Labor Availability and Health Care Costs

Minnesota Department of Health

Report to the Minnesota Legislature

October, 2002

MINNESOTA MDH DEPARTMENT OF HEALTH

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EXECUTIVE SUMMARY

Rising health care costs have been of growing concern for the Minnesota Legislature over the last several years as Minnesotans have seen their health insurance premiums increase, on average, 11 percent per year since 1998. Underlying costs of health care have also grown since 1998. The tight labor market present during this same time may be contributing to the escalating costs. For this reason, the Minnesota Legislature directed the Minnesota Department of Health to study the "effects of health care labor availability and its impact on health care costs."

Overview of Health Care Spending Trends

Health spending in Minnesota during 2000 totaled approximately $19.3 billion, or $3,928 per person, and comprised nearly 10.5 percent of the state's economy. In the same year, hospital spending comprised 28 percent of all health-related spending; physician services accounted for 23.5 percent; long-term care 16 percent; prescription drugs 11 percent; and dental services, 4 percent.

From 1998 to 2000, spending for services covered by private commercial health insurance products (per member, per month) in Minnesota grew, on average, 11 percent per year. Rate increases for private health insurance premiums averaged 16 percent in Minnesota during 2000, a four percent increase over 1999, and a trend that is a significant departure from the nearly flat premium growth in the mid-1990s. Premiums for 2001 are also expected to show a double-digit increase.

Health Care Labor Economics

To appreciate the affects of a workforce shortage, it is crucial to know how labor market conditions relate to the economy and to understand how they are defined. Supply and demand analysis predicts that when demand is greater than supply, a shortage will occur. And when the price of a good goes down, the demand for that good will go up, all other things remaining constant. Health care, unlike many other goods however, cannot always be forgone in the face of high prices, and therefore as price has gone up, the demand has not decreased. As the demand for health care has increased, so has the demand for health care workers, and thus, so has their "price" or wage.

There are a number of ways to examine the scope of work-force shortages. Indicators may include larger wage increases in one industry relative to other industries, vacancy rates, and turnover rates. In addition, workforce projections, which rely on assumptions about the future state of an industry, can be used to indicate future situations of oversupply or shortage. The scope of workforce conditions can be defined by the opinions of individuals familiar with the industry, through professional determinations about the number of staff needed to meet the medical care needs of a population, by the ratio technique, and through examination of vacancy rates.

Health Care Labor Shortages Defined

Overview of the Health Care Workforce

According to the U.S. Department of Labor, employment in health service occupations grew at over 40 percent between 1986 and 1996, and is expected to increase faster than the average rate of increase for all occupations between 1996 and 2006. As of December 2001, over 10 million people nationwide worked in the health services industry. Studies have predicted large future shortages, they have found double-digit vacancies in certain sectors of the health care market, and have found that workforce shortages are a top concern of hospital executives.

Data also suggests that Minnesota is in the midst of a workforce shortage. The Minnesota Department of Economic Security found that, of the 124,000 total job vacancies in Minnesota, more than 14,000 were in healthcare occupations, and of those, a greater proportion are in Greater Minnesota.

Registered Nurses

Registered Nurses make up the largest provider group in the health care market. As health care is being provided in more varied settings, changes in technology and a higher acuity of the inpatient population has increased the demand for nurses. Data suggest that these trends have led to a nursing shortage. According to the GAO, national unemployment for RNs in 2001 was at a decade low of 1 percent, while the number of RNs employed per capita dropped 3 percent over the last 3 years. Contributing to the shortage are decreases in nursing program enrollment, high turn-over rates, and an aging RN workforce.

In Minnesota, there were approximately 58,000 RNs working in 1999, making it the largest health care occupation in the state. Like the nation, it appears as though Minnesota is facing an RN shortage. Despite an all time high in the number of working RNs in 1999, there were 2,900 reported vacancies for this position. For 2000, the Minnesota Department of Economic Security reported an RN vacancy rate of 7.8 percent for Greater Minnesota and 6.4 percent for the Twin Cities. Similar to the national shortage, Minnesota's RN shortage is aggravated by a decrease in nursing program enrollment, high turnover and vacancy rates, and an aging work force.

Pharmacists

In 2000, there were roughly 212,600 pharmacists in the United States, making them the third largest professional group in the nation. In the early 1990s, the educational standards and training requirements for the profession were raised, expanding the role of the profession. These changes, combined with an aging population, an increase in the complexity of medications, and a surge in the number of prescriptions written each year created an increased demand for pharmacists. Despite a 14 percent increase in the number of pharmacists from 1991 to 2000, supply has not kept up with demand, and evidence suggests a pharmacist shortage.

High vacancy rates for pharmacists are being reported in both retail and clinical sectors. According to the National Association of Chain Drug Stores, pharmacist vacancies in chain pharmacies increased from 2,500 in 1998 to 6,500 in 2000. A HRSA pharmacy workforce study, reported that 11 percent of public hospitals reported a pharmacy shortage in 2000 compared to 5 percent in 1996. The pharmacist shortage will be further affected by the fact that the number of applications to pharmacy programs declined by 114,000 from 1994 to 1999.

According to the HRSA workforce study, Minnesota reported the highest demand level for pharmacists of any state. In the fourth quarter of 2001, there were approximately 3,720 total jobs open to licensed pharmacists and 334, or 9 percent, were vacant. In addition, the Office of Rural Health and Primary Care at the Minnesota Department of Health found that well over half of all pharmacists in Minnesota started a new job in the last three years, suggesting an increase in opportunities due to a tight labor market.

Licensed Practical Nurses

In 2000, total national LPN employment was 679,470 making them the second largest health care occupation. According to the BLS, LPNs are projected to be the fourth fastest growing employment category of positions that require postsecondary or associate degrees. Similar to the workforce conditions being reported for RNs, data suggest a national LPN shortage. In 2001, the American Health Care Association (AHCA) reported that the national vacancy rate for LPNs in nursing facilities was 14.6 percent and that 75.8 percent of respondents to a shortage survey said that it had become more difficult to recruit LPNs relative to the year before.

In Minnesota, there were 16,870 LPNs working in the fourth quarter of 2001. As nationally, data suggests a shortage in this occupation. According to the Minnesota Department of Economic Security, approximately 1,581 LPN positions were vacant in 2001 (roughly 9.4 percent). The Minnesota Health and Hospital Partnership reported that the average turnover rate for LPNs was 14.76 percent. According to the Minnesota Department of Health, although Greater Minnesota has a proportionally higher share of openings for LPNs, employers in the Twin Cities report having to wait a longer period of time to find and hire LPNs.

Nursing Assistants

According to the BLS, in 2000, there were roughly 2.1 million nursing assistants employed, and the occupation had the ninth fastest growth of jobs that require short to moderate training. As with RNs and LPNs, evidence suggests a nursing assistant shortage. The AHCA reports that the annualized turnover rate for nursing assistants in nursing facilities was highest in the nursing profession in 2001, at over 78 percent, and that the vacancy rate was 11.9 percent.

Data for Minnesota also indicate a shortage of nursing assistants. According to the Minnesota Department of Economic Security's Job Vacancy Survey, there were 30,200 nursing assistants working in Minnesota in the fourth quarter of 2001 and approximately 2,443 positions were vacant. The AHCA estimated that the there was a 10.4 percent vacancy rate of nursing assistants in Minnesota nursing facilities, and an annualized turnover rate of 61.6 percent.

Effects of a Worker Shortage

The proportion of staffing costs to overall operating expenses for Minnesota hospitals has remained fairly consistent throughout the late 1990s. Salary and benefit costs averaged slightly over 51 percent of operating costs during that time period. Data received from the Minnesota Health and Housing Alliance (MHHA), a trade association for skilled nursing facilities, shows average staffing expenses for their members compose 71 percent of total operating expenses. Nationally, data shows noticeable salary growth in hospitals during the first six months of 2001, with wages increasing 7.6 percent over the same time period in 2000.

Salary Composition and Growth

Registered Nurses (RN) account for 35 percent of salary costs in hospitals and make up the bulk of defined staffing costs. Licensed practical nurses (LPN) compose 2.9 percent of overall staffing costs; certified nursing assistants (CNA) and x-ray technicians both take up 2.5 percent of costs; pharmacists, 2.1 percent; and nurse anesthetists, 1.6 percent. The remainder and majority of staffing costs (53 percent) fall into an "other" category.

The average salary for experienced RNs has gone up 18 percent over the last five years, from $20.80 per hour to $25.35 per hour. Between 1996 and 2001, average CNA wages have increased from $8.11 per hour to $10.45 per hour – an increase of 22 percent. During this same time period, LPN wages have gone from $11.69 per hour to $15.08 per hours — an increase of 22.5 percent.

Industry Performance

The Center for Medicare and Medicaid Services (CMS) has undertaken a new initiative to review data available from Wall Street analysts on various segments of the health industry. Reports on skilled nursing facilities and hospitals are currently available.

CMS reports great concern on the part of financial analysts regarding the future of the skilled nursing industry. They note that although the economy has recently been through a recession, the labor market in skilled nursing facilities has remained very tight due to a severe nationwide nursing shortage. A report issued by Fitch Ratings reinforced the challenges facing the industry due to the nursing shortage and concluded that the sector will continue to be highly susceptible to nursing shortages and can expect overtime expenses and pay increases to rise.

Analyst reports on the hospital industry are not as conclusive. CMS and others acknowledge that the industry is also plagued by a nursing shortage, although not as severe as in the skilled nursing industry. They also agree that, due to industry consolidation, hospitals have seen their negotiating power with health plans vastly improve. However, reports differ regarding whether hospitals can strengthen their operating margins based on these gains.

