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A Health Care and Technology Study

Prepared For:

Canadian Consulate
9th Floor, South Wing
One Gateway Center
Pittsburgh, PA 15222

Luz Velez - Cardamone
Commercial Officer
(412)392-2308

Prepared By:

Specialized Healthcare Consultants
1141 Tamarack Lane
Pittsburgh, PA 15237
March 31, 1996

Peter M. Vercilla
President
(412)367-7291

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Executive Summary

The Canadian Consulate General, in Pittsburgh, Pennsylvania, in colloboration with the management consulting firm of Specialized Healthcare Consultants, Pittsburgh, is providing this study on the health care/medical systems, and the biomedical high technology community in the consulate territory. This study is intended as a snapshot of these industries as they presently stand. The dynamic nature of these industries will continue to change them at a rapid pace.

Specialized Healthcare Consultants was contracted with in January, 1996, to conduct this study. The principals have over forty years of experience in health and medical systems. This study is divided into three sections: Southwestern PA/Pittsburgh, Northwestern/Erie, and the state of West Virginia.

The era of managed care is finally upon the consulate territory. This has been a phenomenon that has been entrenched in the Western and Midwestern US for ten years or more. Hospitals and health systems find themselves under increasing pressure from payors to cut costs, lower overhead, while providing high quality patient care. This effort has resulted in operating losses for most hospitals. The non-operating revenue is maintaining their solvency.

The demographics, culture, and topography of the consulate territory make for a unique mix and challenge. The population is aged, and aging at a rapid rate. This has lead to tremendous pressure on health care providers. As more care is delivered in the outpatient setting, this creates an opportunity for home care firms and products, and skilled nursing facilities. The population has declined due to the loss of the steel industry, leaving those behind that are not economically able to prosper, or re-build the region. Western Pennsylvania has created only 50% of the new jobs on a per capita basis that the rest of the US has created. The cradle to grave employment of the Fortune 500 has not endowed the region with the entrepreneurial attitude until recently. Great efforts are being made by the major universities, venture capitalists, private firms and government to create viable, flexible firms. This is true in the biomedical, chemical, and metals industries. There continues to be a vast knowledge base in the territory.

Opportunities for Canadian firms to enter the marked would be in the following areas:

1. Outpatient, rehabilitative, and home care areas
2. Technology transfer of intellectual property from the universities, particularly computer software and bioengineering
3. Products or services that reduce direct costs, outsourcing, or create efficiencies for health care providers, so that they may expand their services

Both the medical/health care, and biotechnology arenas are in a state of rapid change. The biotechnology area is very fragmented with many players and agencies.

Southwestern Pennsylvania

Introduction

While Southwestern Pennsylvania (SWPA), and Pittsburgh in particular, is still widely known throughout the world as the cradle of steel making, the health care and biomedical industries predominate. The University of Pittsburgh Medical Center alone employs more people than USE, the former US Steel, by several thousand people.

The decline of the steel and related industries in the 1970s and 1980s created large out migrations of the regions economically productive population. The core of the viable economy then constituted the federal, state and local governments, the universities, and the hospitals. Many small companies were formed from the university and hospital sectors, particularly in the software development industry. Spin-offs in the medical industry have risen from the university - hospital interface.

Hospital and health related jobs constituted seven percent of the work force in the 1980s. At 11.5% currently, this represents the highest percentage among all major U.S. metropolitan areas.

Demographics

In general, SWPA has had dramatic demographic shifts over the last twenty years. The largest population in the consulate territory is Allegheny County, which includes the City of Pittsburgh. As of 1992, the population of the county was 1,334,396. From 1980 - 1992, there was an 8.0% drop in the population, of which 5.3% moved out of Pennsylvania, while 28.2% moved within the state. A portion of those that left Allegheny County moved to neighboring, lower tax counties, in particular, Butler, Washington and Westmoreland counties.

In 1970, the population in the City of Pittsburgh was 520,117. This decreased to 423,960 in 1980 and continued to decline to 369,879 in 1990, roughly a 29% decrease in twenty years. A significant portion of those leaving the city moved within Allegheny County. Both corporate, personal income and other taxes are much lower outside the city.

The following is a breakdown, by county, of the gains and losses in population from 1980 - 1990:

County	% Change	County	% Change
Allegheny	-8.0	Greene	-1.9
Armstrong	-5.0	Indiana	-1.6
Beaver	-7.7	Lawrence	-9.9
Butler	+6.0	Somerset	-3.1
Fayette	-8.2	Washington	-5.1
		Westmoreland	-4.6

The counties with the lowest losses tend to be more rural, agrarian and aged in character. The counties with the largest losses tend to be more industrialized, urban/suburban, and a larger population of younger people.

In Allegheny County, females comprise 53% of the population. Caucasians comprise the majority of the population at 87.5%, while African - Americans comprise 11.2% of the population. Per capita income is $15,115, with a median family income of $35,338. The median household income is $28,136.

SWPA is shifting demographically to an older population. Currently, Allegheny County has the highest percent of "senior" citizens in the U.S. As of the 1990 census, persons 65 years and older comprise 17.5% of the population. The greatest rate of increase in the population is occurring in the 65 - 74 year old group, the 75 - 84 age group, and the 85+ age group. These increases were 10.5%, 26.0%, and 24.1% respectively. This is in relation to the 1980 census. Interestingly, there was a 23.0% increase in the 30 - 39 age group. All other age groups show a decrease.

Employment and Education

Allegheny County's total labor force consists of 669,900 people. Approximately 23.0% of the county residents are college graduates, while 80% of the population are high school graduates. The high school dropout rate is 7.4%, which is 2.0% lower than the state rate. The current unemployment rate is 5.3%. This is comparable to the national rate of unemployment.

Service industries comprise 35.0% of the employment of the county, followed by the retail trade at 18.5%. Manufacturing employs 11.3%, while 11.0% are employed by local, state, and federal governments.

In the consulate territory, approximately 26.0 - 30.0% of the population earns $15,000 or less. This is 4.0 - 5.0% below the state average. The region's earnings are close to the state average, until the $75,000 or greater category. Allegheny County exceeds the state average, with the remaining counties significantly below the state range. Approximately 11.3% of county residents receive some sort of medical assistance.

Hospitals, Health Systems, and Networks

The acute care hospitals in SWPA are undergoing dramatic changes. There was a gradual decline in admissions until 1995, when a 4.8% drop in admissions occurred. This is a three - fold decrease from 1994. As managed care takes deeper roots in SWPA, this trend will continue. Results of an analysis published in the January 5, 1996 issue of Hospitals & Health Networks places Pittsburgh second to Boston nationally in the number of staffed beds per 1,000 in a fully capitated market. In 1994 there were 6 staffed beds per 1,000 population. Boston is first with 6.1 staffed beds with 3.2 current inpatient usage, and 1.6 beds needed per 1,000 relative to Pittsburgh. New York City is third at 5.5, 3.3, and 1.6 beds per 1,000. The number of staffed beds needed based on current inpatient usage is 3.8. The estimated number needed per 1,000 in a fully managed care market is 1.9. The salient points of the region, as published by the Hospital Council of Western Pennsylvania for the first half of Fiscal Year 1996 (July 1995 to June 1996) (FY96):

	<u>Category</u>	<u>Key Point(s)</u>
o	Inflationary Expenses:	Planned budget increases were 1.6%
o	Adjusted Cost per Case:	$6,149 for the first half of FY96; average gross inpatient charge is $13,626, up 4.6%
o	Admissions:	Decreased by 4.8%
o	Inpatient Days:	Decreased by 10.3%, with an average length of stay (ALOS) at 5.4 days, down 5.7%
o	Full - Time Equivalents: or 3.1% (FTE)	An average of 67,196, representing a 2,144 decrease
o	Adjusted FTE/Occupied Bed:	5.3 FTE/bed
o	Staffed Beds:	13,587, representing a 2.0% loss
o	Occupancy Rates:	57.8%, but this varies considerably depending on the hospital
o	Outpatient and Emergency Visits:	Decreased by 0.3% and 6.5% respectively
o	Surgical Procedures:	Inpatient procedures at 81,490, a decrease of 4.0% Outpatient procedures at 124,969, and increase of 0.1%
o	Unaudited Net Operating and Total Revenue Margins:	Net Margin: 0.19% loss Average Total Margin: 2.52%

There were only small differences between Allegheny County and City of Pittsburgh hospitals in net operating and total revenue margins. Both showed a 1.0% or less net operating loss. Total revenue was 2.14%, and 2.30% respectively. Urban hospitals showed a net operating loss of 0.13%, with a total revenue of 2.65%. Rural hospitals had a net operating loss of 0.69%, with a total revenue margin of 1.49%. The total revenue margin may be interpreted as under performing investments.

Magee - Women's Hospital, located in the city, is solely dedicated to and specializes in women's health services. This dedication has provided Magee with the second highest number of births per year in the U.S. A Los Angeles, CA hospital is first. Magee also has an active <u>neonatal intensive care program</u>. Other <u>neonatal intensive care programs</u> is the area include: **Children's Hospital, The Western Pennsylvania Hospital**, and **Allegheny General Hospital**.

<u>There are three state certified trauma centers in SWPA.</u> They are: **Allegheny General Hospital (AGH), Mercy Hospital**, and the **University of Pittsburgh Medical Center (UPMC).** The trauma designation requires exceptional levels of staffing, credentialing and expertise which comes with a financial price to the facilities. These facilities naturally attract the worst cases, which may require longer, more complicated lengths of stay.

There are two <u>burn units</u> located within the City of Pittsburgh. One is at **Mercy Hospital**, and the other, larger unit is at **The Western Pennsylvania Hospital**.

Several large hospitals perform various **organ transplants**. AGH performs bone marrow, renal, and to a lesser degree, heart and pancreatic transplants. The Western Pennsylvania Hospital performs bone marrow transplants. UPMC, while most noted for liver transplant surgery, regularly performs heart, heart/lung, bone marrow, lung, small bowel, renal, and pancreatic transplants.

The St. Francis Health System is a Catholic owned system. The primary facility is the 500+ bed, St. Francis Hospital located in the City of Pittsburgh. In addition, the system is comprised of two smaller satellite hospitals, a physical medicine/rehabilitation facility, psychiatric and chemical dependency units, and skilled nursing facilities. There are 1,415 licensed beds in the St. Francis Health System.

The Pittsburgh Mercy Health System is comprised of a 500+ bed acute care hospital, The Mercy Hospital, located in Pittsburgh. A much smaller hospital, retirement facility and satellite facilities complete the Mercy Health System. There are 1,036 licensed beds in this system.

The Forbes Health System is comprised of the 300 bed Forbes Regional Hospital located in Allegheny County, Forbes Metropolitan, a subacute center, and smaller satellite facilities, including a skilled facility and an inpatient hospice. There are 792 licensed beds in the Forbes System.

The South Hills Health System is located throughout Allegheny County. The inpatient, acute facility is the 392 bed Jefferson Hospital. The system is comprised of two emergency departments, a skilled nursing facility, a home health agency, a family medical center and a counseling center.

Due to the deeper penetration of managed care in SWPA, two predominant networks have formed, although they are loosely affiliated, non-financial provider networks. **The Southwestern Integrated Delivery Network (SIDN)** is comprised of 777 bed AGH, Forbes Health System, the 300 bed Allegheny Valley Hospital, 337 bed St. Clair Hospital, and the 225 bed Sewickley Valley Hospital. Within the last month, Sewickley has agreed to a merger with The Medical Center, Beaver (County), a 470 bed acute care facility. It is not known if The Medical Center will join SIDN.

The other network is the **Tri-State Health System (Tri-State)**. The largest member is the 1,221 bed UPMC. Other members include: Children's Hospital at 235 beds, Magee - Women's Hospital at 290 beds, 296 bed Passavant Hospital, South Hills Health System, 267 bed St. Margaret Hospital, 364 bed Washington Hospital, and 225 bed South Side Hospital. Recent developments have brought this network closer. UPMC has purchased South Side Hospital, and has created a community foundation that purchased St. Margaret Hospital. The foundation was funded by UPMC.

<u>Two different philosophies seem to prevail among the networks</u>. SIDN appears to be resisting the acquisition mode of Tri - State. As one of two major tertiary care centers in Pittsburgh, UPMC being the other, AGH is the linchpin of SIDN. AGH's parent corporation, Allegheny Health, Education and Research Foundation, owns the Medical College of Pennsylvania and Hospital, two smaller community hospitals in the Philadelphia area, in addition to affiliations with Hahnemann University and Hospital and St. Christopher's Hospital for Children.

