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Nevada Type 2 Diabetes *and* Stroke Report 2010

Featuring Demographic, Charges,
Utilization, and Pharmacotherapy Data

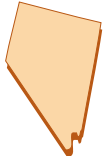
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CONTENTS

Type 2 Diabetes:

Patient Demographics	3-4
Pharmacotherapy	5
Charges	6-7
Use of Services	8

Stroke:

Patient Demographics	9-10
Pharmacotherapy	11
ADA/EASD Guidelines	12

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CONTACTS

Jerry Reeves, M.D. 702-873-4943
Health Innovations LLC
HealthInnovations@cox.net

Michael Ginder 775-329-8007
NHCC Executive Director
nhccreno@nvcbell.net

Sanofi-aventis Nevada Account Team

Stephanie L. Rester, MBA

Noshir David Pestonjee

Doug Maiello

Brent Robinson

Introduction

The Nevada Health Care Coalition (NHCC), Health Innovations and the Southern Nevada Medical Industry Coalition (SNMIC) are pleased to present the fourth edition of the **Nevada Type 2 Diabetes and Stroke Report**, featuring demographic, financial, utilization and pharmacotherapy measures for Type 2 diabetes and stroke patients in key local markets across Nevada. The report also provides state and national benchmarks that can help providers and employers identify opportunities to serve the needs of their patients. Phoenix, Ariz., data are included in this report, as the geographical proximity of that metropolitan statistical area (MSA) to Las Vegas allows for useful comparisons. All data are drawn from the sanofi-aventis **Managed Care Digest Series®**, which, as sponsor of this report, maintains an arm's-length relationship

with these organizations. The desire of sanofi-aventis is for the data in this report to be completely independent and objective.

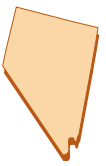
The **Nevada Type 2 Diabetes and Stroke Report 2010** helps NHCC, Health Innovations and SNMIC to fulfill their purpose of improving the total community's understanding and acceptance of cost-effective delivery and utilization of medical services through educational programs and seminars.

The data in this report (covering 2008 and 2009) were gathered by SDI, Plymouth Meeting, Pa., a leading provider of innovative health care data products and analytic services. The data provide employers with independent, third-party information they can use to benchmark their own data on patient demographics, professional (provider) and facility (hospital) charges, service utilization and pharmacotherapy.

Key Findings

- Type 2 diabetes patients across the state of Nevada were more likely to be of working age in 2009 (55.4%) than their national counterparts (50.3%).
- In 2009, the rate of multiple complications among Type 2 diabetes patients in Las Vegas (24.4%) was more than twice the national average (12.0%), and increased considerably from the corresponding 2008 level (15.7%).
- The use of any insulin product among Type 2 diabetes patients dropped between 2008 and 2009 in Las Vegas (to 28.5% from 33.8%) and across Nevada (to 28.9% from 33.8%) alike.
- Type 2 diabetes patients in Las Vegas who filled long-acting insulin pens were more persistent in virtually every month than their counterparts who used long-acting insulin vials.
- Average annual inpatient facility charges were highest, by market, for Type 2 diabetes patients in Las Vegas (\$96,570 vs. \$52,944 nationally).
- Type 2 diabetes patients across Nevada (74.0%) were more likely than their national counterparts (73.6%) to receive an A1c test in 2009, but less likely to have each of four other services performed.
- Nearly half (49.0%) of Las Vegas stroke patients were covered by commercial insurance in 2009, up from 37.7% the previous year.
- The percentage of Las Vegas stroke patients with multiple complications from the disease rose by 14.5 percentage points between 2008 (26.1%) and 2009 (40.6%).
- The share of stroke patients in Reno who filled an antiplatelet prescription in 2009 trailed the national average by more than nine percentage points (54.5% vs. 63.6% nationally).
- Nevada stroke patients were more persistent with their antiplatelet drug therapy than their national counterparts in all 12 months in 2009.

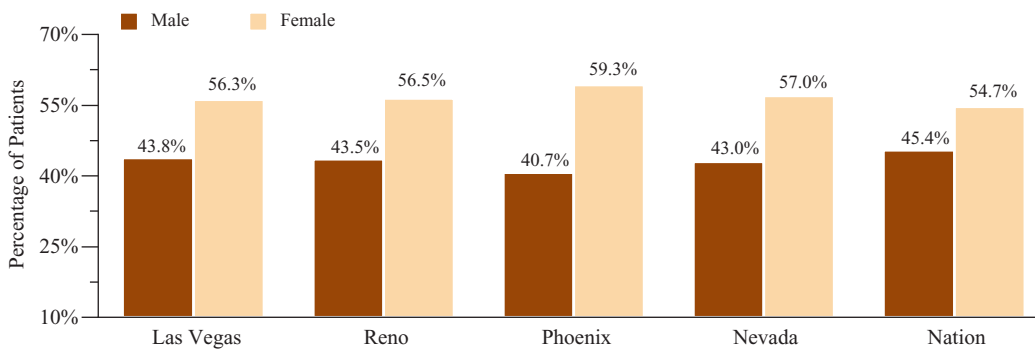
TYPE 2 DIABETES: PATIENT DEMOGRAPHICS



PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY AGE¹

MARKET	0-17		18-35		36-64		65-79		80+	
	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009
Las Vegas	0.3%	0.4%	3.6%	3.4%	53.5%	50.3%	33.8%	36.3	8.7%	9.7%
Reno	0.5	0.4	2.8	3.2	47.5	49.0	38.0	36.9	11.3	10.7
Phoenix	0.4	0.3	3.8	2.8	50.9	40.0	34.2	45.2	10.7	11.7
Nevada	0.4	0.4	3.6	3.4	54.9	52.0	32.4	34.7	8.8	9.5
NATION	0.4%	0.4%	3.2%	3.1%	48.4%	47.2%	34.7%	35.4%	13.4%	13.9%

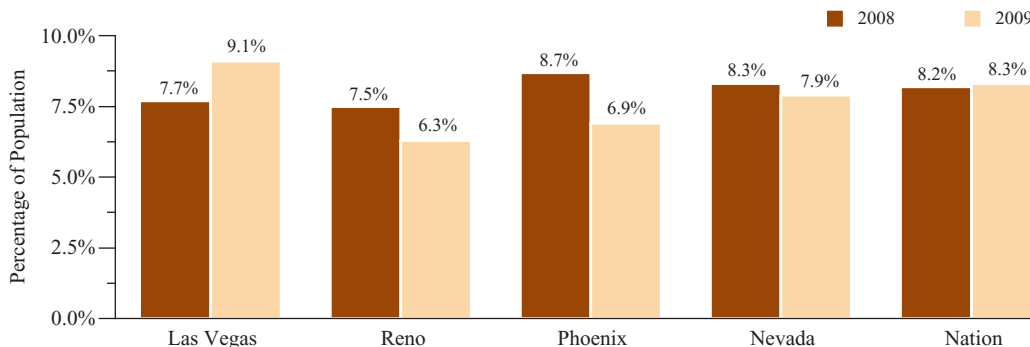
PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY GENDER¹



PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY LOCATION OF DIAGNOSIS¹

MARKET	Primary Care ²		Internal Medicine		Endocrinology		Cardiology	
	2008	2009	2008	2009	2008	2009	2008	2009
Las Vegas	25.3%	13.8%	13.1%	22.1%	0.3%	1.0%	2.2%	8.3%
Reno	15.8	9.4	2.1	12.3	1.1	1.3	18.6	17.9
Phoenix	17.9	8.8	5.6	6.1	1.6	0.8	2.2	2.8
Nevada	22.0	13.1	7.6	18.8	0.5	1.1	5.4	9.4
NATION	23.2%	16.2%	8.9%	14.8%	1.3%	2.6%	6.6%	9.9%

PREVALENCE OF TYPE 2 DIABETES PATIENTS³



Data sources: SDI © 2010; Centers for Disease Control Behavioral Risk Factor Surveillance System © 2010

NOTE: Throughout this report, the Reno MSA includes Sparks, Washoe and Storey counties.

NEVADA SHARES OF WORKING AGE TYPE 2s TOP NATIONAL MARK

The percentages of Type 2 diabetes patients who were of working age (between 18 and 64 years old) were higher than the national average (50.3%) in 2009 in all three Nevada markets shown. Statewide, 55.4% of Type 2 diabetes patients fell into this age group, whereas only 42.8% of such patients in Phoenix were of working age. Across all five local, state and national markets profiled, Type 2 diabetes patients were more likely to be female than male in 2009. This gender gap was more pronounced in the four state and local markets than it was nationwide.

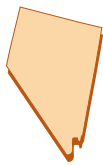
INTERNISTS MOST APT TO DIAGNOSE NEVADA TYPE 2 PATIENTS

Type 2 diabetes patients in Las Vegas and across Nevada were most likely, by specialist, to be diagnosed by an internist in 2009. In Las Vegas, for example, 22.1% of Type 2 diabetes patients were diagnosed by an internal medicine specialist, up from 13.1% the year before. In contrast, Type 2 diabetes patients in Reno were most apt to be diagnosed by a cardiologist in 2009, at a notable 17.9%.

¹ On pages 3-8, the percentages are representative of the universe of Type 2 diabetes patients on whom claims data have been collected in a given year.

² "Primary care" consists of both general and family practitioners.

³ Current year data are as of August 2009.



TYPE 2 DIABETES: PATIENT DEMOGRAPHICS

2+ COMPLICATION RATE IN NEVADA TOPS NATIONAL MARK

The likelihood of Type 2 diabetes patients having multiple complications was much greater in all three Nevada markets and Phoenix than across the U.S. For example, a notable 24.4% of Las Vegas Type 2 diabetes patients were diagnosed with two or more complications in 2009, compared with just 12.0% of such patients nationwide.

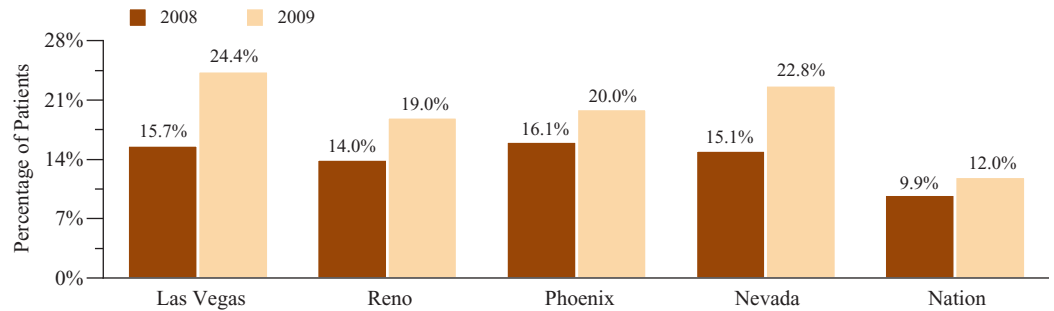
LARGE SHARES OF NV TYPE 2 PATIENTS HAVE 2+ COMORBIDITIES

Nearly half of Type 2 diabetes patients in Reno (49.2%), Las Vegas (49.0%) and across the state of Nevada (48.1%) were also diagnosed with two or more comorbidities in 2009. The multiple comorbidity rate in Phoenix (41.7%) trailed the corresponding rates of its Nevada neighbors, although it was still relatively high compared with the national benchmark of 32.3%.

* 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, coronary artery disease, hypoglycemia, nephropathy, neuropathy and retinopathy.

** 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 which are typically present in patients with Type 2 diabetes. Comorbidities of Type 2 diabetes may include, but are not limited to, congestive heart failure, coronary artery disease, dysmetabolic syndrome, hyperlipidemia, hypertension and obesity.

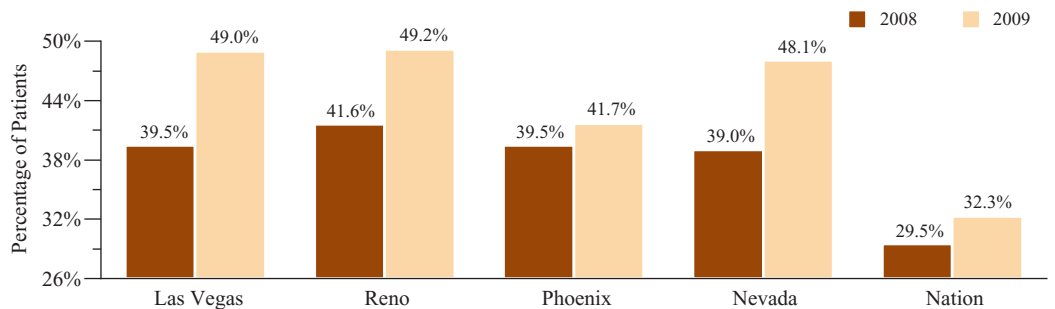
PERCENTAGE OF TYPE 2 DIABETES PATIENTS WITH TWO OR MORE COMPLICATIONS*



PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY NUMBER OF COMPLICATIONS*

MARKET	0		1		2		>2	
	2008	2009	2008	2009	2008	2009	2008	2009
Las Vegas	52.8%	44.0%	31.4%	31.6%	11.9%	16.1%	3.8%	8.3%
Reno	50.3	45.5	35.8	35.4	10.8	13.6	3.2	5.4
Phoenix	52.0	49.3	32.0	30.7	12.1	14.1	4.0	5.9
Nevada	53.4	45.4	31.5	31.8	11.5	15.2	3.6	7.6
NATION	61.6%	58.5%	28.6%	29.4%	7.8%	9.1%	2.1%	2.9%

