Getting Less Care:

The Uninsured with Chronic Health Conditions

A REPORT BY

Families USA

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Getting Less Care: The Uninsured with Chronic Health Conditions

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The California HealthCare Foundation
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INTRODUCTION

There is a persistent misconception that people who do not have health insurance somehow get the care they need, especially when they have serious health problems. In fact, the uninsured have numerous problems getting care. They are less likely to see doctors regularly, and they are more likely to postpone needed care or to go without it altogether.

This report is the first to compare the health care received by insured and uninsured non-elderly people who have five common health conditions: heart disease, hypertension, high blood cholesterol, arthritis, and chronic back pain. The study uses national data from the Medical Expenditure Panel Survey (a national survey conducted by the Agency for Healthcare Research and Quality of the U.S. Department of Health and Human Services) and the National Health and Nutrition Examination Survey (a national survey conducted by the National Center for Health Statistics, Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services).

Each of the health conditions examined in this study has a significant impact on the quality of life and/or the life expectancy of millions of Americans. Heart disease is the leading cause of death in the United States. Elevated blood pressure and blood cholesterol increase the risk of heart attack and of stroke, which is the third leading cause of death in the United States. Arthritis is the leading cause of disability in this country, and chronic back conditions are the most frequent source of activity limitation in people younger than 45. As this study demonstrates, the likelihood of receiving medicine, doctors' care, or other treatment for these conditions differs greatly, depending on insurance status.

KEY FINDINGS

Uninsured people with chronic health conditions visit health care providers less often than insured people with these conditions.

- Uninsured people with chronic health conditions receive less care than their insured counterparts. Uninsured people with heart disease have 28 percent fewer ambulatory care visits (in physicians' offices, clinics, or hospital outpatient settings) than insured people with heart disease. Among people with hypertension, the uninsured make 26 percent fewer visits. Among people with arthritis, the uninsured make 27 percent fewer visits. Among people with chronic back pain, the uninsured make 19 percent fewer visits (see Table 1).
- The uninsured with high blood pressure are more than twice as likely to go without the check-ups needed to monitor their condition. More than one-fifth (22.1 percent) of uninsured non-elderly adults diagnosed with high blood pressure go a year or more without having their blood pressure checked, compared to one-tenth (9.9 percent) of their insured counterparts (see Table 2 on page 5).

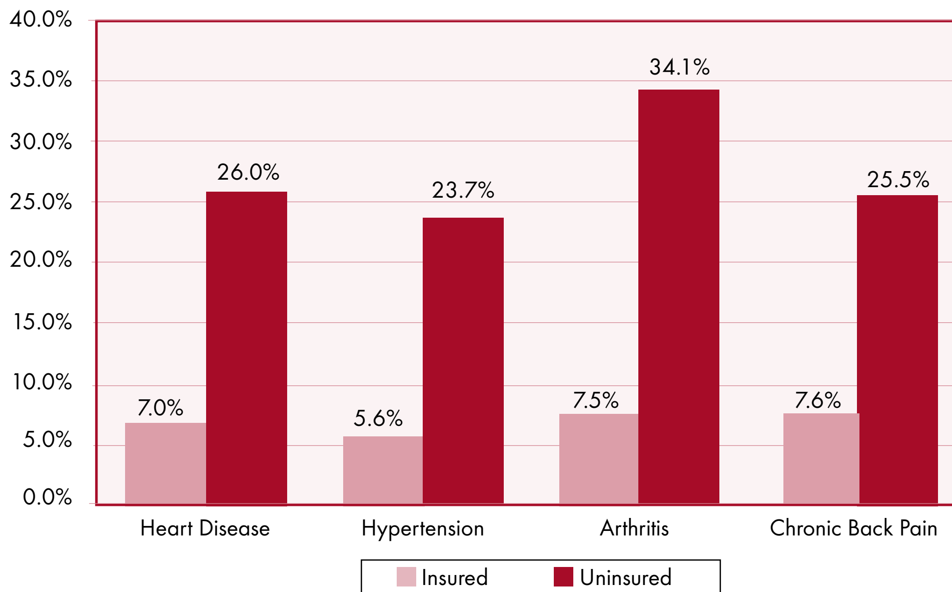
Table 1
Ambulatory Care Visits of the Non-Elderly, by Insurance Status
(Mean Number of Annual Visits)

	Insured	Uninsured	Difference*	Percent Difference
All Respondents	**4.9**	**2.9**	**2.1**	**42%**
Respondents with Heart Disease	9.0	6.5	2.6	28%
Respondents with Hypertension	10.0	7.4	2.6	26%
Respondents with Arthritis	10.7	7.9	2.8	27%
Respondents with Chronic Back Pain	10.2	8.3	2.0	19%

Source: The Lewin Group analysis of 1996 Medical Expenditure Panel Survey (MEPS) for respondents ages 0-64, adjusted for age, sex, race, and income. Ambulatory care includes in-person visits to physicians and non-physician providers in both office and hospital outpatient settings.

* Difference does not compute due to rounding.

Figure 1
Member of Family Went Without Care Due to Cost



Source: The Lewin Group analysis of 1996 Medical Expenditure Panel Survey (MEPS) for respondents ages 0-64.

Among people with chronic health conditions, the uninsured are far less likely than the insured to have an ongoing relationship with a health care provider.

- Among those with hypertension and arthritis, the uninsured are more than three and one-half times as likely as the insured to lack a usual source of care. Among people with heart disease, the uninsured are almost two and one-half times as likely as the insured to lack a usual source of care. Among people with chronic back pain, the uninsured are almost three times as likely not to have a usual source of care (see Table 3 on pages 8-9).

Uninsured people with chronic health conditions are much more likely than their insured counterparts to report that they or a family member did not receive a doctor's care or prescription medicines due to the need to pay for food, clothing, or housing (see Table 3 and Figure 1).

- Among people with arthritis, the uninsured are more than four and one-half times as likely as the insured to report that they or a family member did not receive care due to cost (34.1 percent compared to 7.5 percent).

- Among people with hypertension, the difference is more than four to one (23.7 percent of the uninsured compared to 5.6 percent of the insured).
- Among people with heart disease, the difference is more than three and one-half to one (26.0 percent of the uninsured compared to 7.0 percent of the insured).
- Among people with chronic back pain, the difference is more than three to one (25.5 percent of the uninsured compared to 7.6 percent of the insured).

The uninsured with chronic health conditions are much more likely to go without medicines that are essential to maintaining their health and functioning than are the insured with such conditions.

- Among adults with elevated blood pressure levels, the uninsured are less likely to be taking medication to control their blood pressure than are their insured counterparts. More than two out of five (41.9 percent of) uninsured patients previously diagnosed with elevated blood pressure and told to take medication for it say they are not now taking such medication. Among insured people with high blood pressure, the percentage is 24.8 (see Table 2).
- Among adults with elevated blood cholesterol levels, the uninsured are considerably less likely than the insured to be taking medication to control their cholesterol. More than two out of five uninsured people (43.3 percent) who have elevated cholesterol levels say that they have at some time been told to take medication for their high cholesterol, but they are not now taking such medication. Among insured people with elevated cholesterol levels, the percentage is 29.1 (see Table 4 on page 10).

Table 2

Blood Pressure Screening and Treatment, by Insurance Status

Time since last blood pressure check, by insurance status (all non-elderly adults)		
	Insured	**Uninsured**
< 1 year	81.3%	62.0%
1 year or more	18.7%	38.0%
1 year - < 5years	15.8%	28.4%
> 5 years or never	2.9%	9.6%
Time since last blood pressure check, by insurance status (non-elderly adults diagnosed with high blood pressure)		
	Insured	**Uninsured**
< 1 year	90.1%	77.9%
1 year or more	9.9%	22.1%
1 year - < 5 years	9.1%	18.5%
> 5 years or never	0.8%	3.6%
Use of medication among those with currently elevated blood pressure who have ever been advised to take blood pressure medicine		
	Insured	**Uninsured**
Current blood pressure level: Mild elevation		
Not taking blood pressure medicine	22.5%	35.2%
Taking blood pressure medicine	77.5%	64.8%
Current blood pressure level: Moderate elevation		
Not taking blood pressure medicine	20.9%	46.2%
Taking blood pressure medicine	79.1%	53.8%
Current blood pressure level: Severe elevation		
Not taking blood pressure medicine	26.4%	34.3%
Taking blood pressure medicine	73.6%	65.7%
Total for all elevations		
Not taking blood pressure medicine	23.7%	36.7%
Taking blood pressure medicine	76.3%	63.3%
Use of medication among those ever diagnosed with high blood pressure and told to take blood pressure medicine		
	Insured	**Uninsured**
Not now taking blood pressure medicine	24.8%	41.9%
Now taking blood pressure medicine	75.2%	58.1%

Source: The Lewin Group analysis of NHANES Round III for non-elderly adults.