Intertwined with each network is an insurer. SIDN appears to have US Healthcare, the large, publicly traded HMO located outside of Philadelphia. Tri - State is heavily aligned with the local Blue Cross Association. Blue Cross of Western Pennsylvania is acquiring Blue Shield of Pennsylvania. Blue Cross controls 65% of the regional insurance market, and offers fee for service, point of service, HMO, and Medicare/Medicaid HMOs. Additionally, Blue Cross is constructing eight strategically located, free standing clinics. These appear to be based on a modified staff model. Physicians from the community and the hospital serving the particular area have been invited to staff the clinics.

All of the hospitals in the consulate region have, are, or will undergo restructuring. In general, this means two things. One, a decrease in the work force, and two, different methods of delivering care to its patients.

<u>A significant and growing need is for assisted living, personal care residences, and skilled nursing facilities. Other opportunities include home care services and products.</u> These would range from aides or nursing assistance in the home, to home medical equipment such as canes, walkers, wheelchairs, etc., to home oxygen services. Data from a 1992 survey on nursing homes in Allegheny County, in comparison to the state, reveals the following:

Key Indicator	County	State	+/-
Licensed beds per 1,000 population over 65	33.1	48.9	15.8
Occupancy Rate	88.9%	92.8%	-3.9%
Average Length of Stay (Days)	250.7	401.7	-151

The following are health status indicators comparing Allegheny County to Pennsylvania and the U.S.:

Key Indicator	Allegheny County	PA	U.S.
Total Deaths	542.4	531.8	523.0
Cardiovascular	211.6	205.3	194.2
Heart Disease	176.6	169.5	155.9
Stroke	26.4	26.4	28.0
Lung Cancer	45.1	38.7	38.8
Female Breast Cancer	26.9	25.2	23.0

Note: Deaths per 100,000 population

Inpatient Casetypes above and below the Pennsylvania Average:

Casetype	% Above Average
Chronic Pulmonary Disease	44%
Red Blood Cell Disease	45%
Peptic Ulcer	57%
Foot Procedures	59%
Other Musculoskeletal	64%
D&C, except cancer	67%
Lens Operations	69%
Skin Tissue Procedures	76%
Dental Disease Procedures	80%
Vaginal Delivery Complications	106%

Casetype	% Below Average
Appendectomy	16%
Angina Pectoris	16%
Substance/Depression Rehabilitation	17%
Pediatric Bronchitis & Asthma	18%
Newborn w/Major Problems	21%
Pulmonary Edema & Failure	23%
Pediatric Otitis Media	24%
Concussion	38%
Pediatric Gastroenteritis	41%
Pediatric Pneumonia	53%

Health Maintenance and Other Managed Care Organizations

The concept of health maintenance organizations, and various forms of managed care is not a new phenomenon to the U.S. The most famous of these is the Kaiser Permanente plan in California. **The Health Maintenance Organization Act was passed in 1973 to promote managed care in an attempt to curb rising health care expenditures.** President Carter attempted to pass legislation curbing costs, but it was defeated in the Congress. The 1980s saw an explosion of various managed care plans.

The most popular is the health maintenance organization (HMO). There are several key features of the HMO: 1) a defined population is served 2) a range of medical services is provided with the plan assuming the financial risk and contract management 3) a fixed payment is made to the plan regardless of the actual use of services, usually paid on a monthly basis 4) utilization of medical services is "managed." The attempt is to shift the financial risk to the hospitals, physicians, and other providers.

There are two prevalent HMO models, the first being the staff model. In this model, the HMO staffs its own clinics with physician employees. The physicians are salaried, and manage almost all aspects of a patients' care. HMOs, due to their risk model, must be licensed by state insurance agencies. The HMOs sign limited agreements with selected hospitals for their enrollees.

HMOs tend to be the most restrictive forms of managed care. To gain access to the network, an enrollee must see a primary care physician for evaluation. If an enrollee receives care outside of the network, except under emergency circumstances, the care will not be covered.

Managed care penetration and acceptance has been slower in the consulate region than in the rest of the U.S. The region has experienced a 20% increase in managed care enrollment, with the Pittsburgh region progressing from 11.5% of the population in HMOs in 1991 to 24% in 1994.

The second form of HMO is one whereby they contract with independent providers for care. This is an independent provider association (IPA). The IPA contracts with any number of providers, who in turn provide services to HMO enrollees.

Looser forms of managed care organizations (MCO) also exist. One of these is a point of service (POS) plan. A POS combines traditional fee for service and HMO qualities. An enrollee chooses a provider who may or may not be in the network. If the provider is not a network member, the enrollee must pay higher out of pocket costs. POS plans employ a primary care physician (PCP), also known as a "gatekeeper," for referral to specialist care. These plans are the fastest growing in the consulate region.

A third form of MCO is the preferred provider organization (PPO). A PPO is similar to a POS in that enrollees pay lower rates for care delivered by a preferred provider network member. The difference with the PPO is the enrollees may see a specialist without a PCP referral.

Non-Hospital Care Providers

The need for skilled nursing centers, assisted living centers, personal care homes, and home care services has created a large group of providers of these services. In the SWPA sector there are 63 state licensed home health care agencies that cover the seven county region. These agencies care for many types of patients, and offer various health care services strictly in the home. Each agency employs various levels of employees, ranging from registered nurses to certified nurse aides to homemakers. Each agency chooses the level of advanced care that they will offer in the home. As managed care has decreased the average length of stay in the hospital, home care needs have increased. This trend is expected to continue. Finding qualified nursing staff should not present a difficulty, since downsizing of the hospital nursing staffs has created a pool of highly specialized, available nurses.

Another area of increasing activity is in the area of physical rehabilitation. In the SWPA region there are six inpatient facilities with a total of 494 beds. They provide outpatient services in addition to their inpatient services. The medical conditions they deal with are stroke, brain injury, spinal cord injury, neurological and musculoskeletal disorders, amputations and fractures. There are six outpatient services groups which are staffed and usually owned by physical therapists. In addition to the above medical conditions, all twelve groups offer work hardening, return to work, or industrial medicine. These programs will speed the recovery of a person and allow them to return to work sooner. The goal is to educate them on proper work technique and prevention of further injury. Payment for these services may come from the private insurance industry or the state worker's compensation fund. This fund assists workers injured on the job.

The region is served by eleven hospices. A hospice is the concept of providing care to terminally ill patients. This is essentially comfort care and the alleviation of pain. There is only one inpatient hospice serving the area. The others manage the patient in the home. Hospice care is paid for in various ways. A family may elect to pay these expenses out of pocket. The patient may have a hospice benefit as part of their health insurance (such as Medicare). If hospice coverage is not specified, it may be reimbursed as home care.

Group Purchasing Organizations

The purpose of a group purchasing organization is to procure deep discounts from product and service vendors on behalf of its members. Hospitals, health systems, and physicians pay an annual membership fee to the organization. Some group purchasers have expanded their memberships to include full and associate members. This has enabled the groups to increase the volumes purchased, thus giving them more leverage for price negotiation with the vendors.

The opportunity for a vendor is a tremendous amount of exposure for their product or service, which will be viewed by directors of purchasing and clinical department managers. There are yearly trade shows for the members of the group at various local, regional, and national conventions.

Within the consulate region there are regional offices of these groups. The outlook for the groups is stable, due to national consolidations. As more individual hospitals and providers merge, they are able to bring greater leverage to the purchasing table. This has lessened the need for a group purchasing organization.

McKesson Health Systems
79 No. Industrial Park
Bldg 203-205
Sewickley, PA 15143-2323
(800)242-8044
(800)553-8258
(412)741-1917 (FAX)

Voluntary Hospitals of America (VHA)
Foster Plaza
415 Holiday Drive
Pittsburgh, PA
(412)937-1396
(412)937-9655 (FAX)

National M.D.
153 Mayer Drive
Pittsburgh, PA 15237
(800)446-5996
(412)367-1376 (FAX)

Bisel Medical Specialties
104 Woodhaven Drive
Jeannette, PA 15644
(412)836-1701

Baxter Hospital Supply
1701 Thornhill Drive
Warrendale, PA
(412)961-6851

AmeriNet
500 Commonwealth Drive
Warrendale, PA
(412)776-4455

Wholesalers, Distributors, and Manufacturer's Representatives

As the hospital/health care sector has consolidated, so has the industry serving this sector. Large, regional distributors have been purchased by national firms. A relatively new tactic is being used in the negotiating and purchasing process. The hospital or system will agree to limit their suppliers, in return for deep discounts from the vendor. This is the same tactic that the multinational automotive manufacturers have been using for several years. This tactic has several affects. For the hospital, it assure them of a known price for their products, thus aiding immensely in the budget process. The amount of staff time spent meeting with sales people is greatly reduced. If the manufacturer is unable to meet the demand or quality required, the hospital is placed in a difficult position. This becomes acute if there are few competitors for the particular product or service. From the vendor standpoint, they are able to forecast revenues and supplies for the life of the contract. If the contract represents a significant portion of the vendor's revenue, losing the contract could be disaster. However, this exclusivity allows the vendor to concentrate on customer service and quality.

Medical Device and Pharmaceutical Manufacturers

The concentration of medical physicians and scientists, hospitals and universities has created a nucleus of innovation. The community of manufacturers is populated mainly by small enterprises, with a few well - established companies. Several prominent local universities have established formal technology transfer programs. These programs have full - time staff that work to bring intellectual property from the lab to the marketplace. The general consensus regarding the industry is that there is a nucleus of talent and innovation. Also, with the large number of top tier, teaching hospitals, the number of local beta test sites is extensive. The largest percentage of firms fall into the software and instrumentation areas. Several non - medical firms are collaborating with local hospitals to extend their product line. An example of this is **FORE Systems,** manufacturers of asynchronous transfer mode (ATM) computer communication technology. FORE has teamed with the parent of Allegheny General Hospital to provide teleconsultations between physicians via audiovideo media. A physician at a rural hospital will be able to project x - ray images for review at AGH and consult with their specialists.

Because of the relative embryonic nature of the industry in the consulate territory, there is almost constant flux in terms of start - ups, mergers, alliances and closures. One of the success stories that has come out of the hospital community is **Respironics**. This firm manufactures devices geared to the respiratory market, particularly sleep apnea. Gerald McGinnis, the founder, developed the firm while at a research institute affiliated with Allegheny General Hospital.

The pharmaceutical industry has not developed in the consulate region except for the multinational firm, **Bayer Inc**. The most prominent pharmaceutical manufacturer that is native to the area is **Mylan Laboratories**. Mylan is one of the top five generic manufacturers in the US. Eastern Pennsylvania has a greater concentration of pharmaceutical manufacturers.

Because of the heavy concentration of computer software expertise in the region, the medical software industry is showing a promising future. Several companies have combined software with medical devices. Other companies have adapted their technology to fit the health care market.

Veterans Administration Health Care

The VA system in Western Pennsylvania is diverse in that it covers acute care to extended care and psychiatry. Northwestern Pennsylvania is served by the VA Medical Center in Erie. The Erie VAMC contains 40 nursing home beds out of its 159 bed total. All of the VAMC facilities are accredited by the Joint Commission on Accreditation of Health Care Organizations (JCAHO), and are members of the American Hospital Association.

Southwestern Pennsylvania is served by a VAMC in Butler County. This is approximately 30 miles north of Pittsburgh. This center contains 172 nursing home beds out of a total of 333 beds. The mission of this center is extended and primary care. **The Pittsburgh region is served by two VAMCs.** The largest, at 698 beds, is located directly behind the University of Pittsburgh Medical Center (UPMC). Termed the University or Oakland VAMC (the name of that section of Pittsburgh), the medical coverage is provided, by contract, by the UPMC resident and attending physician staff. This facility contains 240 nursing home beds. The other VAMC, located on Highland Drive, concentrates on extended and psychiatric care, and has 574 beds.

Recent proposed legislation will increase outpatient services at the VAMCs in the U.S. As with all hospitals, admissions are decreasing or expenses are increasing. Current regulations allow for treatment of a multitude of problems, but only on an inpatient basis. The University and Highland VAMCs see approximately 133,000 and 101,000 outpatients a year, respectively. This will certainly increase.

Health Care Consultants

The consulting area has changed over the years. From the Big 8 accounting and management firms, the field has become more fragmented and niche oriented. **The term consulting now extends to information technology and its application.** The changing nature of health care and technology has also driven this fragmentation. One consultant may work only with physicians and their networks, but not with hospitals.

In the context of this report, a hospital consultant will work with acute and extended care facilities. A consultant working with physicians will work in the areas of physician practice, network development, physician - hospital organizations, mergers, and acquisitions. Attorneys specializing in health care or biomedical technology will be identified as such.

Information technology and systems consultants may also work in the area of telecommunications/information systems interface. Some may offer only software support, or may be a value - added distributor (VAD) for both hardware and software. The area with the greatest amount of activity currently is in network integration, satellite facility integration, and data acquisition and analysis. The last area will become very important as to leverage costs of operations in the managed care contract negotiation period.

