On February 14, 1994, Vernon R. Loucks, Chairman and Chief Executive Officer of Baxter International, announced to his shareholders that over the past year the Company’s earnings and stock price had not performed well. Loucks also presented strategic guidelines that would help Baxter to improve its performance in the future. These guidelines included restructuring the company’s organization in 1994, holding operating and administrative expenses flat over the next two years, and making growth outside of the United States a higher priority. With regard to this last component Loucks stated: “In the developed nations, we are emphasizing technologies that serve advanced medical therapies. In less-developed nations, we are filling the demand for therapies such as peritoneal dialysis.” Loucks talked about expansion opportunities for peritoneal dialysis in Latin America, specifically in Brazil, Colombia, Mexico and Venezuela.

COMPANY BACKGROUND

Don Baxter Intravenous Products Corporation was founded in 1931 by three partners: Dr. Donald Baxter, a West Coast physician, Dr. Ralph Falk, an Idaho surgeon, and Harry Falk, a venture capitalist. The new company was based on a recent medical innovation, intravenous (IV) therapy. Baxter manufactured intravenous therapeutic solutions and bottled them in vacuum-sealed containers.

In an attempt to provide its European customers with timely service and improved product availability, Baxter founded Baxter Laboratories of Belgium in 1954. In 1959, Baxter established an international division to market the company’s products globally, marking the beginning of Baxter’s worldwide strategy.

Baxter has always prided itself on innovation and advanced technology. Moving rapidly in research and development, Baxter developed the first artificial kidney in 1956, the VIA FLEX plastic container for its IV solutions in 1970, and the MINI-BAG plastic container in 1974. The latter innovation made use of pre-mixed doses of medication, giving pharmacists more control over IV therapy procedures and minimizing medication errors. Exhibit 1 shows Baxter’s sales revenue growth over the last two decades.

CORPORATE STRATEGY AND INDUSTRY SEGMENTS

Baxter emphasizes a customized response to health care needs, leading it to establish a presence in most of the countries it serves. In addition to export offices in the U.S., Singapore and the United Kingdom, the company has sales offices in 29 countries. These local subsidiaries help Baxter to cope effectively with different government regulations as well as changes in economic and political conditions in each country. Baxter also strives to establish manufacturing and distribution facilities in those countries in which being closer to the customer provides efficiency gains.

The company operates in two industry segments: medical specialties and medical/laboratory products and distribution (refer to Exhibit 2). The medical specialties segment consists of biotherapy products, dialysis systems, medical products (outside the U.S.), and cardiovascular devices. The medical/laboratory products and distribution segment comprises medical/laboratory products, intravenous systems, and sales and distribution services. The medical specialties segment accounts for 36.6% of Baxter’s total sales revenues, while the medical/laboratory products and distribution segment accounts for the remaining 63.4%. Dialysis systems, which are used in the treatment of kidney disease, command the largest share of sales volume in the medical specialties segment.

BAXTER IN THE DIALYSIS MARKET

Baxter concentrates its R&D expenditures on potentially high growth, high return areas, which include therapies for treatment of end-stage renal (kidney) disease (ESRD). The company’s R&D programs are directed at developing improved products for new and emerging
markets as well as at making technological improvements in manufacturing processes. Self-manufactured products launched between 1988 and 1993 comprised approximately 35% of the company’s total self-manufactured product sales for 1993.

The growth potential of renal therapy makes this field a priority for Baxter. As Donald Joseph, president of the Renal Division, put it: “Baxter is just beginning to scratch the surface” of the renal therapy market’s potential. Baxter’s research data confirms Joseph’s point; for every treated kidney patient worldwide, there are five more untreated ones. Baxter prides itself on being the world leader in renal therapy, and it is aggressively positioning its capabilities to expand existing markets and tap into new ones.

Three types of treatments are used against kidney disease:1 (1) hemodialysis (HD), (2) continuous ambulatory peritoneal dialysis (CAPD), and (3) kidney transplants. Hemodialysis (HD) is generally conducted at a hospital or clinic. Patients are connected to a machine that filters impurities from the blood (refer to Exhibit 3). HD is an effective method to remove waste from the blood. However, it is hard on patients and requires about four hours per treatment and three treatments per week. Patients are typically exhausted for a day or more after each treatment, at which point the next treatment is to be given. Baxter is considered to be a strong competitor in given. Baxter is considered to be a strong competitor in the global HD-market.

Baxter pioneered the second type of renal therapy, a revolutionary technology in continuous ambulatory peritoneal dialysis (CAPD), in 1979. A catheter is inserted into the patient’s abdomen and across the peritoneum, the membrane lining the abdomen. Waste is filtered out of the body by a dialysis solution flushed into the abdominal cavity (refer to Exhibit 4). CA PD is generally performed by the patient himself, usually four times a day, and thus offers obvious lifestyle advantages over HD. CA PD provides increased mobility since it can be performed at home, in the car, or at the office. It is less traumatic to the patient’s system and requires fewer dietary restrictions. CA RD is also less costly. Because it is self-administered, no infrastructure (equipment, buildings, staff) is needed. Of all patients being treated with dialysis, 15% are using CA PD. This proportion is growing rapidly. Exhibit gives an overview of CA PD usage worldwide.