- Among people with arthritis and chronic back pain, the uninsured are less likely to be taking any prescription medicines than are their insured counterparts. Among those with arthritis, 26.8 percent of the uninsured receive no prescription medicines of any kind, compared to 4.9 percent of the insured—a more than five-fold difference. Among those with chronic back pain, 29.4 percent of the uninsured receive no prescription medicines, compared to 17.0 percent of the insured (see Table 5 on pages 12-13).

The uninsured are considerably less likely to receive screenings for elevated blood pressure or blood cholesterol.

- The uninsured generally were more than twice as likely as the insured to have had no blood pressure check in the past year (38.0 percent compared to 18.7 percent) (see Table 2).
- Among people diagnosed with high blood pressure, the uninsured were more than twice as likely to have had no blood pressure check in the past year (22.1 percent compared to 9.9 percent) (see Table 2).
- The uninsured were much more likely than the insured to have never had their blood cholesterol level checked (76.8 percent compared to 47.0 percent) (see Table 4).

Uninsured people with chronic health conditions are approximately twice as likely not to receive lab tests (see Table 5).

- Among people with heart disease, 74.4 percent of the uninsured, compared to 38.4 percent of the insured, received no lab test in the past year.
- Among people with hypertension, 68.5 percent for the uninsured, compared to 33.5 percent of the insured, received no lab test in the past year.
- Among people with arthritis, 66.6 percent of the uninsured, compared to 33.6 percent of the insured, received no lab test in the past year.

METHODOLOGY

Families USA and The Lewin Group analyzed data from the 1996 Medical Expenditure Panel Survey (MEPS) and the most recent National Health and Nutrition Examination Survey (NHANES). We obtained data on care received by the insured and uninsured non-elderly populations overall and by insured and uninsured non-elderly persons with specified health conditions. From MEPS, we also collected data on how access to, and utilization of, care differ between insured and uninsured populations with low incomes (below 200 percent of the federal poverty line) and between the low-income uninsured population and the overall uninsured population.

The 1996 Medical Expenditure Panel Survey (MEPS) is a national survey of 10,000 families and 24,000 individuals conducted by the Agency for Healthcare Research and Quality of the U.S. Department of Health and Human Services. This survey combines information gathered through household interviews with data gathered from medical providers, employers, and insurance providers. MEPS provides data on access to care, health care use and expenses, health insurance coverage, and the health status of the U.S. population.

For this study, we analyzed MEPS data on the experiences of insured and uninsured persons under the age of 65. We analyzed household interview data about the accessibility of care for insured and uninsured persons overall and by insured and uninsured persons with heart disease, hypertension, arthritis, and chronic back pain.

We analyzed data gathered from both household interviews and health care providers regarding the health services that insured and uninsured persons used over the course of a year. The Lewin Group adjusted this utilization data (but not the data on access to care) to control for differences in age, gender, race, and income among the insured and uninsured populations by using a regression analysis.

Table 3
Access to Health Care, by Insurance Status

	All Respondents		Heart Disease	
	Insured	Uninsured	Insured	Uninsured
Estimated population*	**186,000,000**	**43,000,000**	**18,000,000**	**3,000,000**
Do you have a usual source of health care?				
Yes	85.5%	62.3%	92.1%	80.7%
No	14.4%	37.7%	7.9%	19.3%
If "No," what is the main reason you do/ do not have a usual source of care?				
High cost of medical care	3.6%	17.6%	7.3%	25.8%
Other reason	96.4%	82.4%	92.7%	74.2%
During the last year, did any family member not receive a doctor's care or prescription medications because the family needed money to buy food, clothing, or pay for housing?				
Yes	5.2%	16.4%	7.0%	26.0%
No	94.8%	83.7%	93.0%	74.0%
During the last year, did any family member have difficulty obtaining care?				
Yes	10.2%	23.2%	13.2%	34.7%
No	89.9%	76.9%	86.8%	65.3%
If "Yes," what is the main problem that caused family members' difficulty, delay, or not receiving needed health care?				
Could not afford care	46.6%	83.9%	45.6%	89.0%
Other**	53.4%	16.1%	54.4%	11.0%

Source: The Lewin Group analysis of 1996 Medical Expenditure Panel Survey (MEPS) for respondents ages 0-64, unadjusted for age, sex, race and income.

* Rounded to nearest million.

** Other reasons include: problems with insurance, could not obtain a referral, medical care too far away, no transportation, could not get time off work, did not have time, was refused services.

Table 3 (cont'd)

Access to Health Care, by Insurance Status

	Hypertension		Arthritis		Chronic Back Pain	
	Insured	Uninsured	Insured	Uninsured	Insured	Uninsured
Estimated population*	**12,000,000**	**2,000,000**	**7,000,000**	**1,000,000**	**10,000,000**	**2,000,000**
Do you have a usual source of health care?						
Yes	96.3%	86.4%	93.0%	73.8%	86.9%	60.9%
No	3.7%	13.6%	7.1%	26.3%	13.1%	39.1%
If "No," what is the main reason you do/ do not have a usual source of care?						
High Cost of Medical Care	4.5%	35.1%	0.8%	42.1%	11.1%	35.6%
Other Reason	95.5%	64.9%	99.2%	57.9%	88.9%	64.4%
During the last year, did any family member not receive a doctor's care or prescription medications because the family needed money to buy food, clothing, or pay for housing?						
Yes	5.6%	23.7%	7.5%	34.1%	7.6%	25.5%
No	94.4%	76.3%	92.5%	65.9%	92.4%	74.5%
During the last year, did any family member have difficulty obtaining care?						
Yes	11.1%	29.5%	16.3%	38.3%	13.4%	36.7%
No	89.0%	70.5%	83.7%	61.7%	86.6%	63.3%
If "Yes," what is the main problem that caused family members' difficulty, delay, or not receiving needed health care?						
Could Not Afford Care	49.3%	79.5%	47.3%	87.7%	38.3%	81.8%
Other**	50.7%	20.5%	52.7%	12.3%	61.7%	18.2%

The National Health and Nutrition Examination Survey (NHANES) is a national survey of 40,000 people conducted by the National Center for Health Statistics, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. NHANES combines information gathered through a household interview with the results of health tests performed in a Mobile Examination Center. Round III of NHANES, the most recent for which data are available, was conducted from 1988 to 1994.

We examined NHANES data with respect to non-elderly adults with high blood pressure and high cholesterol. In particular, we examined the extent to which persons diagnosed with high blood pressure or high cholesterol received treatment, and whether lab tests showed that their conditions were under control at the time of the NHANES interview and examination.

Table 4
Cholesterol Screening and Treatment, by Insurance Status

Have you ever had your blood cholesterol checked, by insurance status (all non-elderly adults)		
	Insured	**Uninsured**
Yes	53.0%	23.2%
No	47.0%	76.8%
Use of medication among adults with elevated cholesterol who have ever been advised to take cholesterol medicine		
	Insured	**Uninsured**
Current cholesterol level : Mild, moderate, or severely elevated		
Not taking cholesterol medicine	29.1%	43.3%
Taking cholesterol medicine	70.9%	56.7%
Current cholesterol level: Severely elevated		
Not taking cholesterol medicine	35.1%	50.0%
Taking cholesterol medicine	65.0%	50.0%

Source: The Lewin Group analysis of NHANES Round III for non-elderly adults.

Limitations of This Study

A major limitation of this study is that, in both the MEPS and the NHANES data, people are counted as uninsured at the point in time when they were interviewed. We were not able to obtain data on the length of time respondents remained uninsured. This study therefore probably understates the effects of health insurance on access to care and use of care.

The MEPS interview asks households a number of questions about their access to care over the last year. These data are supplemented by information from provider records about households' use of care over the last year. We present data demonstrating that persons who were uninsured at the time of the MEPS interview had difficulties obtaining care during the past year and did not receive as much care as the insured population. We do not know how long during the past year the respondents lacked insurance.

Similarly, the NHANES data set includes lab values taken at one point in time and information from an interview held on the same day. Interview questions ask about health history. The NHANES data thus provide a glimpse of whether measures taken to control blood levels have brought those levels into normal ranges on a particular day. We are not able to provide data on the severity of respondents' conditions before treatment or the long-term health and the long-term insurance status of respondents.