Regional Professional Societies

Due to the small locale of these groups, only their members are aware of each other. There is usually no local office, but is managed from the office of the hospital department managers. The easiest way to reach these groups is to call a large local hospital, request the department of interest, and ask for the manager. Regional and state professional trade shows may be located by contacting the hospital association or council.

Northwestern Pennsylvania

Introduction

Northwestern Pennsylvania (NWPA) has historically been known as an area of manufacturing and oil production. The manufacturing was typically on a smaller scale that SWPA. As manufacturing jobs have been moved to non-union states or offshore, the service sector has come to predominate. This geographic area has one predominant city, Erie. The largest nongovernmental employers are Erie Insurance, Gannon and Pennsylvania State Universities. Within the last two years, AMSCO (formerly American Sterilizer Co.) moved its headquarters to Pittsburgh. Quaker State Oil has moved to Dallas, Texas to be closer to its suppliers and customers.

Due to the rural nature of the region, and the smaller nature of business enterprises, the demographic shifts have not been as great as the Pittsburgh region. In many of the counties of the NWPA area there is an anchor in the local college or university. This provides for a more stable region. There has not been a nucleus of spin - off companies in the medical or biomedical technology sectors. This area was until recently adding positions in the hospital sector. As this trend reverses due to managed care, there may be more start - up activity. Except in Erie itself, there is usually only one hospital per county. These tend to be small in terms of bed capacity.

Demographics

By far, the most populous county is Erie, with 275,572 people, which includes the city of Erie. Erie County has only experienced a 0.1% decrease in population from 1980 - 1990. The NWPA region being discussed includes the following counties and their populations (1990 Census data):

County	Population	% +/-	% >65 years
Cameron	5,913	-12.4	18.5
Clarion	41,699	- 3.4	13.9
Clearfield	78,097	- 6.2	16.6
Crawford	86,169	- 2.4	15.4
Elk	34,878	- 8.4	16.0
Erie	275,572	- 0.1	13.8
Forest	4,802	- 4.1	20.2
Jefferson	46,083	- 4.4	17.3
McKean	47,131	- 6.5	16.7
Mercer	121,003	- 4.8	17.2
Potter	16,717	- 4.9	16.5
Venango	59,381	- 7.6	15.0
	817,445		

The state average of persons over 65 years is 15.4%.

Over 90% of the population in the above region are native born and Caucasian. If they relocate, it is intrastate, and English is their primary language. While it varies by county, the top three occupations in this region fall into the laborer, tradesman, and service or administrative categories.

In all counties, females comprise 51 - 53% of the population. The most populous county by far is Erie. The median family income for Erie County is $32,145, with a per capita income of $12,317. Forty - seven percent of the county's households earn less than $25,000. Eighty - one percent of persons 3 years and older are enrolled in elementary or high school. This is lower than their counterparts by 2 - 10 %.

In Erie County, there are 171,369 persons over 25 years of age. Of these, 77.5% are high school graduates, and 16.2% possess a bachelor's degree.

Employment

The Erie metropolitan area had a 5% growth in employment from April 1991 - 1994. The chief industries in the region are manufacturing, retail, and professional services. The order of importance varies depending on the county.

The following is a breakdown of households by income range and the percent of total households (Erie County only):

Income	%	% State
$25,000 - 34,999	18.2	16.6
$35,000 - 49,999	18.7	18.4
$50,000 - 74,999	11.6	14.1
> $75,000	4.8	7.9

The following table breaks down the number of persons receiving Social Security and Supplemental Security income, as of 1991:

County	No. Persons	Rate/1000 Residents
Cameron	1,415	239
Clarion	7,535	181
Clearfield	16,115	206
Crawford	16,740	194
Elk	7,195	206
Erie	49,565	180
Forest	1,345	280
Jefferson	9,885	215
McKean	10,400	221
Mercer	26,055	215
Potter	3,610	216
Venango	12,090	204

The state rate per 1,000 is 54.

Hospitals, Health Systems, and Networks

As might be expected, the number of physicians and their rate per 100,000 is significantly below the state as a whole. This would be due to the rural nature of the region. Erie County has 468 physicians, translating to 170/100,000 population. The state rate is 238/100,000 population.

Since it has the greatest population of the area, Erie/Erie County has the largest number of hospitals, followed by Mercer County. There is one Veterans Administration Medical Center in Erie. Of the 159 beds at this VAMC, 40 are nursing home beds. Outpatient visits totaled 63,000 in 1995. There are 440 employees at the VAMC, with total expenses at $32,361,000.

Of the non-federal, acute care facilities, the largest, by beds, is Hamot Medical Center, with 526 beds. This is followed by St. Vincent Hospital with 469 beds. All except one of the hospitals, including the VAMC, are accredited by the JCAHO or the American Osteopathic Association. Two of the seven hospitals in the city of Erie are rehabilitation facilities, not acute care facilities. These are Great Lakes Rehab and Lake Erie Institute of Rehabilitation. Both are owned by HealthSouth Corporation.

NWPA is under the same managed care constraints as the southwestern consular region. The Blue Cross/Blue Shield of Western Pennsylvania tends to dominate this region as well.

The consolidation of hospitals and the development of networks has lagged behind the Pittsburgh region. The following numbers show the counties in relation to the state average number of beds per 100,000 population (the state beds/100,000 is 431):

County	No. Beds	Beds/100,000
Cameron	0	No Hospital
Clarion	96	230
Clearfield	347	444
Crawford	419	484
Elk	285	813
Erie	1,417	510
Forest	0	No Hospital
Jefferson	142	306
McKean	279	591
Mercer	653	537
Potter	135	800
Venango	357	598

As with most acute care institutions, there is an effort to gain the loyalty of the medical staff. This effort takes several forms. One is the asset purchase and the employment of the practice and the physician. This, of course, requires a significant capital outlay, the expertise in physician practice management, and strategic network development. There is no guarantee that this will create leverage with payors in the future. Not incidentally, payors are also purchasing practices and employing physicians.

The second method of creating loyalty with the medical staff is the creation of a management of medical services organization (MSO). The MSO provides a turnkey practice management system to the physicians, or services the physician lacks. These are usually purchased by the physician at competitive rates. The advantage for the physician is the responsibility for the business of medicine falls to a professional.

The trends for NWPA are very similar to SWPA. There will be closer relationships among acute care, long term care, and home care providers. Opportunities will exist in providing services on an outpatient basis, particularly in the community, not in the hospital. The aging statewide population will provide an opportunity for acute care hospitals to convert a portion of their beds to nursing home beds.

The further penetration of managed care will decrease health care employment as in other areas. Occupancy rates for the region, as compiled by the Hospital Council of Western PA (HCWP), were 55.6% for July - Dec 1994, and 47.8% for July - Dec 1995. During these same periods, the full - time employees (FTEs) per occupied bed (unadjusted) were 8.18 and 8.92, a 9% increase. the adjusted FTEs/occupied bed were 5.15 and 5.38, a 4.5% increase for these periods. Employment in the region has declined since Fiscal Year (FY) 1993, as demonstrated below:

Fiscal Year	Total Employed	% Change (from prior year)
1993	12,674	-3.3
1994	12,071	-4.8
1995	11,986	-0.7
1996 (first half)	11,706	-2.3

Financial Performance

Category	July - Dec 1994	July - Dec 1995	% Change
Net Operating Margin	0.68%	0.68%	0.0
Total Revenue Margin	N/A	2.18	---
Salaries (000)	$173,131	$173,893	0.4
Fringe Benefits	$42,249	$42,348	0.2
Average Salary	$28,956	$29,710	2.6
Total Expenses (000)	$411,026	$421,900	2.6
Average Gross Inpatient Charges/Case	$8,888	$8,901	0.1
Total Admissions	53,668	51,454	-4.1
Patient Days	268,910	241,449	-10.2
Average Length of Stay (Days)	5.01	4.69	-6.8
*Staffed Beds	2,655	2,747	3.47
Occupancy	55.6%	47.8%	-16.3

*FY93, 94 and 95 had decreases from the previous FY of 8.81%, 1.95%, and 9.21%, respectively.

The trend toward more outpatient procedures is matched in NWPA. While revenues on the inpatient side decrease, they are increasing proportionately on the outpatient side. From FY94 to the first half of FY96, outpatient revenue increased from 35.8% to 39.7% of total revenue. This is the highest percent of the regions studied by the Hospital Council of Western PA (HCWP).

In decreasing order, the Eastern region (central PA) has 36.5%, followed by SWPA at 28.3% of revenues on the outpatient side. Overall, 30.7% of revenues are from outpatient services. Among peer group hospitals, non - urban, non - teaching hospitals derived 51.2% of their revenues from outpatients. This correlates with hospitals in the 1 - 99 number of beds, deriving 50.5% of FY96 to date revenues from outpatients. The following is a peer group breakdown for all hospitals surveyed by HCWP:

No. Beds	1st 6 mo. FY94	1st 6 mo. FY95	1st 6 mo. FY96
1 - 99	44.1%	46.2%	50.5%
100 - 199	39.4%	40.3%	41.6%
200 - 299	34.5%	36.8%	39.0%
300 - 399	24.5%	25.4%	26.4%
≥ 400	17.2%	18.3%	19.9%

The costs and charges per outpatient visits, however, are rising disproportionately to the revenue percentage increase. The following are the charges and costs per outpatient visit:

	CHARGES			COSTS		
Region	1st 6 mo. FY95	1st 6 mo. FY96	% Change	1st 6 mo. FY95	1st 6 mo. FY96	% Change
W.PA	344.17	373.08	8.4	195.77	211.86	5.2
SPA	369.78	408.14	10.4	198.49	216.27	9.0
NWPA	300.43	315.66	5.1	186.15	200.21	7.6
East	307.33	326.11	6.1	172.33	180.08	4.5
Number of Beds						
1 - 99	296.21	310.55	4.8	181.50	196.24	8.1
100 - 199	325.84	347.84	6.8	172.71	185.71	7.5
200 - 299	313.52	337.62	7.7	178.03	190.04	6.7
300 - 399	426.01	449.02	5.4	210.22	222.85	6.0
≥ 400	382.59	457.16	19.5	167.52	192.47	14.9

Health Maintenance and Other Managed Care Organizations

The penetration of managed care has been much slower in NWPA. The percentage of admissions by payor class has not changed by more than one percent. Medicare admissions have increased from 46.9% to 48.4% between the first 6 months of FY95 and the first 6 months of FY96. Blue Cross remains at 22.5%, Medicaid at 14.3% and all others at 14.8% for the first 6 months of FY96.

The HMOs, POSs, PPOs listed in the table for SWPA (pg. 54) also serve NWPA. The Blue Cross and Blue Shield Association of Western PA continues to be the predominant insurer in all markets. Blue Cross of W. PA commands 65% of the market in W.PA.

Non - Hospital Care Providers

As in SWPA, the Northwest region has a significant portion of its population approaching or in their later years. Acute care hospitals faced with declining admissions will continue to affiliate, manage, or convert a portion of their beds into skilled nursing. The dynamic nature of the nursing home industry must be monitored prior to entering the regions. Nursing home residents are becoming increasingly complex medical cases. This is due to the effort by insurance companies to demand earlier release of patients from the acute care setting. Hospitals should capitalize on the name recognition and goodwill in their communities to enter the long term care market. The simplest and quickest method of accomplishing this is to allow a long term care management firm take over this function internally.

The city of Erie has two rehabilitation hospitals. Rehabilitation and physical medicine services are typically offered within acute care settings by the physical/occupational/speech therapy departments. Due to the rural nature of the Northwest region, the expansion of home care services would be an opportunity for a firm to enter.

Group Purchasing Organizations

The organizations serving SWPA also serve NWPA from the Pittsburgh region. The travel time by car from Pittsburgh to Erie is less than three hours. Please see this section (pg. 13) for the names, addresses, and telephone numbers of these firms.

Wholesalers, Distributors, and Manufacturer's Representatives

Medical Device and Pharmaceutical Manufacturers

Health Care Consultants

Please see the tables for SWPA (pg. 57). Typically, all of Western Pennsylvania is considered one territory.