PERCENTAGE OF TYPE 2 DIABETES PATIENTS WITH TWO OR MORE COMORBIDITIES**



PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY NUMBER OF COMORBIDITIES**

MARKET	0		1		2		>2	
	2008	2009	2008	2009	2008	2009	2008	2009
Las Vegas	36.8%	28.6%	23.7%	22.4%	31.4%	35.6%	8.1%	13.4%
Reno	39.0	32.0	19.4	18.9	32.8	35.6	8.8	13.6
Phoenix	36.2	38.0	24.3	20.3	31.0	30.2	8.5	11.5
Nevada	38.8	30.6	22.2	21.3	30.9	34.8	8.1	13.3
NATION	47.6%	46.0%	22.9%	21.8%	24.8%	26.2%	4.7%	6.1%

Data source: SDI © 2010

TYPE 2 DIABETES: PHARMACOTHERAPY



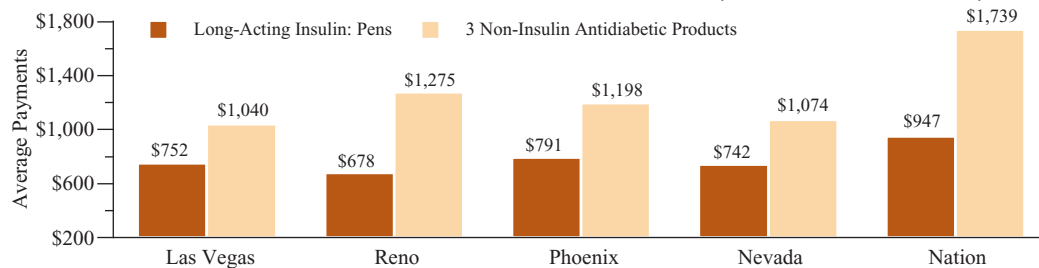
PERCENTAGE OF TYPE 2 DIABETES PATIENTS USING INSULIN THERAPIES, 2009

MARKET	Any Insulin Product		Short-Acting Insulin		Intermediate-Acting Insulin		Long-Acting Insulin		Mixed Insulin	
	2008	2009	Pens	Vials	Pens	Vials	Pens	Vials	Pens	Vials
Las Vegas	33.8%	28.5%	4.9%	8.4%	0.2%	2.2%	7.4%	11.5%	1.5%	2.7%
Reno	30.8	31.2	4.6	10.4	—	2.6	6.8	13.1	2.3	3.4
Phoenix	33.5	32.4	3.1	12.7	0.1	3.5	4.8	16.5	1.0	5.2
Nevada	33.8	28.9	5.1	8.5	0.2	2.4	7.8	11.3	1.7	2.7
NATION	36.4%	35.5%	6.2%	11.0%	0.4%	3.0%	9.0%	14.2%	2.5%	5.5%
#1 State	AK: 40.8%	ND: 42.2%	ND: 13.9%	SD: 17.1%	NH: 1.2%	SD: 6.5%	ND: 15.6%	DC: 19.7%	HI: 5.2%	AL: 9.4%

PERCENTAGE OF TYPE 2 DIABETES PATIENTS USING NON-INSULIN ANTIDIABETIC THERAPIES

MARKET	Any Non-Insulin Antidiabetic Product		Biguanides	Sulfonylureas	Insulin Sensitizing Agents	DPP-4 Inhibitors
	2008	2009				
Las Vegas	81.2%	87.1%	57.6%	37.1%	20.3%	8.6%
Reno	83.9	83.2	58.6	31.2	17.4	7.2
Phoenix	83.6	84.6	61.5	38.7	15.8	5.7
Nevada	85.9	86.4	57.4	35.2	20.3	8.8
NATION	84.5%	84.6%	55.9%	38.0%	17.0%	8.5%
#1 State	CA: 86.8%	CA: 86.5%	OR: 63.9%	IL: 42.3%	CA: 22.0%	NY: 12.7%

AVERAGE PAYMENTS PER TYPE 2 DIABETES PATIENT PER YEAR, BY TYPE OF THERAPY, 2009*



PERSISTENCY: VARIOUS THERAPIES, 2009

Las Vegas	Mo. 1	Mo. 2	Mo. 3	Mo. 4	Mo. 5	Mo. 6	Mo. 7	Mo. 8	Mo. 9	Mo. 10	Mo. 11	Mo. 12
Long-Acting Insulin: Pens	100.0%	71.8%	70.4%	61.9%	61.0%	55.2%	55.6%	53.4%	52.5%	52.9%	48.0%	50.2%
Long-Acting Insulin: Vials	100.0	70.6	66.0	59.5	54.8	55.2	54.1	53.1	49.5	48.0	47.0	44.8
DPP-4 Inhibitors	100.0	81.0	79.2	73.1	66.7	65.1	61.5	58.4	56.9	54.7	50.5	48.6
Non-Insulin Antidiabetic Combinations	100.0	81.9	83.4	77.5	75.1	69.7	68.8	68.0	65.9	62.6	60.5	59.6
Nevada												
Long-Acting Insulin: Pens	100.0%	68.3%	67.2%	60.8%	58.7%	55.0%	53.6%	53.2%	52.2%	52.9%	49.8%	51.2%
Long-Acting Insulin: Vials	100.0	68.2	67.6	61.7	56.2	55.9	54.5	52.2	49.4	48.6	48.3	46.4
DPP-4 Inhibitors	100.0	79.2	76.5	69.1	64.1	62.8	59.2	55.7	54.2	52.4	49.1	46.6
Non-Insulin Antidiabetic Combinations	100.0	82.4	83.1	75.5	73.4	68.0	66.8	65.2	63.9	60.9	59.9	58.6

Data source: SDI © 2010

* Figures reflect the per-patient yearly costs for Type 2 diabetes patients receiving a particular type of therapy.

Biguanides (e.g., metformin)

Improve insulin sensitivity; reduce the production of glucose by the liver, decrease intestinal absorption of glucose, and increase the peripheral uptake and use of circulating glucose.

Dipeptidyl Peptidase 4 (DPP-4) Inhibitors (e.g., sitagliptin)

Inhibit DPP-4 enzymes and slow inactivation of incretin hormones, helping to regulate glucose homeostasis through increased insulin release and decreased glucagon levels.