Other research shows that about 36 percent of the uninsured remain without insurance for a year or more.[1] Persons who remain uninsured for more than one year are even less likely to see doctors and receive preventive care than are the short-term uninsured.[2]

Table 5
Utilization of Health Care over Past Year, by Insurance Status

	All Respondents		Heart Disease	
	Insured	Uninsured	Insured	Uninsured
Estimated population*	**186,000,000**	**43,000,000**	**18,000,000**	**3,000,000**
Ambulatory Care Visits (Office-based or Hospital Outpatient**				
Percent of respondents having at least one visit	75.1%	55.3%	93.7%	88.9%
Percent of respondents having no visits	24.9%	44.7%	6.3%	11.1%
Prescribed Medicines (Including Refills & Free Samples)				
Percent of respondents having at least one prescription	67.6%	49.8%	93.7%	89.7%
Percent of respondents having no prescriptions	32.4%	50.2%	6.3%	10.3%
Emergency Room Visits				
Percent of respondents having at least one visit	12.5%	12.3%	23.3%	25.6%
Percent of respondents having no visits	87.5%	87.7%	76.7%	74.4%
Hospital Stays				
Percent of respondents having at least one stay	5.0%	2.5%	10.8%	11.9%
Percent of respondents having no stays	95.0%	97.5%	89.2%	88.1%
Lab Tests				
Percent of all respondents receiving a lab test	36.2%	20.3%	61.6%	25.6%
Percent of respondents receiving no lab tests	63.8%	79.7%	38.4%	74.4%

Source: The Lewin Group analysis of 1996 Medical Expenditure Panel Survey (MEPS) for respondents ages 0-64, adjusted for age, sex, race, and income.

* Rounded to nearest million.

** Includes visits to physicians and non-physician providers.

Table 5 (cont'd)

Utilization of Health Care over Past Year, by Insurance Status

	Hypertension		Arthritis		Chronic Back Pain	
	Insured	Uninsured	Insured	Uninsured	Insured	Uninsured
Estimated population*	**12,000,000**	**2,000,000**	**7,000,000**	**1,000,000**	**10,000,000**	**2,000,000**
Ambulatory Care Visits (Office-based or Hospital Outpatient)**						
Percent of respondents having at least one visit	93.6%	92.0%	93.5%	66.2%	91.4%	84.0%
Percent of respondents having no visits	6.4%	8.0%	6.5%	33.8%	8.6%	16.0%
Prescribed Medicines (Including Refills & Free Samples)						
Percent of respondents having at least one prescription	97.8%	93.2%	95.1%	73.2%	83.0%	70.6%
Percent of respondents having no prescriptions	2.2%	6.8%	4.9%	26.8%	17.0%	29.4%
Emergency Room Visits						
Percent of respondents having at least one visit	14.9%	21.3%	14.2%	11.8%	17.9%	16.5%
Percent of respondents having no visits	85.1%	78.7%	85.8%	88.2%	82.1%	83.5%
Hospital Stays						
Percent of respondents having at least one stay	11.6%	13.0%	8.7%	3.6%	7.8%	2.5%
Percent of respondents having no stays	88.4%	87.0%	91.3%	96.4%	92.2%	97.5%
Lab Tests						
Percent of all respondents receiving a lab test	66.5%	31.5%	66.4%	33.4%	52.9%	26.5%
Percent of respondents receiving no lab tests	33.5%	68.5%	33.6%	66.6%	47.1%	73.5%

BACKGROUND

Why Are People with Serious Health Conditions Uninsured?

Most non-elderly Americans receive health coverage through the workplace, either as employees or as dependents of employees. People are particularly likely to lack insurance when they are unemployed, when they work for small companies that do not provide health coverage, or when they work in low-wage jobs where the employees' share of premiums represents a significant portion of their incomes.[3]

When chronic illnesses interfere with their ability to work steadily, people often become uninsured. The price of individually purchased health coverage is unaffordable for many persons with chronic conditions. The Health Insurance Portability and Accountability Act of 1996 (HIPAA), which prevents insurers from imposing higher premiums on individuals *within a group* due to their illness, helps the chronically ill get insurance while they are employed. If they leave their jobs, HIPAA provides only limited protection: although the law requires insurers to issue policies to those who maintain continuous coverage after leaving employer plans, it allows insurers to charge the chronically ill premiums that are considerably higher than those charged to healthy people. For people *without access to employer-sponsored coverage*, HIPAA offers no protection. In most cases insurers can refuse to sell them a policy or can charge them very high premiums. A recent study found that, although chronically ill persons are among those who most need help paying for medical expenses, the chronically ill are less likely to have adequate health insurance than are healthy people.[4]

State governments have taken some steps to address the needs of persons buying individual insurance policies. A few states require that at least one insurer must sell policies to individuals regardless of health status. Twenty-eight states have taken steps to make individual coverage more affordable to the chronically ill through the establishment of "high-risk pools" or through price regulation, but other states provide no such assistance.[5] In states that did establish high-risk pools, the premiums are often high, there

are limited benefits, and there are often limits on the number of people who can buy into the pools. In a number of states, insurers marketing to individuals are not required to ever cover pre-existing medical conditions, even after a waiting period.[6]

Only some of the chronically ill are eligible for public coverage through Medicare or Medicaid. The federal government determines eligibility rules for Medicare. To be covered by Medicare, persons must either be at least 65 years of age, have end-stage renal disease, or be permanently disabled. Those who qualify for Medicare due to disability are subject to a two-year waiting period before they receive coverage.

The federal government also sets most eligibility rules for Medicaid, the public health insurance program for low-income people, although states have some options as to whom they cover and what income standards they use. In addition to having low incomes, to qualify for Medicaid in most states, adults must either have dependent children, be age 65 or over, or be permanently disabled. The disability test is strict: the disability must appear on a defined list of medical conditions or it must be so severe that it limits a person's work activities and lasts for at least 12 months. Many chronically ill people do not meet this test. Only a handful of states provide coverage to childless adults who are not permanently disabled. These states either have obtained permission from the federal government to expand Medicaid coverage by cutting expenses elsewhere in their Medicaid program or they provide coverage solely out of state funds.

How Do Uninsured People Get Care?

Rather than using an integrated system of care, the uninsured negotiate with a myriad of health providers. Their ability to get any free care depends on where they live. Some communities provide a ragged patchwork of services to the uninsured. Community health centers receive federal grants and deliver primary care to about 3.3 million of the 42.6 million uninsured persons in the United States.[7] These community health centers are obligated to provide care regardless of patients' ability to pay, although

they may charge for services on a sliding scale. In some communities, local health departments or hospital outpatient clinics also provide some primary care to the uninsured.

The amount of hospital care provided to the uninsured also varies substantially among communities. About 1,300 public hospitals, located primarily in urban areas, provide care regardless of ability to pay.[8] Although other hospitals provide some uncompensated care, and may receive government funding or tax breaks to do so, they generally do not have as strong an obligation to serve the uninsured. The federal Emergency Medical Treatment and Active Labor Act (EMTALA) requires hospitals to treat and stabilize patients in an emergency; it does not require private hospitals to provide non-emergency inpatient care to patients who cannot pay for it.

Thus, the uninsured may be able to get primary care through a clinic but be left to negotiate with private physicians for specialty care; they may be able to get hospital care in an emergency but not non-emergency surgery that is essential to their health. Or, their hospital stays may be written off as uncompensated care, but they may still be left with bills for surgeons, anesthesiologists, and other services delivered in the hospital. To compound their financial problems, as self-pay patients, the uninsured may be charged prices significantly higher than the discounted or "group rate" prices that insurers are able to negotiate.[9]

Interviews reveal the extraordinary steps that some uninsured persons take to get health care. Unable to afford doctor visits, they use the grapevine to learn about an illness and how to treat it; stockpile medicines or swap leftover prescriptions among friends to avoid the cost of doctor visits; take less medicine than prescribed; and use home remedies.[10] When care through professional health care providers can no longer be postponed, people borrow money to pay costs up front, sell property, charge credit cards for large health care bills that will take years to repay, or eventually become bankrupt.[11] In 1999, about 500,000 people sought bankruptcy protection in the United States due to their crushing medical expenses.[12]

Previous Research

A growing body of research has documented the problems that uninsured persons face in obtaining care. One-fifth of uninsured adults report that they have gone without medical care for a serious condition because they could not afford care. Nearly one-third of uninsured adults did not fill a prescription in the past year because they could not afford it, and more than one-third skipped a recommended medical test or treatment due to cost.[13] Surveys have shown that the uninsured are less likely to have a usual source of care than are their insured counterparts, are more likely to report barriers to care, and are more likely to go without physician visits over the course of the year. When people who were uninsured gain coverage, they report improvements in all of these areas.[14]