Regional Media

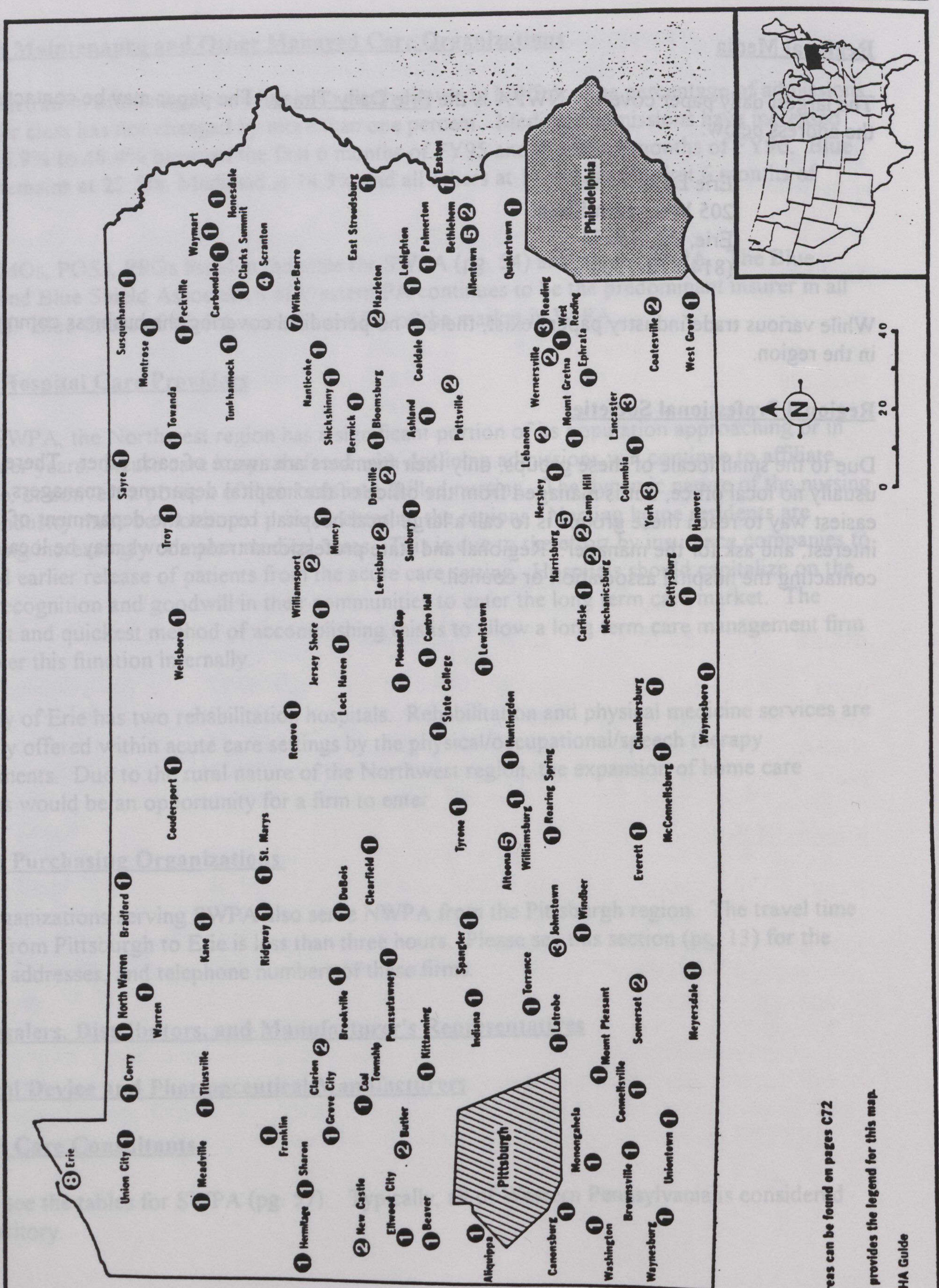
The largest daily paper covering NWPA is the Erie Daily Times. The paper may be contacted at the address below:

Erie Daily Times
205 West 12th Street
Erie, PA 16534
(814)870-1600

While various trade/industry papers exist, there is no periodical covering the business community in the region.

Regional Professional Societies

Due to the small locale of these groups, only their members are aware of each other. There is usually no local office, but is managed from the office of the hospital department managers. The easiest way to reach these groups is to call a large local hospital, request the department of interest, and ask for the manager. Regional and state professional trade shows may be located by contacting the hospital association or council.



Shaded areas can be found on pages C72 and C70.
Section A provides the legend for this map.

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West Virginia

Introduction

Until the late 1800s, the state was primarily an agricultural economy. At this time mining and manufacturing grew in their importance. The primary non-agricultural industries today are bituminous coal mining, chemicals, and primary metal refining. The state is largely forested, at 75% of its area. Even today, only 36% of the WV population is considered urban. West Virginia has coal, natural gas, oil, petroleum, salt and other natural resources.

Due to non - US importing of coal, and mining technology advances, the coal mining industry estimates 40% of its jobs have been lost. This has created less opportunities due to the isolated nature of the mines in rural, or small towns. There are less opportunities for retraining.

Few medically related companies of any size or volume were found in the directories consulted. An organization similar to the Pittsburgh High Technology Council does not exist. Several years ago a National Technology Transfer Center was located at Wheeling-Jesuit College. Additionally, an undergraduate and graduate programs were developed in technology transfer. NASA and Carnegie Mellon University (Pittsburgh) were instrumental in the curriculum development.

The rural nature of the state and its industrial base have not been conducive to high technology development. The following demographics section will provide necessary detail.

Demographics/Employment/Education

Due to the rural nature of the state, all figures are on a statewide basis, unless otherwise noted. The 1990 census placed West Virginia's population a 1,793,477. This is an 8% decline from 1980. As a comparison, Allegheny County is Pennsylvania has a population of 1,334,396. This would mirror the decline of the mining and basic industries economy. As of 1992, the population has risen to 1,808,860 persons. This is less than a 1% increase. This represents a density of 75 people/square mile or 29 people/square km. Caucasians comprise 95.3% of the population. African Americans comprise 3.1% of the population. The remaining 1.6% is comprised of American and Asian Indians, Filipino, and Hispanics. As may be expected, non-whites are located in the urban and university areas.

Population characteristics reveal a dumbbell shaped curve. The 1992 population has 18.8% of the state aged 5-17 years, and 15% of the state over 65 years of age. The 18-24 year age group represent only 10.1% of the population. The 25-44 year age group comprise 29.7% of the state population. Only 9.9% of the population is comprised of 55-64 year olds. Males make up 47% of the population. Only 0.9% are foreign born. English speaking homes represent 97.4% of all households. West Virginia shows the same pattern of movement as Pennsylvania. Intrastate movers represent 28% of the movers.

Births are calculated at 11.9/1,000 residents. Deaths are 10.8/1,000 residents. The state has a 2.85% high school drop out rate. This is comparable to the US average. Twenty two percent of the residents in the appropriate age range attend college. Holders of bachelor degrees or higher comprise 12.3%. The median family income is $25,602. Those earning less than $25,000 comprise 57.8% of the population. Households earning $25,000-34,999 comprise 15.1% of the population. Those households earning $35,000-49,000 comprise 14.6% of the population. Nine percent of the households earn $50,000-74,999. Household earnings of $75,000 or more comprise 3.6% of the population.

The total work force decreased 1.4% from 1980 - 1990. The total work force is 744,032 people. The unemployment rate in 1990 was 9.6%. This has dropped since then, but is still above the national average. The per capita income is $13,744.

The wholesale and retail trade comprises 21.7% of the employed, followed by the manufacturing sector at 14.9%, health services at 9.9%, finance/insurance/real estate at 4.5%, and public administration at 4.4% of those employed. Agriculture represents only 1.9% of those employed.

The rural population, low population density, and mountainous geography have necessitated smaller hospitals and clinics. As expected, the number of physicians and their density is lower. The 1990 census showed 3,086 physicians statewide. This is 172 physicians/100,000 population. Physician density increases in the cities such as Charleston, the state capital, and Morgantown, sit of West Virginia University (WVU) Medical College. The WVU campus, hospital and medical college have undergone complete renovation and expansion within the last three years. As of 1990, there were 461 hospital beds/100,000 population statewide.

As of 1990, there were 370,321 Social Security beneficiaries. This 206.5/1,000 residents. Due to the heavy mining and chemical industry, an assumption can be made that a significant portion of these are Black Lung beneficiaries.

Geography

The capital of West Virginia (WV) is Charleston, located in Kananwha County. Charleston is one of the largest cities at 57,287 residents (1990). The city is a manufacturing and distribution center for the nearby coal, petroleum, natural gas, salt, and timber industries. The major manufacturing industries are glass, metals, and chemicals.

Monongalia County is the home of Morgantown. The 1990 population was 25,879. Economically, medical/health services are important to the region. The major industrials produced locally are textiles, glass, metals, and chemicals. Agriculture, coal mining, and stone quarrying are conducted locally. West Virginia University is located here.

Parkersburg, in Wood County, had a 1990 population of 38,862. The local industries are agriculture, coal mining, petroleum, metals, plastics, and chemicals. Ohio Valley College and several junior colleges are located here.

Huntington is located in two counties. It is the seat of Cabell County, and portions are in Wayne County. The 1990 census was placed at 54,844 people. As elsewhere in WV, coal is mined here. Manufacturing concerns located here are nickel alloy, glassware, railroad and mining equipment, chemicals, and auto parts. Marshall University was established here in 1837.

Wheeling is the seat of Ohio County, and also has portions in Marshall County. At a population of 34,882 (1990), Wheeling is one of the largest cities in WV. It is a prominent manufacturer of iron and steel, chemicals, and tobacco. As elsewhere , coal is mined in the area. In 1954, Wheeling College was founded.

Hospitals, Health Systems, and Networks

Cabell County

The major city is Huntington, with a population of 54,844. There are 369 active physicians, or 381 physicians/100,000 residents. These are non-governmental physicians. There is one Veterans Administration Medical Center located in Huntington. The for-profit hospital chain, HCA, has moved into the market, purchasing one of the hospitals. No formal networks have developed in the region. Managed care has shown some penetration. The competition of a for-profit hospital in this excess bed region will create further contraction.

There are 23,772 beneficiaries of the Social Security system in the county. This is 217 beneficiaries/1,000 residents. Those over age 65 years comprise 16.4% of the county population. The 5-17 years olds, at 16.4%, equal the elderly. This mimics the states' dumbbell shaped demographics. Cabell County is a mirror of the state in terms of income, education and employment.

Kananwha County

The capital of WV, Charleston, is located here. Of the 207,769 county residents, 57,287 reside in Charleston. The demographics change due to the capital's presence. While those over 65 years comprise 15.7%, the 25-34 and 35-44 years olds comprise 15.3% and 15.7% respectively. As expected, the income distribution and education are skewed above the state norm.

The county has 569 physicians, or 274 physicians/100,000 residents. There are 50,038 Social Security recipients in the county. The entire Charleston area falls under the Charleston Area Medical Center (CAMC), except for St. Francis Hospital, which is a member of the Columbia/HCA corporation. Columbia/HCA is a publicly traded, for-profit hospital chain. They are the largest chain in the US. The CAMC includes a 776 bed general hospital, an eye and ear clinic, and a 58 bed hospital. A nonprofit corporation, Camcare, Inc., holds the assets of CAMC. A women's and children's hospital also falls under CAMC.

Monongalia County

Morgantown is located in Monongalia County. The total 1992 population of the county was 77,502, of which 25,879 are in Morgantown. Health care employs a significant number of the city residents. the WVU Hospital employs 2,200 alone. No networks have developed in the region. Physician-hospital organizations are developing at most facilities nationwide. WV is not immune to this trend WVU has a medical school in its system. There are 507 physicians in the county, for a rate of 671/100,000 residents. There are 11,092 Social Security recipients, or 135/1,000 residents. Like all counties in WV, white predominate. The vast majority of the population is native born, with English as the primary language.

The 5-17 year olds comprise 14.5% of the population, with those 65 and older comprising 10.9% of the residents. The 25-44 age group comprises 24.4%, as would be expected. Education and income are higher due to the presence of the university and hospital. Employment is much higher also, related to the university and hospital.

Ohio County

The major urban area is the city of Wheeling. The county population in 1992 was 50,166. Wheeling comprised 34,882 of the county population. There was an 18.3% decrease from 1980-1990. Whites comprise 97% of the population, 98.4% are native born, and 95.8% use English as their primary language. The 5-17 year olds comprise 16.1% of the county. The 65 and over age group makes up 18.9% of the county. The 25-44 age group makes up 27.9% of the residents. In all counties, females comprise 51-53% of the population. As shown by the population characteristics, the birth rate exceeds the death rate by several percentage points.

There are 244 non-governmental physicians in the county. This is a rate of 480/100,000 population. There are 13,542 Social Security recipients in the county. This is approximately 270/1,000 residents. The work force mirrors the state in industry employment. Education and income are slightly higher than the state average.

Wheeling has two general hospitals. One is the Ohio Valley Medical Center (OVMC), which also contains Peterson Hospital, and the Wheeling Hospital. There are a total of 666 beds in the community. There is a hospice, and several rehabilitation centers.

Wood County

Parkersburg is the urban center of Wood County. The 1992 county population was 87, 493, with 33,862 in the city of Parkersburg. The population decreased by 6.6% from 1980-1992. Whites comprise 97.8% of the county population. Native born residents equal 99.2%, with 97.8% using English as their primary language. The 5-17 year olds comprise 18.3% of the residents. The 65 and older group comprise 14.8%, while the 25-44 age group makes up 30.2% of the population. There are 91 males/100 females. The birth rate again exceeds the death rate at 12.7 births per 1,000 residents, vs. 9.4 deaths/1,000 residents. There are 18,622 residents receiving Social Security benefits. This is 2.14 recipients/1,000 residents. Education, income, and employment are representative of the state.

