

WINTERGREEN RESEARCH, INC.

## Wheelchair Market Opportunities, Strategies, and Forecasts, 2004 to 2009

### Wheelchair



*Picture by Susie Eustis*

## MOUNTAINS OF OPPORTUNITY

**WinterGreen Research, Inc.**  
**Lexington, Massachusetts**

[www.wintergreenresearch.com](http://www.wintergreenresearch.com)

REPORT # SH29821356

172 PAGES

44 TABLES AND FIGURES

2004

\$2,800

**CHECK OUT THESE KEY TOPICS**

*WHEELCHAIR MARKET SHARES*

*WHEELCHAIR MARKET FORECASTS*

**Mainstreaming Of People With Disabilities**

**Wheelchair Market Driving Forces**

Healthcare Equipment Industry

Hospital and Home Care Services Billing Issues

*MARKET DRIVING FOR HEALTHCARE COST CONTAINMENT*

*WHEELCHAIR DISTRIBUTOR CHANNELS*

*WHEELCHAIR PRODUCT TYPES*

*WHEELCHAIR TECHNOLOGICAL TRENDS*

*MEDICAL EQUIPMENT GOVERNMENT REGULATION*

*SCIENCE AND MEDICAL TECHNOLOGY*

*WHEELCHAIR SEGMENTS*

*MARKETING GLOBALLY*

*WHEELCHAIR REGIONAL MARKET STRATEGY*

**OPPORTUNITY ABOUNDS**

**WinterGreen Research, Inc.**

**Lexington, Massachusetts**

[www.wintergreenresearch.com](http://www.wintergreenresearch.com)

## **Wheelchair Market Opportunities, Strategies, and Forecasts, 2004 to 2009**

Hospital and homecare wheelchair technology is evolving to give people with disabilities more mobility. Markets are poised to create the ability for people to get more exercise and impact the healthcare delivery industry by encouraging mobility of people who were previously bed ridden.

Wheelchairs impact care delivery, permitting moving from the bed and facilitating exercise. Patients and family gain more control over the care delivery. Care can be delivered in familiar settings.

The wheelchair market participants seek to position with chairs that are in growing market segments. Leading vendors offer a wide range of products, services, training, and support. Homecare agencies depend on reimbursement to sell custom units. The designs of wheelchairs are making them intuitive to use. This represents major market opportunity.

Portable wheelchair choices relate to portable wheelchair concentrators, liquid wheelchair, or compressed gas cylinders. Portable wheelchair concentrators need a battery or to be plugged in. They are poised to become the system of choice as fuel cell power becomes more available.

Wheelchairs are able to change the limits in movement from a few steps to a few hundred yards. People with disabilities can have long trips or visits with family are made possible by new technology for wheelchairs. Wheelchairs that are transported in cars are becoming more common.

Invacare has dominated the wheelchair markets by pursuing two very clear market strategies. Invacare supports its distributors and does not compete with them. Invacare has a complete bundled offering for its distributors including wheelchairs, respiratory, and continuing care products.

Wheelchair markets are expected to grow as the baby boomers age. The aging of the population is expected to change markets. The ability to get reimbursement has been a significant market factor. As baby boomers age and need wheelchairs, they will be willing to pay directly for mobility and comfort as they do for homes and cars now.

## Companies Profiled

### Market Leaders

Invacare Corporation  
Sunrise Medical  
Graham-Field Health Products  
Everest & Jennings

### Market Participants

Convaid	Drive Medical
Eagle Sports Chairs	Gendron Inc.
Glide Rehabilitation Products	Gunnell Inc.
Hoveround Corporation	Magic Mobility Wheelchair
Medline	Melrose Kiwi Concept Chairs
Pride Mobility Inc.	Product Design Group
	RGK

## Wheelchair Strategies and Forecasts, 2004-2009

### REPORT METHODOLOGY

THIS IS THE *TWO-HUNDRED AND TWENTY-FOURTH* REPORT IN A SERIES OF MARKET RESEARCH REPORTS THAT PROVIDE FORECASTS IN COMMUNICATIONS, TELECOMMUNICATIONS, THE INTERNET, COMPUTER, SOFTWARE, TELEPHONE EQUIPMENT, HEALTH EQUIPMENT, AND ENERGY. THE PROJECT LEADERS TAKE DIRECT RESPONSIBILITY FOR WRITING AND PREPARING EACH REPORT. THEY HAVE SIGNIFICANT EXPERIENCE PREPARING INDUSTRY STUDIES. FORECASTS ARE BASED ON PRIMARY RESEARCH AND PROPRIETARY DATA BASES. FORECASTS REFLECT ANALYSIS OF THE MARKET TRENDS IN THE SEGMENT AND RELATED SEGMENTS. UNIT AND DOLLAR SHIPMENTS ARE ANALYZED THROUGH CONSIDERATION OF DOLLAR VOLUME OF EACH MARKET PARTICIPATION IN THE SEGMENT. INSTALLED BASE ANALYSIS AND UNIT ANALYSIS IS BASED ON INTERVIEWS AND AN INFORMATION SEARCH. MARKET SHARE ANALYSIS INCLUDES CONVERSATIONS WITH KEY CUSTOMERS OF PRODUCTS, INDUSTRY SEGMENT LEADERS, MARKETING DIRECTORS, DISTRIBUTORS, LEADING MARKET PARTICIPANTS, OPINION LEADERS, AND COMPANIES SEEKING TO DEVELOP MEASURABLE MARKET SHARE. OVER 200 IN DEPTH INTERVIEWS ARE CONDUCTED FOR EACH REPORT WITH A BROAD RANGE OF KEY PARTICIPANTS AND INDUSTRY LEADERS IN THE MARKET SEGMENT.

