Home Medical Equipment

US Industry Study with Forecasts for 2012 & 2017

Study #2447 | January 2009 | $4600 | 271 pages
# Home Medical Equipment
US Industry Study with Forecasts for 2012 & 2017

## Table of Contents

### EXECUTIVE SUMMARY

### MARKET ENVIRONMENT
General ........................................... 4  
Macroeconomic Trends .................................. 5  
Demographic Patterns ................................ 10  
Trends in Health Care ....... 12  
Health Insurance Coverage .............. 13  
Acute & Chronic Medical Conditions ..... 16  
Acute Conditions .................................. 16  
Chronic Conditions ....................... 18  
National Health Expenditures .......... 20  
Medical Providers ..................... 24  
Acute Care Hospitals ............ 25  
Outpatient Clinics .................. 26  
Skilled Nursing Homes ........ 27  
Physicians .................................. 27  
Home Health Care Organizations .... 27  
Patient Activity ................. 28  
Acute Care Hospital Admissions ... 29  
Surgical Procedures ............. 30  
Outpatient Visits .................. 30  
Home Health Care Visits ........ 31  
Medical Product Demand ........ 32  

### HOME HEALTH CARE OVERVIEW
General ........................................... 34  
Patient Trends & Projections ........ 35  
Regulation .................................... 36  
Home Medical Equipment Market ...... 37  
Historical Market Trends .......... 39  
US Trade .................................. 40  
International Market Opportunities ... 42  

### HOME THERAPEUTIC EQUIPMENT
General ........................................... 46  
Home Respiratory Therapy Equipment .... 48  
Oxygen Delivery Systems .......... 49  
Oxygen Concentrators ........... 51  
Liquid Oxygen Containers ........ 52  
Oxygen Cylinders ................... 54  
Home Oxygen Cannula ............. 56  
Home Oxygen Conservers ........ 57  
Other Home Oxygen Delivery Products ... 58  
Home Continuous Positive Airway Pressure Products ............... 60  
CPAP Machines ................... 61  
CPAP Masks & Patient Interfaces ... 63  
CPAP Accessories .......... 64  

### HOME PATIENT MONITORING EQUIPMENT
General ........................................... 96  
Blood Glucose Monitors ............... 98  
Blood Pressure Monitors ........... 102  
Holter Monitors ..................... 105  
Heart Rate Meters .................. 107  
Apnea & Sleep Monitors ........ 110  
Multi-Parameter Patient Monitors ... 113  
Other Home Patient Monitors .... 116  
Peak Flow Meters .................. 117  
Electronic Thermometers .......... 120  
Home Alert Systems ............ 121  
Home Coagulation Monitors ...... 122  

### MOBILITY ASSIST & OTHER HOME MEDICAL EQUIPMENT
General ........................................... 125  
Wheelchairs & Related Devices ...... 127  
Manual Wheelchairs .............. 128  
Standard Manual Wheelchairs .... 129  
Manual Transport Wheelchairs ... 129  
Lightweight Manual Wheelchairs ... 131  
Ultraportable Manual Wheelchairs ... 131  
Sports Manual Wheelchairs .... 131  
Other Manual Wheelchairs ....... 132  
Powered Wheelchairs ........... 132  
Standard Folding Models ....... 133  
Powered Travel Models ........ 134  
Center-Drive Powered Wheelchairs ... 134  
Heavy Duty Powered Wheelchairs ... 135  
Scooters ........................................ 136  
Stair Lifts .................................... 137  
Walking-Assist Devices .......... 138  
Walkers .................................... 139  
Crutches .................................... 141  
Canes & Walking Sticks .......... 142  
Home Medical Furniture .......... 144  
Lift Chairs .................................. 145  
Medical Beds ......................... 147  
Medical Furniture Accessories .... 149  
Bed Rails ................................... 150  
Mattresses ................................. 151  
Overbed Tables ..................... 152  
Trapeze Bars ......................... 152  
Other Home Medical Equipment .... 153  
Bathroom Safety Equipment ...... 154  
Bars, Grips & Rails ................ 155  
Shower Chairs ...................... 157  
Commodores ............................. 158  
Decubitus Devices ................ 160  
Traction Devices ................... 162  