Discussion and Forecast

We found evidence regarding the severity of health care labor conditions and their influence on increasing health care costs. All signs indicate that labor, which composes nearly 60 percent of health care expenses, is an important and growing aspect of overall costs. However, while some health professions are seeing a brisk acceleration of their wages, none of the available data show that the majority of labor costs within health care institutions are rising more rapidly than labor in non-health related industries.

It is important to note that the severity of the workforce shortage and resulting wage increases are not uniform across health professions. The shortage among registered nurses appears to have the greatest impact on staffing costs, and, while the shortage among pharmacists is persistent and concerning, it does not appear to have as great an effect on overall budgets due to the relatively small presence of pharmacists within a hospital.

Recruiting and retaining medical personnel: While the recent recession may have eased demand pressure for lower-skilled workers, it does not appear to have had the same impact on workers who require 2 or more years

of post-secondary schooling. Rising vacancy rates for RNs, pharmacists, and radiological technicians persist, leading institutions to offer signing bonuses, tuition reimbursement or loan repayment, flexible scheduling, and cash incentives for voluntary overtime shifts. Due to the length of time involved in training and education of new nurses, we do not anticipate that labor conditions will moderate in the near future; thus, costs for financial recruitment and retention incentives can be expected to continue rising.

Hospital Performance: The industry appears to be rebounding from challenges it faced through the late 1990s due to changes in Medicare reimbursement and the waning influence of managed care. While increased market clout is a positive note for the industry, if staffing costs continue their rapid ascent, consumers will ultimately pay the price in increased insurance premiums.

INTRODUCTION

Rising health care costs have been of growing concern for the Minnesota Legislature over the last several years as Minnesotans have seen their health insurance premiums increase, on average, 11 percent per year since 1998. Underlying costs of health care have also grown since 1998. The tight labor market present during this same time may be contributing to the escalating costs. For this reason, the Minnesota Legislature directed the Minnesota Department of Health to study the "effects of health care labor availability and its impact on health care costs."[1]

The Minnesota Department of Health used several strategies to conduct this study. First, we reviewed available hospital data collected by the health department to assess whether staffing costs were composing a greater share of a hospital's operating budget than in the past. We also reviewed historical wage data and the utilization of contract workers for various positions.

Second, the Department conducted site visits and telephone interviews with a wide-range of stakeholders, including hospitals, nursing homes, and trade associations, in order to assess the impact of the labor market on their operating budgets. The goal of the interviews was to gather the following information: wage history for the most prevalent positions in the institutions; salary costs as a percentage of overall operating costs; vacancy and turnover rates for positions; utilization of temporary agencies; and, how the institution is absorbing the increased wages. Finally, in order to assess national trends on these issues, we conducted a review of available data and literature.

In order to provide background and context information for the reader, the first section of this report gives an overview of health care spending in Minnesota and the U.S., the second section provides a brief overview on the fundamentals of wage setting and labor economics, and the third section examines recent trends in health care education and employment. The forth section of the report details the effects of labor availability on health care costs from both a state and national perspective. The fifth and final section is a discussion of findings and policy implications.

SECTION 1

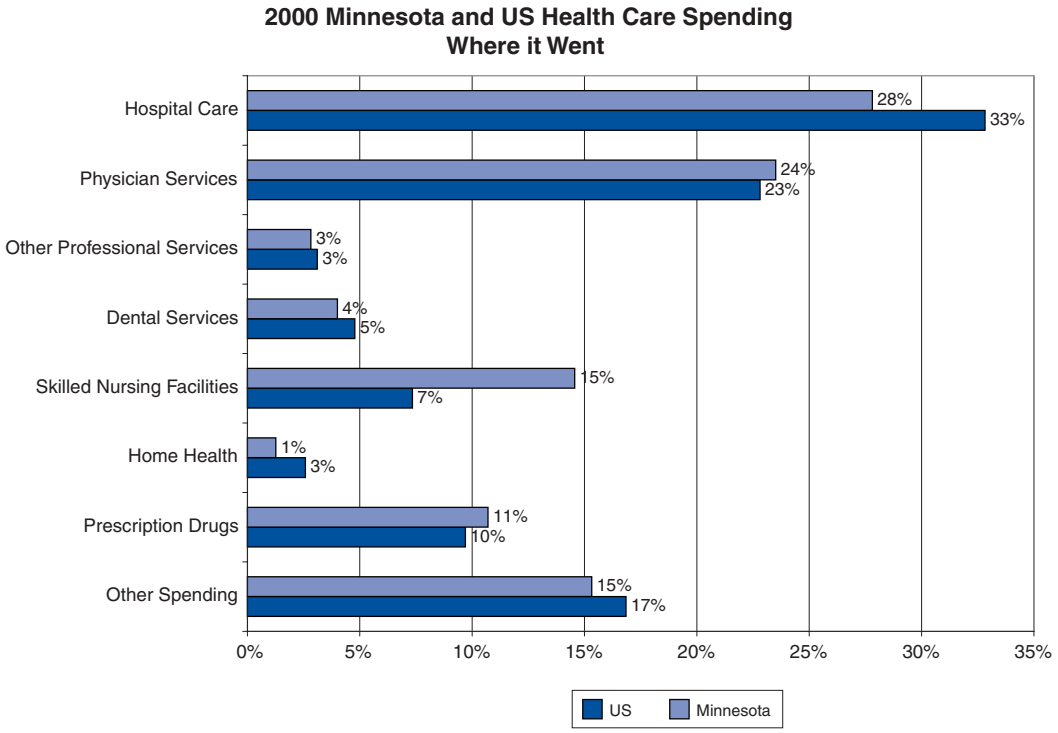
An Overview of Health Care Spending in Minnesota and the U.S.

Prior to beginning a discussion on labor market issues in the health care industry, it is important to gain an understanding of health care spending trends in Minnesota and the United States. In the following section, information will be presented on how much we spend on health care, where the health care dollar goes, and what expenditures are rising most rapidly.

Aggregate Health Care Spending Trends

Health spending in Minnesota during 2000 totaled approximately $19.3 billion or $3,928 per person and comprised nearly 10.5 percent of the state's economy.[2] In the same year, hospital spending comprised 28 percent of all health related spending; physician services accounted for 23.5 percent; long-term care, 16 percent; prescription drugs, 11 percent and dental services, 4 percent (figure 1). This spending breakdown is fairly similar to national statistics.[3] Areas where spending grew most rapidly in Minnesota during the 1990s include outpatient hospital services, general physician services, and prescription drugs. The rate of increase in inpatient hospital spending actually declined over the mid-1990s, primarily due to managed-care-related pressures, which included shifts in site of care to outpatient settings.

Figure 1



Source: MDH Health Economics Program; Centers for Medicare & Medicaid

Recently released national spending trends for 2000 show that a shift is taking place in the structure of health care spending growth. Hospital expenditures for Medicare, Medicaid, and private insurance contributed more to increased spending in 2000 than prescription drugs, in large part because hospital spending comprises a larger share of total health spending. According to analysts, much of this increased spending came as hospitals have consolidated, improving their ability to negotiate increased reimbursement. These gains, however, have been tempered due to rising staff and energy costs.[4] We will discuss increasing staffing costs in the context of Minnesota later in this report.

Private Insurance Spending Trends

From 1998-2000, spending for services covered by private commercial health insurance products (per member, per month) in Minnesota grew, on average, 11 percent per year. During this time, growth in prescription drugs averaged nearly 21 percent each year and accounted for 22 percent of total private health care spending growth. Inpatient and outpatient spending rose an average of 7 percent per year during this time and accounted for 20 percent of total spending growth. Spending for physician services rose nearly 13 percent per year from 1998-2000 and accounted for 42 percent of overall health spending growth. Finally, administrative costs grew slightly under 8 percent and contributed to 9 percent of total spending growth.[5] These numbers are similar to numbers observed on a national level; however, due to significant differences in data collection methods, direct comparisons are not possible.

Premium Trends

It is generally recognized that health insurance premiums are cyclical in nature, meaning that changes in premiums in a given year do not necessarily reflect changes in the underlying cost of providing health care in the same year. Rate increases for private health insurance premiums averaged 16 percent in Minnesota during 2000, a four percent increase over 1999 and a trend that is a significant departure from the nearly flat premium growth in the mid-1990s.[6] Premiums for 2001 are also expected to show a double-digit increase. These statistics are consistent with national trends and suggest that the cyclical insurance underwriting cycle is on an upswing. Upswings are characterized by rising premiums for employers and widening operating margins for insurers. The fact that the underwriting cycle is currently in an upswing, combined with increasing growth in underlying health care costs, are the likely reasons responsible for the double-digit increases in the state over the past several years. While the improving margins of health plans may indicate that premiums may begin to stabilize in coming years, the increasing underlying cost of health care may act to temper effects of the downside of the underwriting cycle. That is, while downsides of premium cycles bring declining premiums, the degree to which premiums decline may be limited by the strong underlying cost growth.

SECTION 2

Health Care Labor Economics

To understand the affects of a workforce shortage, it is important to realize how labor market conditions relate to the economy, and how they are defined. The following section offers basic principals of health care labor economics, as well as labor market definitions.

One way to understand the potential cost implications of a health services workforce shortage is to use supply and demand analysis. Shortages occur when the demand for workers in a specific occupation is greater than the supply of willing, qualified, and available workers. This type of analysis helps to predict the changes that will occur in the workforce as it responds to shifts in supply and demand. More specifically, it can provide insight into workforce shortages and their affects.