**YOU MUST HAVE THIS STUDY**

# Wheelchair Market Opportunities, Strategies, and Forecasts, 2004 to 2009

## Table of Contents

### WHEELCHAIR EXECUTIVE SUMMARY

<b>WHEELCHAIR EXECUTIVE SUMMARY</b>	<b>ES-1</b>
Wheelchair Market Driving Forces	ES-1
Wheelchair Market Shares	ES-3
Wheelchair Market Forecasts	ES-6

### WHEELCHAIR MARKET DYNAMICS AND MARKET DESCRIPTION

<b>1. WHEELCHAIR MARKET DYNAMICS AND MARKET DESCRIPTION</b>	<b>1-1</b>
1.1 Mainstreaming Of People With Disabilities	1-1
1.1.1 Recovery And Active Lifestyles Of Disabled Portion of the Population	1-2
1.2 Healthcare Equipment Industry	1-4
1.2.1 Reimbursement Drives Healthcare Equipment Industry	1-5
1.2.2 Prospective Payment System (PPS)	1-6
1.2.3 Market-Driven Reforms	1-6
1.2.4 Home Medical Equipment Industry Segments	1-7
1.3 Marketing Globally	1-9
1.3.1 U.S. Healthcare Delivery Industry	1-11
1.3.2 Competition Forms Basis Of U.S. Medical Care Services Delivery	1-12
1.3.3 European Homecare Market Trends	1-13
1.4 Hospital and Home Care Services Billing Issues	1-14
1.4.1 Managed Care Requirements	1-15
1.5 Market Drivers For Healthcare Cost Containment	1-18
1.5.1 Managed Care Organization Impact	1-19
1.5.2 Reasons Home Health Care Has Gained Wide-Spread Acceptance	1-19
1.5.3 Managed Care Change In The Healthcare Industry	1-20
1.5.4 Homecare For People With Long Term Disabilities	1-20
1.5.5 Health Care Cost Containment Trends	1-21
1.6 Wheel Chair Distribution Channels	1-21

### WHEELCHAIR MARKET SHARES AND MARKET FORECASTS

<b>2. WHEELCHAIR MARKET SHARES AND MARKET FORECASTS</b>	<b>2-1</b>
2.1 Wheelchair Market Driving Forces	2-1
2.1.1 Lifestyle Demands	2-3
2.1.2 Active Patients	2-4
2.1.3 Customized and Lightweight Wheelchairs Transform Market	2-5
2.1.4 Wheelchair Market Driving Forces	2-5
2.1.5 Wheelchair Insurance Reimbursement	2-7
2.2 Wheelchair Market Shares	2-8
2.3 Wheelchair Segments	2-13
2.4 Wheelchair Market Forecasts	2-18
2.4.1 Standard Wheelchair Market Forecasts	2-19

2.4.2	Custom Wheelchair Market Forecasts	2-23
2.4.3	Sports and Racing Wheelchair Market Forecasts	2-26
2.5	Wheelchair Regional Market Analysis	2-27