### INDUSTRY STRUCTURE
General ........................................... 164  
Market Share .................................. 171  
Competitive Strategies ............ 173  
Mergers & Acquisitions ........... 175  
Licensing & Related Agreements ... 178  
Product Development ............. 181  
Marketing & Distribution ...... 182  
Manufacturing ...................... 183  

### COMPANY PROFILES
Abbott Laboratories .................. 185  
ARRKRAF Incorporated .............. 187  
Baxter International ................. 189  
Bayer AG .................................. 192  
Braun (B.) Melsungen ............... 195  
Cardinal Health ...................... 196  
ConvaTec Incorporated ............ 199  
Cooper Companies .................. 201  
Covidien Limited .................. 203  
DeVilbliss Healthcare .......... 205  
Drive Medical Design & Manufacturing ... 207  
Fresenius Medical Care ............ 210  
General Electric ...................... 212  
Graham-Field Health Products .... 214  
Hill-Rom Holdings ................. 217  
Hospira Incorporated ............ 220  
Invacare Corporation ............ 222  
Johnson & Johnson ................ 226  

(continued on next page)
Table of Contents

COMPANY PROFILES
(continued from previous page)

Medline Industries .................................. 230
Medtronic Incorporated.......................... 235
OMRON Corporation ............................. 238
Permobil AB ........................................ 241
Roche Holding .................................... 245
Royal Philips Electronics .......................... 247
Stryker Corporation ................................ 252
Sunrise Medical ..................................... 254
Teleflex Incorporated .............................. 257
Welch Allyn ........................................... 259
Other Companies Mentioned in Study .......... 261

List of Tables/Charts

EXECUTIVE SUMMARY
1 Summary Table.................................. 3

MARKET ENVIRONMENT
1 Macroeconomic Indicators .................... 10
2 Population by Age Group ..................... 12
3 Health Insurance Coverage
   of the US Population ............................ 15
4 Acute Conditions by Type .................... 17
5 Chronic Conditions by Type .................. 20
6 National Health Expenditures
   by Type & Source ............................... 23
7 Medical Providers by Type .................... 25
8 Patient Activity by Type ...................... 29
9 Medical Product Demand by Type .......... 33

HOME HEALTH CARE
OVERVIEW
1 Home Health Care Patients by Age Group .... 36
2 Home Medical Equipment Demand
   by Product Group .............................. 39
3 Home Medical Equipment
   Demand, 1997-2007 ........................... 40
4 US Trade in Home Medical Equipment ...... 42
5 World Home Medical Equipment
   Demand by Region ............................ 45

HOME THERAPEUTIC EQUIPMENT
1 Home Therapeutic Equipment
   Demand by Product Group ................. 47
Cht Home Therapeutic Equipment Demand
   by Product Group, 2007 ................. 98
2 Home Respiratory Therapy Equipment
   Demand by Product Group ................. 48
3 Home Oxygen Delivery System
   Demand by Product Group ................ 50
4 Home Oxygen Concentrator Demand .......... 52
5 Home Liquid Oxygen Container Demand ...... 54
6 Home Oxygen Cylinder Demand ............ 55
7 Home Oxygen Cannula Demand ............. 57
8 Home Oxygen Conserver Demand .......... 58
9 Other Home Oxygen Delivery
   Product Demand ............................... 60
10 Continuous Positive Airway Pressure
    (CPAP) Product Demand by Type ........ 61
11 Continuous Positive Airway Pressure
    (CPAP) Machine Demand .................. 63
12 Continuous Positive Airway Pressure
    (CPAP) Mask & Patient Interface Demand 64
13 Continuous Positive Airway Pressure
    (CPAP) Accessory Demand ............... 65
14 Home Medical Nebulizer
   Kit & Device Demand ....................... 67
15 Home Medical Ventilator
   & Accessory Demand ....................... 69
16 Home Medical Humidifier Demand .......... 71
17 Home IV Equipment Demand
   by Product Group ........................... 72
18 Home IV Administration Set Demand ....... 75
19 Home IV Pump Demand ....................... 76
20 Home IV Accessory Demand .................. 80
21 Home Dialysis Equipment Demand .......... 82
22 Other Home Therapeutic Equipment
   Demand by Product Group ............... 88
23 Home Ostomy Supply & Device Demand ..... 91
24 Home Electrical Stimulation
   Device Demand ................................ 93
25 Home Automated External Defibrillator (AED) Demand 95

