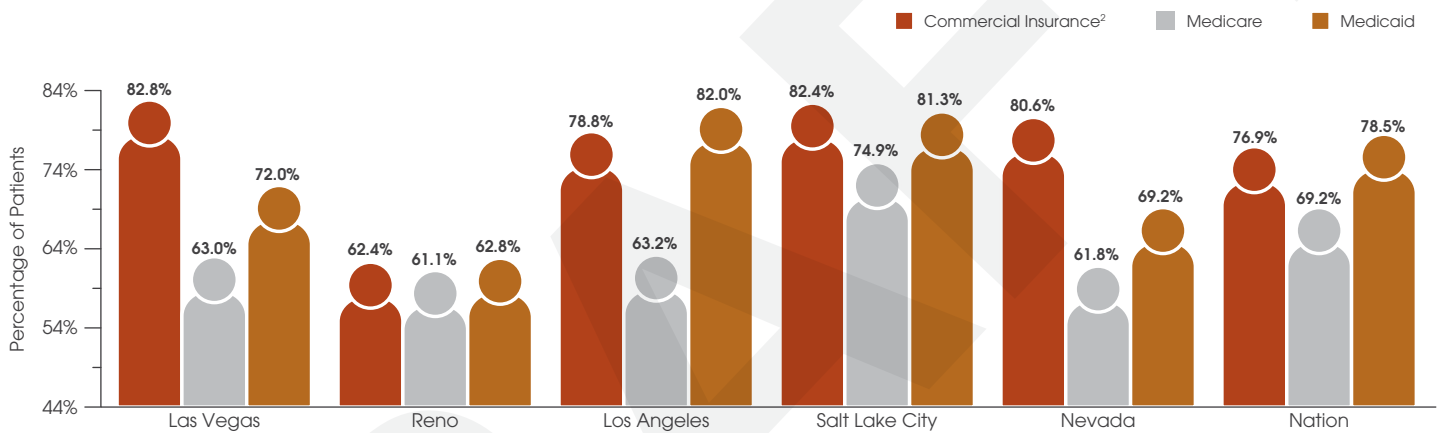


# USE OF SERVICES

## PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY SERVICE, 2015–2016

MARKET	A1c Test <sup>1</sup>		Blood Glucose Test		Serum Cholesterol Test		Ophthalmologic Exam		Urine Microalbumin Test	
	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Las Vegas	75.1%	75.7%	86.9%	87.2%	84.5%	84.6%	63.5%	63.4%	74.1%	75.1%
Reno	65.3	61.8	79.8	77.7	77.9	75.6	65.6	64.9	67.8	66.2
Los Angeles	73.8	74.6	88.4	88.7	85.8	86.1	65.3	65.2	68.2	69.0
Salt Lake City	79.6	80.1	85.8	86.1	83.1	82.8	63.3	62.9	70.1	70.5
Nevada	73.9	73.9	85.6	85.6	83.2	83.0	63.6	63.2	72.9	73.6
<b>NATION</b>	<b>74.0%</b>	<b>73.9%</b>	<b>86.6%</b>	<b>86.6%</b>	<b>84.3%</b>	<b>84.3%</b>	<b>69.4%</b>	<b>69.1%</b>	<b>71.3%</b>	<b>71.3%</b>

## PERCENTAGE OF TYPE 2 DIABETES PATIENTS RECEIVING A1c TESTS, BY PAYER,<sup>2</sup> 2016<sup>1</sup>



## PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY A1c LEVEL RANGE AND BY PAYER, 2016<sup>1</sup>

MARKET	≤7.0%			7.1–7.9%			8.0–9.0%			>9.0%		
	Comm Ins. <sup>2</sup>	Medicare	Medicaid	Comm Ins. <sup>2</sup>	Medicare	Medicaid	Comm Ins. <sup>2</sup>	Medicare	Medicaid	Comm Ins. <sup>2</sup>	Medicare	Medicaid
Las Vegas	49.1%	57.1%	45.4%	20.3%	21.9%	16.6%	13.7%	11.9%	15.1%	16.9%	9.2%	23.0%
Reno	48.3	54.1	35.2	21.6	22.6	14.4	14.2	11.9	17.3	15.9	11.5	33.2
Los Angeles	43.5	50.4	39.2	23.6	23.0	19.4	14.8	13.5	15.7	18.1	13.1	25.7
Salt Lake City	48.5	55.0	48.6	20.3	21.1	16.6	15.3	13.0	14.8	15.9	10.9	20.0
Nevada	47.6	55.5	36.1	21.1	22.0	17.5	14.3	11.9	15.8	17.0	10.5	30.5
<b>NATION</b>	<b>46.7%</b>	<b>51.1%</b>	<b>42.5%</b>	<b>22.1%</b>	<b>22.3%</b>	<b>18.3%</b>	<b>14.4%</b>	<b>13.5%</b>	<b>14.4%</b>	<b>16.9%</b>	<b>13.1%</b>	<b>24.8%</b>

## PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY LDL-C LEVEL, BY PAYER (mg/dL), 2016

MARKET	Commercial Insurance				Medicaid				Medicare			
	<100	100–129	130–189	≥190	<100	100–129	130–189	≥190	<100	100–129	130–189	≥190
Las Vegas	62.6%	22.7%	13.3%	1.4%	58.0%	25.4%	15.0%	1.6%	71.0%	18.2%	9.6%	1.2%
Reno	68.0	20.9	10.2	0.9	63.6	22.2	14.2	n/a	73.8	17.3	8.2	0.8
Los Angeles	66.8	20.8	11.3	1.1	59.7	23.8	14.6	1.9	71.7	17.5	9.6	1.2
Salt Lake City	68.3	19.9	11.0	0.9	68.1	20.2	11.7	n/a	74.0	15.7	9.0	1.4
Nevada	63.9	22.2	12.7	1.3	58.9	24.9	16.1	n/a	72.0	17.9	9.0	1.1
<b>NATION</b>	<b>65.0%</b>	<b>21.7%</b>	<b>12.1%</b>	<b>1.2%</b>	<b>60.0%</b>	<b>23.7%</b>	<b>14.6%</b>	<b>1.7%</b>	<b>70.3%</b>	<b>18.5%</b>	<b>10.1%</b>	<b>1.1%</b>

Data source: QuintilesIMS © 2017

<sup>1</sup> The A1c test measures the amount of glucose present in the blood during the past 2–3 months. Figures reflect the percentage of Type 2 diabetes patients who have had at least one A1c test in a given year.

<sup>2</sup> Includes HMOs, PPOs, point-of-service plans, and exclusive provider organizations.

## INPATIENT DIABETES CASE COUNTS RISE AT LAS VEGAS AND NEVADA FACILITIES

From 2014 to 2015, the numbers of inpatient diabetes mellitus cases per hospital per year increased in Las Vegas and across Nevada, regardless of payer. In 2015, Nevada hospitals treated more such cases than their national counterparts for all three payer types. Las Vegas and Reno hospitals also treated higher numbers of Medicare outpatient cases in 2015 than they did in 2014. In Reno, the average number of outpatient non-Medicare diabetes cases more than tripled the U.S. mean in 2015: 11,187.5 vs. 3,704.1.

## ED SHARE OF NEVADA DIABETES OUTPATIENT CASES IS ABOVE THE U.S. NORM

Close to 40% of Nevada diabetes mellitus outpatient cases were treated in emergency departments (ED) in 2015, a share that exceeded the corresponding national benchmark of 28.2% by more than 10 percentage points. In Las Vegas, the ED portion of diabetes outpatient cases was even higher, at 59.0%.