There are 126 physicians in the county, for a rate of 145/100,000 residents. There are no systems or networks among the hospitals. There are two general hospitals, and one rehabilitation hospital in Parkersburg. The total number of beds is 548, with 20 nursing home beds in the hospital setting.

Health Maintenance and Other Managed Care Organizations

HMOs and other MCOs continue to make incremental advances into the state health care system. The state has proven a viable place for the for-profit hospital chains. This may be due to the small nature of the hospitals and population density. This trend has not occurred in W.PA. Please see the table of HMO/MCO organizations on page 56 for those serving West Virginia.

Non-Hospital Care Providers

The acute care facilities seem to be expanding into rehabilitation, psychiatry, and skilled nursing care as a means of maintaining their viability. This trend is expected to continue as care is delivered in non-traditional settings. The West Virginia Agency on Aging listed is the Resource Directory will have up-to-date information on this area.

Group Purchasing Organizations

The purchasing organizations listed for W.PA on page 13 also cover West Virginia. A source for further group purchasers not listed in directories may be the West Virginia Hospital Association.

Wholesalers, Distributors, and Manufacturer's Representatives

Those listed in the Pennsylvania section on page 14 also serve West Virginia. No medical distributors are listed in the 1995 directory.

Medical Device and Pharmaceutical Manufacturers

Other than the Mylan Laboratories facility, no other manufacturer of these types was found in the state. Please refer to the Pennsylvania listing beginning on page 66 for these manufacturers.

Health Care Consultants

Please see the Pennsylvania listing for consultants located on page 57.

Regional Media

Charleston Gazette
1001 Virginia St. East
Charleston, WV 25301
(304)348-5140

Charleston Newspapers
(800)982-6397

Dominion Gazette
1251 Earl Core Rd
Morgantown, WV 26505
(304)292-6301

Herald Dispatch
946 5th Avenue
Huntington, WV 25701
(304)526-2798

Regional Professional Societies and Trade Shows

Due to the rural nature of WV, the advice put forth in this section of the Pennsylvania portion holds true. Contacting the West Virginia Hospital Association will lead to statewide trade shows, and possibly local societies. The easiest method is to call the department manager at the local hospital, or one of the larger medical centers for the local professional society of specific interest. The officers of these groups change rapidly, and are best located through their peers.

Summary: West Virginia Hospitals

From the report prepared by the WV Health Care Cost Containment Authority, FY 1994 data were analyzed. Every hospital in the state, except three, lost money on Medicare patients. No hospitals with more than 300 beds broke even on their Medicare patients. Surprisingly, the majority of reporting hospitals made money on Medicaid patients.

Total charity care for the state equaled $64,466,534 for FY 1994. The total percentage of charity as a percent of gross patient revenue (GPR), averaged 2.99 for the state. Uncompensated care averaged 6.59% of GPR. The percent of adjusted revenue over expenses for FY 1994 decreased by 32.45% from FY 1993. The adjusted excess revenue over expenses, excluding Medicare and Medicaid, was 3.84% for FY 1994. The FY 1993 figure was 7.67%.

Acute care occupancy for general hospitals, excluding the nursery and neonatal ICU, was 47.1% for FY 1994. The Certificate of Need (CON) expenditures approved for January - July 1995 was $29,698,879.

The following mergers and acquisitions occurred in 1994 and 1995:

1994

- o Columbia/Galen purchased St. Luke's Hospital (Bluefield, WV) and Greenbrier Valley Medical Center (Ronceverte, WV) for a combined $18,298,087.
- o Columbia/HCA purchased Raleigh General Hospital (Beckley, WV), Putman General Hospital (Hurricane, WV) and River Park (Huntington, WV) for a combined $43,639,908.

1995

- o HealthSouth purchased Huntington Rehabilitation (Huntington, WV), Mountainview Regional Rehabilitation, Southern Regional Rehabilitation (Princeton), and Western Regional Rehabilitation (Parkersburg) Hospitals.

In general, West Virginia's hospitals are maintaining their facilities. Their balance sheets and revenue from operations show erosion. Non-operating revenues appear to the key to solvency.

Trends and Opportunities in the Consulate Territory

From the data presented, several trends have emerged in the W.PA region. The general trends are as follows:

1. **Large and growing elderly population**
2. **Increase in managed care participation**
3. **Decreasing average length of stays, and admissions to acute facilities**
4. **Increasing utilization of outpatient services and facilities**
5. **Acute financial distress from on-going operations; solvency only from non-operating revenues, e.g., investments, gifts, and bequests**

These trends do not appear to be alleviating in the short - to - intermediate term. If the national trend continues, reimbursement to acute care facilities will continue to be squeezed, without further obligations coming from those receiving welfare, Social Security, or Medicare.

The elderly population, highest by percentage in the nation, creates both opportunities and difficulties. How this is perceived depends on the individual viewpoint. **Recently, Moody's Investors Services in New York City created a list of twenty national institutions that would be considered "at risk" due to their high reliance on Medicare and Medicaid. Seven health care providers from Western Pennsylvania were on the list.** The number one ranked facility is a local residential care facility for mentally retarded children. It receives 99.9% of its funding from Medicaid. The other six were local hospitals.

The hospitals are as follows:

Name	% Medicare/Medicaid	Rank
McKeesport Hospital	77.7%	3
Armstrong County Memorial Hospital	77.5%	4
Monongahela Valley Hospital	76.9%	6
Suburban General Hospital	74.6%	14
South Hills Health System	73.0%	16
Uniontown Hospital	73.0%	16

The national average is 55.3%. All Western Pennsylvania hospitals received more than the national average in Medicare/Medicaid payments as a portion of their revenue. The "at risk" group could possibly have their bond ratings lowered. This would create higher borrowing costs, and staff cuts. The need for consolidation, mergers, alliances and closures among the provider community are all becoming necessities.

Hospitals essentially have a product in the decline phase. Several options exist when this occurs. One is to re-package the product. Hospitals and health systems may do this in several ways. A cosmetic re-packaging may be accomplished, but the costs will not be competitive. A more substantial effort to expand the product line must be made. By providing a continuum of care, this re-packaging may begin. Over the years hospitals created for-profit subsidiaries to supplement revenue, and retain or build patient loyalty. This has involved creating home care and durable medical equipment companies, and joint ventures. One SWPA joint venture is a health care laundry facility. A significant number constructed professional office buildings for their medical staff. The hospitals became the landlord, and property manager. Many of these were ruled for-profit. This jeopardized the non-profit tax status of many facilities.

Hamot Medical Center in Erie, PA lost its tax-exempt status due to its agressive expansion activities. At one point, to supplement declining patient revenues, Hamot owned a marina on Lake Erie.

The cultural nature of W.PA is such that there are no for-profit institutions. Pittsburgh has the highest per capita number of non-profit institutions in the US. Approximately 40% of the entities and property in the city are tax exempt.

The population tends to be non-mobile and aging. Due to the deep penetration of the Blue Cross indemnity plans offered via the large manufacturing firms, this age group is very accustomed to paying little for health care services. There has been, however, a marked increase in the Blue Cross Medicare HMO, SecurityBlue. A local Medicaid HMO, Gateway Health Plans, has shown an enrollment of 80,000 public assistance clients. Their goal was 16,000.

While the trends are distressing, opportunities do exist, provided the companies willing to explore them meet certain criteria. One, the product/service must be cost effective relative to its competitors. If there is no competitor, then the product/service must create efficiencies in operations, or savings in other categories. The product/service would have an advantage if: 1) it is user friendly and 2) has home and/or outpatient usage.

Complex procedures will continue to be performed. However, products that shorten the length of surgery, or allow a patient to receive therapy in the home and remain ambulatory will be well received.

In the biomedical high technology arena, several opportunities exist. One is in the supply of products/services to those firms needing components to grow in the marketplace will be required. Companies that are able to provide medically related software that will provide a greater degree of knowledge about a facility, its patients, and its extended family will be well received. The information system area is fragmented and pieced together.

A recent development in SWPA is a Center for Tissue Engineering sponsored by Carnegie Mellon University, The University of Pittsburgh, with grant money coming to fruition. This will, over the course of time, stimulate the creation of biopharmaceutical firms. Following this area, there is a large amount of intellectual property that is available for licensing. this may serve as a product line extension mechanism for a firm lacking an in-house development capacity.

True opportunities exist in facilitating the activities of daily living for home-bound and assisted living residents. A product or service that simplifies daily tasks, prevents injuries, or aids the caregiver has significant potential. These are also less dependent on government money.

SWPA/Pittsburgh Region
Hospitals & Health Care Systems
(Ranked by 1994 Gross Revenue)

Name/Address Telephone	Purchasing Contact	Gross Revenues (000)	Number of Beds	Network Affiliation	Trauma Center (Y/N)	Transplants (Tissue)	Average Occupancy	Teaching Areas
University of Pittsburgh Medical Center 200 Lothrop Street Pittsburgh, PA 15213 (412)647-7000	Bill O'Connor	$1,562,060	1,221	T	Y	BM, C, Lu, H, H/Lu, K, LV, P, I	82%	Medical and Surgical
The Western Pennsylvania Hospital 4800 Friendship Avenue Pittsburgh, PA 15224 (412)578-5000	Roger Graziano	$531,227	542	N/A	N	BM	77%	Medical and Surgical
St. Francis Health System 4401 Penn Avenue Pittsburgh, PA 15224 (412)622-4343	Joe Flannery	$516,781	1,415	N/A	N	N/A	66%	Medical and Surgical
Pittsburgh Mercy Health System 1400 Locust Street Pittsburgh, PA 15219 (412)232-8111	Terence Parker	$472,578	1,036	N/A	Y	N/A	80%	Medical and Surgical
Shadyside Hospital 5230 Centre Avenue Pittsburgh, PA 15232 (412)623-2121	James Rowland	$468,201	486	N/A	N	BM	76%	Medical

Name/Address Telephone	Purchasing Contact	Gross Revenues (000)	Number of Beds	Network Affiliation	Trauma Center (Y/N)	Transplants (Tissue)	Average Occupancy	Teaching Areas
Allegheny General Hospital 320 E. North Avenue Pittsburgh, PA 15212 (412)359-3131	Bruce Kehr	$386,995	777	S	Y	H, BM, K, P	74%	Medical and Surgical
Forbes Health System 500 Finley Street Pittsburgh, PA 15206 (412)665-3000	George Bower	$276,731	792	S	N	N/A	73%	Medicine
Children's Hospital 3705 Fifth Avenue Pittsburgh, PA 15213 (412)692-5325	Ken Trexler	$236,615	235	T	Y	BM, C, Lu, H, H/Lu, K, LV, P, I	70%	Medical and Surgical
South Hills Health System P.O. Box 18119 Coal Valley Road Pittsburgh, PA 15236 (412)469-5000	Bob Cunningham	$231,813	392	T	N	N/A	72%	N/A
Westmoreland Regional Hospital 532 W. Pittsburgh Street Greensburg, PA 15601 (412)832-4000	Gary Metcalf	$216,914	416	N/A	N	N/A	78%	N/A
The Medical Center, Beaver 1000 Dutch Ridge Road Beaver, PA 15009 (412)728-7000	Joe Badamo	$216,652	470	N/A	N	N/A	58%	Medical

Name/Address Telephone	Purchasing Contact	Gross Revenues (000)	Number of Beds	Network Affiliation	Trauma Center (Y/N)	Transplants (Tissue)	Average Occupancy	Teaching Areas
The Washington Hospital 155 Wilson Avenue Washington, PA 15301 (412)225-7000	Ron Shaw	$202,145	364	T	N	N/A	66%	N/A
St. Clair Hospital 1000 Bower Hill Road Pittsburgh, PA 15243 (412)561-4900	Don Sippel	$173,711	337	S	N	N/A	73%	N/A
St. Margaret Memorial Hospital 815 Freeport Road Pittsburgh, PA 15215 (412)784-4000	Ed Moran	$163,246	267	T	N	N/A	76%	Family Practice, (recently merged with UPMC)
Allegheny Valley Hospital 1301 Carlisle Street Natrona Heights, PA 15065 (412)224-5100	Fred Hartman	$161,914	300	S	N	N/A	72%	N/A
Passavant Hospital 9100 Babcock Blvd. Pittsburgh, PA 15237 (412)367-6700	Paul Wheeler	$161,884	296	T	N	N/A	69%	N/A
Monongahela Valley Hospital Country Club Road Monongahela, PA 15063 (412)258-1000	Keith Hagan	$158,709	300	N/A	N	N/A	85%	N/A