Seventy percent of all CA PD patients say that they are extremely satisfied with their treatment, compared to only 30% of HD patients. Recognizing this trend, Baxter is currently directing its primary focus towards CA PD treatment. Baxter plans to bolster its position in the CA PD segment by pursuing a two-pronged strategy: (1) to improve its market penetration in developed countries and (2) to expand rapidly in less developed nations where CA PD is also fast becoming the treatment of choice.

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1 See the Appendix for a more extensive overview of the various kidney treatment options.
Infection is a threat with CAPD. Baxter introduced Twin Bag system that allows the patient to drain used fluid and infuse fresh solution within a closed-loop. This system remarkably lowered the infection rate to once every three years (versus once every four or five months a decade ago).

The third type of treatment, a kidney transplant, is preferred by almost all patients, but its use is limited by a shortage of donor organs.

Baxter is the overall market leader in renal therapy with a 25% market share. The company dominates the CAPD-segment, in which it has a whopping 80% global market share. Baxter holds strong positions in those countries in which CAPD is fully developed. The company is also attempting to further penetrate the HD market. It is negotiating a deal with a leading manufacturer of dialyzers. This action would challenge a Swedish competitor, Gambro, the leader in this segment.

Baxter’s recent initiatives include promoting the Personal Cycler, a computerized solutions delivery/return system that enables physicians to tailor CAPD therapies to each patient. The dialysis is performed at night while the patient is sleeping. This product is expected to meet the needs of every major market in the world. It will be smaller, more reliable, and less costly than the current alternatives.

**COMPETITION IN THE DIALYSIS MARKET**

Market experts predict an annual growth rate of 5% in the U.S. market for dialysis products and services through the year 2000, with a continual shift from HD to CAPD. Global markets are expected to grow by about 7% in sales revenues (See Exhibit 6). No major new competitors have entered the market since 1983 when government started to cut budgets for renal diseases.
The world dialysis products market is dominated in ten large manufacturers located in the United States, Sweden, Germany and Japan. The remaining renal produce manufacturers are about sixty small to medium-sized firms located mainly in the United States and Europe.

Exhibit 6 lists the major competitors in the dialysis industry and their respective market shares for 1991. Gambro is Baxter's leading competitor. While Baxter dominates the worldwide HD-market, Gambro, through its acquisitions of Hospal and Cobe, prevails in the HD-market. Both companies supply peritoneal dialysis systems. Baxter pioneered the use of this product and continues to remain the leader in this segment.

Other players in the dialysis market are Althin CD Medical, Fresenius AG, National Medical Care, and Renal Systems. Exhibit 7 gives profiles of these companies. In Japan, several smaller players (Terumo, A sahi, and Toray) concentrate on the domestic market, which is estimated to be large. Terumo is Japan's largest manufacturer of disposable medical devices and is considered to be an important alternative supplier of dialyzers and dialysis supplies to the U.S. market.

**GLOBAL DIALYSIS MARKET TRENDS**

The incidence rate of renal diseases is likely to remain high, especially in developed countries with an aging population. Baxter estimates that by 1995 more than 700,000 people worldwide will suffer from kidney failure. Moreover, it is expected that dialysis patient mortality rates will continue to improve due to earlier detection and treatment of ESRD and the use of new products that reduce the incidence of various other life-threatening conditions. Although these preventive approaches may impact the rate of ESRD incidence, the effect is not likely to be seen in the 1990s.

In 1992, almost 14% of ESRD patients worldwide (around 65,000 patients) were maintained on CAPD. This represents an increase of 15,000 patients from 1990. Reliance on CAPD as a treatment of kidney diseases ranges from 5% in Japan up to 93% in Mexico. Data for other countries are given in Exhibit 8. The penetration of CAPD is to some extent driven by the mechanics of local reimbursement schemes. Jim Austin, Director of Global Strategy of the Renal Division, observes that in those countries where reimbursement of PD and HD therapies is economically neutral towards the doctor, PD penetration is in the 20–30% range. In Canada and the UK, where the governments push home-based therapies (such as PD) penetration is much higher (typically 30 to 40%). However, in countries like Japan, where the incentives favor HD, the spread of PD tends to be less than 10%.

Governments are trying to increase kidney transplants, as this method has significant cost advantages over continued dialysis and also improves quality of life for the patient. However, organ transplants, despite improvements, are not expected to outmode continued dialysis due to lack of organs. In 1984, the 3-year survival rate was estimated to be 78% for cadaver transplants and 91% for related donor transplants. Further, a major constraint on transplants is the availability of suitable kidneys; approximately 20,000 kidney donors die in the United States each year, but only 2,400 kidneys become available. Furthermore, 45% of patients receiving cadaver kidneys and 21% of patients receiving living donor kidneys still require some form of dialysis treatment.