NUMBER OF INPATIENT DIABETES MELLITUS CASES PER ACUTE-CARE HOSPITAL PER YEAR, BY PAYER, 2014-2015

MARKET	Commercial Insurance <sup>1</sup>		Medicare		Medicaid	
	2014	2015	2014	2015	2014	2015
Las Vegas	534.2	553.8	1,100.1	1,238.9	391.8	467.4
Reno	349.8	344.8	1,056.5	1,005.0	280.0	325.5
Los Angeles	414.6	480.2	1,262.8	1,210.4	n/a	288.5
Salt Lake City	239.5	216.5	727.8	701.6	165.2	117.8
<b>Nevada</b>	<b>336.6</b>	<b>366.6</b>	<b>737.2</b>	<b>812.8</b>	<b>254.4</b>	<b>313.7</b>
<b>NATION</b>	<b>259.6</b>	<b>268.0</b>	<b>850.4</b>	<b>807.8</b>	<b>187.0</b>	<b>166.9</b>

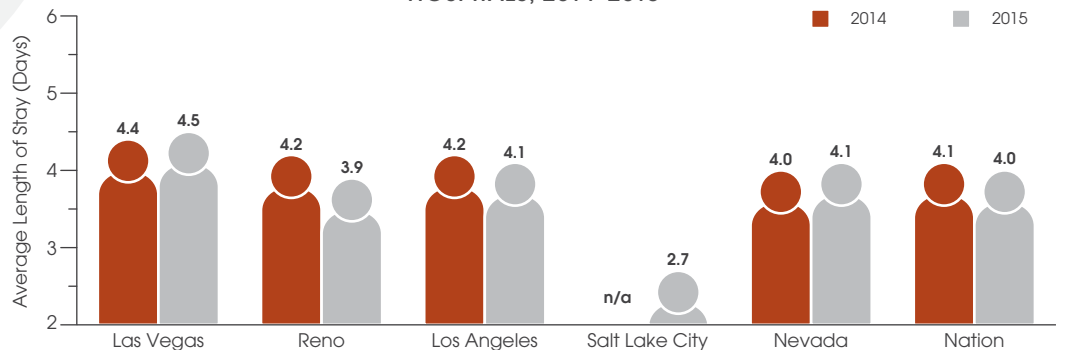
NUMBER OF OUTPATIENT DIABETES MELLITUS CASES PER ACUTE-CARE HOSPITAL PER YEAR, MEDICARE VS. NON-MEDICARE, 2014-2015

MARKET	Medicare		Non-Medicare	
	2014	2015	2014	2015
Las Vegas	1,610.9	1,623.0	4,560.3	4,541.7
Reno	3,148.3	3,357.3	10,505.8	11,187.5
Los Angeles	2,225.5	2,231.6	3,817.6	3,690.9
Salt Lake City	3,377.3	3,574.9	4,053.8	4,274.0
<b>Nevada</b>	<b>1,625.4</b>	<b>1,605.0</b>	<b>4,744.8</b>	<b>4,765.0</b>
<b>NATION</b>	<b>3,329.4</b>	<b>3,402.5</b>	<b>3,263.6</b>	<b>3,704.1</b>

DISTRIBUTION OF OUTPATIENT DIABETES MELLITUS CASES AT ACUTE-CARE HOSPITALS, BY SETTING, 2015

MARKET	Emergency Department		Ambulatory Surgery		All Other Outpatient Cases <sup>2</sup>	
	Overall	w/ Hypoglycemia	Overall	w/ Hypoglycemia	Overall	w/ Hypoglycemia
Las Vegas	59.0%	18.9%	24.1%	44.1%	16.9%	37.0%
Reno	21.0	12.6	46.0	48.8	33.0	38.6
Los Angeles	42.8	33.3	14.6	28.4	42.6	38.3
Salt Lake City	29.7	27.8	18.2	28.3	52.1	43.8
<b>Nevada</b>	<b>38.8</b>	<b>17.4</b>	<b>33.4</b>	<b>43.8</b>	<b>27.8</b>	<b>38.8</b>
<b>NATION</b>	<b>28.2%</b>	<b>28.2%</b>	<b>14.8%</b>	<b>23.3%</b>	<b>57.0%</b>	<b>48.6%</b>

AVERAGE LENGTH OF STAY (DAYS) PER INPATIENT DIABETES MELLITUS CASE AT ACUTE-CARE HOSPITALS, 2014-2015



Data source: QuintilesIMS © 2017

<sup>1</sup> Includes HMOs, PPOs, point-of-service plans, and exclusive provider organizations.

<sup>2</sup> "All Other Outpatient Cases" includes cases treated in units that provide outpatient medical care by appointment, such as general, obstetric, pediatric, substance abuse, or psychiatric clinics.

NOTE: Inpatient/outpatient case counts and average length of stay (ALOS) data come from QuintilesIMS' Hospital Procedure/Diagnosis (HPD) database and are current as of calendar year 2015. Throughout this report, n/a indicates that data were unavailable.

# FACILITY CHARGES

FACILITY CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS, 2015–2016<sup>1</sup>

MARKET	Inpatient		Outpatient	
	2015	2016	2015	2016
Las Vegas	\$38,252	\$39,166	\$8,869	\$8,520
Reno	29,976	33,186	8,229	8,491
Los Angeles	43,089	45,610	12,268	11,310
Salt Lake City	34,094	35,388	15,875	12,944
<b>Nevada</b>	<b>37,433</b>	<b>35,272</b>	<b>8,728</b>	<b>8,454</b>
<b>NATION</b>	<b>\$38,462</b>	<b>\$39,746</b>	<b>\$10,035</b>	<b>\$10,809</b>

## IP FACILITY CHARGES GROW FOR COMMERCIAL TYPE 2 DIABETES PTS. IN LOCAL MKT.

Average inpatient (IP) facility charges for commercially insured Type 2 diabetes patients increased in Las Vegas (2.4%), Reno (10.7%), Los Angeles (5.8%), and Salt Lake City (3.8%) from 2015 to 2016. However, such charges decreased by 5.8% across Nevada during this period.

INPATIENT FACILITY CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS, BY ACTUAL COMPLICATION, 2016<sup>1,2</sup>

MARKET	CV Disease	Nephropathy	Neuropathy	PAD	Severe Hypoglycemia
Las Vegas	\$32,036	\$34,323	\$38,837	n/a	n/a
Reno	28,734	34,641	29,242	\$34,425	n/a
Los Angeles	51,125	47,831	50,259	47,339	\$51,156
<b>Nevada</b>	<b>29,930</b>	<b>34,029</b>	<b>32,739</b>	<b>34,199</b>	<b>n/a</b>
<b>NATION</b>	<b>\$43,790</b>	<b>\$44,922</b>	<b>\$44,699</b>	<b>\$46,243</b>	<b>\$49,017</b>

## NEUROPATHY LEADS TO HIGH IP CHARGES FOR LAS VEGAS TYPE 2 DIABETES PATIENTS

Average inpatient (IP) facility charges for Las Vegas Type 2 diabetes patients with a complication of neuropathy (\$38,837) were higher than those of similar patients with either nephropathy or cardiovascular disease in 2016. In Reno, such charges were highest for Type 2 diabetes patients with nephropathy (\$34,641). Los Angeles Type 2 diabetes patients with severe hypoglycemia had the highest IP facility charges (\$51,156) for any profiled complication among the selected markets.

INPATIENT FACILITY CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS, BY PAYER, 2015–2016<sup>1</sup>

MARKET	Commercial Insurance <sup>3</sup>		Medicare		Medicaid	
	2015	2016	2015	2016	2015	2016
Las Vegas	\$38,252	\$39,166	\$41,479	\$36,001	n/a	\$33,219
Reno	29,976	33,186	33,620	34,217	n/a	27,998
Los Angeles	43,096	45,578	52,486	52,772	\$44,905	46,137
Salt Lake City	34,094	35,388	38,725	27,646	n/a	n/a
<b>Nevada</b>	<b>37,433</b>	<b>35,272</b>	<b>39,301</b>	<b>34,790</b>	<b>n/a</b>	<b>28,892</b>
<b>NATION</b>	<b>\$38,430</b>	<b>\$39,742</b>	<b>\$41,555</b>	<b>\$42,766</b>	<b>\$41,380</b>	<b>\$41,274</b>

OUTPATIENT FACILITY CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS, BY PAYER, 2015–2016<sup>1</sup>

MARKET	Commercial Insurance <sup>3</sup>		Medicare		Medicaid	
	2015	2016	2015	2016	2015	2016
Las Vegas	\$8,936	\$8,508	\$8,731	\$8,297	n/a	\$9,365
Reno	8,229	8,491	11,967	9,556	n/a	11,044
Los Angeles	12,307	11,383	15,846	15,199	13,626	13,162
Salt Lake City	15,869	12,944	9,583	15,845	n/a	13,497
<b>Nevada</b>	<b>8,751</b>	<b>8,449</b>	<b>9,813</b>	<b>9,194</b>	<b>n/a</b>	<b>10,547</b>
<b>NATION</b>	<b>\$10,030</b>	<b>\$10,818</b>	<b>\$10,711</b>	<b>\$11,516</b>	<b>\$10,706</b>	<b>\$10,546</b>

<sup>1</sup> Figures reflect the charges generated by the facilities that delivered care. The data also reflect the amounts charged, not the amounts paid.

<sup>2</sup> A complication is defined as a patient condition caused by the Type 2 diabetes of the patient. These conditions are a direct result of having Type 2 diabetes. Complications of Type 2 diabetes include, but are not limited to, acute myocardial infarction, cardiovascular (CV) disease, severe hypoglycemia, nephropathy, neuropathy, peripheral artery disease (PAD), stroke, and retinopathy.