Name/Address Telephone	Purchasing Contact	Gross Revenues (000)	Number of Beds	Network Affiliation	Trauma Center (Y/N)	Transplants (Tissue)	Average Occupancy	Teaching Areas
McKeesport Hospital 1500 Fifth Avenue McKeesport, PA 15132 (412)664-2000	Dennis Koczaja	$153,526	389	N/A	N	N/A	78%	N/A
Butler Memorial Hospital 911 East Brady Street Butler, PA 16001 (412)283-6666	Paul Eberhardt	$134,125	302	N/A	N	N/A	64%	N/A
Magee Women's Hospital 300 Halket Street Pittsburgh, PA 15213 (412)641-1000	John Deighan	$132,060	290	T	N	N/A	64%	Obstetrics and Gynecology

Key

Network Affiliation: T - Tri-State
S - SIDN (Southwest Integrated Delivery Network)

Transplants:
BM - Bone Marrow
Lu - Lung
LV - Liver
H/Lu - Heart/Lung
C - Cornea
H - Heart
I - Intestinal
K - Kidney
P - Pancreas

NWPA/Erie
Hospitals and Health Systems
(by County)

County	Hospital	No. of Beds	Occupancy %	No. Staff	JCAHO (Y/N)	Comments
Cameron	None					
Clarion	Clarion Hospital One Hospital Drive Clarion, PA 16214 (814)226-9500	87	51	326	N	
Clearfield	Clearfield County Hospital 809 Turnpike Ave Clearfield, PA 16830 (814)765-5341	105	70	677	Y	
	DuBois Regional Medical Center 100 Hospital Ave PO Box 447 DuBois, PA 15801 (814)371-2200	194	62	953	Y	14 Nursing Home Beds
Crawford	Meadville Medical Center 751 Liberty Street Meadville, PA 16335 (814)333-5000	317	53	830	Y	32 Nursing Home Beds 2 Sites

County	Hospital	No. of Beds	Occupancy %	No. of Staff	JCAHO (Y/N)	Comments
	Titusville Area Hospital 406 W. Oak Street Titusville, PA 16354 (814)827-1851	99	33	269	Y	
Elk	Elk County Regional Medical Center 94 Hospital Street Ridgway,PA 15853 (814)776-6111	48	52	152	N	
	St. Mary's Regional Medical Center 763 Johnsonburg Road St. Mary's, PA 15857 (814)781-7500	233	66	491	Y	138 Nursing Home Beds
Erie	Corry Memorial Hospital 612 W. Smith Street Corry, PA 16407 (814)664-4641	71	N/A	N/A	Y	
	Hamot Medical Center 201 State Street Erie, PA 16550 (814)877-6000	531	60	1885	Y	20 Nursing Home Beds Trauma Certified
	Metro Health Center 252 W. 11th Street Erie, PA 16501 (814)864-4031	102	53	240	N	American Osteopath Assoc. Accredited

County	Hospital	No. of Beds	Occupancy %	No. of Staff	JCAHO (Y/N)	Comments
	Millcreek Community Hospital 5515 Peech Street Erie, PA 16544 (814)864-4031	101	46	234	N	American Osteopath Assoc. Accredited
	St. Vincent Health System 232 W. 25th Street Erie.PA 16544 (814)452-5000	471	68	2106	Y	Rehabilitation Accredited
	Shriners Hospital for Crippled Children 1645 W. 8th Street Erie, PA 16505 (814)875-8700	30	57	103	Y	
	HealthSouth Great Lakes Rehabilitation Hospital 143 E. Second Street Erie, PA 16507 (814)878-1200	108	54	182	Y	
	HealthSouth Lake Erie Institute of Rehabilitation 137 W. Second Street Erie, PA 16507 (814)453-5602	99	57	257	Y	27 Nursing Home Beds

County	Hospital	No. of Beds	Occupancy %	No. of Staff	JCAHO (Y/N)	Comments
	Union City Memorial Hospital 130 N. Main Street Union City, PA 16438 (814)438-1000	25	56	102	Y	
Forest	None					
Jefferson	Brookville Hospital 100 Hospital Road Brookville, PA 15825	73	53	352	Y	
	Punxsutawney Area Hospital Rd 5, Rte. 36 North Punxsutawney, PA 15767 (814)938-4500	54	69	225	Y	14 Nursing Home Beds
McKean	Bradford Regional Medical Center 116 Interstate Parkway Bradford, PA 16701 (814)368-4143	216	79	556	Y	95 Nursing Home Beds
	Community Hospital N. Fraley Street Kane,PA 16735 (814)837-8585	53	41	140	N	

County	Hospital	No. of Beds	Occupancy %	No. of Staff	JCAHO (Y/N)	Comments
Mercer	United Community Hospital 631 N. Broad St. Ext Grove City, PA 16127 (412)458-5442	99	56	327	N	
	Greenville Regional Hospital 110 N. Main Street Greenville, PA 16125 (412)588-2100	--	--	--	Y	Horizon Hospital System member
	Shenango Valley Medical Center 2200 Memorial Drive Farrell, PA 16121	--	--	--	Y	Horizon Hospital System member Osteopathic Facility
	Horizon Hospital System 3140 Highland Road Hermitage, PA 16148 (412)346-3557	304	62	1171	Y	Corporate Headquarters 25 Nursing Home Beds
	Sharon Regional Medical Center 740 East State Street Sharon, PA 16146 (412)983-3911	234	67	937	Y	40 Nursing Home Beds

County	Hospital	No. of Beds	Occupancy %	No. of Staff	JCAHO (Y/N)	Comments
Potter	Charles Cole Memorial Hospital Rural Rte. 1, Box 205 Coudersport, PA 16915 (814)274-9300	120	71	394	Y	50 Nursing Home Beds
Venango	Northwest Medical Center One Spruce Street Franklin, PA 16323 (814)437-7000	--	--	--	Y	
	Northwest Medical Center 174 E. Bissell Avenue PO Box 1068 Oil City, PA 16301 (814)677-1711	--	--	--	--	
	Northwest Medical Center System (see Franklin, PA above)	362	--	--	Y	Corporate Headquarters

Veterans Administration Medical Centers
(Western Pennsylvania)

Hospital	No. of Beds	Occupancy %	No. of Staff	JCAHO (Y/N)	Comments
VAMC 325 New Castle Road Butler, PA 16001 (412)287-4781	345	79	649	Y	175 Nursing Home Beds
VAMC 135 E. 38th Sstreet Erie, PA 16504 (814)868-6210	160	66	417	Y	40 Nursing Home Beds
VAMC 7180 Highland Drive Pittsburgh, PA 15206 (412)365-4413	541	86	1171	Y	
VAMC University Drive C Pittsburgh, PA 15240 (412)692-3200	698	82	1822	Y	240 Nursing Home Beds

West Virginia Hospitals and Health Systems
(By County)

County	Hospital	No. of Beds	Occupancy %	No. of Staff	JCAHO (Y/N)	Gross Revenue (000)	Comments
Cabell	Cabell Huntington 1340 Hal Greer Blvd Huntington, WV 25701 (304)526-2000	250	62	1,267	Y	115,913	15 Nursing Home Beds
	St. Mary's Hospital 2900 First Ave Huntington, WV 25702 (304)526-1234	440	60	1,597	Y	144,990	20 Nursing Home Beds
	HCA River Park 1230 Sixth Ave Huntington, WV 25701 (304)526-9111	165	59	247	Y	24,434	Rehab/Psych Only
	Huntington Rehab Hospital 6900 W. Country Club Rd Huntington, Wv 25705 (0)733-1060	40	90	116	Y	13,710	

County	Hospital	No. of Beds	Occupancy %	No. of Staff	JCAHO (Y/N)	Gross Revenue (000)	Comments
Kananwha	Charleston Area Medical Center PO Box 1393 Charleston, WV 25325 (304)348-5432	776	75	4,934	Y	493,203	Mailing Address
	CAMC General Division 501 Morris Street Charleston, WV 25301	--	--	--	--	--	--
	CAMC Memorial Division 3200 MacCorkle Ave. S.E. Charleston, WV 25304 (304)348-5432	--	--	--	--	--	--
	CAMC Womens & Children's 800 Pennsylvania Ave Charleston, WV 25302 (304)348-5432	--	--	--	--	--	--

County	Hospital	No. of Beds	Occupancy %	No. of Staff	JCAHO (Y/N)	Gross Revenue (000)	Comments
	CAMC Eye & Ear 1306 Kananwha Blvd East Charleston, WV 25301	26	4	85	Y	9,181	
	CAMC Highland Hospital 300 56th St., S.E. Charleston, WV (304)926-1600	58	59	153	Y	9,917	Rehab/Psych Only
	St. Francis Hospital 333 Laidley Street Charleston, WV 25301 (304)347-6500	145	72	554	Y	81,304	
Monongalia	West Virginia University Hospitals Medical Center Dr Morgantown, WV 26506 (304)598-4000	330	77	2,202	Y	229,477	Medical School Teaching Hospital
	Monongalia Gen Hospital 1200 J.D. Anderson DR Morgantown, WV 26505 (304)598-1200	198	67	888	Y	89,840	

County	Hospital	No. of Beds	Occupancy %	No. of Staff	JCAHO (Y/N)	Gross Revenue (000)	Comments
	Chestnut Ridge Hospital 930 Chestnut Ridge Rd Morgantown, WV 26505 (304)293-4000	62	--	--	Y	18,249	Rehab/Psych Only
Ohio	Ohio Valley Med Center 2000 Eoff Street Wheeling, WV 26003 (304)234-0123	390	78	980	Y	86,020	172 Nursing Home Beds
	Wheeling Hospital Medical Park Wheeling, WV 26003 (304)243-3000	276	74	1.243	Y	133,172	
	Wheeling Clinic CORF 58 16th Street Wheeling WV 26003 (304)234-2000	--	--	--	--	--	Rehab Only
Wood	St. Joseph's Hospital 1824 Murdoch Ave Parkersburg, WV 26101 (304)424-4382	294	53	1,090	Y	89,050	20 Nursing Home Beds

County	Hospital	No. of Beds	Occupancy %	No. of Staff	JCAHO (Y/N)	Gross Revenue (000)	Comments
	Camden-Clark Memorial Hospital 800 Garfield Ave PO Box 718 Parkersburg, WV 26102 (304)424-2111	214	72	1,063	Y	104,719	
	Western Hills Rehab Hospital 3 Western Hills Dr PO Box 1428 Parkersburg, WV 26102 (304)420-1300	40	90	130	Y	16,164	
Brooke	Weirton Medical Center 601 Colliers Way Weirton, WV 26062 (304)797-6000	260	44	654	Y	54,502	23 Nursing Home Beds

Veterans Administration Medical Centers
West Virginia

Hospital	No. of Beds	Occupancy %	No. of Staff	JCAHO (Y/N)	Total Expenses (000)	Comments
VAMC 200 Veterans Avenue Beckley, WV 25801 (304)255-2121	186	62	430	Y	29,909	
Louis A. Johnson VAMC Clarksburg, WV 26301-4199 (304)623-3461	160	70	606	Y	42,131	
VAMC 1540 Spring Valley Drive Huntington, WV 25704 (304)429-6741	159	--	--	--	--	
VAMC Charles Town Road Martinsburg, WV 25401 (304)263-0811	771	90	1,268	Y	77,625	150 Nursing Home Beds

Health Maintenance and Managed Care Organizations
Pennsylvania

Name	Address/Telephone	Contact	Type	Area/Total Enrollees/Comments
Keystone Health Plan West	681 Andersen Drive Pittsburgh, PA 15220-2771	Dan Holtz (412)392-6740 Peter Mulligan (412)255-8263	HMO - IPA	Western Pennsylvania (PA) 242,459 Full NCQA Certification
Aetna Health Plans of W.PA Inc	5700 Corporate Drive Suite 300 Pittsburgh, PA 15237	Robert Morris (412)366-9000	HMO - IPA	Western PA 16,798 Full NCQA Certification
US Healthcare	2 Marquis Plaza Suite 5313 Campbells Run Road Pittsburgh, PA 15205	Rick Jung (412)788-0500	HMO - IPA	Western PA 79,879 Full NCQA Certification
HealthAmerica	5 Gateway Center Pittsburgh, PA 15222	Thomas Murray (412)553-7300	HMO - Staff	Western PA 175,241 Full NCQA Certification
Aetna Health Plans	As Above	As Above	POS	Western PA 38,906
Blue Cross of W. PA.	Fifth Avenue Place Pittsburgh, PA 15222	Same as Keystone	POS	Western PA 744,835
HealthAmerica (Health Assurance)	As Above	As Above	POS	Western PA 84,497
US Healthcare	As Above	As Above	POS	Western PA N/A