HOME PATIENT MONITORING EQUIPMENT
1 Home Patient Monitoring Equipment
   Demand by Product Group ................. 97

MOBILITY ASSIST & OTHER HOME MEDICAL EQUIPMENT
1 Home Mobility Assist & Other
   Home Medical Equipment
   Demand by Product Group ............... 126
Cht Home Mobility Assist & Other
   Home Medical Equipment
   Demand by Product Group, 2007 .......... 127
2 Wheelchairs & Related Equipment
   Demand ......................................... 128
3 Walking-Assist Device
   Demand by Product Group ................. 139
4 Home Medical Furniture
   Demand by Product Group ................. 145
5 Home Lift Chair Demand .................... 147
6 Home Medical Bed Demand .................. 149
7 Home Medical Furniture Accessory
   Demand by Product Group ............... 150
8 Other Home Medical Equipment
   Demand by Product Group ............... 154
9 Home Bathroom Safety Equipment
   Demand by Product Group ............... 155
10 Home Bathroom Bar, Grab & Rail Demand 156
11 Home Shower Chair Demand ............... 158
12 Home Commode Demand .................... 159
13 Home Decubitus Device Demand .......... 162
14 Home Traction Device Demand ............ 163

INDUSTRY STRUCTURE
1 Home Medical Equipment
   Sales by Company, 2007 ................... 166
Cht Home Medical Equipment
   Market Share by Company, 2007 ........ 173
2 Selected Acquisitions & Divestitures ...... 176
3 Selected Cooperative Agreements ........ 180
Cost-saving products that reduce the need to treat or monitor chronically ill patients in hospitals, skilled nursing facilities and specialized clinics will command strong growth opportunities.

US demand to grow 5.5% annually through 2012

US demand for home medical equipment is forecast to increase 5.5 percent annually to over $10 billion in 2012. Cost-saving products that reduce the need to treat or monitor chronically ill patients in hospitals, skilled nursing facilities and specialized clinics will command strong growth opportunities. Included in this group are CPAP machines and accessories, peritoneal dialysis equipment, IV pumps, ventilators and accessories, and blood pressure monitors. Mobility devices, medical furniture and home safety equipment that enable elderly and disabled persons to live independently without extensive caregiver support will continue to form sizeable markets.

Respiratory, kidney, cancer therapy products to drive therapeutic segment

An increasing prevalence of chronic conditions, especially respiratory disorders, kidney failure and cancer, will boost demand for home therapeutic equipment 6.2 percent annually to 2012. Portable oxygen concentrators for treating chronic obstructive pulmonary disease (COPD), CPAP products for managing obstructive sleep apnea, and ventilators and accessories for alleviating severe breathing impairments will provide the best growth opportunities for home respiratory therapy equipment. Advances in the ease of use and convenience features of dialysate machines, coupled with a rising number of patients with end-stage kidney failure, will create fast rising demand for home dialysis products. The home IV equipment market will gain strong upward momentum as an increasing number of cancer and other chronic care patients receive parenteral nutritional therapies.