Insulin Sensitizing Agents (e.g., pioglitazone)

Improve response to insulin in liver, adipose tissue, and skeletal muscle, resulting in decreased production of glucose by the liver and increased peripheral uptake and use of circulating glucose.

Sulfonylureas (e.g., glimepiride)

Stimulate the release of insulin in the pancreas.

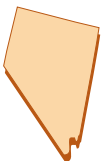
NEVADA TRAILS THE NATION IN USE OF ANY INSULIN PRODUCT

Type 2 diabetes patients in all three Nevada markets and Phoenix were less likely to fill a prescription for any insulin product in 2009 than their peers nationally. Statewide, 28.9% of Nevada Type 2 diabetes patients used any insulin product—a significantly lower rate than the U.S. average of 35.5%. Between 2008 and 2009, only Type 2 diabetes patients in Reno reported growth in the use of any insulin product (to 31.2% from 30.8% the prior year).

NV TYPE 2s ARE MORE PERSISTENT WITH LONG-ACTING PENS

At month 12, Type 2 diabetes patients in Las Vegas and across Nevada who were prescribed long-acting insulin pens were more persistent with their therapy than their peers who were prescribed either long-acting insulin vials or DPP-4 inhibitors in 2009.

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 a patient fills 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. All patients tracked are “New-to-Brand,” meaning they have not filled a prescription for their cohort product during the six months prior to initiation of therapy on that product.



TYPE 2 DIABETES: HOSPITAL CHARGES

FACILITY CHARGES ARE HIGH FOR LAS VEGAS TYPE 2s

Despite reporting a lower-than-average number of inpatient visits per patient per year in 2009 (1.77 vs. 1.87 nationally), Type 2 diabetes patients in Las Vegas reported average annual facility charges that were notably higher than such charges nationally, regardless of setting. For example, hospital inpatient charges were \$96,570 for Type 2 diabetes patients in Las Vegas, well above the national average (\$52,944).

LAS VEGAS REPORTS HIGH IP CHARGES FOR ALL PAYERS

In 2009, Las Vegas Type 2 diabetes patients reported the highest average annual inpatient charges, by market, regardless of payer. For example, such patients covered by Medicare in 2009 generated average inpatient facility charges of \$87,128, well above the average of \$49,511 for similar patients nationally.

* Data reflect the charges generated for Type 2 diabetes patients by the facilities that delivered care. The data also reflect the average amounts charged in Type 2 diabetes patient claims, not the amount the claims paid.

** Includes HMOs, PPOs, point-of-service plans and exclusive provider organizations.

NOTE: Non-governmental for-profit hospitals nationally have significantly higher average inpatient total charges, as compared with other hospital types (such as government-operated and private not-for-profit hospitals). Nationally, only 16.6% of hospitals are non-governmental for-profit; in Las Vegas, the ratio is 61.6%.

AVERAGE HOSPITAL CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS*

MARKET	Emergency Room		Hospital Outpatient		Hospital Inpatient		Avg. Number of Inpatient Visits per Patient	
	2008	2009	2008	2009	2008	2009	2008	2009
Las Vegas	\$2,224	\$2,192	\$8,433	\$8,408	\$98,961	\$96,570	1.92	1.77
Reno	913	965	4,127	4,671	60,329	55,499	1.51	1.32
Phoenix	3,095	2,943	6,871	8,336	87,987	87,809	1.96	1.80
Nevada	2,094	2,126	7,128	6,895	85,627	81,340	1.89	1.74
NATION	\$1,854	\$1,948	\$5,196	\$5,656	\$52,730	\$52,944	1.90	1.87

AVERAGE HOSPITAL INPATIENT CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS, BY PAYER TYPE*

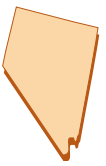
MARKET	Commercial Insurance**		Medicaid		Medicare	
	2008	2009	2008	2009	2008	2009
Las Vegas	\$74,540	\$72,146	\$94,427	\$84,074	\$93,610	\$87,128
Reno	43,830	55,907	—	42,882	56,136	49,633
Phoenix	64,041	69,224	55,503	66,467	75,855	74,172
Nevada	68,834	65,851	87,969	73,959	79,636	73,760
NATION	\$45,185	\$45,317	\$49,015	\$47,550	\$50,420	\$49,511

AVERAGE HOSPITAL OUTPATIENT CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS, BY PAYER TYPE*

MARKET	Commercial Insurance**		Medicaid		Medicare	
	2008	2009	2008	2009	2008	2009
Las Vegas	\$8,127	\$8,193	\$7,803	\$7,356	\$8,451	\$8,347
Reno	4,134	4,652	3,909	4,971	3,948	4,304
Phoenix	6,461	8,131	4,971	6,440	7,541	8,414
Nevada	6,927	6,702	7,380	6,864	6,877	6,700
NATION	\$4,440	\$4,863	\$4,711	\$5,381	\$5,804	\$6,138

Data source: SDI © 2010

TYPE 2 DIABETES: PROFESSIONAL CHARGES



AVERAGE PROFESSIONAL CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS*

MARKET	Ambulatory Surgery Center		Emergency Room		Hospital Inpatient		Hospital Outpatient		Office/Clinic	
	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009
Las Vegas	\$5,176	\$6,543	\$804	\$803	\$5,202	\$6,589	\$1,430	\$1,726	\$2,131	\$2,063
Reno	6,508	7,111	651	773	4,260	4,162	3,736	3,489	1,767	1,692
Phoenix	2,009	2,793	507	509	3,625	2,626	—	818	1,212	1,551
Nevada	7,182	6,586	800	818	5,220	6,562	2,126	2,176	2,067	1,984
NATION	\$3,077	\$4,213	\$722	\$646	\$6,570	\$6,500	\$2,042	\$1,931	\$3,399	\$3,798

NEVADA PROVIDER CHARGES ARE HIGH IN 4 OF 5 SETTINGS

Provider charges generated in the care of Type 2 diabetes patients across the state of Nevada exceeded the corresponding national averages in four of five settings (office/clinic excepted) in 2009. For example, average provider charges for ambulatory surgery center services, were \$6,586 in Nevada, substantially higher than the national mark of \$4,213.

PROFESSIONAL OP MEDICARE CHARGES ARE HIGH IN RENO

In 2009, Type 2 diabetes patients in the Reno market with Medicare coverage reported average outpatient provider charges (\$3,353) that more than doubled the corresponding charges generated by their national counterparts (\$1,606). This gap persisted despite a significant decline in such charges between 2008 (\$4,068) and 2009. By comparison, outpatient provider charges for Las Vegas Type 2 diabetes patients with Medicare coverage were notably lower in 2009, at \$1,906.

* Professional charges are those generated by the providers delivering care to Type 2 diabetes patients in various settings.