Growth of the dialysis market is expected to be disproportionately large in the home-care, alternate site business due to the shifting demographics of an aging population and increased life expectancy. Government and private insurer pressure for cost-containment reinforces this trend. Worldwide, government reimbursement currently accounts for approximately 67% of payments.
for renal dialysis equipment and services, and this percentage is decreasing. Without government subsidies, demand for home-care will depend more heavily on the household’s income.

In such a competitive environment, sustaining market share will depend on the following pillars: competitive pricing, cost-effective manufacturing and distribution, development of new technology, and aggressive marketing. In particular, stronger support services for home users of dialysis products will be necessary to remain competitive. Operating margins for HD are around 10% as opposed to 20% for PD.

**DISTRIBUTION STRATEGY**

One of Baxter’s key strategies has been decentralization of distribution. The company’s subsidiaries and divisions, often with their own sales forces, carry out Baxter’s sales
patients tolerate 2.5L and feel better

TwinBag* integrated design reduces the risk of contamination

forts. Products are also sold to independent distributors dealers and sales agents. Baxter distribution centers some the U.S. and throughout the world each serve several divisions.

Baxter maintains extensive distribution networks both in the hospital and clinical segment and in the home health care segment. The company employs a 75-member direct sales force in the United States. Baxter approaches HD and CAPD products as a single market despite the differences between them because patients constantly switch from one therapy to the other. In the U.S., free delivery of renal therapy products for home patients is provided as a value-added service. Baxter has over 100 trucks for this purpose. It also distributes products through Caremark Corp, the largest national home health care company.

Distribution is one of Baxter’s strengths in the United States. Its distribution system stresses flexibility,
meeting the needs of the smallest as well as the largest customers and allowing Baxter to contract with outside carriers when necessary to meet specialized customer needs. Baxter also views its distribution system as a strategic tool to control health care costs and manage the company’s logistics costs.

Baxter International has a sales and distribution presence in more than 100 countries, either on a direct basis or through independent local distributors. Baxter currently has customer service and distribution systems to provide products and services to patients in their homes in countries. In Latin America, Baxter has manufacturing facilities in Brazil, Colombia, Costa Rica, the Dominican Republic and Mexico.

**CUSTOMER SERVICE**

Customer service is an integral part of Baxter’s strategy for the renal division. The close bonds the Baxter nurtures with its CA PD patients have turned into a tremendous competitive advantage. Donald Joseph describes the role of customer service as follows:

Our patients don’t leave us. We retain 99% of our CA PD patients once they’re with us. A patient is trained at the hospital by a nurse who was trained by us. The nurse introduces the patient to one of our home representatives. The two talk regularly. Next comes our home van driver. These are trained professionals who know and understand the requirements. They come to the home, establish and explain the inventory, open the boxes, rotate the stock, and place it anywhere the patient wants. For as long as the patient is on dialysis, s/he will probably see the same driver, and deal with the same home patient rep. The patient becomes connected to our people. When we promote one of the home patient reps, we often get a backlash from our patients . . . “What happened to Mary Jane? Why can’t I talk with her anymore?” It’s an unbelievable linkage. Our people provide not just service . . . it’s almost friendship. So, I can talk about technology, technology, technology, but for many patients, it’s “just make sure Harry comes to my house every month, and Mary Jane is there on the phone.” Is good service important? It’s major part of our product.

**PRICING STRATEGY**

With its leadership position in the renal therapy market, Baxter, rather than offering marked-down or discount prices, focuses on continuously improving the quality of its products and services and maintaining leadership in pricing. However, the rapidly changing health care environment has led to increased competition among medical suppliers.

Baxter has launched an extensive restructuring plan to lower its costs so that it can meet the increased price competition. The program should enable Baxter to move into “best cost” positions in its markets while maintaining its profit margins. Improved manufacturing technology, increased economies of scale and efficient logistic processes are expected to enable Baxter to reduce costs drastically in the future.
COMMUNICATION STRATEGY

Baxter’s promotional campaigns include the dissemination of educational materials to nephrologists and dialysis centers for their patients (refer to the Appendix for an example of these materials). Baxter strives to be seen as a support service for dialysis patients rather than simply as another product vendor. The promotional materials include a set of videotapes, one of which illustrates the different treatment options for end-stage renal disease patients, and another of which presents CAPD as an option. The videotapes do not specifically promote Baxter products.

As a leading supplier of health care products, Baxter has a strong reputation in the industry. Baxter’s communication strategies foster the image of a high quality supplier offering products at a reasonable cost. This message is conveyed to present customers as well as prospective customers. Baxter does no media advertising.