**WHEELCHAIR PRODUCT DESCRIPTION**

<b>3. WHEELCHAIR PRODUCT DESCRIPTION</b>		<b>3-1</b>
3.1	Wheelchairs	3-1
3.2	Pediatric Wheelchairs:	3-1
3.2.1	Invacare Allegro	3-1
3.2.2	Invacare Comet- Standard and Reverse Configuration	3-2
3.2.3	Invacare MVP jr., MVP jr. Fixed Frame- 60 degree, and MVP jr. Fixed frame 80 degree- folding chair	3-3
3.2.4	Invacare Orbit and Invacare Orbit Long Frame	3-3
3.2.5	Invacare Solara jr.	3-3
3.2.6	Invacare Solara Limited	3-4
3.2.7	Invacare Spree XT Limited	3-4
3.2.8	Invacare IVC 9000 Jymni Wheelchair	3-4
3.2.9	Invacare Top End - Terminator Jr.	3-5
3.2.10	Invacare Pronto M71 jr.	3-5
3.2.11	Glide Bambino	3-5
3.2.12	Glide Cadet	3-5
3.2.13	Melrose Tilt N Space	3-6
3.2.14	Sunrise Medical Zippie TS Wheelchair	3-6
3.2.15	Sunrise Medical Zippie GS	3-6
3.2.16	Sunrise Medical Zippie	3-6
3.2.17	Sunrise Medical Zippie 2	3-7
3.2.18	Sunrise Medical Quickie Kidz	3-7
3.2.19	Sunrise Medical Kid Kart TLC	3-7
3.2.20	Sunrise Medical Quickie Z-500	3-7
3.2.21	Gunnell Kidster	3-8
3.2.22	Pride Mobility Quantum Dynamo	3-8
3.2.23	Convaid EZ Rider	3-8
3.2.24	Convaid Convertible	3-9
3.2.25	Convaid Lite Rider	3-9
3.2.26	Convaid Compax	3-9
3.2.27	Convaid Safari Tilt	3-9
3.2.28	Convaid Rodeo	3-10
3.2.29	Convaid Mountee	3-10
3.2.30	Convaid CruisAire	3-10
3.2.31	Convaid Cruiser	3-10
3.2.32	Convaid Scout	3-11
3.3	Manual Folding Wheelchairs:	3-11
3.3.1	Invacare MVP, MVP Fixed Frame- 60 degree, and MVP Fixed Frame- 80 degree – folding wheelchair	3-11
3.3.2	Invacare Patriot – folding wheelchair	3-11
3.3.3	Invacare Spyder	3-12
3.3.4	Invacare Top End - Terminator Everyday and Terminator Everyday Heavy Duty	3-12
3.3.5	Invacare Top End - Terminator Titanium	3-12
3.3.6	Invacare Xtra	3-12
3.3.7	Pride Mobility	3-13
3.3.8	Glide G2 Leisure Chairs – G2 Leisure, G2 Leisure Plus, and G2 Leisure Sports	3-14

3.3.9	Glide Series 1	3-14
3.3.10	Glide SWQR	3-14
3.3.11	Graham-Field Companion Chair	3-14
3.3.12	Sunrise Medical Quickie Chameleon	3-15
3.3.13	Sunrise Medical Quickie 2	3-15
3.3.14	Sunrise Medical Quickie 2HP	3-15
3.3.15	Sunrise Medical Quickie M6	3-15
3.3.16	Sunrise Medical Quickie LX	3-15
3.3.17	Sunrise Medical Quickie LXI	3-16
3.3.18	Sunrise Medical Quickie Revolution	3-16
3.4	Standard:	3-16
3.4.1	Invacare A4 and Invacare A4 Titanium	3-16
3.4.2	Invacare CareGuard K200, K300, K4000, and K7000	3-16
3.4.3	Everest & Jennings Graham-Field Traveler HTC (Hospital Transport Chair)	3-17
3.4.4	Everest & Jennings Graham-Field Traveler XD	3-17
3.4.5	Everest & Jennings Graham-Field Vista II	3-17
3.4.6	Everest & Jennings Graham-Field Metro LE	3-17
3.4.7	Everest & Jennings Graham-Field Rehab Shower/Commode	3-18
3.4.8	Drive Medical	3-18
3.4.9	Glide Bush Wheelchair	3-20
3.4.10	Glide Comfort Plus	3-20
3.4.11	Glide Front Wheel Drive	3-20
3.4.12	Glide One Arm Drive/ Glide AMP	3-20
3.4.13	Glide Reclining Back	3-21
3.4.14	Glide Tilt in Space	3-21
3.4.15	Glide Ward Chairs	3-21
3.4.16	Glide TR - Transit Wheelchair	3-21
3.4.17	Glide Series 3/SPX	3-22
3.4.18	Graham-Field Traveler	3-22
3.4.19	Pride Mobility	3-22
3.4.20	Melrose Condor	3-23
3.4.21	Melrose Panther/Panther AX/ Extreme	3-24
3.4.22	Melrose Stallion	3-24
3.4.23	Melrose Shockwave	3-24
3.4.24	Sunrise Medical Guardian Easy Care Wheelchair Line	3-24
3.4.25	Sunrise Medical Breezy Wheelchair Line	3-25
3.4.26	Sunrise Medical Hover Wheelchair Line	3-25
3.4.27	Sunrise Medical Quickie Ti Titanium	3-25
3.4.28	Sunrise Medical Quickie R2	3-26
3.4.29	Sunrise Medical Quickie XTR	3-26
3.4.30	Sunrise Medical Quickie GP/GPV	3-26
3.4.31	Sunrise Medical Quickie ST/DT	3-26
3.4.32	Sunrise Medical Quickie GPV Competition	3-27
3.4.33	Sunrise Medical Quickie GP Swing-Away	3-27
3.4.34	Sunrise Medical Quickie GPV Titanium	3-27
3.4.35	Product Design Group Bentley Tilt Wheelchair	3-27
3.4.36	Product Design Group Eclipse Series Wheelchairs	3-28
3.4.37	Product Design Group Stellar Manual Tilt Wheelchair	3-28
3.4.38	Medline Excel 2000 Wheelchairs-	3-29
3.4.39	Medline Excel Extra-Wide Wheelchairs	3-30
3.4.40	Medline Excel K3 Lightweight Wheelchair	3-30
3.4.41	Medline Excel K4 Lightweight Wheelchair	3-30