Name	Address/Telephone	Contact	Type	Area/Total Enrollees/Comments
Travelers (MetraHealth)	The Travelers One Mellon Bank Center 500 Grant Street Pittsburgh, PA 15219	Marilyn Nixon (412)338-5545	POS	Western PA 29,942
Advantage Health	121 Seventh Street Pittsburgh, PA 15222	M. Daniel Splain (412)391-9300	PPO	Western PA 155,000
Aetna Health Plans	As Above	As Above	PPO	Western PA 34,569
ALPHA Health Network	415 Holiday Drive Foster Plaza One Pittsburgh, PA 15220	Annette Fetchko (412)937-1396	PPO	Western PA 80,978
Health Assurance	As Above	As Above	PPO	Western PA 99,847
InterGroup Services Corp	300 Penn Center Blvd Suite 722 Pittsburgh, PA 15235	John A. George (412)823-8400	PPO	Western PA 200,000
MultiPlan	115 Fifth Ave, 7th Floor New York, NY 10003-1004	Lynn Adams (212)780-2000	PPO	Western PA 132,500
Preferred Blue	See Blue Cross of W.PA.	As Above	PPO	Western PA Declined to disclose
Travelers/MetraHealth	As Above	As Above	PPO	Western PA 29,942
University Health Network	Blue Cross of W. PA 120 Fifth Avenue Pittsburgh, PA 15222-3099	Mike Zezulewicz (412)255-8142	PPO	Western PA 42,033

Health Maintenance and Managed Care Organizations
West Virginia

Name	Address/Telephone	Contact	Type	Area/Total Enrollees/Comments
Advantage Health Plan	3000 Guernsy Street Bellaire, OH 43906	Daniel Splain (614)676-4623	HMO	W. Virginia (WV) 7,476
Health Plan of the Upper Ohio Valley	52160 National Road East St. Clairesville, Ohio	Phillip Wright (614)695-3585	HMO	WV 44,081
Carelink	141 Summers St. PO Box 1711 Charleston, WV 25326-1711	Alan Mytty (304)348-2900	HMO	WV 12,181
PrimeOne	113 Goff Mountain Road Suite 5 Cross Lanes, WV 25313	A. Paul Holden (304)353-8707	HMO	WV 20,280
Carelink	300 Capital St. #821 Charleston, WV 25326	Alan Mytty (304)348-2900	PO	WV 20,000
Select Net Plus	One Hillcrest Dr. East Charleston, WV 25311	Robert Harris (304)346-0811	PPO	WV 24,000

Principal Health Care Consultancies

Name/Address	Contact/Telephone	Coverage Area	Specialty Area	Comments
Specialized Healthcare Consultants 1141 Tamarack Lane Pittsburgh, PA 15237	Peter M. Vercilla (412)367-7291	National, International	Operations Analysis Strategic Planning Technology Transfer	Clinical and Nonclinical Staff
Arthur Anderson, LLP 2100 One PPG Place Pittsburgh, PA 15222	(412)232-0600 (412)232-0693 (FAX)	National, International	Auditing/Accounting Management Consulting	
Coopers and Lybrand USX Tower, 35th Floor 600 Grant Street Pittsburgh, PA 15219	Charles Day (Health care) Theodore Glyptie(High Tech) (412)355-8000 (412)355-8089(FAX)	National, International	Auditing/Accounting Management Consulting	
Deloitte and Touche 2500 One PPG Place Pittsburgh, PA 15222	Wilbur Arnold (Health care) (412)338-7200 (412)338-7830 (FAX)	National, International	Auditing/Accounting Management Consulting	
Ernst and Young 2800 One Oxford Center Pittsburgh, PA 15219	Steve Klemash (High Tech) (412)644-7800 (412)644-0671(FAX)	National, International	Auditing/Accounting Management Consulting	
KPMG Peat Marwick One Mellon Bank Center Pittsburgh, PA 15219	Francis Lison, Partner (412)391-9710 (412)391-8963(FAX)	National, International	Auditing/Accounting Management Consulting	
Price Waterhouse USX Tower, Suite 4500 600 Grant Street Pittsburgh, PA 15219	Frank Kelly, Partner (412)355-6000 (412)355-0609(FAX)	National, International	Auditing/Accounting Management Consulting	

Name/Address	Contact/Telephone	Coverage Area	Specialty Area	Comments
The Pilot Group USX Tower 600 Grant Street Pittsburgh, PA 15219	William Hanna, CEO (412)566-1900	National, International	Managed Care Physician - Hospital Networks	
Burt, Hill, Kosar, & Rittelman 300 Sixth Avenue Suite 700 Pittsburgh, PA 15222	P. Richard Rittelman, FAIA (412)394-7000 (412)394-7880(FAX)	National, International	Architecture/Design	National Reputation
Hayes Large Architects 606 Liberty Avenue Pittsburgh, PA 15222	J. Richard Fruth, AIA (412)391-3086 (412)391-7280(FAX	National, International	Architecture/Design	
IKM, Inc One PPG Place Pittsburgh, PA 15222	Mihai "Mike" Marcu, AIA (412)281-1337	National, International	Architecture/Design	
WTW Architects & Planners Timber Court, Suite 301 Pittsburgh, PA 15212	Bryant Robey, AIA Principal, Healthcare (412)321-0550 (412)321-2431(FAX)	National, International	Architecture/Design	
Daniel Stern & Associates The Medical Center East 211 N. Whitfield Street Pittsburgh, PA 15206	John Dempster, CEO (800)438-2476 (412)363-6032(FAX)	National, International	Managed Care Physician - Hospital Networks	25 years experience
Thompson Healthcare Assoc The Frick Bldg, Suite 432 Grant Street Pittsburgh, PA 15219	Tracy Thompson (412)263-2263 (412)263-2908(FAX)	Regional	Management Service Bureaus for physicians and hospitals	
First Consulting Group Park West One Cliff Mine Road, Suite 540 Pittsburgh, PA 15275-1007	Kerry Kerlin (412)787-3252 (412)787-3280(FAX)	National	Information Technology	

Name/Address	Contact/Telephone	Coverage Area	Specialty Area	Comments
Strategic Management Consulting Chamber of Commerce Bldg 411 7th Avenue, Suite 1401A Pittsburgh, PA 15219	Dave Adams, Manager (412)263-2009 (412)391-0478(FAX)	Regional	Information Technology	Division of PBC, a national I.T. staffing firm
Hallmark/Tassone 4 Gateway Center Pittsburgh, PA 15222	Tim Tassone, President (412)471-5300, ext 222 (412)471-3308(FAX)	National	Healthcare/Business to Business marketing/communications	Full service marketing/communications

Western Pennsylvania Media Forums

Name/Address/Telephone	Contact	Coverage Area	Audience	Comments
Hospital News Nursing News 300 Mt. Lebanon Blvd. Suite 201A Pittsburgh, PA 15234 (412)341-1755	Harvey Kart, Publisher	Western PA	Providers, clinicians, payors, administrators, interested parties	
Pittsburgh Business Times 2313 E. Carson St, Suite 200 Pittsburgh, PA 15203 (412)481-6396 (412)481-9956(FAX)	Betsy Benson, Managing Editor	Western PA West Virginia	General Business	Greatly expanded health care coverage, particularly mergers and acquisitions; publishes yearly Managed Care Guide and Book of Lists
Pittsburgh Post-Gazette 34 Blvd of the Allies Pittsburgh, PA 15222 (412)263-1100	Pittsburgh Region: (412)263-1601 Business: (412)263-1567	Region, State, National, International	Largest general daily paper	
Tribune - Review 3 Station Square Express House Pittsburgh, PA 15219 (800)433-3045 (412)391-3588 (412)341-2152(FAX)		Region, State	Second largest daily paper	
Executive Report 3 Gatweay Center, 5th Floor 401 Liberty Avenue Pittsburgh, PA 15222 (412)471-4585 (412)644-3006(FAX)	Jim Urban, Editor - in - Chief	Region, State	Business	

SWPA Nursing Homes
(Ranked by Number of Beds)

Name/Address/Telephone	Number of Beds	Owner	Status	Comments
John J. Kane Regional Centers 300 Kane Blvd Pittsburgh, PA 15243 (412)429-3000	1,440	Allegheny County	Nonprofit	4 Sites
Beaver Valley Geriatric Center 246 Friendship Circle Beaver, PA 15009 (412)775-7100	672	Beaver County	Nonprofit	
Leader Nursing 4000 Waterdam Plaza McMurray, PA 15317 (412)941-9520	600	Manor Health Care	For Profit	4 Sites
Westmoreland Manor 2480 S. Grande Blvd Greensburg, PA 15601 (412)830-4000	540	Westmoreland County	Nonprofit	
Lutheran Alliliated Services 1323 Freedom Road Cranberry, PA 16066 (412)776-1100	511	Lutheran Affiliated Services, Inc	Nonprofit	2 Sites
Presbyterian SeniorCare 1215 Hulton Road Oakmont, PA 15139 (412)826-6008	361	Presbyterian SeniorCare	Nonprofit	2 Sites

Name/Address/Telephone	Number of Beds	Owner	Status	Comments
St. Francis Nursing Center 745 N. Highland Avenue Pittsburgh, PA 15206 (412)362-6622	300	St. Francis Health System	Nonprofit	2 Sites
Riverview Center for Jewish Seniors 4724 Browns Hill Road Pittsburgh, PA 15217 (412)521-5900	280	Jewish Association on Aging	Nonprofit	
Washington County Health Center 36 Old Hickory Ridge Road Washington, PA 15301 (412)228-5010	250	Washington County	Nonprofit	
St. Barnabas Nursing Home 5827 Meridian Road Gibsonia, PA 15044 (412)443-1552	249	St. Barnabas Health System	Nonprofit	2 Sites
Sunnyview Home 107 Sunnyview Circle Butler, PA 16001 (412)282-1800	240	Butler County	Nonprofit	
Heartland Health Care Center 550 S. Negley Avenue Pittsburgh, PA 15232 (412)665-2400	224	Health Care and Retirement Corporation	For Profit	
Wexford House Nursing Center 9850 Old Perry Highway Wexford, PA 15090 (412)366-7900	224	Emergency Medical Management Company	For Profit	

Name/Address/Telephone	Number of Beds	Owner	Status	Comments
Vicentian Home 111 Perrymont Road Pittsburgh, PA 15237 (412)366-5600	221	Vincentian Home Inc.	Nonprofit	
Baldwin Health Center 1717 Skyline Drive Pittsburgh, PA 15227 (412)885-8400	200	Evelyn & Hollis Garfield	For Profit	

Resource Directory
Medical/Health Care

Hospital Association of Pennsylvania
PO Box 8600
Harrisburg, PA 17105-8600
(717)564-9200

Hospital Council of Western Pennsylvania
500 Commonwealth Drive
Warrendale, PA 15086
(412)776-6400
Financial Management: (412)772-7244
Public Affairs: (412)772-8332

Pennsylvania Health Care Association (Long Term Care Group)
2401 Park Drive
Harrisburg, PA 17110
(717)657-4902

Pennsylvania Health Care Cost Containment Council
225 Market Street, Suite 400
Harrisburg, PA 17101
(717)232-6787
FAX: (717)323-3821

Pennsylvania Department of Health
300 Liberty Avenue
Pittsburgh, PA 15222
Hospital Licensing: (412)565-5176
Nursing Home Licensing: (412)565-2836
Administration/Exec. Dir: (412)565-5085

Pennsylvania Department of Health
State Health Data Center
PO Box 90
Harrisburg, PA 17108
(717)783-2548

West Virginia Health Care Cost Review Authority
Dave Foriash, Executive Director
100 Dee Drive
Charleston, WV 25311

West Virginia Hospital Association
Mike Robbins/Tammy Mahood
(304)744-9842

Pennsylvania Department of Aging
231 State Street
Barto Building
Harrisburg, PA 17101
(717)783-1550

West Virginia Commission on Aging
State Capitol
Charleston, WV 25303
(304)348-3317

Pennsylvania Department of Insurance
Company Division System
1131 Strawberry Square
Harrisburg, PA 17120
(717)787-7701
HMO - PPO Information

Erie County Library System
27 South Park Row
Erie, PA 16501
(814)451-6952

West Virginia Insurance Commissioner's Office
Financial Conditions Division
1124 Smith Street
Charleston, WV 25301
(304)558-2100
(304)558-0412 (FAX)
HMO - PPO Information

Resource Directory
BioTechnology

Pittsburgh High Technology Council
4516 Henry Street
Pittsburgh, PA 15213
(412)687-2700 FAX: (412)687-2791

Mid-Atlantic Technology Applications Center
University of Pittsburgh
823 William Pitt Union
Pittsburgh, PA 15260
(412)648-7000; (800)257-2725 FAX: (412)648-7003

National Technology Transfer Center
316 Washington Avenue
Wheeling, WV 26003
(304)243-2456 FAX: (304)243-2539

National Environmental Technology Applications Corporation
615 William Pitt Way
Pittsburgh, PA 15238
(412)826-5511 FAX: (412)826-3360