Baxter also forms partnerships with clinics and laboratories worldwide to develop new technologies. The company’s scientific track record and capital strength make it the first choice of many clinics looking for corporate research partners.

BAXTER’S EXPANSION IN LATIN AMERICA

Health Care in Latin America

In general, government expenditures for health care and demand for medical products in a given country are driven by a complex interplay among various economic, demographic, institutional and technological factors. Most importantly, however, spending patterns
Case 22: Baxter International—Renal Division: Market Opportunities in Latin America

**EXHIBIT 7**
**COMPANY PROFILES**

<table>
<thead>
<tr>
<th>Company</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Althin CD Medical</td>
<td>• Major player in the hemodialysis delivery machine market&lt;br&gt;• Maker of the new System 1000, touted to offer major savings over competitive models&lt;br&gt;• Althin products are sold in 70 countries. It has sales and distribution offices mainly in Europe, Japan, Singapore, Australia, and Canada.  &lt;br&gt;• Regional distributors are used in Latin America and in the Asian Pacific region.</td>
</tr>
<tr>
<td>Baxter Healthcare Corporation Renal Division</td>
<td>• Dominant player in both hemodialysis and peritoneal dialysis markets&lt;br&gt;• Introduced the first commercially developed dialyzer and first to market a portable kidney dialysis system known as CA PD in early 70’s.&lt;br&gt;• Over 80% of products are made by Baxter at its own manufacturing and assembly plants.&lt;br&gt;• 75-member direct sales force based in the U.S. (dedicated to dialysis) and uses distributors overseas.</td>
</tr>
<tr>
<td>CGH Medical, Inc. Division of Cobe Renal Care (Gambro)</td>
<td>• Highly vertically integrated organization with position in manufacturing, sales and distribution, and dialysis services.&lt;br&gt;• Active entering new markets and penetrating old ones through joint ventures and acquisitions.&lt;br&gt;• The Gambro group has 90 subsidiaries in 23 countries and is represented in 90 countries. There are 23 production units in 10 countries. R&amp;D is conducted in Sweden, Germany, France, Italy, Japan, and U.S.&lt;br&gt;• Gambro, and its subsidiaries COBE Laboratories and Hospal, operate their own separate sales organizations overseas and display their own trademark in most markets. In U.S. sales organization is combined into one unit.&lt;br&gt;• Main expansion efforts are in Central and Eastern Europe, China, and Asia Pacific markets. It expands mainly by joint ventures with local manufacturers. However, it is testing the market in Mexico: if successful this may open the doors of the rest of Latin America.&lt;br&gt;• Owns dialysis centers in Sweden and Italy.</td>
</tr>
<tr>
<td>Fresenius AG (Germany)</td>
<td>• It acquired 1993 Abbott’s renal dialysis business (laboratories in U.S., Australia, and New Zealand) and positioned itself as second largest provider of peritoneal dialysis products after Baxter. It also has a non-exclusive right to sell Abbott technology in the world except Canada, Mexico, Taiwan, and some Middle Eastern countries.&lt;br&gt;• Is licensed by Baxter to produce some of its patented peritoneal dialysis products.</td>
</tr>
</tbody>
</table>
are determined by the incidence of various diseases, the availability of health care resources and facilities, and the ability to pay for the level of care desired or required.

Latin America’s developing countries’ lack of economic resources and rapid population growth have precluded development of a comprehensive health care delivery infrastructure capable of serving most segments of the population. The quality and availability of hospital and physician’s services in Latin America often exceed those found in other third world regions. However, a large share of procedures and consultations are consumed by affluent members of the population and industrial workers covered by insurance plans. It is common for health care personnel to be clustered in urban areas, close to these affluent residents and industrial workers. Rural residents have access to limited, if any, health care. Private funding accounts for 44% of total health care spending in the region but covers only about 5% of the population. Some clinics in the more industrialized countries such as Brazil offer high health care standards. Their services are not affordable to the vast majority of the population. Accordingly, the two major health-related challenges faced by Latin American governments are (1) to improve access to professional medical care, and (2) to improve the quality and effectiveness of the available care.

In the last few years, Latin America has undergone an economic bounceback. After decades of protectionism and austere, inward-looking economic policies, much of the region is aggressively breaking down trade barriers and allowing the entry of foreign capital in a drive to industrialize and raise living standards. Even though most Latin American countries continue to rely primarily on agriculture and commodities, many of them are...
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Expected to surpass the world average GNP in the long term. Sustained growth will help these countries to overcome structural economic problems such as low per capita income, high unemployment and rampant inflation. Furthermore, increased income levels will allow governments to reduce debt, make more productive investments and boost health care expenditures.