3.4.42	Medline Excel Narrow Wheelchair	3-31
3.4.43	Medline Excel Passenger Transport Wheelchair	3-31
3.5	Positioning:	3-31
3.5.1	Invacare Allegro	3-32
3.5.2	Invacare MVP	3-32
3.5.3	Invacare Compass SPT and Compass SPT Limited	3-32
3.5.4	Invacare Solara	3-33
3.5.5	Gunnel Rehab TNT	3-33
3.5.6	Gunnel Rehab RAM	3-33
3.5.7	Sunrise Medical Quickie IRIS	3-34
3.5.8	Sunrise Medical Quickie TS	3-34
3.5.9	Sunrise Medical Quickie Recliner	3-34
3.5.10	Sunrise Medical Quickie T45	3-34
3.6	Bariatric:	3-35
3.6.1	Invacare IVC 9000 Topaz Wheelchair	3-35
3.6.2	Invacare IVC 9000 XDT Wheelchair	3-35
3.6.3	Invacare IVC 900 Custom Wheelchair	3-36
3.6.4	Invacare IVC Tracer IV Wheelchair	3-36
3.6.5	Invacare IVC 9000 SL Wheelchair	3-36
3.6.6	Invacare IVC 9000 XT Wheelchair	3-36
3.6.7	Invacare IVC Tracer SX5 Wheelchair	3-37
3.6.8	Invacare IVC Tracer EX2 Wheelchair	3-37
3.6.9	Invacare Aluminum Transport Chair	3-37
3.6.10	Invacare IVC Transport Chair, 16 and 18" Seat Width	3-37
3.6.11	Invacare IVC 9000 XT Recliner	3-38
3.6.12	Invacare IVC Tracer SX5 Recliner	3-38
3.6.13	Gunnel Bariatric TNT	3-38
3.6.14	Gunnel Bariatric RAM	3-38
3.6.15	Gendron (Manual) Regency Wheelchair Line	3-39
3.6.16	Gendron Tracker Wheelchair Line Gendron Tracker II Basic	3-39
3.6.17	Gendron (Power) Regency Wheelchair Line	3-40
3.6.18	Teftec BetaTrac	3-40
3.6.19	Pride Mobility	3-41
3.7	Power Wheelchairs:	3-41
3.7.1	Invacare Formula TRE powered seating system	3-41
3.7.2	Glide Power Assist	3-43
3.7.3	Glide Series 4	3-43
3.7.4	Glide Series 6 and Series 7	3-44
3.7.5	Glide Series 8	3-44
3.7.6	Glide Series 9	3-44
3.7.7	Hoveround MPV 4	3-45
3.7.8	Hoveround Teknique FWD	3-45
3.7.9	Hoveround Teknique RWD	3-45
3.7.10	Hoveround Teknique GT	3-45
3.7.11	Hoveround Teknique XHD	3-46
3.7.12	Hoveround Re/Hab	3-46
3.7.13	Invacare Pronto M51	3-46
3.7.14	Invacare Pronto M71	3-47
3.7.15	Invacare Pronto M91	3-47
3.7.16	Invacare Pronto M94	3-48
3.7.17	Invacare 3G Arrow RWD	3-48
3.7.18	Invacare 3G Ranger X RWD	3-49