Biomedical/Biotechnology/Pharmaceutical

Primary and Secondary Firms

Applied Health Physics, Inc.
2986 Industrial Blvd
Bethel Park, PA 15102
(412)835-9555
(412)835-9559 (FAX)

- Peter Collopy $1.43 Million (1994)
- Radiologic facility decontamination and remediation, surveillance and assessment, risk assessment
- Regional, national, international

Augmentech, Inc.
5001 Baum Blvd.
Pittsburgh, PA 15213
(412)687-3409

- Mark Friedman, President
- Contract engineering design of biomedical and rehabilitation technology, produces cognitive prosthetics
- Regional, national

Automated Healthcare, Inc
261 Kappa Drive
Pittsburgh, PA 15238
(412)967-2690
(412)967-3599 (FAX)

- Sean McDonald, President $3.9 Million (1994)
- manufactures the Automated Pharmacy Station (TM), a robotics-based pharmacy management control system
- Regional, national

Biocontrol Technology, Inc.
Building 2500
2275 Swallow Hill Road
Pittsburgh, PA 15220
(412)429-0673
(412)279-1367 (FAX)

- David Purdy, President
- Developing a non-invasive glucose sensor for diabetics; bioremediation products; zebra mussel repellant

Medical Products
(Unclassified)

Biological Detection, Inc. 635 William Pitt Way Pittsburgh, PA 15238 (412)826-3857 (412)826-3850 (FAX)	o R. Terry Dunlay, President o National, international o Develops and markets imaging sofwware to measure the genetic and biochemical properties of microscope slide-based samples; areas include molecular pathology, oncology, cytogenetics, and cell biology; runs on IBM PCs.
Bioptechs, Inc. 334 Heist Road Butler, PA 16001 (412)282-7145	o Daniel Focht, President o National, international o Manufactures live cell microscopy environmental control systems
Cardiac Telecom Corp (Division of Telemed Technologies Int't) 503 Braddock Avenue Turtle Creek, PA 15145 (412)824-6600 (412)824-4225 (FAX)	o Lee Erhlichman, President o International o Manufactures home based, portable cardiac monitoring
Computational Diagnostics, Inc. 5001 Baum Blvd. Pittsburgh, PA 15213 (412)681-9990 (412)681-9994 (FAX)	o Sharon Enos, PhD, President $1 Million (1994) o Neurophysiologic monitoring systems

<u>Flexcell Int'l. Corp.</u> 541 Fifth Avenue McKeesport, PA 15132 (412)664-3539 (412)664-1179 (FAX)	o Albert Banes, PhD, President o National, international o Development of products for cellular biomechanics; products include Flexercell Strain Unit, and Flex 1 flexible bottom culture plate
<u>Lifecor, Inc.</u> 121 Freeport Road Pittsburgh, PA 15238 (412)826-9300 (412)826-9485 (FAX)	o Larry Bowling, President o National, international o Development of advanced cardiac monitoring product
<u>Metamorphic Surgical Devices, Inc.</u> 301 McKnight Park Drive Pittsburgh, PA 15237 (412)635-0501 (412)366-3111 (FAX)	o Gerald Cano, PhD, President o National, international o Designs, develops and markets minimally invasive instruments utilizing shape-memory-effective alloys
<u>Neuro Kinetics, Inc.</u> 130 Gamma Drive Pittsburgh, PA 15238 (412)963-6649 (412)963-6722 (FAX)	o Joseph Sinka, President $1 Million o International o Designs and manufactures instruments for human balance and control systems
<u>NOMOS Corp.</u> 2591 Wexford Bayne Road Suite 400 Sewickley, PA 15143 (412)934-5477 (412)934-5488 (FAX)	o Frank Guglielmo, VP Sales o Provides advanced treatment products for radiation oncology and neurosurgery

<u>NOVUM, Inc.</u> 5900 Penn Avenue Pittsburgh, PA 15206 (412)363-3300 (412)362-5783	o Dean Haas, VP o National o Pharmaceutical research testing services to the international pharmaceutical industry; provides for phases I - IV clinical trial sites
<u>Sylvan Corp.</u> PO Box 501 Irwin, PA 15642 (412)864-9350 (800)628-3836 (412)864-7138 (FAX)	o James Fedorka, President o National, international o Manufactures battery powered, medical fiberoptic light sources
<u>VASCOR, Inc.</u> 566 Alpha Drive Pittsburgh, PA 15238 (412)963-7438 (412)963-1476 (FAX)	o S. A. Kolenik, President/COO o National, international o Developing advanced cardiac assist devices; both VASCOR, LIFECOR, and Medrad are companies founded by M.S. Heilman, MD
<u>Wright Linear Pump, Inc.</u> 185A Robinson Road Imperial, PA 15126 (412)695-0800 (800)631-9535 (412)695-0406 (FAX)	o Edward Wright, President $900,000 (1994) o International o Develops and manufactures compression pumps for lymphedema, burns, para/quadraplegia, veterinary medicine

Medical Products by
Standard Industrial Classification (SIC) Codes

2834 Pharmaceuticals

Bayer Corp.	o Gerd Mueller, COO
One Mellon Center	o $7.1 Billion
Pittsburgh, PA 15219	o International
(412)394-5500	o Chemicals, health care, imaging technology
(412)394-5578 (FAX)	
General Nutrition Corp.	o Retail vitamin and nutritional supplements
921 Penn Avenue	o National
Pittsburgh, PA 15222	
(412)288-4600	
Medical Manufacturing Corp.	o Import/Export
Erie, PA	o International
(814)899-4500	

Mylan Laboratories
130 Seventh Street
Pittsburgh, PA 15222
(412)232-0100
(Corporate Headquarters)

- o Milan Puskar, CEO
- o $396 Million (1994)
- o Generic pharmaceutical manufacturer
- o National, international

Manufacturing Facility:
781 Chestnut Ridge Road
PO Box 4310
Morgantown, WV 26505-4310
(304)598-3232
(304)599-2595 (FAX)

Oakmont Pharmaceuticals
One Pennex Drive
Verona, PA
(412)828-2900

Quality Chemicals
Tyrone, PA
(814)684-4310

SmithKline Beecham Consumer
100 Beecham Drive
Pittsburgh, PA 15205
(412)928-1000

West Co., Inc.
Erie, PA
(814)899-9313

Zetachron, Inc.
State College, PA
(814)234-7370

2836 Biological Products, Excluding Diagnostics

Fortron Bioscience Inc.
St. Mary's PA
(814)781-6610

Shore Chemical Co.
2917 Spruce Way
Pittsburgh, PA
(412)471-3330

3821 Laboratory Apparatus & Furniture

Applied Test Systems, Inc
Butler, PA 16001
(412)283-1212

Burrell Scientific
Pittsburgh, PA
(412)471-2527

Fisher Scientific
711 Forbes Avenue
Pittsburgh, PA 15219
(412)562-8300 (Corporate HQ)
(412)963-3300 (Lab Supplies)

Shandon Lipshaw, Inc.
Pittsburgh, PA
(412)788-1133

3826 Analytical Instruments

Medastat Scientific Corp.
821 Main
Pittsburgh, PA
(412)963-5886

3841 Surgical & Medical Instruments & Apparatus

AMSCO International
500 Grant Street, Suite 5000
Pittsburgh, PA 15219
(412)338-6500

- $483 Million (1994)
- Regional, national, international
- Manufacturer and supplier of infection control, sterilizers, surgical equipment, and services

Autovage, Inc.
Library, PA
(412)653-5888

Bio Pace, Inc
Butler, PA
(412)282-7704

CSE Corp.
Monroeville, PA
(412)856-9200

Capintec, Inc.
Pittsburgh, PA
(412)963-1988

DeVilbiss Health Care Inc.
PO Box 635
Somerset, PA 15501
(814)443-4881

- National, international
- Manufacturer and distributor of oxygen and humidification therapy devices for pulmonary patients

Dymax Corp.
604 Epsilon Drive
Pittsburgh, PA 15238
(412)963-6884
(412)963-6179 (FAX)

- National, international
- Manufactures medical ultrasound scanners and probes

Dynamet Inc.
McMurray, PA 15317
(412)941-5540

TE Corp/Medical Systems Group
Pittsburgh, PA
(412)279-3900

Instrumentation Industries 2990 Industrial Blvd. Bethel Park, PA (412)854-1133	o Manufactures respiratory products and related items
Medrad, Inc. 271 Kappa Drive Pittsburgh, PA 15238 (412)967-9700 (412)967-9028 (FAX)	o Kenneth Grob, COO $78.3 Million (1994) o National, international o Manufactures, distributes and services equipment and products that enhance the clarity of medial images
Mine Safety Appliances PO Box 126 Pittsburgh, PA 15230 (412)967-3000	o $459 Million (1994) o National, international o Manufacture employee safety equipment, including breathing apparatus
Neuro Kinetics 130 Gamma Drive Pittsburgh, PA 15238 (412)963-6649	o $1 Million (1994) o National, international o Designs and manufactures instruments concerned with human balance and control systems
Respironics, Inc. 1001 Murry Ridge Road Murraysville, PA 15668-8550 (412)733-0200 (412)733-0299 (FAX)	o Robert Crouch, VP Sales $78.2 Million (1994) o National, international o Designs, manufactures, and markets medical products for respiratory and pulmonary problems, particularly sleep apnea

3842 Orthopedic, Prosthetic & Surgical Appliances

Actronics, Inc.
121 Freeport Road
Pittsburgh, PA 15238
(412)828-5480
(412)828-8987 (FAX)

- Samuel Vrankovich, VP
- National, international
- Design, develop, market interactive video training courses, primarily medical courses

Contour Form Products
Greenville, PA
(412)588-4452

Ellwood Safety Appliance
Ellwood City, PA
(412)758-7538

F & L Medical Products
One Parks Bend
Vandergrift, PA 15690
(412)845-7028
(412)845-1760 (FAX)

- Fred Foust, President
- National, international
- Develop, manufacture, and market elastomeric medical devices, primary product is F & L Attenuating Glove - reduces by 90% secondary radiation during fluoroscopy

Hanger Orthopedics
Pittsburgh, PA
(412)681-4553

Lake Region Medical, Inc
620 Alpha Drive
Pittsburgh, PA 15238
(412)963-1488
(412)963-7862 (FAX)

- Tracey Rode, Manager
- National, international
- Manufacturer of wire and machine products, particularly pacing lead coils and guide wires; 30 years experience

Pennsylvania Artificial Limb
Erie, PA
(814)868-5231

Presque Isle Orthopedic Lab
Erie, PA
(814)838-2349

Radioear Corp.
New Eagle, PA
(412)258-5353

Thermo-Electric Corp.
Imperial, PA
(412)695-1890

Union Orthotics & Prosthetics
Pittsburgh, PA
(412)621-2698

3843 Dental Equipment and Supplies

Benjamin Industries & Manufacturing
Greensburg, PA
(412)834-5599

Harbor Orthodontic Services
New Castle, PA
(412)654-3599

3844 Xray Apparatus and Tubes

Alvord Systems, Inc.
Clairton, PA
(412)233-3910

Cianflone Scientific Instruments
228 RIDC Park West Drive
Pittsburgh, PA 15275
(412)787-3600
(412)787-5022 (FAX)

Cook Pacemaker Corp.
Leechburg, PA
(412)845-8621

LumenX
Allison Park, PA 15101
(412)443-0290

3845 Electromedical & Electrotherapeutic Apparatus

Bio Pace Tech
Butler, PA
(412)282-7704

Laser Drive, Inc.
Gibsonia, PA 15044
(412)443-7688

<u>3851 Ophthalmic Goods</u>

Aire-Con Laboratories
Pittsburgh, PA
(412)531-8393

Guthrie Plastic Lens
Erie, PA
(814)833-8433

Three Rivers Optical Co.
McKees Rocks, PA
(412)771-5566

Beittler-McKee Optical Co.
Pittsburgh, PA
(412)481-4700

PD Plastics Co.
McMurray, PA
(412)941-2608

Radiosar Corp.
New Eagle, PA
(412)258-5353

Thermal Electric Corp.
Imperial, PA
(412)695-1890

Union Orthotics & Prosthetics
Pittsburgh, PA
(412)621-2698

3843 Dental Equipment and Supplies

Benjamin Industries & Manufacturing
Greensburg, PA
(412)834-5395

Harbor Orthodontic Services
New Castle, PA
(412)654-3599

3844 X-ray Apparatus and Tubes

Alvord Systems, Inc.
Clairton, PA
(412)233-3910

Cianflone Scientific Instruments
228 RIDC Park West Drive
Pittsburgh, PA 15275
(412)787-3600
(412)787-3022 (FAX)

LaserX
Allison Park, PA 15101
(412)443-0290

3845 [illegible] & Electrotherapeutic Apparatus

[illegible] Drive, Inc.
[illegible], PA 15044

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