** Includes HMOs, PPOs, point-of-service plans and exclusive provider organizations.

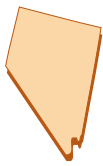
AVERAGE PROFESSIONAL INPATIENT CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS, BY PAYER TYPE*

MARKET	Commercial Insurance**		Medicaid		Medicare	
	2008	2009	2008	2009	2008	2009
Las Vegas	\$4,935	\$6,683	—	\$4,606	\$5,236	\$5,702
Reno	3,818	3,609	\$4,701	4,752	3,789	3,679
Phoenix	3,455	2,540	—	1,840	3,345	2,424
Nevada	4,785	6,594	3,380	4,755	5,414	5,755
NATION	\$5,211	\$5,064	\$5,224	\$4,793	\$6,326	\$6,074

AVERAGE PROFESSIONAL OUTPATIENT CHARGES PER YEAR FOR TYPE 2 DIABETES PATIENTS, BY PAYER TYPE*

MARKET	Commercial Insurance**		Medicaid		Medicare	
	2008	2009	2008	2009	2008	2009
Las Vegas	\$1,314	\$1,608	\$976	\$1,742	\$1,532	\$1,906
Reno	2,971	3,392	3,191	2,028	4,068	3,353
Phoenix	—	819	—	624	—	684
Nevada	1,520	1,847	1,689	1,908	3,549	2,801
NATION	\$1,934	\$1,670	\$1,421	\$1,402	\$1,720	\$1,606

Data source: SDI © 2010



TYPE 2 DIABETES: USE OF SERVICES

RENO A1c TEST SHARE FALLS FURTHER BEHIND NATION

The share of Type 2 diabetes patients in the Reno market who received at least one A1c test in 2009 was just 70.2%, down 2.0 percentage points from its 2008 level (72.2%). This share, lowest among the five markets profiled in 2009, trailed the national average (73.6%) by 3.4 percentage points.

UTILIZATION RATES ARE LOW FOR NEVADA TYPE 2 PATIENTS

Type 2 diabetes patients across the state of Nevada were less likely than their counterparts nationally to receive four of the five services shown in 2009 (A1c test excepted). For instance, only 64.4% of Nevada Type 2 diabetes patients received an eye exam in 2009, compared with a more robust 69.4% of patients nationally.

LAS VEGAS TYPE 2s ARE MOST LIKELY TO HAVE A1c LEVEL ≤7.0%

In 2009, 62.4% of Las Vegas Type 2 diabetes patients recorded an A1c score of 7.0% or lower on their most recent test, the largest such share among the five markets shown.

* 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.

** Includes HMOs, PPOs, point-of-service plans and exclusive provider organizations.

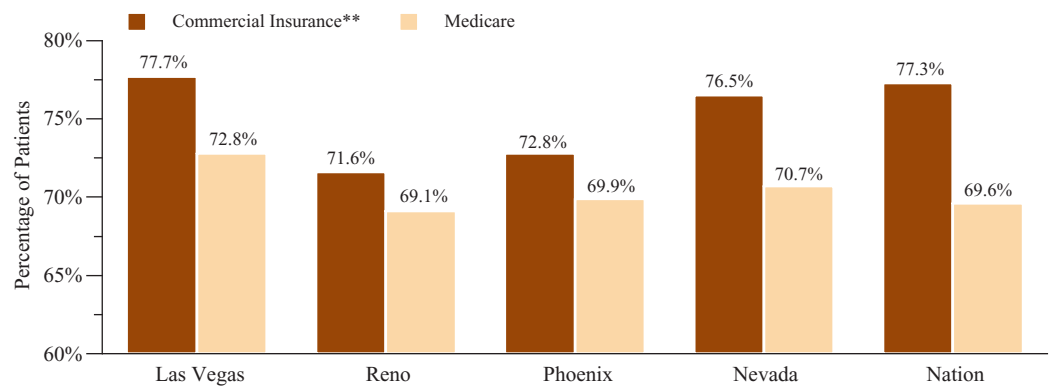
PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY SERVICE

MARKET	A1c Test*		Blood Glucose Test		Serum Cholesterol Test		Ophthalmologic Exam		Urine Glucose Test	
	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009
Las Vegas	75.5%	75.5%	87.2%	87.2%	85.1%	84.8%	63.7%	65.0%	85.3%	85.0%
Reno	72.2	70.2	83.2	83.7	81.6	81.6	68.7	66.4	82.9	82.1
Phoenix	72.7	72.0	88.0	88.3	85.5	86.4	71.1	71.5	87.1	86.5
Nevada	74.1	74.0	85.3	85.6	83.1	83.1	63.9	64.4	83.7	83.7
NATION	73.8%	73.6%	86.7%	86.6%	83.9%	83.9%	69.4%	69.4%	83.8%	83.8%

2009 State Leaders

#1	SD: 87.1%	CT: 93.3%	DE: 91.7%	MN: 79.1%	CT: 94.8%
#2	MN: 85.1	NH: 92.9	NH: 90.1	NH: 78.8	DE: 92.7
#3	NE: 84.9	DE: 92.3	MA: 89.5	CT: 77.5	NH: 92.6

PERCENTAGE OF TYPE 2 DIABETES PATIENTS RECEIVING A1c TESTS, BY PAYER TYPE, 2009*



PERCENTAGE OF TYPE 2 DIABETES PATIENTS, BY A1c LEVEL RANGE

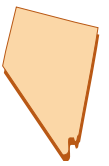
MARKET	≤7.0%		7.1–7.9%		8.0–9.0%		>9.0%	
	2008	2009	2008	2009	2008	2009	2008	2009
Las Vegas	64.1%	62.4%	15.1%	15.6%	9.0%	9.9%	11.8%	12.1%
Reno	65.5	59.6	15.6	18.0	8.8	11.1	10.2	11.3
Phoenix	64.2	62.2	15.2	17.1	9.1	9.6	11.6	11.1
Nevada	64.0	61.5	15.4	16.0	9.0	10.4	11.6	12.2
NATION	61.4%	58.1%	17.2%	18.7%	9.9%	10.8%	11.5%	12.5%

2009 State Leaders

#1	WY: 67.6%	DE: 17.7%	NV: 10.4%	DC: 12.9%
#2	ND: 67.1	NJ: 17.6	CO: 10.3	TX: 12.6
#3	AK: 66.7	FL, WV: 17.3	VA: 10.1	NM: 12.5