Going without appropriate medication and treatment can cause chronic conditions to grow so severe that patients require hospitalization. A 1995 study of diabetics who were hospitalized in a Nevada public hospital showed that, for the uninsured, lack of medication was frequently a contributing factor to this hospitalization—much more often than for their insured counterparts.[15] A 1992 analysis of hospital discharge data in Maryland and Massachusetts showed that the uninsured were 50 to 70 percent more likely to be admitted for "avoidable hospital conditions" such as pneumonia and bleeding ulcers than were those who were privately insured. The uninsured were twice as likely as the privately insured to require hospitalization for diabetes and malignant hypertension.[16]

Since the uninsured often go without routine checkups, diseases such as cancer are more likely to go undetected. A study in Florida showed that the uninsured were substantially more likely than the insured to be diagnosed with late-stage colorectal cancer, melanoma, breast cancer, and prostate cancer.[17] Similarly, a New Jersey study showed that uninsured women were diagnosed with breast cancer at later stages of the disease than were insured women, and that uninsured women were therefore more likely to die from the disease.[18]

A recent national study evaluated care among persons with major health risks. Using data from the Behavioral Risk Factor Surveillance System, researchers found that, among people at significant risk for disease, adults uninsured for one year or more were significantly more likely than insured adults to go without routine checkups. Uninsured adults were also more likely than the insured to go without screening for cancer or hypertension, and were more likely to go without appropriate diabetes management than were their insured counterparts. The disparities in preventive care were greatest among the long-term uninsured.[19]

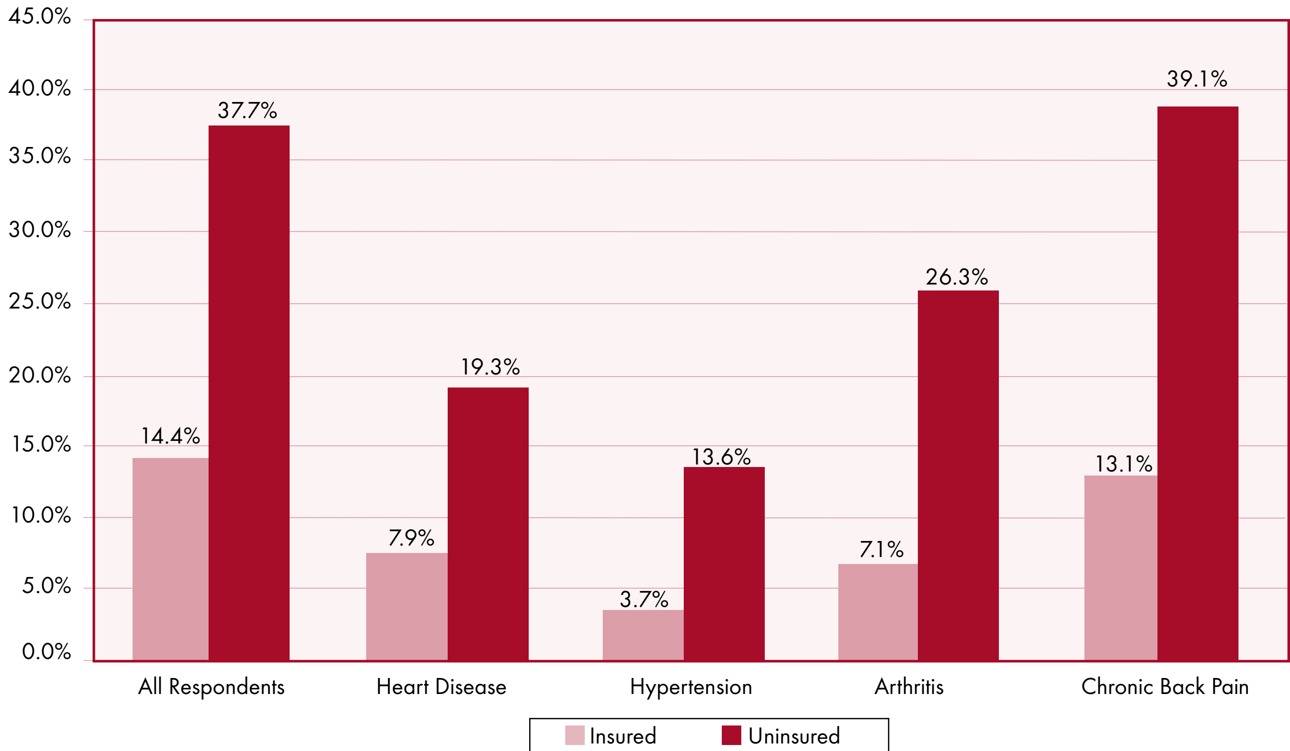
FINDINGS

The Uninsured Generally Face More Barriers to Care and Receive Less Care

MEPS data on access to care for insured and uninsured persons under age 65 show that insurance matters. Those without health insurance face more barriers to care (see Table 3) and are less likely to receive needed medical care (see Tables 2 and 5) than are those with insurance.

- The uninsured are two-and-one-half times as likely as the insured to lack a usual source of medical care. More than one out of three uninsured persons (37.7 percent) lack a usual source of care, compared to one out of seven insured persons (14.4 percent) (see Figure 2).
- One-sixth (16.4 percent) of the uninsured said that a family member did not receive a doctor's care or prescription medicines because the family needed money to buy food or clothing or to pay for housing. This is three times the proportion of insured persons (5.2 percent) who experienced similar difficulties.
- The uninsured are less likely than the insured to visit a health care provider during the course of a year. Nearly half of the uninsured (44.7 percent)—but one-quarter (24.9 percent) of the insured—went without any visits to doctors, clinics, or hospital outpatient departments during the year. Thus, the uninsured are almost twice as likely to go without annual health care visits as their insured counterparts.

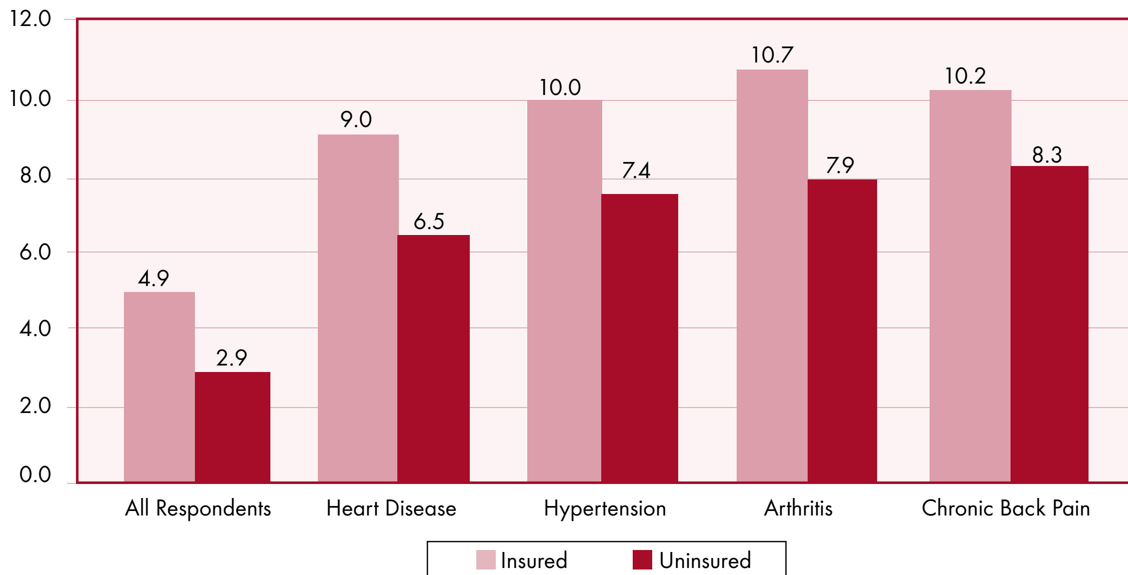
Figure 2
Lack a Usual Source of Care



Source: The Lewin Group analysis of 1996 Medical Expenditure Panel Survey (MEPS) for respondents ages 0-64.

- When they do obtain care, the uninsured make fewer ambulatory care visits than the insured. On average, uninsured persons visit doctors' offices or hospital outpatient facilities 42 percent less frequently than their insured counterparts (2.9 times a year for the uninsured compared to 4.9 times per year for the insured) (see Figure 3).
- The uninsured are less likely to receive prescription drugs than are the insured. More than two-thirds of the insured (67.6 percent)—but only half (49.8 percent) of the uninsured—receive prescription medicines. On average, the insured receive 6.8 prescriptions per year while the uninsured receive 4.4 (see Table 6 on page 27).

Figure 3
Ambulatory Care Visits, by Insurance Status



Source: The Lewin Group analysis of 1996 Medical Expenditure Panel Survey (MEPS) for respondents ages 0-64, adjusted for age, sex, race, and income.