**WINTERGREEN RESEARCH, INC.**

3.7.19	Invacare 3G Torque SP RWD	3-49
3.7.20	Invacare Arrow FWD	3-49
3.7.21	Invacare Storm Series TDX	3-50
3.7.22	Invacare Storm Series TDX5	3-50
3.7.23	Invacare Storm Series TDX4	3-51
3.7.24	Invacare Storm Series TDX3	3-51
3.7.25	Invacare Xterra GT, no Electronics or MKIV RII-80amp Electronics	3-52
3.7.26	Invacare Nutron R32, Nutron R32LX, Nutron R50 LX, Nutron R51, Nutron R51LX, Nutron R51LXP	3-52
3.7.27	Invacare P9000 XDT	3-52
3.7.28	Invacare Pronto M50	3-53
3.7.29	Sunrise Medical Guardian Aspire	3-53
3.7.30	Sunrise Medical Guardian Microlite Garnet and Ruby	3-53
3.7.31	Sunrise Medical Quickie Freestyle	3-53
3.7.32	Sunrise Medical Quickie Xtender	3-54
3.7.33	Sunrise Medical Quickie P-222 SE	3-54
3.7.34	Sunrise Medical Quickie P220	3-54
3.7.35	Sunrise Medical The Quickie S-646 and S-646 SE	3-54
3.7.36	Sunrise Medical The Improved Quickie S-525	3-54
3.7.37	Sunrise Medical Quickie SmartSeat	3-55
3.7.38	Sunrise Medical Quickie G-424	3-55
3.7.39	Sunrise Medical Quickie Z-500	3-55
3.7.40	Sunrise Medical Quickie V-521	3-55
3.7.41	Sunrise Medical Quickie V-100	3-55
3.7.42	Sunrise Medical Quickie V-121	3-56
3.7.43	Sunrise Medical Quickie P210	3-56
3.7.44	Sunrise Medical Quickie P-222	3-56
3.7.45	Sunrise Medical Quickie S-626	3-56
3.7.46	Magic Mobility Extreme 4X4 and Extreme Force 4X4	3-56
3.7.47	Magic Mobility Jewel Tilt-In-Space	3-57
3.7.48	Magic Mobility Mystic	3-57
3.7.49	Magic Mobility Frontier	3-58
3.7.50	Pride Mobility Jazzy Power Chairs	3-58
3.7.51	Pride Mobility Jazzy 1103 Ultra	3-58
3.7.52	Pride Mobility Jazzy 1113	3-58
3.7.53	Pride Mobility Jazzy 1143	3-59
3.7.54	Pride Mobility Jazzy 1101 and Jazzy 1121	3-59
3.7.55	Pride Mobility Jazzy 1122	3-59
3.7.56	Pride Mobility Jazzy 1133	3-59
3.7.57	Pride Mobility Jazzy 1170XL	3-60
3.7.58	Pride Mobility Quantum Blast 650, 850, HD, X-TREME	3-60
3.7.59	Pride Mobility Quantum Jazzy 1133	3-61
3.7.60	Pride Mobility Quantum Jazzy 1400	3-61
3.7.61	Pride Mobility Quantum Jazzy 1420	3-61
3.7.62	Pride Mobility Quantum Jazzy 1650	3-62
3.7.63	Teftec OmegaTrac	3-62
3.7.64	Pride Mobility Scooters	3-63
3.8	Sportschairs:	3-63
3.8.1	Eagle Sports Chairs The Soaring Eagle T-Frame V-Cage racer	3-63
3.8.2	Eagle Sportschairs Tornado Allsport	3-63
3.8.3	Eagle Sportschairs Tornado QR	3-64
3.8.4	Eagle Sportschairs Thunder Tennis Sportschair	3-64

## WINTERGREEN RESEARCH, INC.

3.8.5	Eagle Sportschairs Eagle's Nest Field Events Chair	3-64
3.8.6	Eagle Sportschairs Roadrunner	3-65
3.8.7	Eagle Sportschairs Basketball Chair	3-65
3.8.8	Eagle Sportschairs Buzzard	3-65
3.8.9	Invacare Top End - Terminator BB/X-Terminator BB	3-66
3.8.10	Invacare Top End - Terminator Titanium	3-66
3.8.11	Invacare Top End Transformer	3-66
3.8.12	Invacare Excelerator - Invacare Top End	3-67
3.8.13	Invacare Excelerator - XLT	3-67
3.8.14	Invacare XLT Gold Handcycle	3-67
3.8.15	Invacare Excelerator XLT JR	3-68
3.8.16	Invacare Excelerator XLT PRO Hand Cycle	3-68
3.8.17	Invacare Top End - X-Terminator QR	3-69
3.8.18	Invacare Eliminator OSR Racing Chair	3-69
3.8.19	Invacare Top End - T3 Tennis Elite	3-69
3.8.20	Invacare T-4 Tennis Elite	3-70
3.8.21	Melrose Orion	3-70
3.8.22	Melrose Rhino	3-70
3.8.23	Melrose Gazelle	3-70
3.8.24	Sunrise Medical Quickie Allcourt Wheelchair	3-71
3.8.25	Sunrise Medical Quickie Match Point	3-71
3.8.26	Sunrise Medical Quickie Kidz Bike	3-71
3.8.27	Sunrise Medical Quickie Mach 2	3-71
3.8.28	Sunrise Medical Quickie Kanski	3-71
3.8.29	Sunrise Medical Quickie Racer	3-72