Economic growth should serve as a catalyst for the improvement of the quality of health care delivery in the region. In 1987, the per capita outlay for health care in Latin America was $65.2 (compared to an average of $1,550 in developed countries). Governments are unable to fund universal health insurance. Local authorities also face a shortage of modern equipment, trained health care personnel, sophisticated pharmaceuticals, and state-of-the-art diagnostic and therapeutic equipment.

Health care outlays are expected to grow by 11.2% per year through 1996 up to a total of $63 billion. Although it is expected that all health care segments in Latin America will expand, most growth will occur in the outpatient segment due to concerted government-sponsored efforts to broaden coverage in outlying areas. These efforts are evidenced by sharp increases in the employment of nurses dispatched to non-metropolitan and rural areas.

In line with the broader trends in health care spending, demand for medical products in Latin America is projected to increase by 10.8% per year through 1996 up to $16.5 billion. This increase will stem mainly from reusable goods and basic consumer first aid products. Disposable items cater more to the affluent customers who can afford them.

Analysis by Country

Below follows an overview of economic conditions and the health care industry in each of Baxter’s targeted countries for expansion: Brazil, Colombia, Mexico and Venezuela (Refer to Exhibit 9 for a summary of comparative economic statistics).

Brazil. Of the Latin American countries targeted for expansion, Brazil is the largest in terms of population, geographic size and economic strength. The country’s major industries include agriculture, mining and manufacturing, which developed only within the last two decades. The domestic economy stagnated in the late 1980s, and the country grappled with severe inflation. It was unable to meet foreign debt obligations and, thus, had few public resources available for expansion of the current health care system.

Health care spending as a percentage of GDP increased from 3.0% in 1985 to 3.5% in 1989, a fairly large increase by the standards of a developing country. However, the quality of health care is still limited by the lack of funding. Availability is hindered by the sheer size of the country and the wide dispersion of the population. Approximately 90% of those living in urban areas have access to medical services, as compared to only 15% of those living in rural areas. Rural residents represent one-third of Brazil’s population. To compensate for the lack of quality and availability of health care, medical professionals tend to rely on prescribed medications instead of ongoing treatment and therapy.

The deficiency in ambulatory services in Brazil’s health care system is offset to some extent by the large hospital sector. Brazil has one of the largest inpatient sectors in the world, boasting some 7,000 primary care facilities. The Social Security Ministry operates a health program which covers about 60% of the population for basic hospital and physician’s services. The program is funded via payroll contributions and general tax revenues. The lack of public resources has provided an opportunity for private health programs to emerge. Private funding now accounts for nearly half of Brazil’s total health expenditures.

Brazil is projected to be one of the few countries in the world in which increases in primary care facilities will outpace population growth, due in part to the current growth in outpatient treatment facilities. Also, it is believed that the increasing compensation levels for health care professionals will attract entry into these occupations and will stimulate the expansion of health care sector in Brazil.

Most of Brazil’s health care equipment and pharmaceuticals are imported, although small domestic pharmaceutical manufacturers do exist. A part from Baxter,
## Exhibit 9
### Health and Demographic Statistics by Country — 1989 Estimates

<table>
<thead>
<tr>
<th>Latin American Countries</th>
<th>Brazil</th>
<th>Mexico</th>
<th>Venezuela</th>
<th>Colombia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (millions)</td>
<td>434.2</td>
<td>147.4</td>
<td>84.3</td>
<td>19.3</td>
</tr>
<tr>
<td>GDP/capita</td>
<td>$2,512</td>
<td>$2,918</td>
<td>$2,660</td>
<td>$4,453</td>
</tr>
<tr>
<td>GDP (billions US$)</td>
<td>$1,090.6</td>
<td>$430.1</td>
<td>$224.2</td>
<td>$87.5</td>
</tr>
<tr>
<td>Health Care Expenditures/capita</td>
<td>$86.5</td>
<td>$97.2</td>
<td>$98.2</td>
<td>$241.7</td>
</tr>
<tr>
<td>Health Care Expenditures (% of GDP)</td>
<td>3.4%</td>
<td>3.3%</td>
<td>3.7%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Number of</td>
<td>7.0</td>
<td>6.6</td>
<td>5.8</td>
<td>5.8</td>
</tr>
<tr>
<td>Deaths/capita (thousands)</td>
<td>3.0</td>
<td>4.6</td>
<td>0.9</td>
<td>2.6</td>
</tr>
<tr>
<td>Hospital Beds/capita (thousands)</td>
<td>1.2</td>
<td>1.1</td>
<td>1.1</td>
<td>1.5</td>
</tr>
<tr>
<td>Physicians’ Visits/capita</td>
<td>1.8</td>
<td>1.5</td>
<td>1.6</td>
<td>3.3</td>
</tr>
<tr>
<td>Total Health Expenditures (millions)</td>
<td>$37,560</td>
<td>$14,325</td>
<td>$8,275</td>
<td>$4,655</td>
</tr>
<tr>
<td>By Source:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>$21,775</td>
<td>58.0%</td>
<td>$7,292</td>
<td>50.9%</td>
</tr>
<tr>
<td>Private</td>
<td>$15,785</td>
<td>42.0%</td>
<td>$7,033</td>
<td>49.1%</td>
</tr>
<tr>
<td>By Type:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital Care</td>
<td>$15,718</td>
<td>41.8%</td>
<td>$7,204</td>
<td>50.3%</td>
</tr>
<tr>
<td>Outpatient Care</td>
<td>$9,817</td>
<td>26.1%</td>
<td>$2,488</td>
<td>17.4%</td>
</tr>
<tr>
<td>Drugs &amp; Sundries</td>
<td>$9,265</td>
<td>24.7%</td>
<td>$3,543</td>
<td>24.7%</td>
</tr>
<tr>
<td>Other Expenditures</td>
<td>$2,760</td>
<td>7.3%</td>
<td>$1,090</td>
<td>7.6%</td>
</tr>
<tr>
<td>Medical Products Demand</td>
<td>$10,235</td>
<td>70.8%</td>
<td>$3,888</td>
<td>71.4%</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>$7,245</td>
<td>70.8%</td>
<td>$2,775</td>
<td>71.4%</td>
</tr>
<tr>
<td>Supplies &amp; Devices</td>
<td>$2,330</td>
<td>22.8%</td>
<td>$865</td>
<td>22.2%</td>
</tr>
<tr>
<td>Equipment</td>
<td>$660</td>
<td>6.4%</td>
<td>$248</td>
<td>6.4%</td>
</tr>
</tbody>
</table>
Brazili has at least one other multinational pharmaceutical manufacturer, Akzo do Brazil, which produces contraceptives, hormonal drugs and other primary drugs.