<sup>3</sup> Includes HMOs, PPOs, point-of-service plans, and exclusive provider organizations.

NOTE: Due to low patient claims counts, hospital inpatient and outpatient charge data by complication or payer were unavailable for some of the selected state and local markets. Throughout this report, n/a indicates that data were not available.

## PROVIDER OP CHARGES RISE FOR TYPE 2 DIABETES PTS. IN RENO AND LAS VEGAS

Average professional hospital outpatient (OP) charges grew 18.9% for Reno Type 2 diabetes patients, regardless of coverage, from 2015 to 2016, and 8.2% for their counterparts in Las Vegas. Across Nevada, such charges increased 8.9% during this period. For commercially insured Type 2 diabetes patients in these markets, OP professional charges rose 27.2% in Reno, 4.7% in Las Vegas, and 8.4% statewide.

## HYPOGLYCEMIA DRIVES UP IP PROVIDER CHARGES FOR LAS VEGAS TYPE 2 DIABETES PTS.

Inpatient (IP) professional charges were highest, by market and by complication, in 2016 for Las Vegas Type 2 diabetes patients with severe hypoglycemia (\$6,768). This was also true for such patients in Los Angeles (\$6,673). In Reno, a complication of peripheral arterial disease incurred the greatest IP professional charges (\$5,485) for Type 2 diabetes patients that year.

PROFESSIONAL CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS, 2015–2016<sup>1</sup>

MARKET	Ambulatory Surgery		Emergency Department		Hospital Inpatient		Hospital Outpatient		Office/Clinic	
	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Las Vegas	\$3,221	\$3,451	\$2,743	\$2,671	\$4,054	\$3,928	\$1,324	\$1,432	\$2,973	\$2,966
Reno	3,372	3,673	2,250	2,762	2,893	3,211	1,208	1,436	2,189	2,263
Los Angeles	2,431	2,633	1,432	1,412	3,444	3,525	1,335	1,404	2,367	2,253
Salt Lake City	3,144	3,153	1,719	1,659	3,160	2,965	1,603	1,483	1,963	2,060
<b>Nevada</b>	<b>3,345</b>	<b>3,500</b>	<b>2,632</b>	<b>2,701</b>	<b>3,882</b>	<b>3,801</b>	<b>1,288</b>	<b>1,402</b>	<b>2,855</b>	<b>2,870</b>
<b>NATION</b>	<b>\$2,985</b>	<b>\$3,223</b>	<b>\$1,549</b>	<b>\$1,889</b>	<b>\$3,344</b>	<b>\$3,681</b>	<b>\$1,303</b>	<b>\$1,424</b>	<b>\$2,180</b>	<b>\$2,404</b>

PROFESSIONAL INPATIENT CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS, BY ACTUAL COMPLICATION, 2016<sup>1,2</sup>

MARKET	CV Disease	Severe Hypoglycemia	Nephropathy	Neuropathy	PAD	Retinopathy
Las Vegas	\$5,369	\$6,768	\$5,591	\$5,516	\$5,941	\$4,351
Reno	4,251	5,345	4,353	4,281	5,485	3,873
Los Angeles	5,032	6,673	5,531	5,301	5,830	4,841
Salt Lake City	3,637	4,501	3,869	3,570	4,206	3,524
<b>Nevada</b>	<b>5,235</b>	<b>6,501</b>	<b>5,454</b>	<b>5,404</b>	<b>5,855</b>	<b>4,348</b>
<b>NATION</b>	<b>\$4,945</b>	<b>\$6,718</b>	<b>\$5,422</b>	<b>\$5,245</b>	<b>\$5,885</b>	<b>\$4,589</b>

PROFESSIONAL INPATIENT CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS, BY PAYER, 2015–2016<sup>1</sup>

MARKET	Commercial Insurance <sup>3</sup>		Medicare		Medicaid	
	2015	2016	2015	2016	2015	2016
Las Vegas	\$3,752	\$3,530	\$3,119	\$3,237	\$3,582	\$3,626
Reno	2,369	2,799	2,301	2,655	2,719	2,447
Los Angeles	3,242	3,390	2,268	2,517	4,038	3,664
Salt Lake City	3,241	3,019	2,287	2,363	1,959	1,933
<b>Nevada</b>	<b>3,588</b>	<b>3,483</b>	<b>2,973</b>	<b>3,065</b>	<b>3,529</b>	<b>3,459</b>
<b>NATION</b>	<b>\$3,082</b>	<b>\$3,323</b>	<b>\$2,630</b>	<b>\$2,856</b>	<b>\$3,325</b>	<b>\$3,606</b>

PROFESSIONAL OUTPATIENT CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS, BY PAYER, 2015–2016<sup>1</sup>

MARKET	Commercial Insurance <sup>3</sup>		Medicare		Medicaid	
	2015	2016	2015	2016	2015	2016
Las Vegas	\$1,407	\$1,473	\$993	\$1,092	\$1,310	\$1,605
Reno	1,050	1,336	1,117	1,264	1,509	1,410
Los Angeles	1,394	1,476	1,038	1,227	1,233	1,079
Salt Lake City	1,568	1,493	1,336	1,209	1,155	1,265
<b>Nevada</b>	<b>1,312</b>	<b>1,422</b>	<b>1,021</b>	<b>1,127</b>	<b>1,291</b>	<b>1,473</b>
<b>NATION</b>	<b>\$1,243</b>	<b>\$1,325</b>	<b>\$1,102</b>	<b>\$1,198</b>	<b>\$1,334</b>	<b>\$1,492</b>

<sup>1</sup> Professional charges are those generated by the providers delivering care to Type 2 diabetes patients in various settings.

<sup>2</sup> A complication is defined as a patient condition caused by the Type 2 diabetes of the patient. These conditions are a direct result of having Type 2 diabetes. Complications of Type 2 diabetes include, but are not limited to, acute myocardial infarction (AMI), cardiovascular (CV) disease, severe hypoglycemia, nephropathy, neuropathy, stroke, and retinopathy.

<sup>3</sup> Includes HMOs, PPOs, point-of-service plans, and exclusive provider organizations.

Data source: QuintilesIMS © 2017



# PHARMACOTHERAPY

## PERCENTAGE OF TYPE 2 DIABETES PATIENTS RECEIVING VARIOUS INSULIN THERAPIES, 2016<sup>1</sup>

MARKET	Any Insulin Products	Long-Acting Insulin: Gen 1	Long-Acting Insulin: Gen 2	Rapid-Acting Insulin	Mixed Insulin	Intermediate-Acting Insulin
Las Vegas	31.2%	23.3%	3.7%	15.2%	2.6%	1.3%
Reno	32.6	24.7	3.6	15.6	2.9	1.0
Los Angeles	32.5	23.2	3.3	13.6	5.2	2.3
Salt Lake City	36.6	26.2	5.9	19.8	1.9	0.7
<b>Nevada</b>	<b>31.0</b>	<b>23.2</b>	<b>3.7</b>	<b>15.1</b>	<b>2.6</b>	<b>1.2</b>
<b>NATION</b>	<b>33.7%</b>	<b>24.8%</b>	<b>3.2%</b>	<b>16.5%</b>	<b>3.9%</b>	<b>1.3%</b>

## INSULIN FILL RATES FOR TYPE 2 DIABETES PATIENTS LAG NATIONAL MEAN IN NV

In Las Vegas (31.2%), Reno (32.6%), and across Nevada (31.0%), the shares of Type 2 diabetes patients who filled prescriptions for any insulin products lagged the national percentage (33.7%). Meanwhile, such patients were more apt than their peers nationally to receive any non-insulin antidiabetic product. Specifically, 9.7% of Nevada Type 2 diabetes patients who filled a prescription received an SGLT-2 inhibitor in 2016, which was more than two percentage points above the national norm (7.4%).