Most economic analysis relies on the premise that people make rational choices, buying what they need and want according to their budget. In addition, traditional economics assumes that consumers will utilize their budget for things that provide them with the greatest utility or happiness. Supply and demand theory argues that when the price of a good goes down, demand for that good will go up, all other things remaining constant. Unlike the market for many goods, however, the health care market is relatively inelastic (that is, the demand for a product is not as responsive to changes in the price of that product). This is due to the fact that health care is a good that, in most cases, people cannot forgo, regardless of their budget constraints. In light of this, as the price of health care has increased, the demand has not decreased.

As the demand for health services has continued to rise due to demographic shifts and other factors, so has the demand for health care workers to produce these services. As the demand for health care workers has gone up, the employment rate for these workers has gone up. If the existing supply of workers remained stable, there would be fewer workers to hire, as these workers gained employment. Therefore, as the demand for health care workers increases, the wage rate paid to workers (the "price" of the good) rises. In addition (assuming a stable pool of workers), as more workers are hired, supply dwindles, further driving up wages.

In health care, however, the pool of workers is not stable. New graduates of nursing, medicine, pharmacy, certified nursing assistant (CNA), and other health care provider programs increase the pool of workers every year. The rate at which these workers graduate and become licensed is, therefore, very important to the wage rate. An increase of graduates will boost the number of available workers for an industry, giving employers more applicants from which to choose. At the same time, not every graduate who receives licensure to perform medical or health care services will take work in that field. For this reason, it is important not only to look at the number of new licensures, but the percentage of the licensed workforce that works in the health care sector (this is called the participation rate).

A note on technology: While in many industries the introduction of technology has served as a labor-saving innovation (for example, the introduction of automated processes in factories), in health care the introduction of technology has not been able to reduce labor intensity. Health care, by its nature, is a handicraft process where

doctors, nurses, and other professionals interact on a personal basis with patients. While technology has undoubtedly improved outcomes and enhanced medical ability, it is not clear that it has reduced the need for labor in health care.

Indicators of Work Force Shortages

One indicator of a work force shortage, according to supply and demand analysis, is an industry's wage increases being larger than other industries'. That is, if wage increases are larger in industry A than in industry B, it may indicate that demand for labor is stronger in A, and may signal that industry A is experiencing a work force shortage. It is important, however, to examine wage increases for industries as a whole, rather than using single occupations within an industry to illustrate shortages. Using information about a single occupation in an industry doesn't account for labor substitution. Labor substitution occurs when institutions substitute high-wage workers with those who are less expensive. In health care, for instance, if there is a high demand for health services, but the supply of registered nurses (RNs) is not keeping pace with that demand, their wages will increase. If the supply of licensed practical nurses (LPNs) and CNAs is growing in line with the demand for health services, their wages will not increase as much. In the face of such differentials, health care institutions may choose to, where feasible, substitute LPNs and CNAs for RNs. For this reason, although a wage increase may illustrate a discrepancy between supply and demand within a single occupation initially, substitution may avert an overall industry shortage and increases in labor costs overall. The extent to which substitution can occur within a given industry depends upon the degree to which skills, regulation, education, and professional training allow for substitution of one occupation for another.

Vacancy rates are also used to indicate trends in workforce conditions. Vacancy rates refer to the percent of unfilled, budgeted positions for which there is active recruitment. The presence of high, persistent vacancy rates can be an indicator of a workforce shortage. It is important to consider the changing world of health care when looking at vacancy rates. Taking the example of RNs, the meaning of vacancy rates has changed over time, because an RN vacancy means something different to the health care system than it did ten years ago. Analysts argue that the financial pressures from managed care and other health care cost-containment initiatives, and corresponding reductions in nurse staffing levels, have reduced the ability of institutions to move nurses from one unit to another to meet temporary needs. For this reason, some believe that vacancy rate statistics are a more meaningful and accurate indicator of an industry shortage in the current workforce because less flexible staffing situations prohibit the shifting of workers across departments to alleviate vacancies.

Another potential indicator of overall industry conditions is labor turnover rates. Labor turnover refers to the change in the employment of an industry during a reference period resulting from people leaving and entering the industry's workforce. The labor turnover rate is the difference between the number of new employees and the number of people who have discontinued employment. This indicator is used to suggest labor market conditions by illustrating the ease with which workers can shift between employers.

Workforce projections are also used to predict future situations of oversupply or shortage in occupational sectors. The accuracy of workforce projections is often questioned, however, because assumptions about the future of an industry are used to make the prediction. For instance, a recent projection that was challenged by many was a report called "The Critical Challenges in Revitalizing the Health Professions for the Twenty-First Century," published in 1995 by the Pew Health Professionals Commission.[7] It reported that there was an "oversupply of

nurses in the U.S. and this oversupply would continue to grow in the future."[8] Critics argue that the current trends in the nursing sector suggest a shortage as opposed to a surplus, and therefore dismiss the validity of the projection. According to critics, the flaw of this study was the Commission's conclusions being based on the assumption that managed care would restructure the health system, forcing hospitals to function with more limited resources. Although managed care and the Balanced Budget Act have reduced hospital payments relative to what they otherwise would have been, they have not reduced the volume of service provided by hospitals. In fact, many argue that the demand for nurses has increased because of the aging of the population, the increased use of sophisticated technology, an increased ability to manage chronic diseases, and pressures to improve quality.

Scope of Work Force Shortages

There are several ways to define the scope of a workforce shortage. The first is a qualitative method that relies on the opinions of individuals familiar with an industry. Within the health care industry, opinions might be sought from nurse supervisors, human resource directors, or chief operating officers. These opinions are normally collected via survey. Items include rating the difficulty of filling positions, hiring workers, and the level of concern the issue has relative to other industry problems. Responses are based on the normative judgments of the respondents (what they think staffing levels ought to be, the level of difficulty hiring staff ought to be). These value judgments are therefore subject to who is asked, and don't necessarily reflect market realities.

A second method for defining the scope a workforce shortage is called "professional determinations." In health care, this involves determining the number of staff in a particular occupation necessary to care for the medical needs of the population. The difference between the estimate and the current number of workers indicates the degree of a shortage or surplus. A drawback with this definition, if applied to the aggregate, is that it is not clear that the employed staff are distributed appropriately across geographic or other areas. For instance, there may be twice as many LPNs in urban areas than was determined, based on the need, and twice as few in rural areas, but the aggregate will not reflect this. In addition, this determination is susceptible to problems if labor substitution is not taken into consideration.

A third and popular technique for determining the scale of a workforce shortage is the ratio technique. This involves determining the current ratio of workers in an occupation to the population and comparing it to the ratio that is projected in the future. The future ratio is calculated by the likely number of future graduates, the rate of retirement in the occupation, and the rate of population growth. The difference between the current and future ratios reflects a possible shortage of workers. A problem with this technique is that it doesn't take into account possible shifts in demand. Specific to the health care sector, it ignores changes in reimbursement, changes in lifestyle factors, population aging, and other factors. In response to this criticism, some current applications of this measurement have begun to take demographic shifts and other factors into consideration.

Finally, vacancy rates are often used to indicate both the presence and severity of a workforce shortage. The scope of the vacancies (both the number of vacancies and the length of the vacancies) can be used as an indicator to assess the degree of the shortage. The main problem with using vacancy rates to determine the scale of a workforce shortage is shifts in employer expectations. When there is an abundance of labor in an occupational sector, employers may become accustomed to hiring workers with a specific level of training and experience. When the labor market tightens, employers may find it more difficult to hire well-trained and experienced workers. This may lead to higher vacancies for longer periods of time, while employers spend time seeking out a specific quality of worker.

SECTION 3

Health Care Labor Shortages Defined

Data suggest the presence of a health care workforce shortage both in Minnesota and across the nation. Within the health care workforce, the shortage seems to affect occupations to varying degrees. In addition, the likely causes of and solutions for the shortages vary across the different occupations. In this section, we review national and state level data collected by government and other sources. We also review and summarize some of the major national and state initiatives to address the shortage.

Overview of the Health Care Workforce

Over the last twenty years, the health care sector and the cost of health care services have been frequent issues of concern to policy makers. Recently, workforce costs, one of the largest portions of the health care cost input, have been under examination. According to the U.S. Department of Labor, during 1986 to 1996, close to one out of every nine new jobs created by the economy was in health occupations, a trend that is expected to continue between 1996 and 2006.[9] In addition, employment in health service occupations grew at over 40 percent between 1986 and 1996, and is expected to increase faster than the average rate of increase for all occupations between 1996 and 2006.[10] As of December 2001, over 10 million people nationwide worked in the health services industry.[11] Despite an increase in overall employment in the health care sector, evidence suggests workforce shortages in specific health services occupations.