Colombia. Colombia is the seventh largest industrialized economy in Latin America. Despite its relative economic strength, Colombia was plagued throughout the 1980s by a sluggish economy, low per capita income, little measurable improvement in the standard of living, and a deficient health care system.

The provision of most health services is restricted to wealthier, urban residents. Most rural inhabitants receive only infrequent examinations and vaccinations, performed by government-sponsored traveling medical teams. The public finances almost 70% of all health benefits through payroll and employers taxes. However, private sector spending in health care is expected to increase in Colombia. This expected growth is due in part to the purchase of supplemental health insurance by the expanding middle class.

Growth is expected in the outpatient sector, since officials deem this sector to be a priority. Construction of primary care facilities, on the other hand, is not expected to increase significantly. Also, salary levels of health care professionals are expected to remain low, discouraging entry into medical occupations.

Because of the shortcomings of Colombia’s health care services, great reliance is placed on pharmaceuticals, as a substitute for therapy. The primary medical imports are analgesics, antibiotics and bandages. Other pharmaceutical products and supplies are rare and expensive. Also, pharmaceuticals, medical supplies and equipment are imported. Entry of multinational health care manufacturers is anticipated in all medical segments in Colombia. No serious competition from any domestic producer is expected in the near future.

Mexico. Mexico has experienced economic turmoil in the 1980s due to depressed world oil prices, high inflation and large foreign debt obligations. However, Mexico is expected to reap gains from large investments by foreign businesses in the domestic manufacturing sector. Also, economic agreements such as NAFTA and the free-trade agreement with Chile should bolster economic recovery. Increased economic activity might lead to prosperity, a higher standard of living and improvements in health care.

Health care spending in Mexico exceeds the Latin American average on a per capita basis and on a percentage-of-GDP basis. However, Mexico suffers from cost inefficiencies, inadequate infrastructure and poor administration. Despite the above-average spending, poor administration results in widespread shortages and a lack of availability. Many Mexicans have no access to health care. Further, Mexico ranks among the lowest of countries in the Western hemisphere in the number of facilities, beds, admissions and physician visits.

Health care in Mexico for such services as basic hospitalization, ambulatory services, some dental care and some pharmaceuticals is generally provided by the government. These services are offered to the elderly and the working population and are funded via payroll contributions and general tax revenues, with some patient contributions. More than 70% of Mexican health care expenditures is publicly funded.

To appreciably increase the quality of health care in Mexico, construction of primary and ambulatory care facilities must increase. Also, compensation levels should increase to attract needed talent into health care occupations. Outpatient expenditures are expected to be the largest growing segment of health care in Mexico.

Many of Mexico’s pharmaceuticals are produced domestically, with some imports from the United States and Western Europe. Most health care equipment is imported from the United States.

Venezuela. Venezuela’s economy boomed in the 1970s when world oil prices reached their highest levels. Much of the resulting wealth was channeled into social programs, especially the health care system. Due in part to this economic expansion, Venezuela now boasts one of the highest per capita income levels in the region. Due to the collapse of world oil prices and economic mismanagement, economic conditions deteriorated in the late 80s and early 90s. Health care expenditures in Venezuela continue to be more than twice the Latin American average. Also in the U.S. and Mexico, however, the system contains inefficiencies, as evidenced by statistics showing poor performance in health care relative to the number of dollars spent. In the 1980s, when oil prices dropped and remained low, the country experienced economic unrest, currency problems and a period of GDP decline. Nevertheless, due to market reforms introduced during the 1980s, Venezuela was rewarded with a strong economic recovery in the early 1990s.