Data source: SDI © 2010

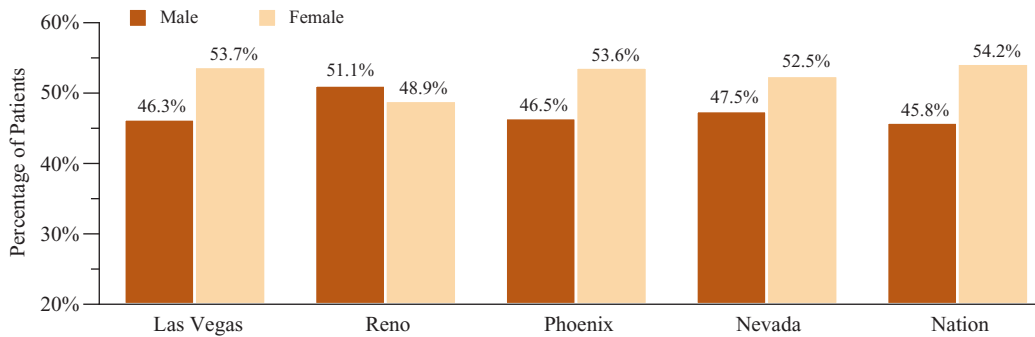
STROKE: PATIENT DEMOGRAPHICS



PERCENTAGE OF STROKE PATIENTS, BY AGE GROUP, 2009

MARKET	0-44	45-54	55-64	65-74	75+
Las Vegas	1.6%	4.8%	13.0%	33.2%	47.5%
Reno	2.0	7.0	14.0	31.0	46.0
Phoenix	1.6	6.9	14.0	30.4	47.2
Nevada	1.7	5.7	13.6	32.3	46.7
NATION	1.8%	6.8%	16.8%	28.9%	45.8%

PERCENTAGE OF STROKE PATIENTS, BY GENDER, 2009

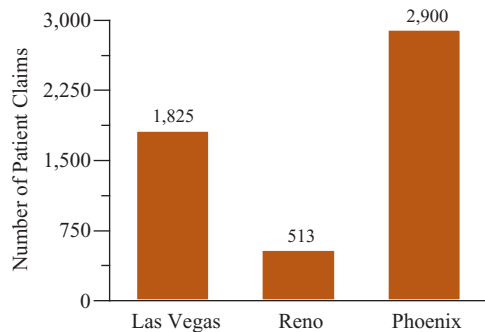


PERCENTAGE OF STROKE PATIENTS, BY PAYER TYPE

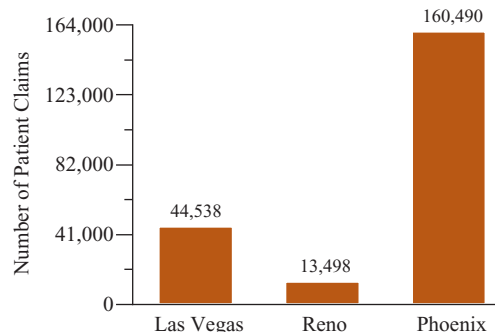
MARKET	Commercial Insurance*		Medicaid		Medicare		Other Payer**	
	2008	2009	2008	2009	2008	2009	2008	2009
Las Vegas	37.7%	49.0%	4.2%	4.9%	54.9%	41.0%	3.1%	5.1%
Reno	33.8	35.2	3.2	6.3	58.6	53.5	3.2	3.2
Phoenix	48.6	44.0	4.6	6.3	35.0	42.4	11.6	7.4
Nevada	38.0	48.5	3.8	5.1	54.1	41.3	4.1	4.9
NATION	38.0%	38.7%	5.3%	6.5%	52.4%	49.1%	4.3%	5.7%

NUMBER OF PATIENT CLAIMS

STROKE, 2009



TYPE 2 DIABETES, 2009



NV STROKE PATIENTS ARE LESS LIKELY TO BE UNDER AGE 65

In 2009, just 21.0% of stroke patients across the state of Nevada were age 64 or younger, well below the corresponding national average (25.4%). Stroke patients in both Las Vegas (19.4%) and Reno (23.0%) were also less likely than the national average to fall into this age group in 2009.

COMM. INSURANCE STROKE PAYER SHARE CLIMBS IN LAS VEGAS

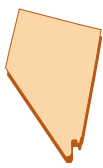
The proportion of stroke patients covered by commercial insurance in the Las Vegas market rose steeply in 2009, to nearly half (49.0%) from 37.7% the year before. This share, highest among the five featured markets, exceeded the national rate (38.7%) by more than 10 percentage points. Meanwhile, the percentage of stroke patients in Las Vegas with Medicare coverage dropped significantly, to 41.0% from 54.9% the year before.

* Includes HMOs, PPOs, point-of-service plans and exclusive provider organizations.

** "Other payer" includes government, Department of Veterans Affairs and others.

NOTE: All percentages are representative of the universe of stroke patients on whom claims data have been collected in a given year. Percentages may not sum to 100% due to rounding.

Data source: SDI © 2010



STROKE: PATIENT DEMOGRAPHICS

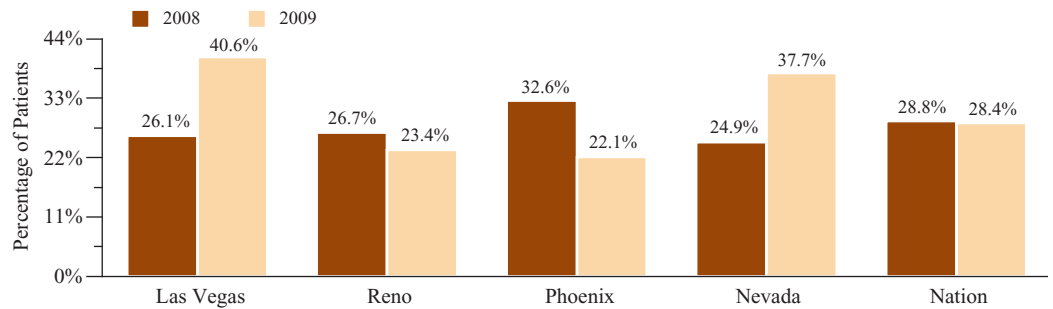
2+ COMPLICATION SHARE SPIKES FOR L.V. STROKE PATIENTS

Both in Las Vegas and across the state of Nevada, the percentages of stroke patients who were diagnosed with two or more complications from their disease climbed between 2008 and 2009. In Las Vegas, this share grew by a notable 14.5 percentage points, to 40.6% from 26.1% the previous year. Nationally, the multiple-complication rate among stroke patients slipped incrementally, to 28.4% in 2009 from 28.8% in 2008.

LAS VEGAS COMORBIDITY-FREE SHARE SHRINKS

The proportion of Las Vegas stroke patients who were diagnosed with zero comorbid conditions slid to just 13.6% in 2009 from more than one-fifth (21.2%) in 2008. Nationally, the opposite trend was observed: 23.7% of stroke patients were comorbidity-free in 2009, up slightly from 21.8% in 2008.