Research done by the American Hospital Association (AHA) found that the percentage of hospital executives who cited labor and staffing as one of their major concerns nearly doubled from 1999 to 2000 (34 percent to 58 percent).[12] In 2001, the Federation of American Hospitals and National Association of Public Hospitals and Health Systems found double-digit vacancy rates for registered nurses (RNs), imaging technicians, pharmacists, licensed practical nurses (LPNs), and nursing assistants. The Federal government has also acknowledged the shortage. In 1998, the U.S. Department of Labor, Bureau of Labor Statistics (BLS), began to track the issue. The Bureau estimates that, by the year 2008, 450,000 more RNs and 136,000 more LPNs will be necessary to fill the need (the BLS estimates that in 2000, there were approximately 2.2 million RNs and almost 680,000 and LPNs working in their field).[13]

Data suggest that Minnesota is also suffering a workforce shortage with an especially severe shortage in Greater Minnesota. The Department of Economic Security's 2001 State of Minnesota Job Vacancy Survey reported that in the fourth quarter of 2001, there were 17,776 job openings in the health care industry.[14] The survey also found that of the 124,000 total job vacancies in Minnesota, more than 14,000 were in healthcare occupations.[15] Registered nurse vacancies represented the fourth highest, and nursing assistants the sixth highest, job vacancy rates in the state.[16] This same survey showed that although the Twin Cities area has the highest number of health care worker vacancies, Greater Minnesota has a higher proportion of these vacancies.[17]

A recently completed survey by the Minnesota Department of Health shows that one important predictor of where a health professional will eventually practice is where he or she grew up. According to the survey, which asked about future practice plans of graduating students and residents in medical, pharmacy, dental, and other health professional programs, those who had graduated from Minnesota high schools or colleges were significantly more likely to remain in the state to practice after completion of their training than were those who had attended high school or college in other states or countries.[18]

Despite an overall workforce shortage, the situation differs by occupation type and health care setting. In addition, the contributing factors and possible solutions differ for different occupations. The next section of this report examines different occupations separately.

Registered Nurses (RNs)

Registered nurses make up the largest provider group in the health care market and occupy jobs across the health care sector. In 2000, the total national employment for RNs was approximately 2.2 million.[19] To practice, RNs must have either an associate degree in nursing (ADN) (4 or 5 years), bachelor of science degree in nursing (4 or 5 years), or an ADN diploma through a community or junior college (2 to 3 years), and must pass a national licensing examination. In addition, many states require periodic license renewal, which may involve continuing education. Registered nurses provide direct patient care and administer medications.[20] Although most RNs are employed in hospitals (about 59 percent in 2000) they also occupy positions in other settings, such as ambulatory care, home health, nursing homes, and outpatient clinics.[21]

Over the last twenty years, as the health care system has changed, so has the role of RNs. Cost containment has shifted care from the traditional acute care hospital setting to ambulatory care centers, community clinics, and nursing homes. Changes in technology have further encouraged these shifts, leading to a decline in hospital beds and length of stay. As a result, the level of acuity for hospital patients has increased. The combination of these changes has led to an upsurge in job opportunities and demand for nurses.

Current evidence suggests that these shifts in the marketplace have led to a pervasive national nursing shortage. The General Accounting Office (GAO) reported that national unemployment for RNs in 2001 was at a decade low of 1 percent and that, nationwide, the number of RNs employed per capita has decreased by 2 percent over the last 3 years.[22] This signals a sharp departure from the 44 percent increase in employed RN's per capita from 1980 to1996.[23] At the same time, the BLS projected that RNs would be the fastest growing occupation among positions requiring a post secondary or associated degree.[24]

A decrease in nursing program enrollment, high turn over rates, and an aging RN workforce are also contributing to the nursing shortage. According to a 1999 Nursing Executive Center report, nursing diploma programs and degree program enrollment declined 42 percent and 11 percent respectively between 1993 and 1996. As a result, the number of successful RN licensures declined from 97,679 in 1996 to 74,787 in 2000 (a decrease of 23 percent).[25] The same study found that the national turnover rate for RN's increased from 12 percent to 15 percent between 1996 and 1999.[26] A Federation of Nurses and Health Professionals study conducted in March 2001 found that 1 in 5 nurses is considering leaving their job.[27]

As the number of new nurses decline, the number of nurses aging out of the profession is increasing. Between 1983 and 1998 the average age of U.S. nurses increased by 4.5 years, from 37.4 to 41.9 years.[28] At the same time, the average age of the U.S. worker increased less than 2 years, from 37.4 in 1983 to 39.0 years in 1998.[29] According to an American Hospital Association work force study conducted in 2001, the average age of working RN's in 2000 was 43, and the number of working RNs under 30 decreased by 41 percent.

Fewer than one in three nurses were under 40 years of age in the year 2000.[30] According to the BLS, the nursing profession's retiree replacement needs will be 330,000 by 2008, putting it in the top 10 occupations most affected by the baby boom.[31] An extensive study on the aging RN workforce, published in the Journal of the American Medical Association in 2000, predicted that by 2010 more than 40 percent of RNs will be older than 50 years. In addition, the study reported that if current growth trends continue, there will be a 20 percent deficit between the existing pool of RNs and the HRSA-estimated-requirement by 2020.[32] The culmination of all of these factors has lead to speculation that there will be a nationwide shortage of one million nurses by 2010.[33]

In response to the RN shortage, the GAO was charged with further studying the issue. Their resulting study described the shortage and attributed it to problems of retention and recruitment. Low job satisfaction driven by inadequate staffing levels, heavier workloads, and the increased use of mandatory overtime were cited as causes for low retention and recruitment.[34]

To alleviate the nursing shortage on a national level, the Federal government has taken several approaches. The first has been to fund a project headed by HRSA called the Nurse Education Loan Repayment Program. This project will use $7.3 million to repay educational loans of clinical care nurses who agree to work for two years in designated public or nonprofit health facilities facing a critical shortage of nurses. The second Federal initiative, also headed by HRSA, allots more than $20 million to be awarded in the form of 94 grants to 82 colleges, universities, and other organizations, with the intent of increasing the number of nurses with bachelor's and advanced degrees.[35]

In Minnesota, like the nation, RNs represent the largest health care occupation. According to the Minnesota Nurses Association, Minnesota had an all-time high of approximately 58,000 RNs working in 1999, with approximately 2,900 RN positions vacant across the state.[36] Minnesota Department of Economic Security statistics showed that of the 46,630 estimated total RN positions in the fourth quarter of 2001, 3,260 were vacant (about 7 percent).[37] In Greater Minnesota, the shortage appears to be more acute. The most recent vacancy statistics reported by the Minnesota Department of Economic Security show a vacancy rate for RNs is 7.8 percent for RNs in Greater Minnesota, and a rate of 6.4 percent for the Twin Cities.[38]

Similar to the national shortage, Minnesota's RN shortage is aggravated by a decrease in nursing program enrollment, high turnover and vacancy rates and an aging work force. Turnover rates for RNs in Minnesota have been very high.[39] According to a survey done by the Minnesota Hospital and Health Care Partnership (MHHP), the average turnover rate for RNs in 2001 was 6.3 percent.[40] In addition, the Minnesota Job Vacancy Survey Report found that in the fourth quarter of 2001, nurses had a 7.0 percent vacancy rate compared with an average job vacancy rate across all occupations of 3.1 percent (the report showed a rate of 5.9 percent for healthcare practitioners, overall).[41] Finally, the age structure of Minnesota nurses increased 1.5 years between 1996 and 2000. In 2000, the average age of an RN in Minnesota was 45.3.[42] This aging trend is far more pronounced than the national average: RNs in Minnesota are almost three years older, on average, than those in the rest of the country. [43]

State responses to the shortage have focused primarily around industry efforts. For example, in October 2001, MHHP joined with the Healthcare Education-Industry Partnership and Minnesota Colleagues in Caring to examine ways to create capacity for nursing education in Minnesota. In addition, the Minnesota Nurses Association (MNA) has conducted a study funded by the American Nurses Association to quantify the effects of the nursing shortage on quality of care. The MNA has also initiated legislation to promote nursing recruitment, improve the working environment and monitor quality-of-care issues related to the shortage.

Pharmacists

Pharmacists represent the third largest professional group in the United States. [44] According to the BLS, national pharmacist employment in 2000 was roughly 212,660.[45] To practice, pharmacists need to be licensed, which requires that they graduate from an accredited college of pharmacy[46], they must fulfill an internship under a licensed pharmacist and pass a state examination.[47] Most states require continuing education for license renewal. The majority of pharmacists practice in pharmacies located in traditional health delivery settings including hospitals, medical centers, long-term care facilities, and in retail areas such as drug stores and grocery stores. A smaller number of pharmacists work for managed care plans, consulting firms, universities, and pharmaceutical companies.

The role of the pharmacist has changed dramatically over the last decade. Beginning in the 1990s, the profession raised educational standards, requiring a doctorate and increased clinical and practical skill training.[48] As a result, the role of the profession expanded beyond pharmaceutical dispensing to training other health care professionals about prescription drugs and taking an increased role in the management of patient care. At the same time, the complexity of medications amplified and the number of prescriptions written per year increased dramatically (44 percent between 1990 and 1999).[49] In addition, an aging population, increased coverage of prescription drugs, and increased consumer demand has lead to an increased demand for pharmacists.