The Venezuelan medical system includes both public and private elements. The Ministry of Health and Social Security provides government-sponsored health plans for the elderly and industrial and farm workers for basic hospital and ambulatory services. These programs are financed through payroll contributions and business and general tax revenue. Venezuela’s population includes a fairly large affluent portion. An extensive network of technologically advanced medical facilities developed to serve this sector of the population. This wealthy sector has also contributed to the popularization
of private care, which has grown to 53% of total Venezuelan health care outlays.

The least developed sector of the health care system in Venezuela is the inpatient sector. Construction of hospital facilities financed by oil profits was planned in the 1970s and 1980s, but development was derailed with the oil price collapse. Outpatient resources, on the other hand, are more abundant. Venezuela has more doctors per capita than most Latin American countries. There does exist a lack of physician specialists, but compensation increases should address this shortage.

Spending on supplies and medical devices is expected to experience the highest growth. In contrast, spending on expensive capital equipment is projected to be sluggish. The market for pharmaceuticals, a much-relied upon alternative to therapy, is expected to grow extensively over the next decade. Many multinational health care suppliers including Abbott, Akzo, Ciba-Geigy, Glaxo and Johnson & Johnson, have a presence in Venezuela.

**CAPD - Treatment in Brazil.** The number of CAPD patients in Brazil has grown from less than 200 in to 1274 in 1989 (see Exhibit 10). The number of HD-patients in 1989 was 10,450. Thus, CAPD is used in 21% of all dialysis cases in Brazil. No growth is expected in the number of HD patients for several reasons:

1. There are few dialysis units in Brazil. The number is not expected to increase.
2. HD equipment is subject to high import taxes, making it too costly for many health care facilities. Under the General Agreement on Trade and Tariffs (GATT), tariffs are phased out for industrial countries only, effective July 1995; developing countries have an exemption period. A discussion on GATT follows this section.
3. The government has determined that HD treatment is not a cost-effective use of Brazil’s public funds. Approximately 1.6% of the Social Security Ministry’s budget is allocated to dialysis patients, which represent .008% of the population. A shift to CAPD as a low-cost alternative to HD and transplants is anticipated. At present, reimbursement economics actually favor HD. Reimbursement rates are $11,000/patient/year for PD and $15,000/patient/year for HD.

**CAPD - Treatment in Colombia, Mexico and Venezuela**

- In Colombia, approximately 25% of dialysis patients are receiving CAPD treatment (250 out of 1,000 patients).
- The devastating earthquakes in Mexico in the late 1980s damaged or destroyed many dialysis centers. HD patients that relied on these centers switched to CAPD. Thus, a large percentage (93%) of the population receiving dialysis treatment currently uses CAPD (2,800 out of a total of 3,000 dialysis patients). In Mexico, only PD gets reimbursed.
- The Venezuelan government reimburses HD and CAPD treatments at the same rate. About half of the dialysis patients are being treated with CAPD.

CAPD has already received reimbursement approval as a dialysis treatment in each of the four countries. Approval is anticipated in other countries including Argentina. Argentina had about 4,000 dialysis patients receiving non-reimbursed treatment in 1989, making the pending approval a significant event.

Based on the average rate of treated patients in the U.S. and Japan, the estimated number of patients requiring dialysis treatment in the four targeted countries is approximately 272,000. Baxter patients (both

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**EXHIBIT 10**

**PERCENTAGE OF PD PATIENTS IN LATIN AMERICA (APRIL 1989)**

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Dialysis Patients</th>
<th>HD Patients</th>
<th>PD Patients</th>
<th>% of PD Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>12,724</td>
<td>10,450</td>
<td>2,274</td>
<td>18%</td>
</tr>
<tr>
<td>Colombia</td>
<td>1,000</td>
<td>750</td>
<td>250</td>
<td>25%</td>
</tr>
<tr>
<td>Mexico</td>
<td>3,000</td>
<td>700</td>
<td>2,300</td>
<td>77%</td>
</tr>
<tr>
<td>Venezuela</td>
<td>1,100</td>
<td>500</td>
<td>600</td>
<td>55%</td>
</tr>
<tr>
<td>Argentina</td>
<td>4,000</td>
<td>3,920</td>
<td>80</td>
<td>2%</td>
</tr>
<tr>
<td>Cuba</td>
<td>1,000</td>
<td>500</td>
<td>500</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22,824</strong></td>
<td><strong>16,820</strong></td>
<td><strong>6,004</strong></td>
<td><strong>26%</strong></td>
</tr>
</tbody>
</table>