BP, heart rate products to pace monitoring equipment

Demand for home patient monitoring equipment will increase 5.6 percent annually to 2012. This product segment will see mixed growth opportunities as markets for products such as electronic thermometers and Holter monitors are approaching the saturation stage. Monitors for blood pressure, coagulation, heart rate, sleep apnea and general physiological parameters, along with home alert systems, will fare better in the marketplace based on trends promoting the expansion of preventive medicine activities.

A significant share of the demand posted by home medical equipment will remain in mobility assist devices. Strong growth in the elderly population will create opportunities for both personal and household products that help orthopedically impaired individuals maintain independent lifestyles. As a result, bathroom safety products, home medical furniture, powered scooters, rollators, and canes will build up attractive niches in the home health care marketplace.

Copyright 2009 The Freedonia Group, Inc.
HOME THERAPEUTIC EQUIPMENT

Oxygen Concentrators -- Oxygen concentrators hold the best growth potential among home oxygen therapy equipment. They generate oxygen internally from the air and do not require refilling. Based on this advantage and the increasing availability of models adaptable to away-from-home use, demand for oxygen concentrators in the home health care market is projected to expand annually to $7.7 billion by 2012, representing 304,000 units. Growth will also benefit from continuing Medicare coverage of the devices. Medicare reimburses oxygen concentrators through a capped rental scheme, which enables home health care agencies and other purchasers of the devices to more than recover their initial payments.

Oxygen concentrators are electrically or battery powered devices that remove nitrogen from air thereby producing oxygen. Until the recent introduction of portable models, available oxygen concentrators consisted of non-transportable, stationary units used exclusively by patients at home. Newer portable configurations have greatly expanded the market potential of this product group.

Among the top-selling portable oxygen concentrators on the market is Respironics’ EVERGO, which weighs less than ten pounds and is easily transportable in a black case with a non-medical design. The EVERGO features an eight-hour battery life, an oxygen capacity of 1,050 milliliters per minute and an easy to use, control touch screen. The device delivers oxygen on a pulse basis, which conserves power and extends battery life.

Another high value-added portable oxygen concentrator is sold by SeQual Technologies under the ECLIPSE 2 label. The ECLIPSE 2 provides for both pulse and continuous oxygen delivery and incorporates an automatically recharging cassette. The concentrator is about the size of a briefcase and is lightweight enough to be carried by patients at home.

Copyright 2009 The Freedonia Group, Inc.
**Sample Profile, Table & Forecast**

### DeVilbiss Healthcare Incorporated

100 DeVilbiss Drive  
Somerset, PA 15501  
814-442-4881  
http://www.devilbisshealthcare.com

**Annual Sales:** $130 million (estimated)  
**Employment:** 850 (estimated)  
**Key Products:** continuous positive airway pressure (CPAP) systems, humidifiers, nebulizers, compressor/nebulizer systems, oxygen concentrators, portable compressed oxygen systems and oxygen filling stations

DeVilbiss Healthcare is a designer, manufacturer and marketer of home care and extended care products, including respiratory medical and sleep therapy equipment. The privately held company also provides a range of financial and educational services related to its products. DeVilbiss Healthcare manufactures products in the US, Europe and the Asia/Pacific region, and distributes products in more than 100 countries worldwide. In July 2007, the Company was spun off from Sunrise Medical Incorporated (Longmont, Colorado).

DeVilbiss Healthcare is active in the US home medical equipment industry through the manufacture of sleep apnea and respiratory therapy products. Among the Company’s sleep apnea therapy products are continuous positive airway pressure (CPAP) systems, which are offered in standard, bilevel and automatic adjust types. For example, DeVilbiss Healthcare makes the DEVILBISS INTELLIPAP standard CPAP unit with an attached heated humidification system. This device features large, slip-resistant pads on the bottom of the unit to minimize movement on tables during the night; a delay pressure ramp designed