## PERCENTAGE OF TYPE 2 DIABETES PATIENTS RECEIVING ANY INSULIN PRODUCTS, BY A1c LEVEL, 2015–2016<sup>1,2</sup>

MARKET	≤7.0%		7.1–7.9%		8.0–9.0%		>9.0%	
	2015	2016	2015	2016	2015	2016	2015	2016
Las Vegas	16.1%	17.1%	37.7%	39.6%	53.6%	57.2%	64.4%	60.3%
Reno	13.4	12.6	33.2	35.7	51.1	57.5	65.7	62.6
Los Angeles	14.1	13.8	30.1	29.6	46.1	47.4	59.6	59.8
Salt Lake City	16.6	16.6	42.7	44.3	60.1	63.9	68.8	67.6
<b>Nevada</b>	<b>15.3</b>	<b>15.7</b>	<b>34.7</b>	<b>36.8</b>	<b>49.7</b>	<b>54.9</b>	<b>61.2</b>	<b>59.9</b>
<b>NATION</b>	<b>15.6%</b>	<b>15.1%</b>	<b>33.6%</b>	<b>32.6%</b>	<b>50.3%</b>	<b>49.6%</b>	<b>63.7%</b>	<b>63.4%</b>

## PERCENTAGE OF TYPE 2 DIABETES PATIENTS RECEIVING VARIOUS NON-INSULIN ANTIDIABETIC THERAPIES, 2016<sup>1</sup>

MARKET	Any Non-Insulin Antidiabetic Product	Biguanides	DPP-4 Inhibitors	GLP-1 Receptor Agonists	GLP-1 + Long-Acting Insulin	Insulin Sensitizing Agents	SGLT-2 Inhibitors	Sulfonylureas
Las Vegas	88.0%	65.4%	10.4%	7.6%	2.5%	6.1%	9.2%	32.4%
Reno	87.7	67.3	12.2	6.7	2.6	7.1	7.7	26.5
Los Angeles	89.2	65.5	19.3	5.7	2.2	8.5	7.1	34.2
Salt Lake City	84.5	66.9	9.8	8.4	3.2	6.6	7.4	25.3
<b>Nevada</b>	<b>88.3</b>	<b>65.7</b>	<b>10.6</b>	<b>7.9</b>	<b>2.6</b>	<b>6.4</b>	<b>9.7</b>	<b>31.4</b>
<b>NATION</b>	<b>86.4%</b>	<b>64.6%</b>	<b>12.6%</b>	<b>7.5%</b>	<b>2.6%</b>	<b>5.3%</b>	<b>7.4%</b>	<b>30.5%</b>

## PERCENTAGE OF TYPE 2 DIABETES PATIENTS RECEIVING ANY NON-INSULIN ANTIDIABETIC PRODUCT, BY A1c LEVEL, 2015–2016<sup>1,2</sup>

MARKET	≤7.0%		7.1–7.9%		8.0–9.0%		>9.0%	
	2015	2016	2015	2016	2015	2016	2015	2016
Las Vegas	92.5%	93.4%	86.2%	85.6%	81.2%	79.9%	77.9%	78.5%
Reno	93.3	96.2	90.2	88.6	83.9	79.4	81.4	78.7
Los Angeles	94.2	94.7	90.3	90.6	84.9	87.0	83.6	84.2
Salt Lake City	92.1	94.1	84.0	84.3	72.4	78.9	74.6	70.3
<b>Nevada</b>	<b>92.4</b>	<b>94.5</b>	<b>88.3</b>	<b>87.4</b>	<b>84.1</b>	<b>81.3</b>	<b>79.1</b>	<b>79.9</b>
<b>NATION</b>	<b>93.5%</b>	<b>93.7%</b>	<b>87.5%</b>	<b>88.2%</b>	<b>81.7%</b>	<b>82.6%</b>	<b>78.6%</b>	<b>79.3%</b>

Data source: QuintilesIMS © 2017

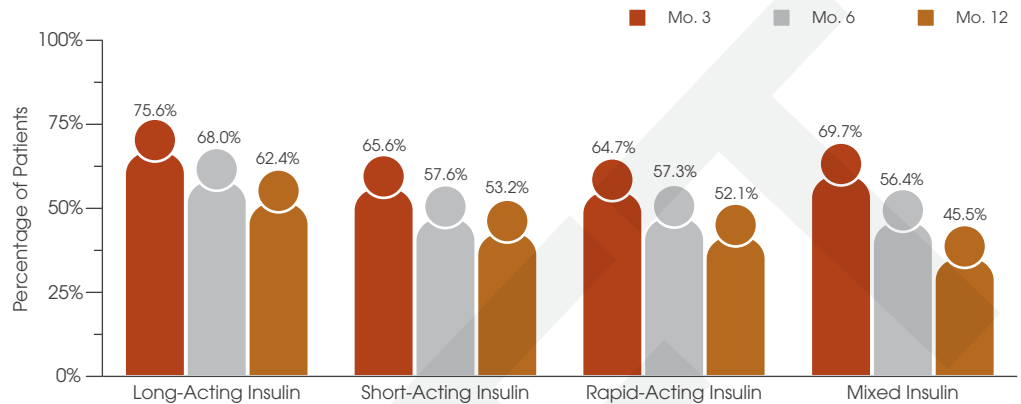
<sup>1</sup> Patients who filled prescriptions for any insulin products may have also filled prescriptions for products in the non-insulin category, and vice versa.

<sup>2</sup> The A1c test measures the amount of glucose present in the blood during the past 2–3 months. Figures reflect the percentage of Type 2 diabetes patients who have had at least one A1c test in a given year.

## INSULIN THERAPY PERSISTENCY FOR NV TYPE 2 DIABETES PTS. IS HIGHEST FOR L-A INSULINS

The share of Nevada Type 2 diabetes patients who were persistent in their therapy in month 12 of 2016 was largest, by profiled insulin therapy, for those who were dispensed a long-acting insulin (62.4%), and lowest for those who filled prescriptions for mixed insulin (45.5%). The shares of their counterparts who were persistent in month 12 on either a short- or rapid-acting insulin were virtually the same (53.2% and 52.1%, respectively).

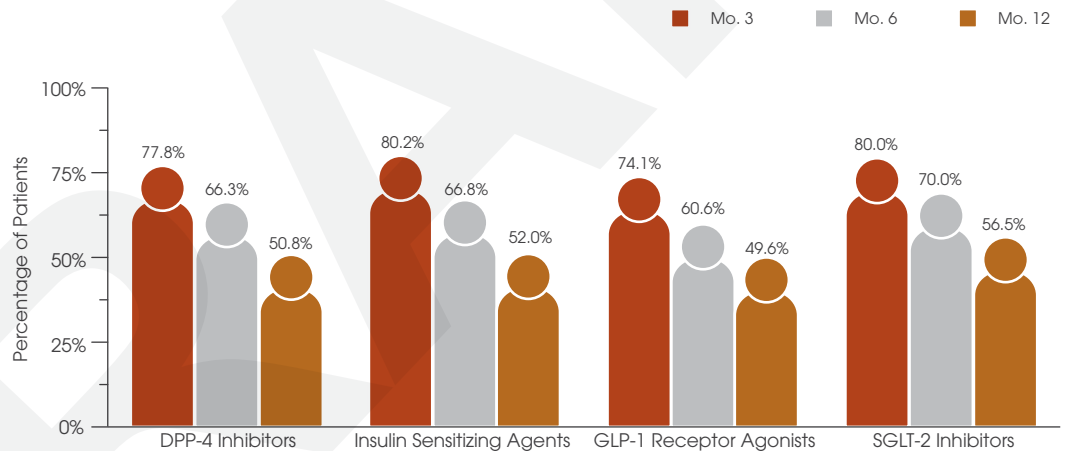
PERSISTENCY: TYPE 2 DIABETES PATIENTS USING VARIOUS INSULIN PRODUCTS, NEVADA, 2016



## SGLT-2s HAVE HIGHEST NON-INSULIN PERSISTENCY FOR NV TYPE 2 DIABETES PTS.

In 2016, Nevada Type 2 diabetes patients who filled prescriptions for an SGLT-2 inhibitor showed the highest rate of therapy persistency (56.5%) in month 12 among those patients receiving any of the four profiled non-insulin antidiabetic therapies.

PERSISTENCY: TYPE 2 DIABETES PATIENTS USING VARIOUS NON-INSULIN ANTIDIABETIC PRODUCTS, NEVADA, 2016



## READMIT RATES ARE LOWER FOR WEST REGION TYPE 2 DIABETES PTS. USING INSULINS

The shares of West region Type 2 diabetes patients readmitted to an inpatient facility within either three or 30 days of initial discharge were lower for those who were dispensed any insulin products than those of their peers dispensed a non-insulin antidiabetic therapy.

READMISSION RATES FOR PATIENTS DIAGNOSED WITH TYPE 2 DIABETES, BY TYPE OF THERAPY, 2014-2016<sup>1,2</sup>

MARKET	Three-Day Readmissions		30-Day Readmissions	
	Any Insulin Products	Three Non-Insulin Antidiabetic Products	Any Insulin Products	Three Non-Insulin Antidiabetic Products
West Region	6.9%	15.2%	15.8%	25.3%
NATION	8.7%	11.9%	18.1%	22.4%

Data source: QuintilesIMS © 2017

<sup>1</sup> Figures reflect the percentages of Type 2 diabetes patients who were readmitted to an inpatient facility in the three-year period between 2014 and 2016. These percentages include patients who filled multiple prescriptions. Readmissions are not necessarily due to Type 2 diabetes. Readmissions data were available down to the regional level only.