Source: Status of Peritoneal Dialysis in Latin America, Contributions to Nephrology, Filho, J. C. Divino, 1991, vol 89, pp 11 - 15. Note that data presented to Contributions to Nephrology were obtained from Baxter-Brazil which was the only organized PD registry in Latin America at that time.
CASE 22: BAXTER INTERNATIONAL—RENSAL DIVISION: MARKET OPPORTUNITIES IN LATIN AMERICA

EXHIBIT 11
ESTIMATION OF LATIN AMERICAN MARKET 1993
DATA—POPULATION IN THOUSANDS

<table>
<thead>
<tr>
<th></th>
<th>Total Dialysis Patients</th>
<th>Projected Population</th>
<th>% of Pop Needing Dialysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>200</td>
<td>258,162</td>
<td>0.077%</td>
</tr>
<tr>
<td>Japan</td>
<td>125</td>
<td>125,904</td>
<td>0.099%</td>
</tr>
<tr>
<td>Average</td>
<td>325</td>
<td>384,066</td>
<td>0.085%</td>
</tr>
</tbody>
</table>

POTENTIAL MARKET SIZE ASSUMES MARKET PENETRATION LEVELS EQUAL TO THE US AND JAPAN AVERAGE 1993 DATA—POPULATION IN THOUSANDS

<table>
<thead>
<tr>
<th></th>
<th>% of Pop Needing Dialysis</th>
<th>Projected Population</th>
<th>Estimated Market</th>
<th>Patients on Baxter’s Registry</th>
<th>Untreated or Non-Baxter Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>0.085%</td>
<td>165,083</td>
<td>140</td>
<td>13</td>
<td>127</td>
</tr>
<tr>
<td>Colombia</td>
<td>0.085%</td>
<td>36,182</td>
<td>31</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.085%</td>
<td>97,967</td>
<td>83</td>
<td>3</td>
<td>80</td>
</tr>
<tr>
<td>Venezuela</td>
<td>0.085%</td>
<td>22,212</td>
<td>19</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>321,444</td>
<td>272</td>
<td>18</td>
<td>254</td>
</tr>
</tbody>
</table>

100%            | 6.6%                      | 93.4%                |


HD and CAPD account for only 18,000, or 6.6%, of this number. The remaining 93.4% either use a competing product or remain untreated (Refer to Exhibit 11).

GENERAL AGREEMENT ON TRADE AND TARIFFS

Many issues in the health care and pharmaceutical arena were resolved during the Uruguay round of the General Agreement on Trade and Tariffs (GATT) negotiations. The three main areas of discussion were tariffs, subsidies and intellectual property rights.

Most tariffs on pharmaceutical products and medical equipment will be virtually phased out by July 1995 in all industrial and many developing nations. Subsidies are granted through joint ventures with the National Institutes of Health (NIH). Since the NIH is funded by the U.S. government, this arrangement could be construed as a “subsidy” to the U.S. pharmaceutical industry. Nevertheless, tricky negotiations resulted in GATT condoning such relationships. Thus, GATT successfully resolved the issues of tariffs and subsidies with respect to U.S. health care manufacturers such as Baxter.

Complete success was not achieved in resolving intellectual property issues. Countries such as Brazil, Colombia, and Venezuela fall into GATT’s developing country classification and thus are not required to enforce patent protection for eleven and one half years (up to the year 2005). Patented Baxter products may therefore not be protected against infringement in these countries. Around 99% of Baxter’s products are protected by patents, although licensing agreements are sometimes negotiated at the local level. Further, counterfeit drugs are proliferating in countries such as Brazil and Nigeria. GATT does not require the implementation of anti-counterfeiting statutes in developing countries for six and one half years (2000). In response, the U.S. government has exerted pressure on the developing countries to protect patents outside of the GATT framework. These problems are not an issue with Mexico since patents must be recognized and are protected under the NAFTA agreement.
The highest priority on Vernon Loucks’ agenda is Baxter’s global market expansion, with a special emphasis on developing countries. Furthermore, Loucks has stated that CAPD will play a strategic role in Baxter’s renal therapy business, in particular in the emerging markets of Latin America and Asia. Loucks wondered whether, and if so, how to implement Baxter’s expansion in Latin America. Specifically, the following issues needed to be addressed:

- What opportunities do these countries offer?
- Are market conditions and industry trends in dialysis therapy favorable enough for a major expansion in Latin America? Will the developing health care systems in Latin America be able to support Baxter’s expansion plans?
- How should Baxter allocate its resources across the targeted countries?
- Will CAPD’s expected promise come to fruition in Latin America, or should Baxter focus on the more traditional treatment of HD?
- Will Baxter be able to duplicate its customer service support in that region?
- Under GATT, Baxter’s patents are not protected in developing countries. How does this fact threaten Baxter’s leadership position in this region?