### TABLE VI-2  
**WHEELCHAIRS & RELATED APPLIANCE DEMAND**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population 65 Years &amp; Older (mil)</td>
<td>34.4</td>
<td>35.6</td>
<td>37.9</td>
<td>42.6</td>
<td>49.8</td>
</tr>
<tr>
<td>Wheelchairs &amp; related capita 65+</td>
<td>23.1</td>
<td>26.6</td>
<td>29.8</td>
<td>31.5</td>
<td>31.9</td>
</tr>
<tr>
<td>Wheelchairs &amp; Related (000)</td>
<td>794</td>
<td>948</td>
<td>1130</td>
<td>1340</td>
<td>1590</td>
</tr>
<tr>
<td>$/unit</td>
<td>938</td>
<td>1025</td>
<td>999</td>
<td>963</td>
<td>950</td>
</tr>
<tr>
<td>Wheelchairs &amp; Related (mil $)</td>
<td>745</td>
<td>972</td>
<td>1129</td>
<td>1290</td>
<td>1510</td>
</tr>
<tr>
<td>Wheelchairs: Manual Wheelchairs</td>
<td>688</td>
<td>890</td>
<td>1004</td>
<td>1095</td>
<td>1200</td>
</tr>
<tr>
<td>Powered Wheelchairs</td>
<td>306</td>
<td>385</td>
<td>434</td>
<td>470</td>
<td>510</td>
</tr>
<tr>
<td>Powered Scooters</td>
<td>45</td>
<td>64</td>
<td>96</td>
<td>145</td>
<td>220</td>
</tr>
<tr>
<td>Stair Lifts</td>
<td>12</td>
<td>18</td>
<td>29</td>
<td>50</td>
<td>90</td>
</tr>
<tr>
<td>% wheelchairs &amp; related appliances</td>
<td>73.8</td>
<td>73.6</td>
<td>71.7</td>
<td>69.4</td>
<td>67.7</td>
</tr>
<tr>
<td>Mobility Assist &amp; Other Equip (mil $)</td>
<td>1009</td>
<td>1320</td>
<td>1575</td>
<td>1860</td>
<td>2230</td>
</tr>
</tbody>
</table>

**SAMPLE TABLE**

"**Powered Wheelchairs** -- Weakened by intensifying supplier competition and tighter controls on Medicare and other health insurance coverage and reimbursement, home demand for powered wheelchairs will expand slowly, rising 1.6 percent annually to $470 million in 2012. Ongoing advances in the performance and convenience features of manual wheelchairs will also hinder gains. Lastly, …”

--Section VI, pg. 132-3
Corporate Use License
Now every decision maker in your organization can act on the key intelligence found in all Freedonia studies. For an additional $2300, companies receive unlimited use of an electronic version (PDF) of the study. Place it on your intranet, e-mail it to coworkers around the world, or print it as many times as you like.

Click here to learn more about the Corporate Use License

ORDER FORM

Home Medical Equipment ........................................... $4600

☐ Corporate Use License (add to study price) *

☐ Additional Print Copies @ $500 each *

☐ Enclosed is my check (5% discount) drawn on a US bank and payable to The Freedonia Group, Inc., in US funds (Ohio residents add 7.75% sales tax)

☐ Bill my company ☐ American Express ☐ MasterCard ☐ Visa

Credit Card #

Expiration

Name ________________________________

Title ________________________________

Company ____________________________

Division ____________________________

Street (No PO Box please)

City/State/Zip ________________________

Country ______________________________

Phone ______________________________ Fax __________________________

Email ________________________________

* Please check appropriate option and sign below to order an electronic version of the study.

☐ Individual Use License Agreement
The undersigned hereby represents that the above captioned study will be used by only ___ individual(s) who are employees of the company and that the study will not be loaded on a network for multiple users. In the event that usage of the study changes, the Company will promptly notify Freedonia of such change and will pay to Freedonia the appropriate fee based on Freedonia’s standard fee schedule then in effect. Note: Entire company corporate use license, add $2300; one additional user, add $500; two additional users, add $1000; three additional users, add $1500.