<sup>2</sup> Patients who filled prescriptions for any insulin products may have also filled prescriptions for products in the non-insulin category, and vice versa.

NOTE: "Persistency" measures whether patients maintain their prescribed therapy. It is calculated by identifying patients who filled a prescription for the reported drug class in the four months prior to the reported year, and then tracking prescription fills for those same patients in each of the months in the current reported year. If patients fill a prescription in a month, they are reported among the patients who have continued or restarted on therapy. Continued means that the patient has filled the drug group in each of the preceding months. Restarted means that the patient did not fill in one or more of the preceding months. Continuing and restarting patients are reported together.

# OTHER CONDITIONS: DISCHARGE DATA

NUMBERS OF INPATIENT CASES PER ACUTE-CARE HOSPITAL PER YEAR, 2014–2015

MARKET	Hypertension		Lipid Disorders		Diabetes w/ Lipid Disorders	
	2014	2015	2014	2015	2014	2015
Las Vegas	3,414.4	3,362.0	2,096.1	2,219.3	756.5	824.0
Reno	2,814.5	2,674.5	1,994.8	1,948.5	553.0	533.0
Los Angeles	2,375.2	2,377.8	1,704.9	1,714.8	631.7	655.5
Salt Lake City	1,349.2	1,394.8	849.8	879.2	280.7	286.9
<b>Nevada</b>	<b>2,208.0</b>	<b>2,194.1</b>	<b>1,427.6</b>	<b>1,509.1</b>	<b>486.6</b>	<b>531.7</b>
<b>NATION</b>	<b>1,757.3</b>	<b>1,750.3</b>	<b>1,185.2</b>	<b>1,223.3</b>	<b>411.6</b>	<b>421.4</b>

NUMBERS OF OUTPATIENT CASES PER ACUTE-CARE HOSPITAL PER YEAR, 2014–2015

MARKET	Hypertension		Lipid Disorders		Diabetes w/ Lipid Disorders	
	2014	2015	2014	2015	2014	2015
Las Vegas	10,208.4	11,125.9	4,249.9	4,172.0	1,383.3	1,318.5
Reno	20,155.3	21,893.8	19,672.8	22,378.8	4,749.0	5,702.0
Los Angeles	8,329.0	7,990.1	5,253.1	5,066.9	1,751.4	1,928.9
Salt Lake City	9,253.9	9,530.1	5,453.1	5,484.5	1,643.1	2,056.7
<b>Nevada</b>	<b>9,930.5</b>	<b>10,525.2</b>	<b>7,012.4</b>	<b>6,455.9</b>	<b>1,849.1</b>	<b>1,833.0</b>
<b>NATION</b>	<b>9,010.1</b>	<b>9,599.9</b>	<b>6,065.4</b>	<b>6,337.8</b>	<b>1,924.5</b>	<b>2,263.4</b>

## IP CASE COUNTS OF LIPID DISORDER AND DIABETES WITH LIPID DISORDERS CLIMB IN NV

From 2014 to 2015, the average numbers of inpatient (IP) lipid disorders and diabetes with lipid disorders cases treated at Nevada hospitals rose. For instance, hospitals treated an average of 1,509.1 IP lipid disorders cases in Nevada in 2015, compared with 1,427.6 in 2014, a 5.7% increase. Further, in each profiled Nevada market, IP cases of hypertension, lipid disorders, and diabetes with lipid disorders exceeded the corresponding national benchmarks in 2015.

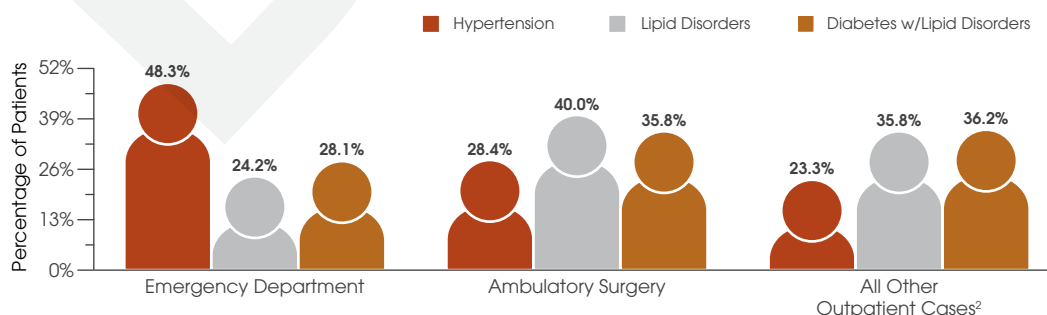
## NV MEDICARE IP CHARGES FOR DIABETES WITH LIPID DISORDERS TOP U.S. MEAN

In Las Vegas (\$60,165) and across Nevada (\$57,904), average Medicare charges per inpatient (IP) diabetes with lipid disorders case were 81.5% and 74.7% higher, respectively, than those of the nation (\$33,141) in 2015.

MEDICARE CHARGES AND REIMBURSEMENT PER ACUTE-CARE HOSPITAL INPATIENT CASE, 2015<sup>1</sup>

MARKET	Hypertension		Diabetes w/ Lipid Disorders	
	Charges	Reimbursement	Charges	Reimbursement
Las Vegas	\$44,816	\$4,569	\$60,165	\$6,349
Reno	n/a	n/a	28,503	5,529
Los Angeles	40,439	5,162	50,080	8,267
Salt Lake City	20,009	2,275	31,463	5,557
<b>Nevada</b>	<b>44,816</b>	<b>4,569</b>	<b>57,904</b>	<b>6,291</b>
<b>NATION</b>	<b>\$25,626</b>	<b>\$3,866</b>	<b>\$33,141</b>	<b>\$6,287</b>

DISTRIBUTION OF HYPERTENSION, LIPID DISORDERS, AND DIABETES WITH LIPID DISORDERS OUTPATIENT CASES AT ACUTE-CARE HOSPITALS, BY SETTING, NEVADA, 2015



<sup>1</sup> Charge data are per-case averages for inpatients with a particular diagnosis of interest. Charges may be for treatment related to other diagnoses. Data reflect the total charges billed by the hospital for the entire episode of care, and may include accommodation, pharmacy, laboratory, radiology, and other charges not billed by the physician. Data do not necessarily indicate final amounts paid.

<sup>2</sup> "All Other Outpatient Cases" includes cases treated in units that provide outpatient medical care by appointment, such as general, obstetric, pediatric, substance abuse, or psychiatric clinics.

NOTE: Throughout this report, n/a indicates that data were not available.

Data source: QuintilesIMS © 2017

# OTHER CONDITIONS: DISCHARGE DATA

## NUMBERS OF IP CASES OF STROKE, AMI, AND HEART FAILURE INCREASE IN NV

The average numbers of inpatient (IP) cases of stroke, AMI, and heart failure treated at Nevada hospitals rose from 2014 to 2015. For instance, the IP heart failure case count per hospital in Nevada grew by 17.1% during this period, reaching 872.2 in 2015. Moreover, IP cases of stroke (358.1), AMI (87.9), and heart failure (1,315.7) in Las Vegas were considerably higher than those of hospitals nationally in 2015.

## OUTPATIENT CASES OF FEATURED CV-RELATED DXs IN RENO ARE HIGH

At Reno hospitals in both 2014 and 2015, outpatient cases of stroke, AMI, and heart failure notably surpassed those of the nation.

<sup>1</sup> Charge data are per-case averages for inpatients with a particular diagnosis of interest. Charges may be for treatment related to other diagnoses. Data reflect the total charges billed by the hospital for the entire episode of care, and may include accommodation, pharmacy, laboratory, radiology, and other charges not billed by the physician. Data do not necessarily indicate final amounts paid.