- The uninsured are about half as likely as the insured to receive lab tests. One in five (20.3 percent) of the uninsured receive at least one lab test during the course of the year, compared to about one in three (36.2 percent) of the insured.

The Uninsured with Heart Disease, Hypertension, and High Cholesterol: Disparities in Care

Heart disease is the leading cause of death in the United States. Stroke is the third leading cause of death. Hypertension and high blood cholesterol significantly increase the risk of both of these diseases.[20]

Heart problems are among the main reasons for hospital admissions, and among the main reasons for admissions through the emergency room.[21] Hospitals must treat and stabilize patients in an emergency—even if they are uninsured and cannot pay for care. These data show that the likelihood of hospitalization is about equal for insured and uninsured patients with heart disease. The likelihood of receiving ambulatory care, however, differs

for insured and uninsured patients with hypertension and heart disease (see Table 5). When these conditions are not adequately controlled outside of the hospital, problems can escalate and require acute care.

Particularly for persons with chronic conditions, seeing the same health care provider on an ongoing basis is very important. The provider can monitor changes in the patient's health status and find out what interventions

Cardiologist Notes Problems for the Uninsured

Dr. Arthur Garson, immediate past president of the American College of Cardiology, says that the largest gaps in access to care for heart patients are for uninsured persons aged 19 to 64. "In most parts of the United States, there is no health care safety net for people in this age group," he says.

Problems differ for uninsured patients on opposite ends of this age spectrum. For example, Dr. Garson tells of one patient who had been born as a blue baby (truncus arteriosis). As a daughter of working parents with a low family income, she was covered by Medicaid. At age five, she had open-heart surgery, recovered nicely and did well for many years. Then at age 16, she began having heart rhythm problems. At age 19, she lost eligibility for Medicaid because she was no longer a child. She was unable to find an employer that would hire her with her health condition, and unable to obtain insurance. Like many rural communities, hers had no public health care facilities. Cardiologists continued to see her for free, but she stopped taking her prescriptions when the family's funds ran out a few months after her last visit. So at age 19½, after a lapse in medication, she suffered a cardiac arrest. Paradoxically, now that she is permanently disabled, she is covered by public insurance programs.

At the other end of the age spectrum, a 55-year-old uninsured patient admitted to the hospital with acute chest pain likely has not seen a doctor of any kind for years, says Dr. Garson. The patient may not know he has hypertension or heart disease, and has not recognized the early warning signs of a heart attack. Once admitted, the hospital may uncover many additional health problems that have gone untreated. "Yet hospital admission data understate the problems for uninsured adults," says Dr. Garson. "Many have heart attacks and die without even getting to the hospital."

Source: Interview with Arthur Garson, Jr., MD, MPH, Immediate Past President of the American College of Cardiology, Bethesda, Maryland, January 5, 2001.

work best to keep conditions such as high blood pressure under control. Persons with heart disease and hypertension are more likely than the overall population to have an ongoing relationship with a provider. However, among persons with heart disease and hypertension, the uninsured are less likely than their insured counterparts to have such an ongoing relationship because many uninsured persons cannot afford the costs of regular visits.

- One-fifth of uninsured persons with heart disease lack a usual source of care. Among those with heart disease, the uninsured are almost two and one-half times as likely as the insured (19.3 percent, compared to 7.9 percent) to lack a usual source of care (see Table 3).
- Among those with hypertension, 13.6 percent of the uninsured, compared to 3.7 percent of those with insurance, lack a usual source of care. Thus, uninsured persons with hypertension are more than three and one-half times as likely as their insured counterparts to lack a usual source of care (see Table 3).

Uninsured patients with heart disease or hypertension are more likely to have difficulties obtaining medical care than insured people with such health conditions. They are considerably more likely to forgo care due to cost (see Table 3).

- More than one out of four uninsured persons with heart disease (26 percent) report that a family member did not receive a doctor's care or prescription medicine in the last year because the family needed money to buy food or clothing or pay for housing, compared to one out of 14 insured people with heart disease (7 percent). Thus, the uninsured with heart disease are almost four times as likely as their insured counterparts to go without needed medical care due to cost.
- Nearly one out of four uninsured persons with hypertension (23.7 percent) report that a family member went without doctor's care or prescription medicine in the last year because the family needed money to buy food or clothing or pay for housing, compared to

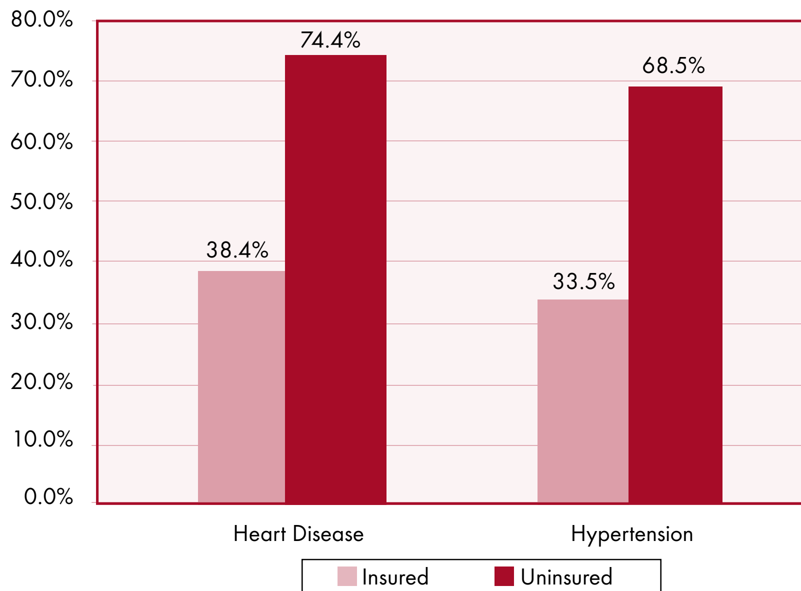
nearly one out of 18 insured people with hypertension (5.6 percent). Thus, the uninsured with hypertension are more than four times as likely as their insured counterparts to go without needed medical care due to cost.

Large disparities exist in the amount of care received by people with heart disease and hypertension based on their insurance status (see Tables 1 and 5).

- On average, uninsured persons with heart disease receive about 28 percent fewer provider visits than their insured counterparts. The mean number of office-based provider visits is 6.5 for uninsured people with heart disease, compared to 9.0 for insured people with heart disease. Uninsured persons with hypertension receive about one-fourth (26 percent) fewer provider visits than their insured counterparts. The mean number of office-based provider visits is 7.4 for the uninsured, compared to 10.0 for the insured.

Figure 4

Received No Lab Test in Last Year



Source: The Lewin Group analysis of 1996 Medical Expenditure Panel Survey (MEPS) for respondents ages 0-64, adjusted for age, sex, race, and income.

- Uninsured patients with heart disease are almost two times more likely not to receive lab tests than their insured counterparts (74.4 percent for the uninsured, compared to 38.4 percent for the insured) (see Figure 4).

When heart disease and hypertension are not adequately controlled, people may require emergency or acute care. Thus, it is not surprising that uninsured patients with heart disease and hypertension are more likely to visit emergency rooms than their insured counterparts (see Table 5).

- More than one out of five uninsured patients with hypertension (21.3 percent) had at least one emergency room visit over the course of the year, compared to approximately one out of seven (14.9 percent) of their insured counterparts. More than one-fourth (25.6 percent) of uninsured patients with heart disease had at least one emergency room visit, compared to 23.3 percent of the insured.

Uninsured non-elderly adults are twice as likely as the insured to go without annual blood pressure and blood cholesterol screening (see Tables 2 and 4).

- Overall, 38.0 percent of non-elderly uninsured adults have not had their blood pressure checked for a year or more, compared to 18.7 percent of their insured counterparts.

- Even when a doctor has diagnosed them with high blood pressure, about 22.1 percent of uninsured adults go for a year or more without having their blood pressure checked, compared to 9.9 percent of their insured counterparts.

- The uninsured are more likely than the insured to go without blood cholesterol checks. Overall, more than three-fourths (76.8 percent) of the uninsured, compared to fewer than half (47 percent) of the insured, report that they have never had their blood cholesterol checked.

Even when they have been advised by a doctor to take medication, uninsured persons with elevated blood pressure and high blood cholesterol are considerably less likely than their insured counterparts to obtain such medications (see Tables 2 and 4).

- Uninsured people who have been diagnosed with high blood pressure are more likely than their insured counterparts to report that they are not taking medication to control their blood pressure even though they have been advised to do so by a doctor (41.9 percent, compared to 24.8 percent).
- More than two out of five (43.3 percent of) uninsured persons who, on testing, had elevated cholesterol levels and had been told to take medication for their high cholesterol, said that they are not now taking such medication. For insured persons with elevated cholesterol levels, the proportion of persons not now taking medication although they had been told to do so at some time is much lower, 29.1 percent.