Signature ________________________________

☐ Corporate Use License Agreement
The above captioned study may be stored on the company’s intranet or shared directory, available to company employees. Copies of the study may be made, but the undersigned represents that distribution of the study will be limited to employees of the company.

Signature ________________________________
In Vitro Diagnostics

This study analyzes the US IVD industry. It presents historical demand data (1998, 2003, 2008) and forecasts for 2013 and 2018 by product (e.g., reagents and consumables, clinical chemistry, immunoassay, blood testing, nucleic acid testing, microbiology, cellular analysis, anatomical pathology, effusion and visual inspection, cytology), application (e.g., endocrine conditions, infectious diseases, cancer, drug testing, heart disease testing) and market. The study also evaluates company market share and profiles industry players.

#2455 .......... 02/2009 .......... $4800

Dental Products in China

This study analyzes the Chinese market for dental care products. It presents historical demand data (1997, 2002, 2007) and forecasts for 2012 and 2017 by material, product (e.g., crowns and bridges, dentures, implants, fillings, orthodontic appliances, veneers, whiteners, adhesives and cements, sealants, fluoride treatments, toothpaste, mouthwash/dental rinse, floss), end use (professional, consumer), and region. The study also considers market environment factors, evaluates company market share and profile industry players.

#2421 .......... 01/2009 .......... $5100

Drug Delivery Systems

US demand for drug delivery systems will grow 10% annually through 2012. Oral types will remain the largest drug delivery category while parenteral, inhalation and implantable systems grow the fastest. Parenteral formulations will eventually surpass oral dosages as the largest product group. This study analyzes the $80.2 billion US drug delivery system industry, with forecasts for 2012 and 2017 by material, type and application. It also evaluates company market share and profiles leading industry players.

#2294 .......... 03/2008 .......... $4500

Disposable Medical Supplies

This study analyzes the US disposable medical supply industry. It presents historical demand data (1998, 2003, 2008) and forecasts for 2013 and 2018 by product group (e.g., drug delivery, catheterization and related; wound management; nonwoven medical disposables), market (e.g., hospitals, home health care, outpatient facilities, physicians' offices) and raw material. The study also considers market environment factors, details industry structure, evaluates company market share and profiles industry competitors.

#2476 .......... 04/2009 .......... $4800

Other Studies

About The Freedonia Group

The Freedonia Group, Inc., is a leading international industry market research company that provides its clients with information and analysis needed to make informed strategic decisions for their businesses. Studies help clients identify business opportunities, develop strategies, make investment decisions and evaluate opportunities and threats. Freedonia research is designed to deliver unbiased views and reliable outlooks to assist clients in making the right decisions. Freedonia capitalizes on the resources of its proprietary in-house research team of experienced economists, professional analysts, industry researchers and editorial groups. Freedonia covers a diverse group of industries throughout the United States, the emerging China market, and other world markets. Industries analyzed by Freedonia include:

• Chemicals • Plastics • Life Sciences • Packaging • Building Materials • Security & Electronics • Industrial Components & Equipment • Automotive & Transportation Equipment • Household Goods • Energy/Power Equipment

Freedonia Custom Research

Freedonia Custom Research delivers the same high quality, thorough and unbiased assessment of an industry or market as an industry study. Since the research initiative is based upon a company’s specific needs, companies harness Freedonia’s research capabilities and resources to answer unique questions. When you leverage the results of a Freedonia Custom Research engagement, you are able to obtain important answers to specific questions and issues associated with: mergers and acquisitions, new product launches/development, geographic expansion, entry into new markets, strategic business planning, and investment and funding decisions.

Freedonia Custom Research is ideal for companies seeking to make a strategic difference in the status quo and focus on future business growth. Working side by side with clients, Freedonia’s team is able to define a research project that is custom-tailored to answer specific questions and provide the basis from which a company can make informed business decisions.

Click here to visit freedoniagroup.com