## WHEELCHAIR TECHNOLOGY

<b>4. WHEELCHAIR TECHNOLOGY</b>	<b>4-1</b>
4.1 Science And Medical Technology	4-1
4.1.1 Physical Therapy	4-2
4.1.2 Treatment Trends	4-2
4.2 Wheel Chair Technological Trends	4-4
4.2.1 Power Wheelchairs	4-4
4.2.2 Sport Wheelchairs	4-4
4.2.3 Lightweight Wheelchairs	4-5
4.2.4 Transport Wheelchairs (Folding)	4-5
4.3 Medical Equipment Government Regulation	4-7
4.3.1 U.S. Medical Equipment Government Regulation	4-7
4.3.2 Safe Medical Devices Act of 1990 and Medical Device Amendments of 1976	4-8
4.3.3 Companies Gain Market Credibility For Adhering To High Standards Of Quality And Safety	4-9
4.3.4 U.S. Legislation Related To Providing Prescription Drug Coverage For The Elderly -- November 2003	4-9

## WHEELCHAIR COMPANY DESCRIPTION

<b>5. WHEELCHAIR COMPANY PROFILES</b>	<b>5-1</b>
5.1 Convaid	5-1
5.2 Drive Medical	5-1
5.2.1 Drive Medical / Dr. K Healthcare	5-2
5.3 Eagle Sports Chairs	5-2
5.4 Gendron Inc.	5-2

**WINTERGREEN RESEARCH, INC.**

5.5	Glide Rehabilitation Products	5-3
5.6	Graham-Field Health Products	5-3
5.7	Gunnell Inc.	5-3
5.8	Hoveround Corporation	5-4
5.9	Invacare Corporation	5-4
5.9.1	Invacare Strategy	5-7
5.9.2	Invacare Revenue	5-7
5.9.3	Invacare North American Operations	5-8
5.9.4	Invacare European Operations	5-9
5.9.5	Invacare Australia Operations	5-9
5.9.6	Invacare Business Segments	5-10
5.9.7	Invacare Marketing And Distribution	5-11
5.9.8	Invacare Homecare Sales Force	5-12
5.9.9	Inside Sales Department	5-12
5.9.10	Invacare Service and Parts Division	5-13
5.9.11	Invacare Soft Goods And Disposable Medical Supplies	5-13
5.9.12	Invacare Co-Op Advertising Program	5-14
5.9.13	Invacare Top Ten Customers	5-16
5.9.14	Invacare Europe	5-17
5.10	Magic Mobility Wheelchairs	5-25
5.11	Medline	5-25
5.12	Melrose Kiwi Concept Chairs	5-26
5.13	Pride Mobility Inc.	5-26
5.14	Product Design Group	5-27
5.15	RGK	5-27
5.16	Sunrise Medical	5-27
5.16.1	Sunrise Medical / Dynavox	5-28

**List of Tables and Figures****WHEELCHAIR EXECUTIVE SUMMARY**

Table ES-1	ES-1
Wheelchair Market Driving Forces	
Figure ES-2	ES-4
Worldwide Wheelchair Market Shares, First Half 2004	
Figure ES-3	ES-5
Worldwide Wheelchair Market Shares, 2003	
Figure ES-4	ES-7
Worldwide Wheelchair Total Market Forecasts, 2004-2009	

**WHEELCHAIR MARKET DYNAMICS AND MARKET DESCRIPTION**

Table 1-1	1-2
Wheelchair Target Markets	
Table 1-2	1-3
Wheelchair Target Market Positioning	
Table 1-3	1-4
Wheelchair Market Positioning Functions	
Table 1-4	1-8
Home Medical Equipment Market Segments	
Table 1-5	1-10
Marketing Globally	
Table 1-6	1-14
Home Care Services Billing Issues	
Table 1-7	1-15
Home Care Services Billing Changes Needed	
Table 1-8	1-16
JCAHO ORYX Requirements	

**WHEELCHAIR MARKET SHARES AND MARKET FORECASTS**

Table 2-1	2-1
Wheelchair Market Driving Forces	
Table 2-2	2-6
Wheelchair Market Driving Forces	
Figure 2-3	2-9
Worldwide Wheelchair Market Shares, 2003	
Figure 2-4	2-10
Worldwide Wheelchair Market Shares, First Half 2004	
Table 2-5	2-11
Worldwide Wheelchair Shipments, Dollars Market Shares, 2003 and First Half 2004	
Figure 2-6	2-13
Worldwide Wheelchair Market Segments, 2003	
Figure 2-7	2-14
Worldwide Wheelchair Market Segments, 2009	
Table 2-8	2-15
Summary Wheelchairs Market Segment Forecasts, 2004-2009	