NUMBERS OF INPATIENT CASES PER ACUTE-CARE HOSPITAL PER YEAR, 2014-2015

MARKET	Stroke		AMI (STEMI)		Heart Failure	
	2014	2015	2014	2015	2014	2015
Las Vegas	305.6	358.1	85.7	87.9	1,086.5	1,315.7
Reno	356.3	341.5	126.3	134.0	1,265.8	1,329.0
Los Angeles	232.6	245.1	53.2	56.3	1,047.0	1,149.8
Salt Lake City	128.1	136.9	54.1	51.5	499.1	553.4
<b>Nevada</b>	<b>245.8</b>	<b>269.8</b>	<b>94.5</b>	<b>96.6</b>	<b>745.1</b>	<b>872.2</b>
<b>NATION</b>	<b>181.6</b>	<b>190.3</b>	<b>54.1</b>	<b>51.3</b>	<b>810.0</b>	<b>878.2</b>

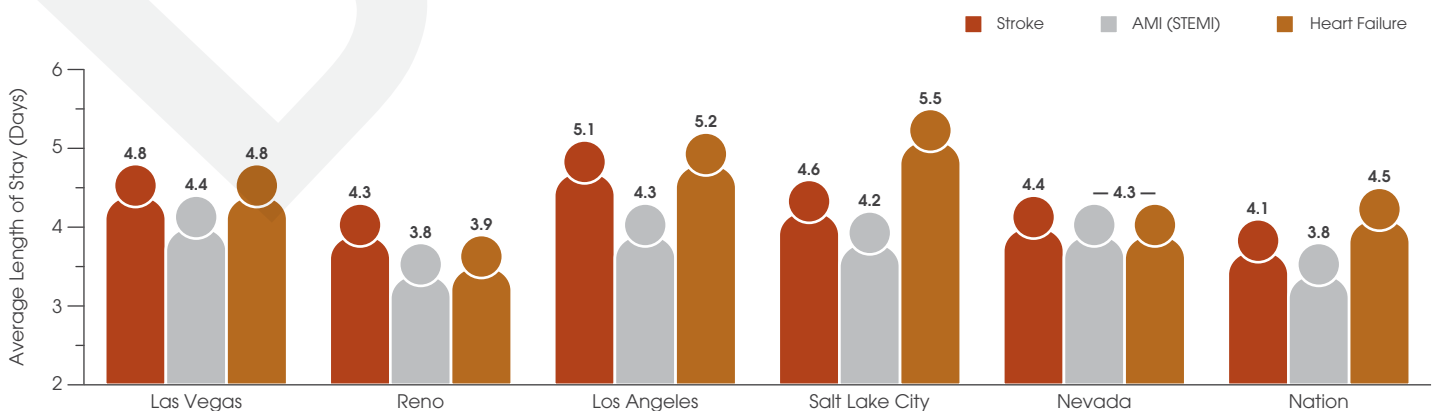
NUMBERS OF OUTPATIENT CASES PER ACUTE-CARE HOSPITAL PER YEAR, 2014-2015

MARKET	Stroke		AMI (STEMI)		Heart Failure	
	2014	2015	2014	2015	2014	2015
Las Vegas	257.2	252.7	5.8	7.0	953.7	996.4
Reno	1,750.8	2,112.5	58.3	64.3	2,084.0	2,165.5
Los Angeles	234.3	280.6	12.8	15.0	839.6	918.4
Salt Lake City	322.2	397.6	22.3	27.5	1,198.2	1,479.5
<b>Nevada</b>	<b>520.5</b>	<b>535.1</b>	<b>17.9</b>	<b>21.3</b>	<b>1,042.4</b>	<b>1,070.7</b>
<b>NATION</b>	<b>396.4</b>	<b>439.1</b>	<b>19.1</b>	<b>22.0</b>	<b>1,171.2</b>	<b>1,275.2</b>

MEDICARE CHARGES AND REIMBURSEMENT PER ACUTE-CARE HOSPITAL INPATIENT CASE, 2015<sup>1</sup>

MARKET	Stroke		AMI (STEMI)		Heart Failure	
	Charges	Reimbursement	Charges	Reimbursement	Charges	Reimbursement
Las Vegas	\$86,119	\$8,662	\$168,817	\$15,891	\$71,278	\$8,626
Reno	46,339	7,348	105,815	16,138	35,233	6,996
Los Angeles	66,704	9,341	142,333	18,371	62,360	10,360
Salt Lake City	38,269	6,920	87,329	13,434	35,107	8,649
<b>Nevada</b>	<b>71,795</b>	<b>8,166</b>	<b>159,125</b>	<b>15,929</b>	<b>54,044</b>	<b>8,574</b>
<b>NATION</b>	<b>\$39,124</b>	<b>\$7,143</b>	<b>\$100,412</b>	<b>\$15,220</b>	<b>\$30,764</b>	<b>\$7,355</b>

AVERAGE LENGTHS OF STAY (DAYS) PER ACUTE-CARE HOSPITAL INPATIENT CASE, 2015



Data source: QuintilesIMS © 2017



# OTHER CONDITIONS: DISCHARGE DATA

## NUMBERS OF INPATIENT CASES PER ACUTE-CARE HOSPITAL PER YEAR, 2014-2015

MARKET	Diabetes w/ Depression		Depression		Diabetes w/ Peripheral Vascular Disease	
	2014	2015	2014	2015	2014	2015
Las Vegas	68.3	85.4	324.5	455.9	34.8	43.5
Reno	59.3	50.8	333.0	305.5	26.0	24.3
Los Angeles	112.7	120.6	601.4	638.1	85.9	84.0
Salt Lake City	42.4	53.4	367.2	454.6	10.2	11.1
Nevada	66.0	71.1	278.7	317.0	32.0	37.1
<b>NATION</b>	<b>60.6</b>	<b>62.3</b>	<b>345.4</b>	<b>373.7</b>	<b>30.2</b>	<b>32.5</b>

## NUMBER OF INPATIENT DEPRESSION CASES IN LAS VEGAS TOPS NV, U.S. AVGS.

In 2015, the average number of inpatient depression cases per Las Vegas hospital (455.9) was notably higher than the Nevada (317.0) and U.S. (373.7) means. Further, the average case count of such cases in Las Vegas rose a dramatic 40.5% from the previous year (324.5).

## NUMBERS OF OUTPATIENT CASES PER ACUTE-CARE HOSPITAL PER YEAR, 2015

MARKET	Diabetes w/ Depression		Depression		Diabetes w/ Peripheral Vascular Disease	
	2014	2015	2014	2015	2014	2015
Las Vegas	13.5	9.4	753.2	822.2	69.4	76.1
Reno	17.0	24.3	4,559.8	2,907.0	164.8	129.3
Los Angeles	8.9	8.2	846.0	801.2	99.2	64.7
Salt Lake City	21.1	12.8	776.2	700.9	72.6	94.9
Nevada	13.1	10.2	1,227.1	1,062.9	62.3	62.6
<b>NATION</b>	<b>14.6</b>	<b>13.7</b>	<b>810.5</b>	<b>839.4</b>	<b>88.3</b>	<b>90.5</b>

## OUTPATIENT CASE COUNTS OF DEPRESSION ARE HIGH IN RENO HOSPITALS

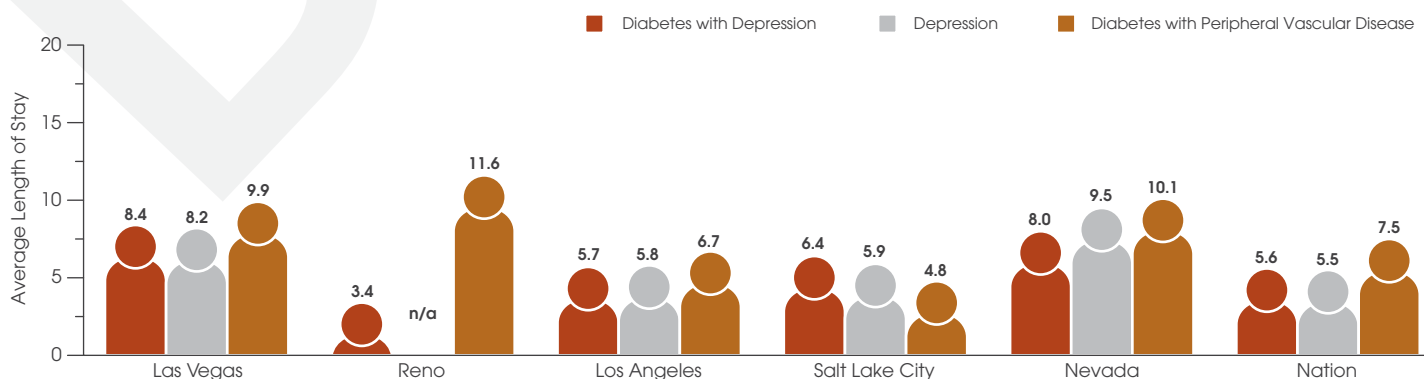
Despite falling considerably from 2014 (4,559.8) to 2015 (2,907.0), the average number of inpatient depression cases at Reno hospitals was still nearly three times the state average (1,062.9) in 2015.