The Uninsured with Arthritis and Chronic Back Pain: Disparities in Care

Arthritis affects over 40 million Americans. Most people with arthritis are working-age, and arthritis is a leading cause of work disability. Chronic back conditions are the most frequent cause of activity limitation in people younger than 45. Low back pain disables many Americans.[22]

Arthritis and chronic back pain are treated with a combination of medicine, exercise, joint protection, and self-help techniques. Although arthritis and back surgery are common reasons for hospitalization, unlike heart disease and hypertension, arthritis and back pain are *not* prevalent reasons for *emergency* hospital admissions.[23] This analysis of MEPS data reveals that many uninsured people with arthritis and chronic back pain do not get any hospital or medical care to help them manage their pain.

- Uninsured persons with arthritis are nearly four times as likely as their insured counterparts to go without regular care. Over one out of four uninsured persons with arthritis (26.3 percent) lack a usual source of care, compared to one out of 14 insured persons with arthritis (7.1 percent) (see Table 3).
- One out of three uninsured persons with arthritis (34.1 percent) went without doctor's care or prescriptions for themselves or a family member because the family could not afford care. This was four and one-half times worse than the experience of insured people with arthritis, since fewer than one out of 13 insured people with arthritis (7.5 percent) went without doctor's care or prescriptions (see Table 3).
- Uninsured persons with chronic back pain are three times as likely to lack a usual source of care as their insured counterparts. About two out of five uninsured persons with chronic back pain (39.1 percent) have no usual source of care, compared to 13.1 percent of insured persons with chronic back pain (see Table 3).
- More than one out of four uninsured persons with chronic back pain (25.5 percent) report that they or a family member could not afford needed medical care or prescriptions, compared to one out of 13 (7.6 percent) of their insured counterparts (see Table 3).
- Uninsured persons with arthritis are five times as likely as their insured counterparts to go without a visit to the doctor, clinic, or hospital outpatient department during the course of a year. One-third (33.8 percent) of uninsured non-elderly persons with arthritis go without ambulatory care visits, compared to 6.5 percent of their insured counterparts (see Table 5).
- On average, uninsured persons with arthritis visit ambulatory care providers 7.9 times a year, while their insured counterparts make 10.7 visits (see Table 1).

- On average, uninsured persons with chronic back pain visit ambulatory providers 8.3 times a year, while their insured counterparts make 10.2 visits (see Table 1).

Uninsured persons with arthritis and chronic back pain are less likely to take prescription drugs, and have fewer prescriptions, than their insured counterparts.

- Non-elderly uninsured persons with arthritis are more than five times as likely as their insured counterparts to go without prescription medicines of any kind. One out of four uninsured persons with arthritis (26.8 percent) receives no prescription medicine, compared to 4.9 percent of their insured counterparts (see Table 5).

- On average, non-elderly uninsured persons with arthritis receive two-thirds as many prescriptions and refills a year as their insured counterparts. Uninsured persons with arthritis receive 14.6 prescriptions and refills a year, while the insured receive 23.5 (see Table 6).

Table 6
Non-Elderly Prescriptions, by Insurance Status
(Mean Number of Prescriptions)

	Insured	Uninsured	Difference*	Percent Difference
All Respondents	**6.8**	**4.4**	**2.4**	**36%**
Respondents with Heart Disease	17.4	17.5	-0.1	0%
Respondents with Hypertension	25.2	22.6	2.6	10%
Respondents with Arthritis	23.5	14.6	8.9	38%
Respondents with Chronic Back Pain	12.7	8.9	3.8	30%

Source: The Lewin Group analysis of 1996 Medical Expenditure Panel Survey (MEPS) for respondents ages 0-64, adjusted for age, sex, race, and income.

* Differences do not compute due to rounding.

- Non-elderly uninsured persons with chronic back pain are more than one and one-half times as likely as their insured counterparts to go without prescription medicine. More than one out of four uninsured persons with chronic back pain (29.4 percent) receive no prescribed medicines during a year compared to 17.0 percent of their insured counterparts (see Table 5).

Sharmon Caiola-Lussier, San Diego, California

Sharmon, a single mother with three children, has rheumatoid arthritis and fibromyalgia. She and her children are uninsured. Sharmon experiences such severe pain that it is hard for her to hold a job, and she is unable to afford the medicines that would help her to function.

When she has the money, Sharmon pays $56 up-front to see a doctor. The doctor helps with free samples of medicine and has prescribed Celebrex, Elavil, and Effexor. When the free samples run out, Sharmon takes only a fraction of what the doctor prescribed. She is supposed to take Celebrex nightly for her arthritis, but, since it costs about $30 per month, she just takes it twice a week. It takes two months to save enough money to buy Elavil, which helps her sleep through the night with her pain. Although she is supposed to take Effexor daily for depression, Sharmon just takes it when she can.

Sitting for long periods of time and walking are both difficult. Sharmon thinks she could qualify for disability benefits with more medical documentation of her condition, but she would have to pay up-front to get an MRI, which she cannot afford to do. She struggles with jobs, working one week, and then taking a week off due to her health. On her doctor's recommendation, Sharmon signed up for a Salvation Army waiting list for a wheelchair seven months ago. She has not received one yet. The Salvation Army is still seeking chairs for other people.

Source: Interview with Sharmon Caiola-Lussier, December 21, 2000.

ACCESS TO CARE AND USE OF CARE FOR THE LOW-INCOME UNINSURED

The uninsured are disproportionately in families with low incomes.[24] While wealthier people may be uninsured because they choose not to purchase insurance that they could afford,[25] for the poor and near poor, purchasing private insurance is often prohibitively expensive. Some low-income people are eligible for public coverage or for free health care. As noted above, however, many low-income people still have no access to such coverage.

To explore the effects of income on access to health care and use of health care, we separately analyzed MEPS data for persons under age 65

with incomes below 200 percent of the federal poverty level. We found that having a low income compounds problems in obtaining care, both for the insured and the uninsured. Both the insured and the uninsured with incomes under 200 percent of the poverty line are slightly less likely to visit an ambulatory care provider, but somewhat more likely to visit an emergency room or stay overnight in the hospital, than the general non-elderly population.

Among the low-income population, problems in getting health care are consistently worse for those without insurance (see Tables 7 and 8 on pages 32-35). Low-income uninsured persons are more likely than their insured counterparts to go without any visits to doctors or clinics during the course of the year, they visit doctors and clinics less than half as often as their insured counterparts, and they receive fewer prescription drugs. Low-income people—whether insured or uninsured—use emergency rooms about the same amount, but the low-income uninsured have fewer overnight stays in hospitals than their insured counterparts (see Table 8).

How do barriers to care differ for uninsured low-income persons with heart disease and hypertension? (See Tables 3 and 7.)

Low-income uninsured persons with heart disease and hypertension are even more likely to report difficulties in obtaining care, and to report family members going without care, than are all uninsured persons. Low-income uninsured persons with heart disease and hypertension report these difficulties more frequently than their low-income insured counterparts.

- Among people with heart disease, almost one-third (31.7 percent) of the low-income uninsured, compared to 26.0 percent of the overall uninsured, report that they or their families went without a doctor's care or prescription medications because they could not afford it. Among people with hypertension, 30.2 percent of the low-income uninsured, compared to 23.7 of the overall uninsured, could not afford medical care or prescriptions for themselves or their families.

- Low-income uninsured people are considerably more likely not to get doctor's care or prescription medicines due to cost than their low-income but insured counterparts. Among low-income people with heart disease, 31.7 percent of the uninsured, compared to 14.4 percent of the insured, did not get care due to cost. Among low-income people with hypertension, 30.2 percent of the uninsured, compared to 12.0 percent of the insured, did not get care due to cost.

How does use of care differ for low-income uninsured persons with heart disease and hypertension? (See Tables 1 and 8.)

For both insured and uninsured low-income persons with heart disease or hypertension, the likelihood of using an emergency room is higher than among the overall population with heart disease and hypertension. Disparities in care between the low-income insured and the low-income uninsured are most evident in the frequency of their visits to health care providers and in their use of prescription medicines.

- Low-income uninsured persons with heart disease visit ambulatory care providers much less often than their insured counterparts. The mean number of visits for the low-income uninsured is 5.9, compared to 9.9 for the low-income insured. Low-income uninsured persons with hypertension visit ambulatory care providers half as often as their insured counterparts. The mean number of visits for the low-income uninsured is 6.2, compared to 12.5 for the low-income insured.