Figure 2-9	2-16
Worldwide Wheelchair Total Market Forecasts, 2004-2009	
Table 2-10	2-17
Worldwide Wheelchair Industry Segments, Percent, 2003	
Table 2-11	2-18
Worldwide Wheelchair Industry Segments, Dollars, 2003	
Figure 2-12	2-20
Worldwide Standard Wheelchair Market Forecast, Dollars, 2004-2009	
Figure 2-13	2-21
Worldwide Folding Wheelchair Market Forecast, Dollars, 2004-2009	
Table 2-14	2-22
Worldwide Standard Wheelchair Market Forecast, Shipments, Units and Dollars, 2004-2009	
Figure 2-15	2-23
Worldwide Custom Manual Wheelchair Market Forecasts, Dollars, 2004-2009	
Figure 2-16	2-24
Worldwide Custom Power Wheelchair Market Forecasts, Dollars, 2004-2009	
Table 2-17	2-25
Worldwide Custom Power and Manual Wheelchair Market Forecast, Shipments, Units and Dollars, 2004-2009	
Figure 2-18	2-26
Worldwide Sports / Racing Wheelchair Market Forecasts, Dollars, 2004-2009	
Table 2-19	2-27
Invacare Standard and Rehab Regional Market Segments	
Figure 2-20	2-28
Wheelchair Regional Market Shares, 2003	
Table 2-21	2-29
Wheelchair Regional Market Shares, 2003	
Figure 2-22	2-30
Wheelchair Regional Market Shares, 2009	
Table 2-23	2-31
Wheelchair Regional Market Shares, 2009	

**WHEELCHAIR PRODUCT DESCRIPTION**

Table 3-1	3-13
Pride Specifications:	
Table 3- 2	3-23
Pride Mobility Stylus Features:	

**WHEELCHAIR TECHNOLOGY**

Table 4-1	4-3
Factors Relating To Value Of Home Health Care Over Institutional Care	
Table 4-2	4-6
Transport Wheelchair Features	

**WHEELCHAIR COMPANY DESCRIPTION**

Table 5-1	5-5
Product Segments Of Invacare	
Table 5-2	5-18
Revenues From External Customers, 2001-2003 In thousands of dollars	

**WINTERGREEN RESEARCH, INC.**

Table 5-3	5-19
Revenues From External Customers, Three Months Ended March 31 In thousands of dollars	
Table 5-4	5-29
Sunrise Medical Percentage Of Total Revenue By Product Line	
Table 5-5	5-30
Total revenue by segment for 1998, 1999, and 2000 In thousands of dollars	

## ABOUT THE COMPANY

**WINTERGREEN RESEARCH**, HAS A UNIQUE RESEARCH STRATEGY THAT RELATES TO IDENTIFYING MARKET TRENDS THROUGH READING AND INTERVIEWING OPINION LEADERS. BY READING THE ELECTRONIC EQUIVALENT OF 40 FEET OF PAPER, WINTERGREEN RESEARCH SENIOR ANALYSTS CAN LEARN A LOT MORE ABOUT MARKETS, A LOT FASTER THAN CAN BE LEARNED THROUGH EXPENSIVE SURVEYS AND FOCUS GROUPS. THINKING ABOUT MARKET TRENDS IS A HIGH PRIORITY AT WINTERGREEN RESEARCH. AS WITH ALL RESEARCH, THE VALUE PROPOSITION FOR COMPETITIVE ANALYSIS COMES FROM INTELLECTUAL INPUT.

IT IS A LUXURY REALLY, AVAILABLE TO ONLY A VERY FEW PEOPLE, TO BE ABLE TO GATHER INFORMATION, LOTS OF INFORMATION FROM READING MASSIVE AMOUNTS OF CONTENT, AND THEN TRYING TO MAKE SENSE OF THAT CONTENT. THE ABILITY TO THINK ABOUT MARKET TRENDS IS ENHANCED BY DOING IT OVER AND OVER FOR MANY DIFFERENT MARKETS. THAT IS WHAT WINTERGREEN RESEARCH IS ALL ABOUT: READING AND THINKING IS AN ESSENTIAL ASPECT OF COMPETITIVE ANALYSIS. TALKING TO OPINION LEADERS IS THE THIRD ESSENTIAL ASPECT OF PRODUCING GOOD, RELIABLE DATA.

**WINTERGREEN RESEARCH**, FOUNDED IN 1985, PROVIDES STRATEGIC MARKET ASSESSMENTS IN TELECOMMUNICATIONS, COMMUNICATIONS EQUIPMENT, HEALTH CARE, INTERNET AND ADVANCED COMPUTER TECHNOLOGY. INDUSTRY REPORTS FOCUS ON OPPORTUNITIES THAT EXPAND EXISTING MARKETS OR DEVELOP MAJOR NEW MARKETS. THE REPORTS ASSESS NEW PRODUCT AND SERVICE POSITIONING STRATEGIES, NEW AND EVOLVING TECHNOLOGIES, AND TECHNOLOGICAL IMPACT ON PRODUCTS, SERVICES, AND MARKETS. MARKET SHARES ARE PROVIDED. LEADING MARKET PARTICIPANTS ARE PROFILED, AND THEIR MARKETING STRATEGIES, ACQUISITIONS, AND STRATEGIC ALLIANCES ARE DISCUSSED. THE PRINCIPALS OF WINTERGREEN RESEARCH HAVE BEEN INVOLVED IN ANALYSIS AND FORECASTING OF INTERNATIONAL BUSINESS OPPORTUNITIES IN TELECOMMUNICATIONS AND ADVANCED COMPUTER TECHNOLOGY MARKETS FOR OVER 30 YEARS.