In response to these changes, nationally, the number of pharmacists has increased by 14 percent from 1991 to 2000 compared to a 9 percent growth in U. S. population.[50] Despite this, evidence suggests that the demand for pharmacists has greatly outstripped supply. According to the National Association of Chain Drug Stores, in February 2000 about 6,500, or 6 percent, of pharmacy jobs at chain pharmacies were unfilled. This represents an increase of 4,000 vacancies since February 1998.[51] In terms of hospital pharmacists, the American Society of Health-System Pharmacies found that 70 percent of pharmacy directors termed the pharmacist shortage "severe" in 2000, compared with 48 percent in 1999.[52] Finally, according to a HRSA pharmacy workforce study, 11 percent of public hospitals reported a pharmacist shortage in 2000 compared to 5 percent in 1996.[53]

The pharmacist shortage is further affected by a decrease in pharmacy program enrollment. Data from the American Association of Colleges of Pharmacy shows that, although the number of applications for pharmacy programs hit a high of 342,000 in 1994, it rapidly decreased throughout the mid-1990s and was only 228,000 by 1999.[54] The combination of these shifts has lead many to project large future shortages.[55] For instance, according to the HRSA's Pharmacist Workforce Shortage Study, by 2010, there will be about 224,500 active pharmacists, and although they didn't predict demand for pharmacists in 2010, they reported that the factors currently influencing demand will last at least 5 to 10 years.[56]

In December 1999, Congress directed the Department of Health and Human Services to study the validity and size of the pharmacist shortage. HRSA conducted the study. HRSA's report presented evidence supporting the existence of a shortage and identified four contributing factors. The first was an increased use of prescription drugs. The second was an increase in competition for pharmacists among retail pharmacies due to store openings, expanded hours, and increased time pharmacists spend verifying third- party payer information. The third factor identified in the report was the expansion of pharmacy practice and roles. Finally, HRSA reported that changes in the pharmacist workforce, such as an increase in the number of female pharmacists who are more likely to work part time, the loss of new graduates due to changes in the entry-level degree needed to enter pharmacy programs, and the increasing likelihood that pharmacists will not choose to practice in rural and underserved settings had contributed to the shortage. They also provided several possible policy approaches to address this issue. These options included using technicians to perform repetitive manual tasks, and utilizing automation to increase efficiency and reduce pharmacists' workload.[57]

In June 2001, Congress acted to begin addressing the pharmacist workforce issues by passing the Pharmacy Education Aid Act. The act will provide funding for pharmacy school infrastructure, such as capital expenditures to modernize or expand existing pharmacy schools and to create new schools. The Act will also promote pharmacy program enrollment by enhancing funding for student loans and scholarships. In addition, the Act seeks to assure an adequate supply of pharmacy faculty by expanding existing faculty loan repayment and recruiting programs for health professional schools.[58]

According to the HRSA workforce study, Minnesota reported the highest demand level for pharmacists of any other state. In the fourth quarter of 2001, there were approximately 3,720 total jobs open to licensed pharmacists and 334, or 9 percent, were vacant.[59] Reinforcing the presence of a shortage, the Minnesota Department of Health (MDH) found that well over half of all pharmacists in Minnesota started a new job in the last three years, suggesting an increase in opportunities due to a tight labor market.[60] In addition, according to the Health Professions Trainee Exit Surveys 2002 results released by MDH, roughly a quarter of pharmacists who responded said that they received five or more job offers during their job search, almost half responded that it took less than a month to find a satisfactory practice position, and more than 56 percent reported no difficulty finding a job.[61]

Licensed Practical Nurses

Licensed practical nurses represent the second largest health care occupation. The BLS reported that in 2000, total LPN employment was 679,470.[62] The BLS projects LPNs as the fourth fastest growing employment category of positions that require postsecondary or associate degrees.[63] To practice, LPNs must pass a national examination after completing a state-approved practical nursing program (normally about 1 year of both classroom and clinical practice). Licensed practical nurses provide basic bedside care under the direction of a physician and RN. These activities include taking vital signs and treating bedsores. In states where the law allows, LPNs also administer prescribed medicines or start intravenous fluids.[64] Nationally, 29 percent of LPNs work in nursing homes, 28 percent in hospitals, and 14 percent in physicians' offices and clinics. Other work settings include home healthcare services, residential care facilities, and schools.[65]

Consistent with the picture for RNs, data suggest a national LPN shortage. According to a recent study by the American Health Care Association (AHCA), an organization which represents the long-term care community, the national vacancy rate for LPNs in nursing facilities was 14.6 percent in 2001. In addition, the annualized turnover rate for LPNs in nursing facilities was found to be roughly 54 percent. The AHCA also reported that 75.8 percent of respondents said that it has become more difficult to recruit LPNs relative to the year before.[66]

According to the Department of Economic Security, there were 16,870 LPNs working in Minnesota in the fourth quarter of 2001, and approximately 1,581 of these positions were vacant (roughly 9.4 percent).[67] The Minnesota Health and Hospital Partnership reported that the average turnover rate for LPNs was 14.76 percent.l[68] In the same 2001 study by the AHCA, vacancy rates for LPNs in Minnesota nursing facilities were reported at 12.9 percent and annualized turnover rates were reported as 32.7 percent.[69] Unlike RNs, the shortage of LPNs seems to be affecting the Twin Cities more than Greater Minnesota. According to the Office of Rural Health and Primary Care, 84 percent of LPN positions remain open for more than two months. Although Greater Minnesota has a proportionally higher share of openings for LPNs, the Office of Rural Health and Primary Care reported that employers in the Twin Cities report having to wait a longer period of time to find and hire LPNs than employers in Greater Minnesota. In addition to tight demand, between 1994 and 2000 the supply of LPN graduates preparing for Minnesota licensure decreased by 30 percent.[70]

Nursing Assistants

Nursing assistants represent the ninth fastest growing occupation of jobs that require short to moderate training periods. According to the BLS, about 2.1 million nursing assistants were employed in 2000.[71] Although in some settings very little training is required to practice as a nursing assistant, hospitals often require mandatory training (75 hours of classroom and practical training) and the completion of a state competency test. Nursing assistants who complete the program are certified and placed on a state registry. Nursing assistant duties depend on in-house and outside training, experience, and type of health care facility. Generally, however, nursing assistants work under the direction of RNs and LPNs and take vital signs, serve meals, make beds, and help patients eat, dress, and bathe.[72] Nationally, about 50 percent of nursing assistants work in nursing homes and 25 percent work in hospitals. They also work at home health agencies, visiting nurse associations, social services agencies, and residential care facilities.[73]

According to data from the AHCA "Nursing Position Vacancy and Turnover Survey," nursing assistants are also in short supply. AHCA reports that the annualized turnover rate for nursing assistants in nursing facilities was highest in the nursing profession in 2001 at over 78 percent. In addition, they reported the 2001 vacancy rate in nursing facilities to be 11.9 percent. As with LPNs, the majority (over 58%) of respondents reported that it had become more difficult to recruit nursing assistant than in the previous year.[74]

Data for Minnesota indicate that the state seems to be suffering a shortage of nursing assistants. There were 30,200 nursing assistants working in Minnesota in the fourth quarter of 2001.[75]The estimated vacancy rate for the second quarter of 2001 was 9.3 percent and the turnover rate was 21.2 percent.[76] In terms of actual positions, the Minnesota Department of Economic Security, Research and Statistics Office Job Vacancy Survey, approximately 2,443 jobs were vacant in the fourth quarter of 2001.[77] According to the AHCA "Nursing Position Vacancy and Turnover Survey," Minnesota nursing facilities have a 10.4 percent vacancy rate for nursing assistants and an annualized turnover rate of 61.6 percent.[78]

SECTION 4

Effects of a Worker Shortage – State and National Evidence

The following section details the effects of health care workforce conditions on various institutions. The information presented in this section is based on data collected by the Minnesota Department of Health; interviews with hospitals, trade associations, and other providers from October 2001 through January 2002; and a review of available literature.

To provide a definitive account of the dynamics between changes in health care utilization, availability of technology, and staffing is difficult, even in the case where complete data is available. Data in this study is limited primarily to aggregated hospital data, and therefore we can only illustrate, in part, how dynamics of the health care market are affected by staffing pattern changes. In addition, the data collection effort that this study relies on—the Health Care Cost Information System—has experienced two rounds of methodology changes in the last 5 years, making longitudinal analysis more difficult. Despite these limitations, the variety of sources used in this analysis points out a number of trends that can be of value to policymakers.

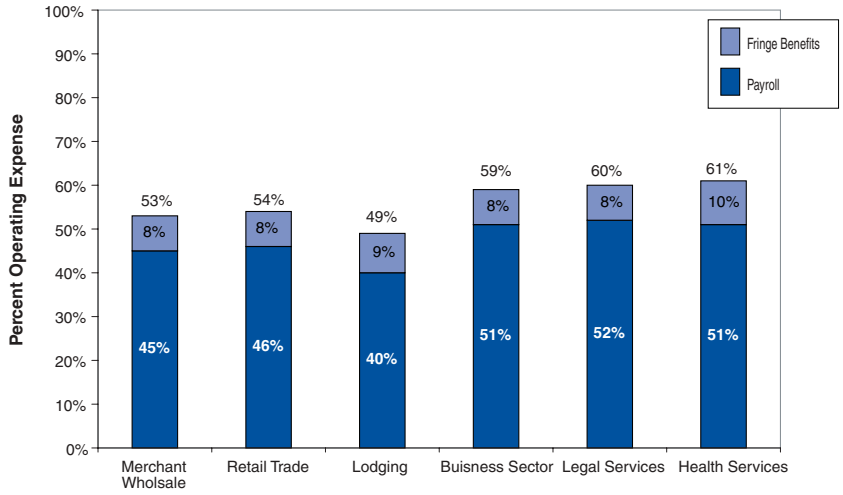
Labor Intensity in the Health Care Industry

Labor intensity measures the percentage of expenses which go toward labor in various industries. In industries that are more labor-intensive, wages and salaries represent a larger portion of overall operating expenses. Thus, in industries that are more labor-intensive, wage increases have a greater impact on overall costs of production than for industries which are less labor-intensive.

As shown in figure 2, payroll and benefits costs (as a portion of overall business costs) are relatively high in the health services industry when compared to other industries. Individual interactions with a wide range of providers, as well as complex payment and financing systems, contribute to the intensity level. Many other industries have found ways to automate certain services or production processes. As mentioned earlier, in health care, while technology has certainly enhanced provider capabilities, it hasn't and cannot replace the need for health care providers. As a result, health care is, and likely will continue to be, a relatively labor-intensive industry. Therefore, health care labor costs will continue to play an important role in determining the overall cost of health care.