- Low-income uninsured persons with heart disease or hypertension make fewer visits to ambulatory care providers than the overall population of uninsured persons with heart disease or hypertension.

- Low-income uninsured persons with heart disease and hypertension receive fewer prescriptions than their insured counterparts. Low-

income uninsured persons with heart disease receive about 15 prescriptions and refills a year, while their insured counterparts receive 21. Low-income uninsured persons with hypertension receive about 24 prescriptions and refills a year, while their insured counterparts receive 31.

How do barriers to care differ for low-income persons with arthritis and chronic back pain? (See Table 7.)

Low-income people with arthritis or chronic back pain—whether insured or uninsured—are more likely to lack a usual source of care than the overall population with arthritis and chronic back pain. They are also more likely to report difficulties in obtaining care. Problems are clearly worse for the low-income uninsured than for their insured counterparts.

- More than one out of three low-income uninsured persons with arthritis (36.1 percent) lack a usual source of care, compared to one out of 12 low-income insured persons with arthritis (8.4 percent). More than two out of five low-income uninsured persons with chronic back pain (44.1 percent) lack a usual source of care, compared to 16.5 percent of low-income insured persons with chronic back pain.
- Among low-income persons with arthritis or chronic back pain, the uninsured are twice as likely as the insured to have gone without a doctor's care or prescription medications due to cost. Among low-income persons with arthritis, 36.8 percent of the uninsured and 16.7 percent of the insured had this problem. Among low-income persons with chronic back pain, 31.1 percent of the uninsured and 16.6 percent of the insured had this problem.

Table 7
Access to Health Care for Low-Income Respondents, by Insurance Status

	All Respondents		Heart Disease	
	Insured	Uninsured	Insured	Uninsured
Estimated population*	**49,900,000**	**24,900,000**	**4,600,000**	**1,700,000**
Do you have a usual source of health care?				
Yes	83.3%	61.1%	91.5%	80.0%
No	16.8%	38.9%	8.5%	20.0%
If "No," what is the main reason you do/ do not have a usual source of care?				
High cost of medical care	6.7%	20.1%	18.7%	32.6%
Other reason	93.3%	79.9%	81.3%	67.4%
During the last year, did any family member not receive a doctor's care or prescription medications because the family needed money to buy food, clothing, or pay for housing?				
Yes	11.6%	19.1%	14.4%	31.7%
No	88.4%	80.9%	85.6%	68.3%
During the last year, did any family member have difficulty obtaining care?				
Yes	15.6%	26.0%	22.1%	40.4%
No	84.4%	74.0%	77.9%	59.6%
If "Yes," what is the main problem that caused family members' difficulty, delay, or not receiving needed health care?				
Could not afford care	63.6%	87.5%	60.9%	95.2%
Other**	36.4%	12.5%	39.1%	4.8%

Source: The Lewin Group analysis of 1996 Medical Expenditure Panel Survey (MEPS) for respondents ages 0-64, unadjusted for age, sex, and race.

* Rounded to nearest hundred thousand.

** Other reasons include: problems with insurance, could not obtain a referral, medical care too far away, no transportation, could not get time off work, did not have time, was refused services.

Table 7 (cont'd)

Access to Health Care for Low-Income Respondents, by Insurance Status

	Hypertension		Arthritis		Chronic Back Pain	
	Insured	Uninsured	Insured	Uninsured	Insured	Uninsured
Estimated population*	**3,200,000**	**1,100,000**	**2,000,000**	**600,000**	**2,400,000**	**1,100,000**
Do you have a usual source of health care?						
Yes	95.5%	80.0%	91.7%	63.9%	83.6%	55.9%
No	4.5%	20.0%	8.4%	36.1%	16.5%	44.1%
If "No," what is the main reason you do/ do not have a usual source of care?						
High cost of medical care	14.2%	40.7%	2.3%	44.5%	29.1%	46.0%
Other reason	85.8%	59.3%	97.7%	55.5%	70.9%	54.0%
During the last year, did any family member not receive a doctor's care or prescription medications because the family needed money to buy food, clothing, or pay for housing?						
Yes	12.0%	30.2%	16.7%	36.8%	16.6%	31.1%
No	88.0%	69.8%	83.3%	63.2%	83.4%	68.9%
During the last year, did any family member have difficulty obtaining care?						
Yes	19.1%	36.0%	28.6%	39.7%	19.6%	42.7%
No	80.9%	64.0%	71.4%	60.3%	80.4%	57.3%
If "Yes," what is the main problem that caused family members' difficulty, delay, or not receiving needed health care?						
Could not afford care	57.7%	80.2%	64.7%	90.8%	57.2%	90.4%
Other**	42.3%	19.8%	35.3%	9.2%	42.8%	9.7%

Table 8

Utilization of Health Care over Past Year for Low-Income Respondents, by Insurance Status

	All Respondents		Heart Disease	
	Insured	Uninsured	Insured	Uninsured
Estimated population*	**49,900,000**	**24,900,000**	**4,600,000**	**1,700,000**
Ambulatory Care Visits (Office-based or Hospital Outpatient)**				
Percent of respondents having at least one visit	71.2%	51.1%	93.8%	87.2%
Percent of respondents having no visits	28.8%	48.9%	6.2%	12.8%
Mean number of visits	5.0	2.1	9.9	5.9
Prescribed Medicines (Including Refills & Free Samples)				
Percent of respondents having at least one prescription	65.0%	46.0%	95.4%	87.3%
Percent of respondents having no prescriptions	35.0%	54.0%	4.6%	12.7%
Mean number of prescriptions	7.4	3.1	21.1	15.3
Emergency Room Visits				
Percent of respondents having at least one visit	16.0%	14.4%	32.7%	35.7%
Percent of respondents having no visits	84.0%	85.6%	67.3%	64.3%
Hospital Stays				
Percent of respondents having at least one stay	6.8%	3.7%	15.1%	12.9%
Percent of respondents having no stays	93.2%	96.3%	84.9%	87.1%
Lab Tests				
Percent of all respondents receiving a lab test	34.4%	20.0%	62.6%	41.0%
Percent of respondents not receiving a lab test	65.6%	80.0%	37.4%	59.0%

Source: The Lewin Group analysis of 1996 Medical Expenditure Panel Survey (MEPS) for respondents ages 0-64, adjusted for age, sex, and race.

* Rounded to nearest hundred thousand.

** Includes visits to physicians and non-physician providers.

Table 8 (cont'd)

Utilization of Health Care over Past Year for Low-Income Respondents, by Insurance Status

	Hypertension		Arthritis		Chronic Back Pain	
	Insured	Uninsured	Insured	Uninsured	Insured	Uninsured
Estimated population*	**3,200,000**	**1,100,000**	**2,000,000**	**600,000**	**2,400,000**	**1,100,000**
Ambulatory Care Visits (Office-based or Hospital Outpatient)**						
Percent of respondents having at least one visit	93.4%	94.8%	96.3%	70.6%	86.3%	81.8%
Percent of respondents having no visits	6.6%	5.2%	3.7%	29.4%	13.7%	18.2%
Mean number of visits	12.5	6.2	11.5	4.3	8.6	5.1
Prescribed Medicines (Including Refills & Free Samples)						
Percent of respondents having at least one prescription	97.4%	92.9%	98.0%	77.9%	80.1%	64.4%
Percent of respondents having no prescriptions	2.6%	7.1%	2.0%	22.1%	19.9%	35.6%
Mean number of prescriptions	31.4	24.0	30.5	16.4	15.0	9.4
Emergency Room Visits						
Percent of respondents having at least one visit	20.2%	23.9%	18.0%	22.5%	24.4%	16.3%
Percent of respondents having no visits	79.8%	76.1%	82.0%	77.5%	75.6%	83.7%
Hospital Stays						
Percent of respondents having at least one stay	15.1%	12.9%	12.3%	5.0%	16.3%	4.4%
Percent of respondents having no stays	84.9%	87.1%	87.7%	95.0%	83.7%	95.6%
Lab Tests						
Percent of all respondents receiving a lab test	67.6%	65.7%	65.4%	45.9%	54.1%	38.1%
Percent of respondents not receiving a lab test	32.4%	34.3%	34.6%	54.1%	45.9%	61.9%

How does use of care differ for low-income uninsured persons with arthritis and chronic back pain? (See Table 8.)

Low-income uninsured people with arthritis and chronic back pain visit doctors and clinics somewhat less often than their insured counterparts and use fewer prescription drugs.