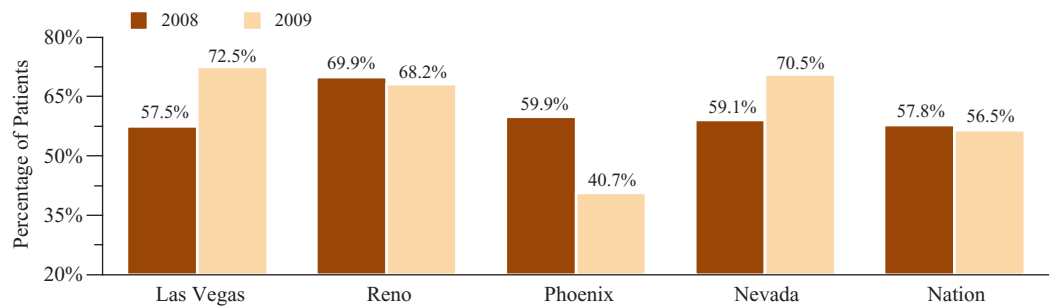
PERCENTAGE OF STROKE PATIENTS WITH TWO OR MORE COMPLICATIONS*



PERCENTAGE OF STROKE PATIENTS, BY NUMBER OF COMPLICATIONS*

MARKET	0		1		2		>2	
	2008	2009	2008	2009	2008	2009	2008	2009
Las Vegas	32.7%	21.7%	41.2%	37.7%	22.3%	29.2%	3.8%	11.4%
Reno	27.1	30.6	46.3	44.3	24.9	23.4	1.8	—
Phoenix	28.0	46.6	39.4	31.4	26.5	17.5	6.1	4.6
Nevada	32.0	23.7	43.1	38.7	21.9	27.9	3.0	9.8
NATION	31.0%	32.7%	40.2%	39.0%	23.7%	23.3%	5.1%	5.1%

PERCENTAGE OF STROKE PATIENTS WITH TWO OR MORE COMORBIDITIES**



PERCENTAGE OF STROKE PATIENTS, BY NUMBER OF COMORBIDITIES**

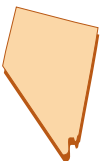
MARKET	0		1		2		>2	
	2008	2009	2008	2009	2008	2009	2008	2009
Las Vegas	21.2%	13.6%	21.4%	13.9%	21.1%	19.1%	36.4%	53.4%
Reno	16.1	18.5	14.1	13.3	26.1	23.2	43.8	45.0
Phoenix	18.8	40.8	21.3	18.5	20.5	14.8	39.4	25.9
Nevada	22.1	15.6	18.8	14.0	23.4	19.4	35.7	51.1
NATION	21.8%	23.7%	20.5%	19.8%	19.7%	18.6%	38.1%	37.9%

* A complication is defined as a patient condition caused by the stroke. These conditions are a direct result of having a stroke. Complications of stroke include, but are not limited to, heart attack, hypertensive retinopathy, kidney failure and ventricular hypertrophy.

** A comorbidity is a condition a stroke patient may also have, which is not directly related to the stroke. Comorbidities were narrowed down to a subset of conditions typically present in patients with stroke. Comorbidities of stroke may include, but are not limited to, congestive heart failure, hypertension, nephrolithiasis and obesity.

Data source: SDI © 2010

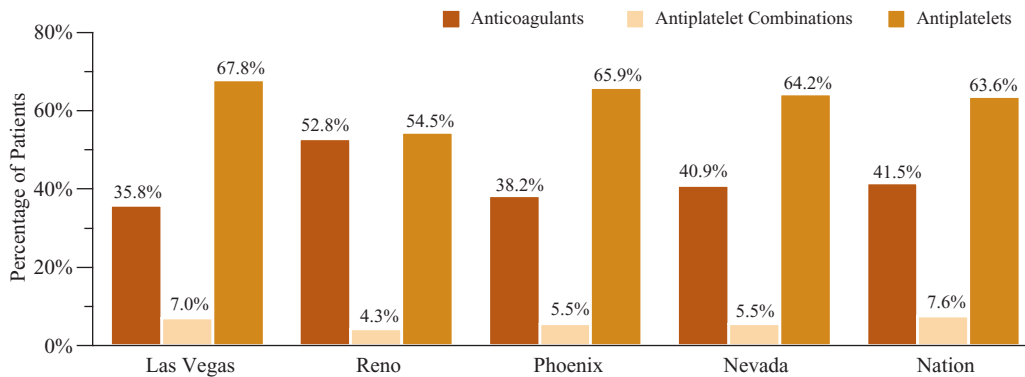
STROKE: PHARMACOTHERAPY



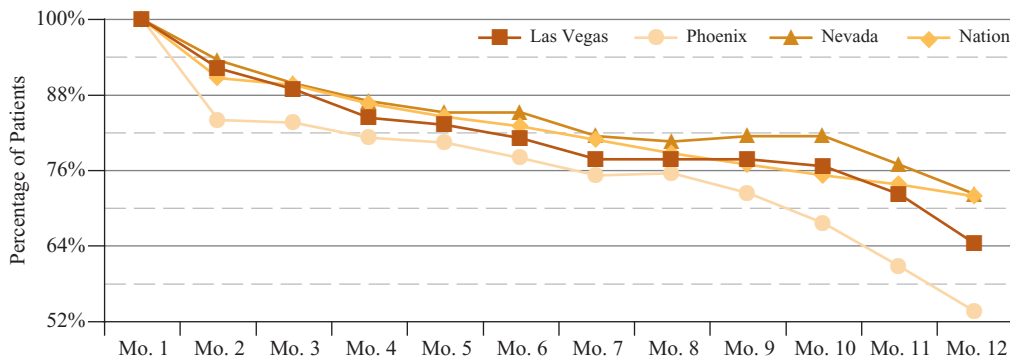
STROKE PATIENTS USING VARIOUS THERAPIES, 2009

MARKET	Anticoagulants		Antiplatelet Combinations		Antiplatelets	
	Percentage of Patients	Avg. Payments per Patient*	Percentage of Patients	Avg. Payments per Patient*	Percentage of Patients	Avg. Payments per Patient*
Las Vegas	35.8%	\$77	7.0%	\$659	67.8%	\$809
Reno	52.8	122	4.3	710	54.5	943
Phoenix	38.2	93	5.5	918	65.9	839
Nevada	40.9	98	5.5	723	64.2	830
NATION	41.5%	\$103	7.6%	\$895	63.6%	\$861