Figure 2

Payroll and Benefit Expenses as a Percent of Operating Expenses for Selected Industries: 1997



Source: 1997 Economic Census

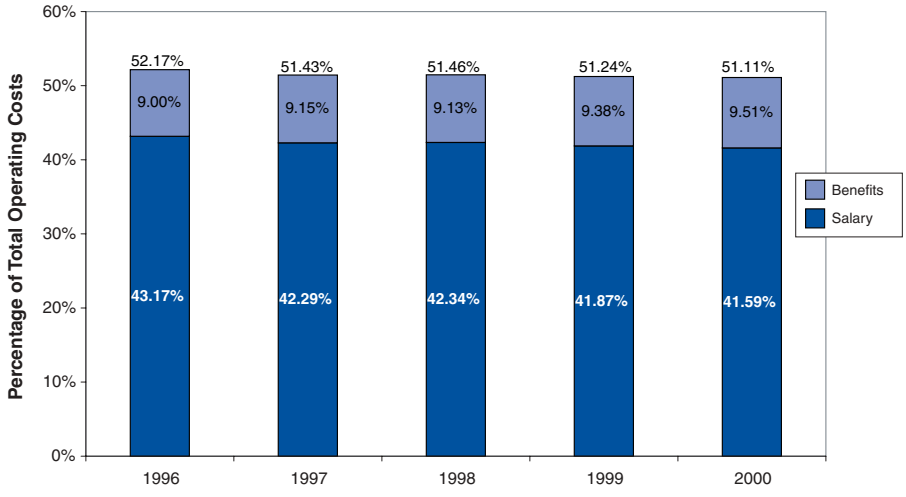
Staffing Costs within Health Care Institutions

This section of the report examines the role of staffing costs relative to other expenses at Minnesota's health care institutions.

The proportion of staffing costs to overall operating expenses for Minnesota hospitals has remained fairly consistent throughout the late 1990s. Salary and benefit costs averaged slightly over 51 percent of operating costs during that time period.[79] This is not to say that wages are not rising; rather, they appear to be rising proportionately with other cost centers in hospitals. Figure 3 does not reflect the settlement reached last year by Twin Cities area hospitals that will raise RN salaries by 21 percent over the next three years; we address that issue later in this report.

Figure 3

Labor Costs as a Percentage of Total Operating Costs for Minnesota Hospitals

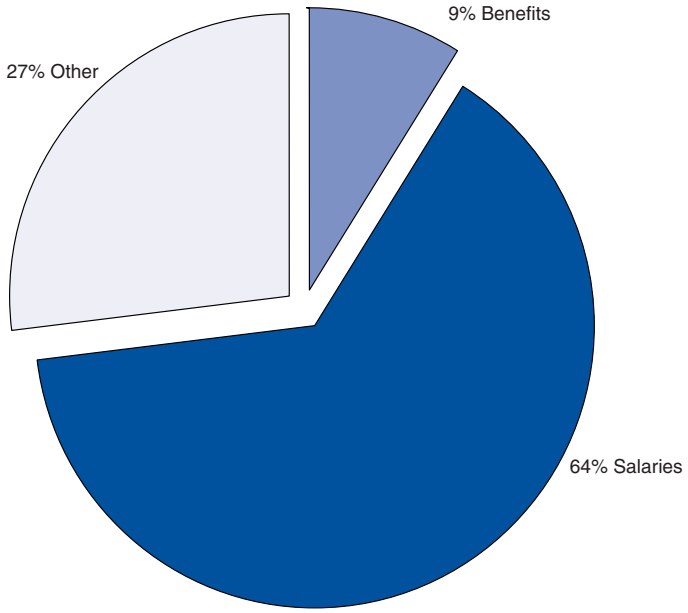


Source: HICCIS Database

Data received from the Minnesota Health and Housing Alliance (MHHA), a trade association for skilled nursing facilities, shows average staffing expenses for their members compose 71 percent of total operating expenses. MHHA says this figure has remained fairly constant over the 1990s.80 While MHHA members do not represent the entire long-term care industry in Minnesota, staffing cost figures for members of this organization are comparable to national numbers, so it is likely this figure is a relatively accurate representation for nursing facilities statewide (figure 4).

Figure 4

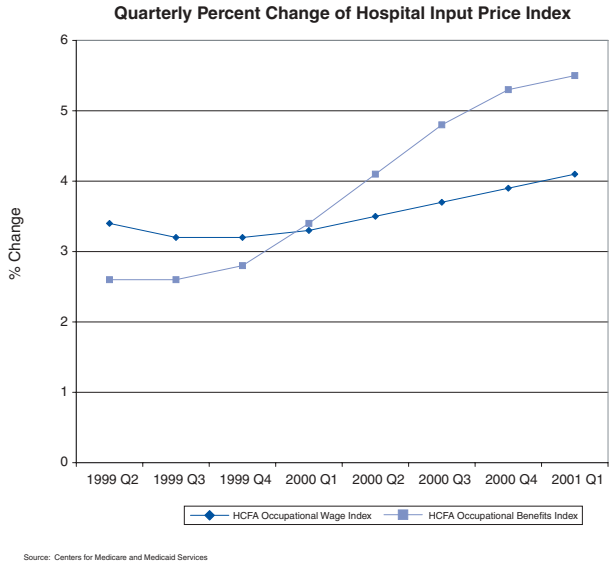
Salaries and Benefits as a Percentage of Total Nursing Home Operating Costs



Source: Minnesota Health and Housing Alliance

Nationally, data shows noticeable salary growth in hospitals during the first six months of 2001, with wages increasing 7.6 percent over the same time period in 2000.81 It is difficult to know whether the increase in salary costs are due to a greater number of hours worked, an increase in average hourly wage, or combination of the two. Evidence gained through the site visit portion of this study suggests it is likely a combination of factors, with providers (in particular, RNs) working a greater number of hours than in the past, and being paid a higher hourly wage. Additionally, data from the Center for Medicare and Medicaid Services, which calculates changes in wages and benefits within hospitals, shows a rise in both areas from 1999 to early 2001 (figure 5). The rise in benefits is more evident than the rise in salaries, possibly because hospitals and nursing homes are attempting to substitute benefits in lieu of pay increases.

Figure 5

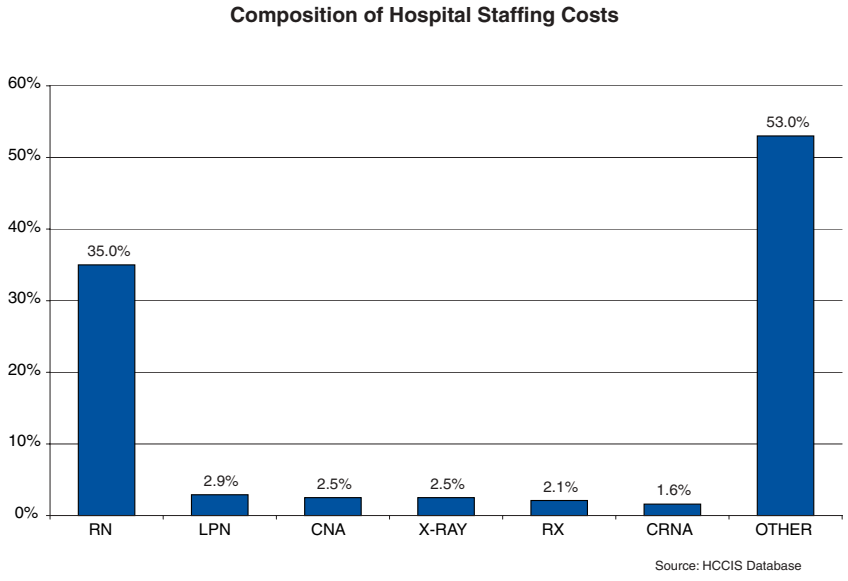


Compensation for Various Positions in Institutions

Composition of Staffing Costs

Registered nurses account for 35 percent of salary costs in hospitals and make up the bulk of defined staffing costs. LPNs compose 2.9 percent of overall staffing costs; CNAs and x-ray technicians both take up 2.5 percent of costs; pharmacists, 2.1 percent; and nurse anesthetists, 1.6 percent. The remainder and majority of staffing costs (53 percent) fall into an "other" category.[82] "Other" is composed of administrative costs, occupational and physical therapists, physicians, lab technicians, temporary or contract workers and, in some cases, janitorial and food service staff (figure 6).