## MEDICARE CHARGES AND REIMBURSEMENT PER ACUTE-CARE HOSPITAL INPATIENT CASE, 2015<sup>1</sup>

MARKET	Depression		Diabetes w/ Peripheral Vascular Disease	
	Charges	Reimbursement	Charges	Reimbursement
Las Vegas	\$48,331	\$10,681	\$146,653	\$13,786
Reno	68,115	9,278	121,328	17,122
Los Angeles	38,886	10,961	108,840	16,417
Salt Lake City	27,195	7,743	55,849	13,903
Nevada	51,628	10,448	143,035	14,262
<b>NATION</b>	<b>\$26,318</b>	<b>\$7,715</b>	<b>\$89,312</b>	<b>\$15,247</b>

<sup>1</sup> Charge data are per-case averages for inpatients with a particular diagnosis of interest. Charges may be for treatment related to other diagnoses. Data reflect the total charges billed by the hospital for the entire episode of care, and may include accommodation, pharmacy, laboratory, radiology, and other charges not billed by the physician. Data do not necessarily indicate final amounts paid.  
NOTE: Some data were unavailable for the selected markets.

## AVERAGE LENGTH OF STAY (DAYS) PER ACUTE-CARE INPATIENT DEPRESSION, DIABETES WITH DEPRESSION, AND DIABETES WITH PERIPHERAL VASCULAR DISEASE CASE, 2015



Data source: QuintilesIMS © 2017

# OTHER CONDITIONS: DISCHARGE DATA

## NUMBERS OF INPATIENT STAGE 3 KIDNEY DISEASE CASES CLIMBS ALMOST 28%

From 2014 (189.0) to 2015 (241.4), the number of stage 3 chronic kidney disease inpatient cases per Nevada acute-care hospital rose a notable 27.7%, exceeding the rate of growth (13.1%) nationally during this time, as well as the U.S. benchmark of 224.8 in 2015.

## LAS VEGAS EDs TREAT HIGH SHARES OF OUTPATIENT KIDNEY DISEASE CASES

Emergency departments in Las Vegas acute care hospitals treated 29.6% of stage 3 chronic kidney disease outpatient cases and 28.0% of stage 4 chronic kidney disease outpatient cases in 2015, higher percentages than those reported by hospitals nationally (13.1% and 12.4%, respectively).

## PORTION OF STAGE 4 KIDNEY DISEASE IP CASES DISCHARGED TO HH RISES

The share of stage 4 chronic kidney disease inpatient (IP) cases in Nevada acute-care hospitals that were discharged to home health (HH) inched up in 2015 to 19.4% from 18.7% in 2013.

NUMBERS OF INPATIENT CASES PER ACUTE-CARE HOSPITAL PER YEAR, 2014-2015

MARKET	Chronic Kidney Disease Stage 2		Chronic Kidney Disease Stage 3		Chronic Kidney Disease Stage 4	
	2014	2015	2014	2015	2014	2015
Las Vegas	34.6	38.5	205.3	291.6	127.5	150.7
Reno	36.0	35.0	312.3	331.8	115.5	135.8
Los Angeles	41.2	41.8	309.4	330.3	120.4	128.1
Salt Lake City	7.5	10.5	57.5	79.6	51.7	56.6
Nevada	32.4	37.7	189.0	241.4	99.0	112.0
<b>NATION</b>	<b>24.5</b>	<b>25.5</b>	<b>198.7</b>	<b>224.8</b>	<b>97.2</b>	<b>104.6</b>

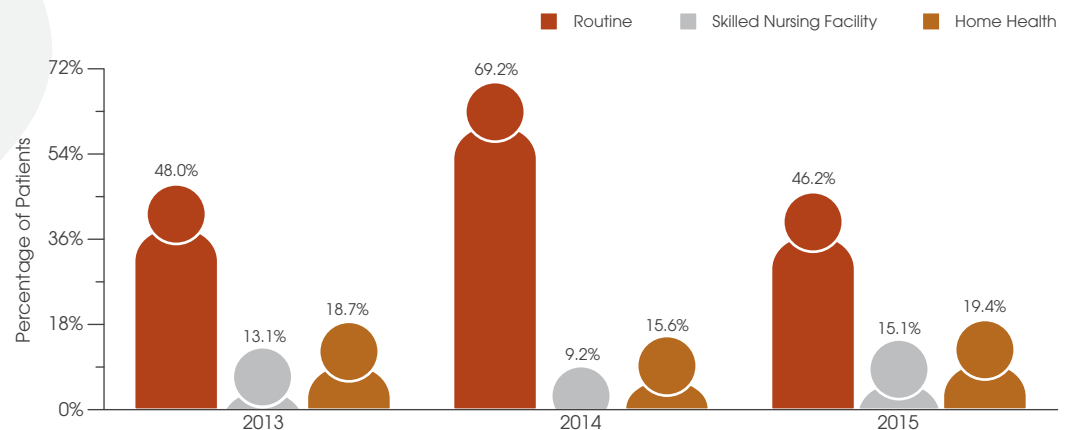
NUMBERS OF OUTPATIENT CASES PER ACUTE-CARE HOSPITAL PER YEAR, 2014-2015

MARKET	Chronic Kidney Disease Stage 2		Chronic Kidney Disease Stage 3		Chronic Kidney Disease Stage 4	
	2014	2015	2014	2015	2014	2015
Las Vegas	30.5	45.7	273.9	289.2	80.1	73.7
Reno	253.8	257.5	3,043.3	3,286.0	469.0	680.8
Los Angeles	112.7	54.0	532.1	383.6	130.1	126.3
Salt Lake City	51.7	61.4	431.0	467.8	142.8	187.1
Nevada	80.6	80.9	821.7	809.2	188.1	199.3
<b>NATION</b>	<b>68.8</b>	<b>71.6</b>	<b>522.2</b>	<b>588.2</b>	<b>176.3</b>	<b>197.7</b>

DISTRIBUTION OF OUTPATIENT CHRONIC KIDNEY DISEASE CASES AT ACUTE-CARE HOSPITALS, BY SETTING, 2015

MARKET	Emergency Department		Ambulatory Surgery		All Other Outpatient Cases <sup>1</sup>	
	Stage 3	Stage 4	Stage 3	Stage 4	Stage 3	Stage 4
Las Vegas	29.6%	28.0%	21.7%	28.0%	48.8%	43.9%
Reno	4.0	4.2	36.5	39.3	59.5	56.5
Los Angeles	16.1	15.6	22.8	16.3	61.1	68.1
Salt Lake City	13.9	14.8	17.4	13.1	68.7	72.1
Nevada	8.5	8.6	30.8	33.6	60.6	57.8
<b>NATION</b>	<b>13.1%</b>	<b>12.4%</b>	<b>9.7%</b>	<b>8.7%</b>	<b>77.2%</b>	<b>78.9%</b>

PERCENTAGE OF INPATIENT CHRONIC KIDNEY DISEASE STAGE 4 CASES AT ACUTE-CARE HOSPITALS, BY DISCHARGE DESTINATION, NEVADA, 2013-2015



<sup>1</sup> "All other outpatient cases" includes any outpatient visit that did not require surgery or arrive as an emergency. Services rendered include, but are not limited to, lab work and wellness visits, etc.

NOTE: Stage 2 chronic kidney disease (Dx 858.2) is mild. Stage 3 (Dx 858.3) is moderate. Stage 4 (Dx 858.4) is severe.

Data source: QuintilesIMS © 2017

# OTHER CONDITIONS: DISCHARGE DATA

NUMBER OF INPATIENT OBESITY CASES PER ACUTE-CARE HOSPITAL PER YEAR, 2013-2015

MARKET	2013	2014	2015
Las Vegas	419.3	464.6	505.7
Reno	424.0	428.0	385.8
Los Angeles	460.5	485.9	491.6
Salt Lake City	304.1	313.0	350.2
Nevada	318.7	351.4	360.9
<b>NATION</b>	<b>284.4</b>	<b>293.4</b>	<b>301.2</b>

## NUMBERS OF INPATIENT OBESITY CASES INCREASE IN LAS VEGAS AND STATEWIDE

The numbers of obesity inpatient cases per acute-care hospital rose in Las Vegas and Nevada, and fell in Reno, from 2013 to 2015. During this period, outpatient obesity case volumes expanded in Las Vegas, Reno, and across Nevada; moreover, the rate of such growth at hospitals in Las Vegas, Reno, and statewide exceeded that of the nation (24.3%) during this time.