- Low-income uninsured people with arthritis visit doctors and clinics about one-third as often as their insured counterparts. The mean number of visits for the low-income uninsured is 4.3, compared to 11.5 for the low-income insured. Low-income uninsured people with chronic back pain visit doctors and clinics about three-fifths as often as their insured counterparts—5.1 mean visits for the low-income uninsured, compared to 8.6 mean visits for the low-income insured.
- Low-income uninsured people with arthritis receive about half as many prescriptions and refills as their insured counterparts—16 prescriptions and refills in a year, compared to 31. Low-income uninsured people with chronic back pain receive about two-thirds as many prescriptions and refills as their insured counterparts—nine prescriptions and refills, compared to 15.

CONCLUSION

Although the public believes that the uninsured get the health care they need, when they need it, the data in this report tell a different story. In fact, as this report shows, health care is often inaccessible to the uninsured, even when they have serious chronic health conditions.

Overall, people without insurance are much less likely to get health care than are people who are insured. Problems getting care are even worse for the uninsured who have chronic health conditions. Many are left to deal with arthritis and chronic back pain without medications to assist them. Many are not taking medicines to control their high blood pressure or high blood cholesterol. Uninsured people with heart disease, hypertension, ar-

thritis, and chronic back pain visit doctors less often and use less medicine than the insured. Uninsured people with chronic health conditions are much more likely to forgo medical care than their insured counterparts, and are also more likely to go without needed care than the overall uninsured population. Their families say that cost is the primary obstacle to care, and access problems are even greater for low-income people without insurance.

When there is a life-threatening emergency, the uninsured have some protection under federal law—they cannot be denied the hospital care needed to stabilize their condition. But when the uninsured need non-emergency health care—such as doctor care or prescriptions to treat a chronic health problem—they have very few protections. Their ability to get care depends on whether or not their local communities provide any sort of health care safety net. These local safety nets are often frayed or nonexistent, leaving uninsured people to negotiate directly—and often unsuccessfully—with many different health providers to obtain care.

ENDNOTES

[1] Bennefield, Robert, *Who Loses Coverage and for How Long?* (Washington, DC: U.S. Department of Commerce, Census Bureau, August 1998).

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TECHNICAL APPENDIX

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TECHNICAL APPENDIX

The Lewin Group analyzed two national datasets for the production of this report:

1. The Medical Expenditure Panel Survey (MEPS), 1996
2. The Third National Health and Nutrition Examination Survey (NHANES III)

ANALYSIS OF MEPS 1996

The 1996 MEPS is based on a household survey of 22,601 persons, weighted up to a total of 268,910,000 persons. Data can be used to make estimates of the civilian non-institutionalized U.S. population for 1996.

Identifying Patients with Chronic Conditions

To identify patients with chronic diseases, we first analyzed data from the MEPS Conditions File (HC-006). Patients were defined as having the chronic condition if they had the following ICD-9-CM diagnosis code (ICD9CODX) or procedure code (ICD9PROX) or MEPS chronic condition code (CCCODEX) anytime during 1996 (see table below).

Chronic Condition	ICD9CODX	ICD9PROX	CCCODEX
Heart disease	410-429	35-37	096-108, 127
Hypertension	401		098
Diabetes	250		049-050, 186
Arthritis	711, 714-716		201-203
Chronic Back Pain	724		

ICD9CODX contains values for the following screening codes: V76 (Screening for Malignant Neoplasm); V77 (Screening for endo/nutritional/metabolic disorders); V81 (Screening for Heart/Respiratory/GU Disorders)

Performing Patient-level Analyses

Later, these data were merged with other patient-level data from the following MEPS files: HC-002, HC-003, HC-008, HC-009, and HC-011, to create a comprehensive, patient-level analysis file. AHRQ/MEPS released the

file HC-012 (a comprehensive patient level file) after we had completed our analyses.

The files described above were used to estimate figures on demographics, access to care, and some measures of health care utilization. Percentages within a given population (e.g., all insured respondents, uninsured respondents with heart disease, etc.) reflect the weighted number of respondents in that category (e.g., male, African American) over the weighted number of all respondents answering the question. Respondents answering 'Don't Know' were dropped before any calculations were made. Estimates of utilization (i.e., percent of respondents having at least one visit, mean number of visits) were made using the HC-011 file. Ambulatory care visits represent the sum of office-based provider visits and hospital outpatient visits. Data on sonograms, mammograms, laboratory tests, EKGs, and child vaccinations were taken from three event-level files: the Office-based Medical Provider Visits File (HC-010G); the Outpatient Department Visits File (HC-010F); and the Emergency Room Visits File (HC-010E). Estimates on medications for arthritis were made from data extracted from the Prescribed Medicines File (HC-010A), linking this data via the Condition-Event Link File (HC-010IF1) and the Prescribed Medicines-Event Link File (HC-010IF2).

Adjusting Utilization Estimates for Age, Sex, Race, and Income

To control for inherent differences in the insured vs. uninsured populations with regard to age, sex, race, and income, utilization estimates were adjusted as follows. We obtained adjusted utilization measures for each category insurance status (i.e., insured, uninsured), for each population of interest (e.g., all respondents, heart disease, low-income arthritis, etc.) by direct standardization to the demographic characteristics (age, sex, race, income) of the full study cohort using ordinary least squares and logistic regression analysis. Each regression model could be described as follows:

Ordinary least squares (OLS) regressions were run on all continuous dependent variables (i.e., number of visits) according to the following model:

$$Y = a + b_1(\text{UNINSURED}) + b_2(\text{AGE}) + b_3(\text{SEX}) + b_4(\text{RACE}) + b_5(\text{INCOME}) + e$$

Where Y = continuous, dependent, utilization variable (i.e., number of visits)

a = intercept

b = coefficients on independent variable

e = error term (set equal to zero in regressions)

Logistic regressions were run on all dichotomous dependent variables (e.g., whether or not the respondent had at least one visit) according to the following model:

$$P = \frac{1}{1 + ea^{+b^{1(\text{UNINSURED})} + b^{2(\text{AGE})} + b^{3(\text{SEX})} + b^{4(\text{RACE})} + b^{5(\text{INCOME})} + e}}$$

Where P = the probability that the respondent had at least one visit tothe health care provider/setting in question

In each case, the means across the entire population (i.e., regardless of insurance status) of the variables for which we controlled (age, sex, race, income) were inserted into the equation. For each dependent variable being estimated, regressions were run separately on five different populations: a) for all respondents, b) those with heart disease, c) those with hypertension, d) those with arthritis, and e) those with chronic back pain. Within a population stratum, differences in the estimated utilization measures between the insured and uninsured populations were driven by the value of the dummy variable UNINSURED, which was set equal to zero if the patient was insured and one if the patient was uninsured. The marginal effect of being uninsured is reflected in the coefficient b_1.

ANALYSIS OF NHANES III

The Third National Health and Nutrition Examination Survey (NHANES III) contains data from over 40,000 people from 1988-1994. The NHANES III is a follow-up survey to the NHANES II and includes nationally representative information on the health and nutritional status of the population of the US as gathered through personal interviews, physical examinations, laboratory tests, and nutritional assessment. NHANES III is unique in that it includes data on laboratory tests conducted as part of the survey such that specific measurements can be known for each patient (e.g., on the date of the survey, a respondent's blood cholesterol level was found to be X). By linking the laboratory data with the survey data, we are able to assess the proportion of undiagnosed patients within specific disease areas.

Our analysis of NHANES III focussed on two main files: Adult and Laboratory. The Adult file includes responses from over 20,000 surveyed individuals who are 17 years old or older and our analysis was restricted to patients under the age of 65 years old. This file was supplemented with laboratory data gathered during a home visit examination from a subgroup of adult respondents.

We focussed our analyses on several disease areas including hypertension and cholesterol. Each disease area was examined across several strata of severity. The number of patients who had complete adult and laboratory data was approximately 13,000 for cholesterol assessment and 14,500 for hypertension assessment. The criteria used to determine these levels are presented below. Each of the disease areas was examined further in order to determine if there was a correlation between severity of disease and insurance status. A patient was considered to be insured if they were covered by either Medicare, Medicaid, Champus, ChampVA, VA, military coverage, private-, employer-, or union-sponsored insurance.

Criteria Used to Determine Disease Severity Levels*

	Hypertension (blood pressure)	Cholesterol (serum cholesterol)
Normal	systolic<140mm Hg or diastolic<90mm Hg	cholesterol<220mg/dL
Mild	140mg/dL</=systolic< 160mm Hg or 90mg/dL</=diastolic< 99mm Hg	220mg/dL</=cholesterol< 240mg/dL
Moderate	140mm Hg </=systolic< 160mm Hg and 90mm Hg </=diastolic< 99mm Hg	240md/dL</=cholesterol< 260mg/dL
Severe	systolic>/=160mm Hg or diastolic>/=99mm Hg	Cholesterol>/=260mg/dL

*from Laboratory File

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