Figure 6



The Nursing Staff

Figure 7

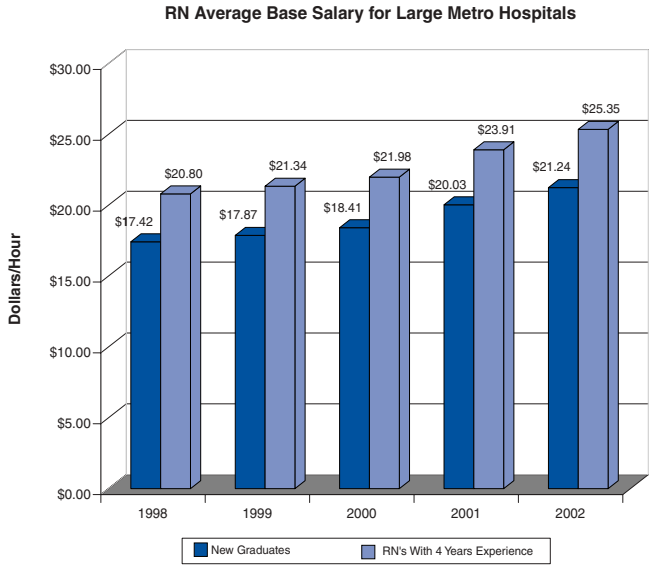
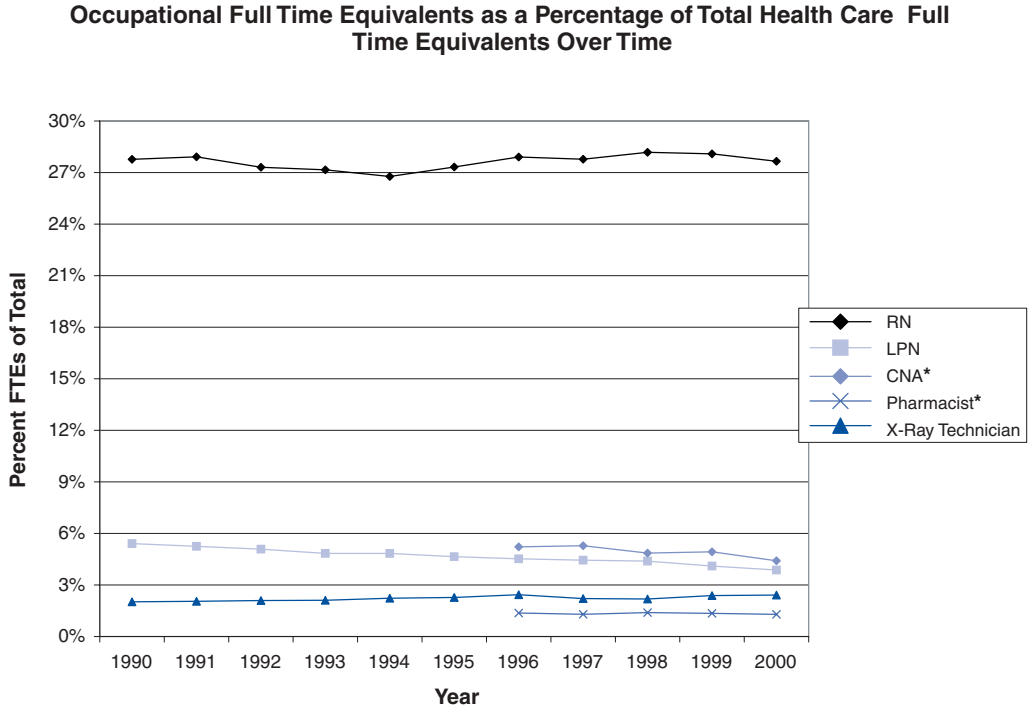


Figure 7 shows the change in average RN salaries for large Twin Cities area hospitals over the last five years.[83] The average salary has gone up 18 percent over that time period, from $20.80 per hour to $25.35 per hour for experienced RNs. Given that registered nurses compose the greatest share of the hospital workforce, averaging 28 percent across Minnesota hospitals[84] (figure 8), an increase of this level will likely have a significant impact on individual hospital operating expenses.

Figure 8



*data not collected until 1996

Source: HCCIS Database

Wage data on licensed practical nurses and certified nursing assistants is not collected as widely as data on registered nurses. However, the annual MHHA member survey has collected this information for the past five years. While this data may not be entirely representative of the experience of all nursing facilities, it is illustrative of wages in long-term health care facilities. Between 1996 and 2001, average CNA wages have increased from $8.11 per hour to $10.45 per hour – an increase of 22 percent. During this same time period, LPN wages have gone from $11.69 per hour to $15.08 per hour — an increase of 22.5 percent. These numbers are similar to the 23 percent rise in overall weekly wages in all industries from 1996 to 2000 in Minnesota.[85]

Pharmacists

As documented earlier, the demand for pharmacists has rapidly increased over the last several years, primarily due to an increase in the number of prescriptions filled, especially in supermarket and mass merchant settings. Administrators interviewed for this study commented extensively on the difficulty of hiring and retaining pharmacists. An administrator of a large hospital system in the Twin Cities commented that "…we are very happy to have a pharmacy school in Minnesota; however, it is not generating enough graduates to keep pace with demand in the metro area, much less in Greater Minnesota. The school graduates 60 students per year, and we are currently recruiting for 20 positions within our system alone."

Those interviewed indicated that rural hospitals frequently resort to sharing a pharmacist between multiple hospitals. Illustrating this is a capital improvement grant that was recently awarded to the Wilderness Health Care Coalition, composed of nine hospitals in northeastern Minnesota. They received $500,000 to implement telepharmacy projects at five of the nine hospitals, where they will jointly purchase and use technology allowing for automated medication dispensing as well as inventory control.[86]

Most hospitals in the Twin Cities now pay pharmacists an annual salary of $85,000 plus a significant signing bonus, oftentimes around $10,000.[87] Administrators indicated that retaining pharmacists often requires annual salary increases of 12 percent a year in order to compensate for required overnight and weekend work, and to remain competitive with community pharmacy settings. Given the small percentage of overall staffing costs that pharmacists comprise, it is unclear whether increases of this magnitude have a considerable impact on a hospital's budget; however, the demographic changes that will be occurring over the next 10 years, and the trend toward increasing utilization of prescription drugs, mean that hospitals will likely continue to feel the effects of a relatively short supply of pharmacists.

Radiological Technicians

Radiological technicians (RTs) are another position that hospitals are having difficulty filling. In each interview we conducted, administrators mentioned the rapid increase in stand-alone radiology imaging centers as the main reason for the increased demand for RTs. While data is limited on the number of these new centers, anecdotal and capital expenditure reporting information indicates that there has been a rapid growth of these types of facilities in the Twin Cities and in certain areas of Greater Minnesota.

The demand for RTs has lead to noteworthy salary increases. One health system in the state has seen salaries rise for RTs nearly 60 percent from 1995 to 2001 (with a 14 percent increase in 2001). A national survey found that RTs are currently earning an average wage of $21.20 per hour ($53,919 annually) – an increase of 20 percent since 1997.[88] While RTs make up less than 3 percent of the health care workforce, they are among the fastest rising staffing costs within hospitals.

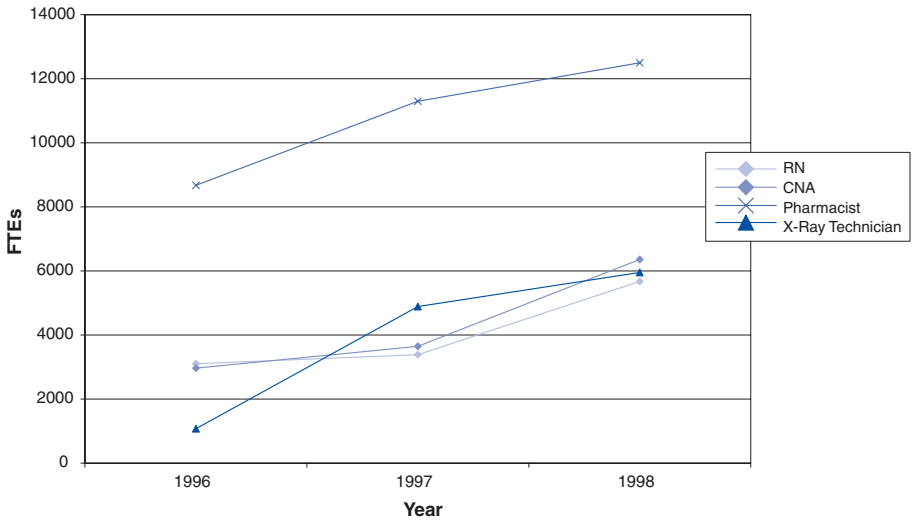
Temporary or Contract Workers

Over the last several years, hospitals have begun to increasingly rely on temporary personnel agencies to ensure that hospital shifts remain properly staffed with RNs, LPNs, and CNAs. While these services are expensive – averaging about $60 per hour for an RN, or nearly double the hourly wage of a staff nurse – temporary agencies provide a crucial service for hospitals. There is limited information available to quantify the actual costs associated with temporary or contract nursing staff, however, figure 9 illustrates, and our site visits confirmed, that it has become progressively more expensive for hospitals.

Administrators also informed us of the increasing trend for nurses to work part-time at a hospital (enough to ensure eligibility for benefits) and work their remaining hours for a temporary agency where the pay is significantly higher. Nurses do not frequently work full-time at temporary agencies because, although the pay is higher, the jobs generally do not include any benefits.

Figure 9

Consultant/Contract Full Time Equivalents by Occupation for Minnesota Hospitals



Source: HCCIS Database

Nurses and administrators alike view the increased use of temporary workers as a key reason for job dissatisfaction among nurses. These professionals told us that, as new staff is constantly rotating through a wing in a hospital, it is difficult to build relationships among nurses, and this often leads to less continuous patient care. They also indicated that full-time hospital staff sometimes feel resentment toward temporary workers because they perceive them as less dedicated to patient care and more concerned with salary. So, although the exact cost of contract workers is difficult to quantify, it is a rising expense for hospitals and skilled nursing facilities. Additionally, it appears to be having a negative impact on staff morale.

Fairview Nurses Strike

Although the nursing shortage is not solely to blame for recent labor actions, both nurses and hospital administrators indicated that it undoubtedly played a prominent role. Staff have reported feeling overburdened with high patient loads and mandatory overtime caused by the shortage. According to Merritt Research Services, a municipal bond research company, "you need to look at the nursing shortages in tandem with labor actions….Shortages mean working conditions will remain at stressful levels and are therefore more likely to trigger disputes."