NUMBER OF OUTPATIENT OBESITY CASES PER ACUTE-CARE HOSPITAL PER YEAR, 2013-2015

MARKET	2013	2014	2015
Las Vegas	503.9	848.7	942.4
Reno	1,162.0	2,298.0	2,594.5
Los Angeles	677.3	888.1	821.4
Salt Lake City	1,004.2	1,214.4	1,207.4
Nevada	437.7	821.4	943.7
<b>NATION</b>	<b>702.0</b>	<b>795.1</b>	<b>872.6</b>

## MEDICAID SHARES OF IP OBESITY CASES TOP U.S. MARK IN PROFILED NV MKTS.

In 2015, the Medicaid portion of inpatient (IP) obesity cases exceeded that of the nation (20.2%) in all three of the featured Nevada markets; among these markets, this share was highest in Las Vegas, at 23.7%, that year.

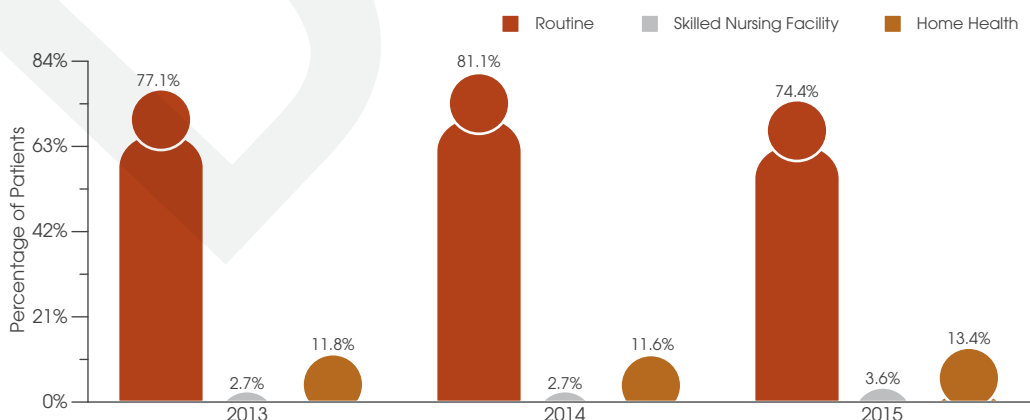
PERCENTAGE OF INPATIENT OBESITY CASES AT ACUTE-CARE HOSPITALS, BY PAYER, 2015

MARKET	Commercial Insurance <sup>1</sup>	Medicare	Medicaid
Las Vegas	37.6%	31.4%	23.7%
Reno	36.5	32.1	23.1
Los Angeles	40.9	25.9	22.2
Salt Lake City	40.9	25.5	20.5
Nevada	37.6	31.4	23.3
<b>NATION</b>	<b>36.9%</b>	<b>33.6%</b>	<b>20.2%</b>

## SHARE OF OBESITY IP CASES DISCHARGED TO HOME HEALTH EDGES UPWARD

From 2013 (11.8%) to 2015 (13.4%), the percentage of obesity inpatient (IP) cases that were discharged from Nevada acute-care hospitals to home health increased by 1.6 percentage points.

PERCENTAGE OF INPATIENT OBESITY CASES AT ACUTE-CARE HOSPITALS, BY DISCHARGE DESTINATION, NEVADA, 2013-2015

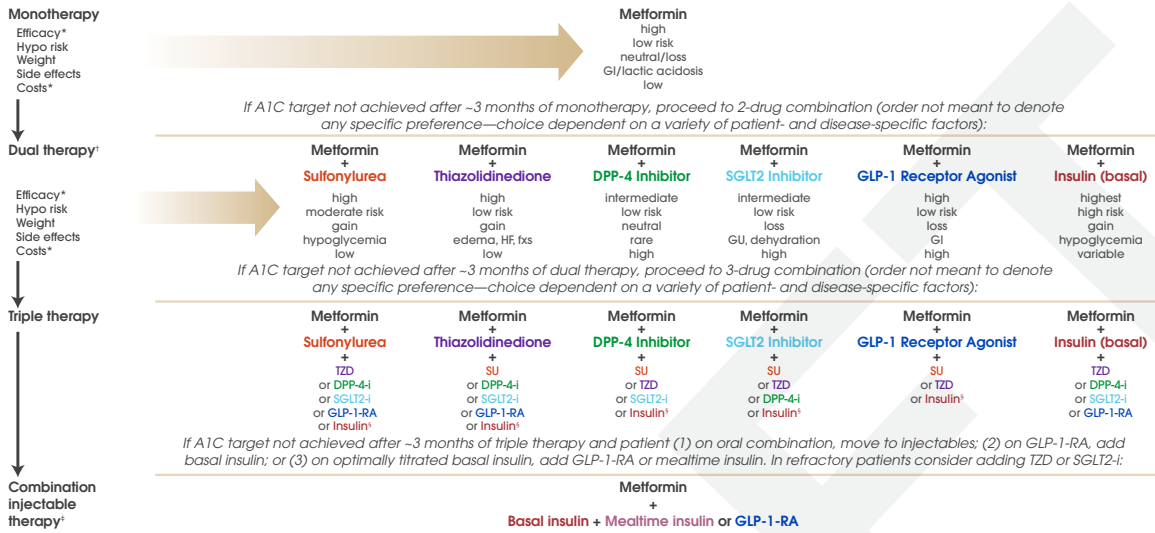


<sup>1</sup> Includes HMOs, PPOs, point-of-service plans, and exclusive provider organizations.

Data source: QuintilesIMS © 2017

## Adapted From the 2015 ADA/EASD Position Statement

Healthy eating, weight control, increased physical activity, and diabetes education



Antihyperglycemic therapy in Type 2 diabetes: general recommendations (see Reference). The order in the chart was determined by historical availability and the route of administration, with injectibles to the right; it is not meant to denote any specific preference. Potential sequences of antihyperglycemic therapy for patients with Type 2 diabetes are displayed, with the usual transition moving vertically from top to bottom (although horizontal movement within therapy stages is also possible, depending on the circumstances). DPP-4-i, DPP-4 inhibitor; fxs, fractures; GI, gastrointestinal; GLP-1-RA, GLP-1 receptor agonist; GU, genitourinary; HF, heart failure; Hypo, hypoglycemia; SGLT2-i, SGLT2 inhibitor; SU, sulfonylurea; TZD, thiazolidinedione. \*See Reference for description of efficacy categorization. † Consider starting at this stage when A1C is  $\geq 9\%$ . ‡ Consider starting at this stage when blood glucose is  $\geq 300$ –350 mg/dL (16.7–19.4 mmol/L) and/or A1C is  $\geq 10$ –12%, especially if symptomatic or catabolic features are present, in which case basal insulin + mealtime insulin is the preferred initial regimen. § Usually a basal insulin (NPH, glargine, detemir, degludec). Adapted with permission from Inzucchi et al. (see Reference).

Reference: Inzucchi, S. E., et al. (2015). Management of Hyperglycemia in Type 2 Diabetes, 2015: A Patient-Centered Approach: Update to a Position Statement of the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD). Diabetes Care. Retrieved from <http://care.diabetesjournals.org/content/38/1/140.full.pdf+html>

## Methodology

QuintilesIMS generated most of the Type 2 diabetes data for this data brief out of health care professional and institutional insurance claims, representing nearly 9.7 million unique patients nationally in 2016 with a diagnosis of Type 2 diabetes (ICD-9 codes 249.00–250.92; ICD-10 codes E08, E09, E11, E13). Data from physicians of all specialties and from all hospital types are included.

Inpatient and outpatient discharge data come from QuintilesIMS's Hospital Procedure/Diagnosis (HPD) Database. This database contains an extensive set of hospital inpatient and outpatient discharge records, including actual diagnoses and procedures for about 75% of discharges nationwide (including 100% of Medicare-reimbursed discharges). Data are based on all short-term, acute-care hospitals, and are effective as of 2015. Psychiatric, rehabilitation, armed forces, and long-term acute care hospitals are excluded.

QuintilesIMS also gathers data on prescription activity from the National Council for Prescription Drug Programs (NCPDP). These data represent some 2 billion prescription claims annually, or more than

86% of the prescription universe. These data represent the sampling of prescription activity from a variety of sources, including retail chains, mass merchandisers and pharmacy benefit managers. Cash, mail-order, Medicaid, and third-party transactions are tracked.

### DATA INTEGRITY

Patient-level, disease-specific data arriving into QuintilesIMS are put through a rigorous process to ensure that data elements match to valid references, such as product codes, ICD-9/10 (diagnosis) and CPT-4 (procedure) codes, and provider and facility data. Claims undergo a careful de-duplication process to ensure that when multiple, voided, or adjusted claims are assigned to a patient encounter, they are applied to the database, but only for a single, unique patient. Through its patient encryption methods, QuintilesIMS creates a unique, random numerical identifier for every patient, and then strips away all patient-specific health information that is protected under HIPAA. The identifier allows QuintilesIMS to track disease-specific diagnosis and procedure activity across many settings where care is provided.

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