**ABOUT THE PRINCIPAL AUTHORS**

**ELLEN T. CURTISS**, TECHNICAL DIRECTOR, CO-FOUNDER OF WINTERGREEN RESEARCH, CONDUCTS STRATEGIC AND MARKET ASSESSMENTS IN TECHNOLOGY-BASED INDUSTRIES. PREVIOUSLY SHE WAS A MEMBER OF THE STAFF OF ARTHUR D. LITTLE, INC., FOR 23 YEARS, MOST RECENTLY AS VICE PRESIDENT OF ARTHUR D. LITTLE DECISION RESOURCES, SPECIALIZING IN STRATEGIC PLANNING AND MARKET DEVELOPMENT SERVICES. SHE IS A GRADUATE OF BOSTON UNIVERSITY AND THE PROGRAM FOR MANAGEMENT DEVELOPMENT AT HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION. SHE IS THE AUTHOR OF RECENT STUDIES ON WORLDWIDE TELECOMMUNICATIONS MARKETS, THE TOP TEN INTERNET EQUIPMENT COMPANIES, THE TOP TEN CONTRACT MANUFACTURING COMPANIES, AND THE TOP TEN TELECOMMUNICATIONS MARKET ANALYSIS AND FORECASTS.

**SUSAN EUSTIS**, PRESIDENT, CO-FOUNDER OF WINTERGREEN RESEARCH, HAS DONE RESEARCH IN COMMUNICATIONS AND COMPUTER MARKETS AND APPLICATIONS. SHE HOLDS SEVERAL PATENTS IN MICROCOMPUTING AND PARALLEL PROCESSING. SHE HAS THE ORIGINAL PATENTS IN ELECTRONIC VOTING MACHINES. SHE HAS NEW PATENT APPLICATIONS IN FORMAT VARYING, MULTIPROCESSING, AND ELECTRONIC VOTING. SHE IS THE AUTHOR OF RECENT STUDIES OF THE REGIONAL BELL OPERATING COMPANIES' MARKETING STRATEGIES, INTERNET EQUIPMENT, BIOMETRICS, A STUDY OF INTERNET EQUIPMENT, WORLDWIDE TELECOMMUNICATIONS EQUIPMENT, TOP TEN TELECOMMUNICATIONS, DIGITAL LOOP CARRIER, WEB HOSTING, WEB SERVICES, AND APPLICATION INTEGRATION MARKETS. MS. EUSTIS IS A GRADUATE OF BARNARD COLLEGE.

ORDER FORM

Return To: WinterGreen Research, Inc.  
6 Raymond Street  
Lexington, MA 02421 USA  
Phone: (781) 863-5078 --- Fax: (781) 863-1235 or (781) 860-0897

PLEASE ENTER MY ORDER FOR:

Wheelchair Market Opportunities,  
Strategies, and Forecasts 2004-2009

-ALL REPORTS ARE AVAILABLE IN EITHER PRINT OR PDF-

\_\_\_\_\_PDF\_\_\_\_\_PRINT

\_\_\_\_\_ENCLOSED IS MY CHECK FOR \$2,800 FOR SINGLE COPY, \$3,800 FOR WEB SITE POSTING

\_\_\_\_\_PLEASE BILL MY COMPANY USING P.O. NUMBER\_\_\_\_\_

\_\_\_\_\_PLEASE CHARGE MY MASTERCARD/VISA/AMERICAN EXPRESS\_\_\_\_\_

CARD NUMBER \_\_\_\_\_EXP. DATE\_\_\_\_\_

If charging to a Credit card you may e-mail the order form, but not the card information  
Fax or Call with credit card information - Do not send card number as e-mail - You may send the order as e-mail

\_\_\_\_\_ADDITIONAL COPIES, @ \$375 (EXTRA COPY PRICE IN EFFECT ONLY WITH INITIAL ORDER)

NAME \_\_\_\_\_TITLE \_\_\_\_\_

SIGNATURE \_\_\_\_\_

COMPANY \_\_\_\_\_DIVISION \_\_\_\_\_

-

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_STATE /

ZIP \_\_\_\_\_

TELEPHONE \_\_\_\_\_

FAX \_\_\_\_\_

EMAIL \_\_\_\_\_

PLEASE NOTE: RESIDENTS OF MASSACHUSETTS AND CONNECTICUT MUST INCLUDE APPROPRIATE SALES TAX

SUBSCRIBERS OUTSIDE THE UNITED STATES MUST PROVIDE PREPAYMENT IN U.S. FUNDS