In May and June 2001, over 6,400 nurses at thirteen Twin Cities metro-area hospitals threatened to go on strike over disputes related to staffing levels and mandatory overtime, as well as wages and benefits. According to Minneapolis Star Tribune interviews, nurses wanted relief from chronic staff shortages. They attributed the shortage with jeopardizing patient care and making their jobs "almost unbearable." The Minnesota Nursing Newsletter also cited poor staffing conditions caused by the nursing shortage as a primary reason to strike. Ultimately, 10 hospitals settled contract disputes before the strike deadline, while 1,350 nurses at 3 hospitals – Fairview Southdale and Fairview-University Medical Center's Riverside campus – struck for 23 days before reaching a settlement that raises wages 19 percent over the next 3 years. Roger Feldman, a health economist from the University of Minnesota, estimates that a nearly 20 percent raise in nursing salaries will increase the total staffing costs of a hospital by slightly over 2 percent, which Dr. Feldman estimated would result in a similar rise in health insurance premiums.[89]

While there are no aggregate figures available that estimate the total cost of the strike to Twin Cities hospitals, certain aspects can be examined. For instance, roughly 4,000 replacement nurses were brought into work during the strike. Replacement nurses can cost roughly $40 to $50 an hour plus recruitment fees, transportation monies, accommodations, and other incentives. Affected hospitals operated at lower capacity in order to preserve quality of care and appropriate nurse-patient ratios. This lead to costs associated with foregone revenue, legal and consulting bills and, finally, plans and preparations for the possible strikes. Moody's Investors indicated that the HealthEast care system paid nearly $2 million for 335 potential nurse replacements, which in turn lead Moody's to downgrade their bond rating.[90]

National Evidence on Labor Shortages

Skilled Nursing Facilities

The Center for Medicare and Medicaid Services (CMS) has undertaken a new initiative to review data available from Wall Street analysts on various segments of the health industry. A major finding included: "the most significant cost for nursing facilities is labor. According to a Credit Suisse First Boston analysis, about 55-60 percent of nursing facility companies' revenues go to pay for labor costs. It notes the wage rate increases over the last two years have been significant….Thus, the industry remains at the mercy of the labor market, which despite the recession, remains tight because of a severe nationwide nursing shortage. Because of the labor shortage, many SNFs rely on staffing agencies, which are viewed by Wall Street as expensive."[91]

Fitch Ratings, a bond rating company, also examined the skilled nursing market and found that "…Fitch's outlook for the long-term care sector is neutral to somewhat negative due largely to expected increasing labor costs….Fitch anticipates profitability to remain flat to declining in 2001." They based this analysis on the fact that most skilled nursing facilities are heavily reliant on Medicaid payments as well as "….compared to most hospitals, skilled nursing providers pay lower wages to nurses, making the attraction of qualified and experienced nurses more difficult. The sector…is susceptible to nursing shortages and should face increasing agency nurse utilization, overtime expense, and pay increases."[92]

Hospitals

Fitch Ratings has similar concerns with the hospital market as it does with skilled nursing. In a report from June 2001, they state that "…rising personnel expense, mainly due to the growing shortage of nurses, is the most significant long-term problem affecting hospitals and threatens to keep operating margins in check for the foreseeable future." They also found that, "Hospitals can afford to increase nursing salaries only slightly because most hospitals perform only at break-even profitability already. If salaries are increased substantially, almost all hospitals would be unprofitable."[93]

National studies have documented that many provider systems, after considerable consolidation, enjoy "must-have" status in health plan networks.[94] This has enabled networks of hospitals and clinics to increase their negotiating power with health plans and improve reimbursement for services. The hospitals we spoke with in or near the metro-area confirm that they have also been able to demand an increase in reimbursement rates from health plans over the last 18 months and there were instances cited where health systems threatened to reject contract offers from health plans if they did not improve their rates. Given these market dynamics, it is likely that hospitals, in large part, have been able to pass the increased wages on to third-party payers.

A study which examined national data on this issue found that, "…gains (in health plan contracts) were tempered by rapidly rising nurses' wages and energy costs. Weekly wages paid to workers in private hospitals increased 4.1 percent in 2000….Costs also increased as hospitals hired more costly temporary staff, provided flexible work arrangements, and offered signing bonuses to meet staffing needs….While nursing shortages wax and wane, pressures to increase nurses' wages are expected to increase." [95]

In another report by Fitch they projected that, "Maintaining its negative outlook of the past two years, Fitch believes that hospitals will continue to be challenged by various operating pressures and will produce flat or possibly weaker operating margins in 2001….Temporary staffing costs…have offset improvements hospitals have made in their negotiations with managed care companies….Although the absolute 0.7 percent increase in personnel costs…may appear small, it is much more significant when realizing that this 0.7 percent directly correlates with a 0.7 percent decline in operating margins."[96]

The market industry update on acute care hospitals recently completed by CMS comes to different conclusions about the impact of labor costs on hospitals. The analysis recognizes labor costs, and in particular nursing costs, as an area of some concern, but CMS does not believe it will have a significant impact on overall financial performance of the industry. They quote recent findings of a Medicare Payment Advisory Commission report which states, "…We note that revenue per adjusted admission grew at a greater rate than expenses, despite no appreciable change in hospital discharges, days, outpatient visits or non-operating revenue. This would suggest that payments from private payers continue to increase."[97] As health insurance premiums are expected to continue rising over the next year, CMS reports that analysts expect hospitals to remain well-positioned to extract rate increases during this time period.

SECTION 5

Discussion and Forecast

The Minnesota Department of Health was charged with determining the effects of health care labor availability and its impact on health care. We found evidence regarding the severity of health care labor conditions and their influence on increasing health care costs. All signs indicate that labor, which composes nearly 60 percent of spending on health care, is an important and growing aspect of overall costs. Data collected for this paper, as well as national studies, indicate that personnel costs began to rise toward the end of 1999. Payroll data from the first half of 2001 shows a continuation of wage acceleration. However, while some health professions are seeing a brisk acceleration of their wages, none of the available data shows that the majority of labor costs within health care institutions are rising more rapidly than labor in non-health related industries.

Factors influencing rising labor costs in Minnesota are trends being noted nationwide, in some cases much more severely. Utilization of health services is increasing due to a variety of factors, including the aging of the population. This drives the need for more health professionals and perpetuates the growing issues with the retention of medical personnel. It is important to note that the severity of the workforce shortage and resulting wage increases are not uniform across health professions. The shortage among registered nurses appears to have the greatest impact on staffing costs. In contrast, while the shortage among pharmacists is persistent and concerning, it does not appear to have a great effect on overall budgets due to the relatively small presence of pharmacists within hospitals.

Recruiting and retaining medical personnel: While the recent recession may have eased demand pressure for lower-skilled workers, it does not appear to have had the same impact on workers who require 2 or more years of post-secondary schooling. Rising vacancy rates for RN's, pharmacists, and radiological technicians persist, leading institutions to offer signing bonuses, tuition reimbursement or loan re-payment, flexible scheduling, and cash incentives for voluntary overtime shifts. While nursing vacancy and turnover rates in Minnesota are high compared to other industries in the state, when contrasted with national data, it appears as though Minnesota is faring better than the rest of the country. Nationally, a 12-13 percent annual RN turnover rate is reported, while in Minnesota, the annual RN turnover rate is estimated at 6 percent. With regards to the issue of an aging nurse population, Minnesota has a significantly older population of workers than the rest of the country. The average age of an RN in Minnesota is 45.3 years, versus the national average of 43 years. Due to the length of time involved in training and education of new nurses, we do not anticipate that labor conditions will moderate in the near future, thus, costs for financial recruitment and retention incentives can be expected to continue rising.

Aging Population: Minnesota's 65-and-older population is currently the fastest growing age group in the state. This trend, due to the aging of the baby boom generation, is expected to continue for at least the next 30 years.[98] This has implications for projections related to health service utilization. As the population ages, people spend greater amounts of money on health care because service use tends to increase with age. Average yearly medical expenditures are one indicator of this: expenses for people aged 18 to 64 are estimated at $1,861, while for those over 65, the average is $5,370.[99] Therefore, as the population ages, it is likely that there will be a continued and increased demand for health care professionals, exacerbating the strain on the labor market for these individuals.

Hospital Performance: The hospital industry was faced with a number of challenges in the late 1990s. The Balanced Budget Act of 1997 reduced Medicare payment increases, and the growing influence of managed care meant that patient stays were curtailed and lower reimbursement for services was being offered. The industry appears to be rebounding from this, in part due to further changes made to Medicare reimbursement policy, as well as the ebbing of managed care companies' marketplace negotiating leverage. CMS reports that the outlook for the industry is fairly positive due to aging demographic trends, commercial premium rate increases, changes in Medicare payment policies and the projected improvement of the overall economy in the later half of 2002. They have concerns regarding the impact of the recession on state Medicaid budgets and the rising costs of pharmaceuticals, malpractice insurance, utilities, and pensions.[100] While the agency has expressed some apprehension about the impact of labor costs on overall hospital budgets, it is not their leading concern. However, given that labor costs compose nearly half of an average hospital's operating budget, combined with their increased negotiating power with health plans, if staffing costs continue their rapid ascent, consumers will ultimately pay the price in increased insurance premiums.

Cost Growth: From 1998-2000, private health care spending in Minnesota grew an average of 11 percent per year. This figure illustrates the growth in underlying health care costs and it has risen every year since 1996. When this is combined with the continuing growth of health premiums, it seems unlikely that costs will moderate in the near future. Labor shortages, particularly in the nursing field, will exacerbate growth in underlying costs.

Continued Monitoring: The Health Economics Program will continue to monitor the issue of health profession labor shortages and their impact on overall health care costs to ensure that accurate and timely information is available to policymakers and the public as Minnesota continues its efforts to make health insurance affordable for all Minnesotans.

Endnotes

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