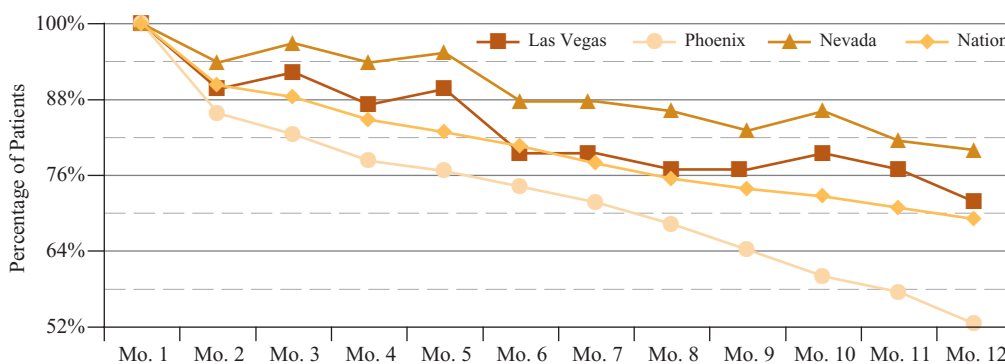
PERCENTAGE OF STROKE PATIENTS USING VARIOUS THERAPIES, 2009



PERSISTENCY: ANTIPLATELETS, 2009



PERSISTENCY: ANTICOAGULANTS, 2009



Data source: SDI © 2010

ANTIPLATELET RX USE IN RENO TRAILS NATIONAL RATE

Among Reno patients diagnosed with stroke in 2008 or 2009, only 54.5% filled a prescription for antiplatelets in 2009, the lowest share by a wide margin among the five markets profiled. This share lagged more than nine percentage points behind the corresponding national average (63.6%).

ANTIPLATELET RX PERSISTENCY IS HIGH FOR NEVADA PATIENTS

Nevada stroke patients who filled an antiplatelet prescription in 2009 were more likely than their counterparts nationally to continue or restart their therapy in all 12 months.

* Figures reflect the per-patient yearly costs for stroke patients receiving a particular type of therapy.

NOTE: Therapy percentages are representative of those patients with a diagnosis of stroke in the most recent two years, who filled prescriptions within each drug category in the reporting year.

Anticoagulants: Drugs that suppress, delay, or prevent blood clots. Anticoagulants are used to treat embolisms.

Antiplatelets: Drugs that inhibit platelets from aggregating to form a plug.

NOTE: "Persistence" 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 a patient fills 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. Restart means that the patient did not fill in one or more of the preceding months. Continuing and restart patients are reported together.

Persistence data were unavailable for the Reno MSA.



Nevada Health Care Coalition
 300 E. Second Street, Suite 1520
 Reno, NV 89501

Leading the way to quality health care in our community...

www.nhccreno.org

The Nevada Health Care Coalition is a partnership between public and private sectors formed for the primary purpose of improving the total community's understanding and acceptance of cost-effective delivery and utilization of medical services through educational programs and seminars. The Coalition also focuses on the creation of purchasing initiatives designed to reduce the cost of health care, for the benefit of employers, employees and the community as a whole.

Our member companies include:

- Atlantis Casino Resort Spa
- Baldini's Sport Casino
- Boomtown Hotel Casino
- Carson Nugget
- Carson-Tahoe Regional Healthcare
- Carson Valley Inn
- City of Reno
- City of Sparks
- Club Cal Neva
- Diocese of Reno
- International Gaming Technology (IGT)
- Jacob's Entertainment (Gold Dust West)
- John Ascuaga's Nugget
- NV Energy (Formerly Sierra Pacific Power Co.)
- Peppermill Resort Spa Casino
- Reno Tahoe Airport Authority
- Scolari's Food and Drug Company
- Washoe County
- Washoe County School District

2009 ADA/EASD RECOMMENDATIONS

Consensus Statement: Strategies for the Management of Type 2 Diabetes Mellitus

STEP 1	At diagnosis: Lifestyle + Metformin	Reinforce lifestyle interventions at every visit and check A1c every 3 months until A1c is <7% and then at least every 6 months.	
STEP 2	Tier 1: Well-validated core therapies	Lifestyle + Metformin + Basal Insulin Lifestyle + Metformin + Sulfonylurea	
	Tier 2: Less well-validated therapies	Lifestyle + Metformin + Pioglitazone Lifestyle + Metformin + GLP-1 agonist	Lifestyle + Metformin + Pioglitazone + Sulfonylurea Lifestyle + Metformin + Basal Insulin
STEP 3	Lifestyle + Metformin + Intensive Insulin		

The 2009 American Diabetes Association (ADA)/European Association for the Study of Diabetes (EASD) consensus statement recommends timely use of insulin, as one approach, for patients who are not at their A1c goal. The ADA and EASD also recommend, as one approach, earlier addition of insulin in patients who do not meet glycemic goals after lifestyle intervention and metformin for 2 to 3 months.¹ To access the ADA's website for the latest ADA/EASD consensus statement and information on diabetes management, visit www.diabetes.org.

¹ Nathan DM, Buse JB, Ferrannini E, et al. Medical management of hyperglycemia in type 2 diabetes: a consensus algorithm for the initiation and adjustment of therapy. *Diabetes Care*. 2009;32(1):193–203.

Important Safety Information for Insulin: The most common side effect of insulin is hypoglycemia, which can be serious. Other possible side effects include injection site reactions and allergic reactions, including itching and rash. Monitor blood glucose in all patients treated with insulin.

Methodology

SDI generated data for this **Managed Care Digest Series®** database using health care professional and institutional insurance claims, representing nearly 8.3 million unique patients nationally in 2009 with a range of Type 2 diabetes diagnoses (250.00–250.92), and more than 450,000 unique patients nationally with a stroke diagnosis. Data from physicians of all specialties and from all hospital types are included.

SDI also gathers data on prescription activity from the National Council for Prescription Drug Programs (NCPDP). These data account for some 8 billion prescription claims annually, or more than 50% of the prescription universe. These prescription data represent the sampling of prescription activity from a variety of sources, including retail chains, mass merchandisers and pharmacy benefit managers, and come from a near census of more than 59,000 pharmacies in the U.S. Cash, mail-order, Medicaid and third-party transactions are tracked.

DATA INTEGRITY

Patient-level, disease-specific data arriving into SDI are put through a rigorous process to ensure that data elements match to valid references, such as product codes, ICD-9 (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, SDI creates a unique, random numerical identifier for every patient, and then strips away all patient-specific health information that is protected under the Health Insurance Portability and Accountability Act (HIPAA). The identifier allows SDI to track disease-specific diagnosis and procedure activity across the various settings where patient care is provided (hospital inpatient, hospital outpatient, emergency rooms, clinics, doctors' offices and pharmacies), while protecting the privacy of each patient.

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