

PORTABLE MEDICAL ELECTRONIC PRODUCTS: TECHNOLOGIES AND GLOBAL MARKETS



HLC084B
January 2016

Shalini Shahani Dewan
Project Analyst

ISBN: 1-62296-208-7



BCC Research
49 Walnut Park, Building 2
Wellesley, MA 02481 USA
866-285-7215 (toll-free within the USA),
or (+1) 781-489-7301
www.bccresearch.com
information@bccresearch.com

TABLE OF CONTENTS

TOPIC	PAGE NO.
CHAPTER 1 INTRODUCTION	2
STUDY GOALS AND OBJECTIVES	2
REASONS FOR DOING THE STUDY	2
INTENDED AUDIENCE	2
SCOPE OF REPORT	3
INFORMATION SOURCES	3
ANALYSTS' CREDENTIALS	3
RELATED BCC RESEARCH REPORTS	4
BCC RESEARCH WEBSITE	4
DISCLAIMER	4
CHAPTER 2 EXECUTIVE SUMMARY	6
<i>SUMMARY TABLE GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY REGION, THROUGH 2020 (\$ MILLIONS)</i>	7
<i>SUMMARY FIGURE GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY REGION, 2013-2020 (\$ MILLIONS)</i>	7
CHAPTER 3 OVERVIEW	9
MINIATURIZATION AND PORTABILITY	9
BENEFITS OF PORTABILITY IN MEDICINE	9
HISTORY	10
<i>TABLE 1 TECHNOLOGICAL MILESTONES OF PORTABLE MEDICAL ELECTRONIC PRODUCTS</i>	10
REQUIREMENT FOR PORTABILITY IN MEDICAL DEVICES	12
ROLE OF SEMICONDUCTORS IN MEDICAL DEVICES	12
BASIC DESIGN	12
DATA ACQUISITION SYSTEMS AND SIGNAL CONVERSION	13
MICROPROCESSORS	13
POWER SUPPLIES AND POWER MANAGEMENT	13
MEMORY UNITS	14
DISPLAYS AND AUDIO INTERFACES	14
WIRED AND WIRELESS INTERFACES	14
CIRCUIT BOARDS AND PACKAGING	14
<i>CLASSIFICATION OF PORTABLE MEDICAL ELECTRONIC PRODUCTS</i>	15
<i>TABLE 2 TYPES OF PORTABLE MEDICAL ELECTRONIC PRODUCTS BASED ON THEIR APPLICATIONS</i>	15
PMEPS USED FOR DIAGNOSIS AND TESTING	16
PMEPS USED FOR THERAPY	17
PMEPS USED FOR FIRST AID AND OTHER APPLICATIONS	18
CHAPTER 4 REGULATORY ASPECTS	22
PREMARKET APPROVALS	22
DIAGNOSIS AND TESTING	22
<i>TABLE 3 PREMARKET APPROVALS FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS USED FOR DIAGNOSIS AND TESTING, 2011 TO APRIL 2015</i>	22
THERAPY	38

TOPIC	PAGE NO.
<i>TABLE 4 PRE-MARKET APPROVALS FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS USED FOR THERAPY, 2011 TO APRIL 2015</i>	38
FIRST AID AND OTHER APPLICATIONS	39
<i>TABLE 5 PRE-MARKET APPROVALS FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS USED FOR FIRST AID AND OTHER APPLICATIONS, 2011 TO APRIL 2015</i>	39
RECALLS	41
CLASS I RECALLS	41
<i>TABLE 6 CLASS I RECALLS ISSUED FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS, 2011 TO APRIL 2015</i>	41
CLASS II RECALLS	43
<i>TABLE 7 CLASS II RECALLS ISSUED FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS, 2011 TO APRIL 2015</i>	43
CLASS III RECALLS	47
<i>TABLE 8 CLASS III RECALLS ISSUED FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS, 2011 TO APRIL 2015</i>	47
CHAPTER 5 NEW DEVELOPMENTS	49
NEW PRODUCT LAUNCHES	49
<i>TABLE 9 NEW PRODUCT/PLATFORM LAUNCHES IN PORTABLE MEDICAL DEVICES FROM TOP MANUFACTURERS, 2013 TO AUGUST 2015</i>	50
HEALTHCARE REFORM AND AFFORDABILITY	51
PREVENTIVE CARE AND OPPORTUNITIES	51
EMERGING MARKETS AND GROWTH	52
CONSUMER DEVICES AND TECHNOLOGIES	52
MOBILE DEVICES AND APPS	52
MERGERS AND ACQUISITIONS	53
<i>TABLE 10 MERGERS AND ACQUISITIONS INVOLVING TOP PORTABLE MEDICAL DEVICE COMPANIES, 2013 TO AUGUST 2015</i>	53
CHAPTER 6 MARKET ANALYSIS	56
MARKET BY TYPE	56
MARKET OVERVIEW	57
MARKET REVENUE	58
<i>TABLE 11 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY TYPE, THROUGH 2020 (\$ MILLIONS)</i>	58
<i>FIGURE 1 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY TYPE, 2013-2020 (\$ MILLIONS)</i>	58
MARKET SHARE	59
<i>TABLE 12 MARKET SHARE OF PORTABLE MEDICAL EQUIPMENT PRODUCTS BY TYPE, 2014 (%)</i>	59
<i>FIGURE 2 MARKET SHARE OF PORTABLE MEDICAL EQUIPMENT PRODUCTS BY TYPE, 2014 (%)</i>	59
PMEPS USED FOR DIAGNOSIS AND TESTING	60
Market Overview	61
Market Revenue	61
<i>TABLE 13 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR DIAGNOSTICS AND TESTING BY TYPE, THROUGH 2020 (\$ MILLIONS)</i>	62
<i>FIGURE 3 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR DIAGNOSTICS AND TESTING BY TYPE, 2013-2020 (\$ MILLIONS)</i>	63
PMEPS USED FOR THERAPY	63

TOPIC	PAGE NO.
Market Overview	64
Market Revenue	65
<i>TABLE 14 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR THERAPY BY TYPE, THROUGH 2020 (\$ MILLIONS)</i>	66
<i>FIGURE 4 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR THERAPY BY TYPE, 2013-2020 (\$ MILLIONS)</i>	66
PMEPS USED FOR FIRST AID AND OTHER APPLICATIONS	67
Market Overview	67
Market Revenue	68
<i>TABLE 15 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY TYPE, THROUGH 2020 (\$ MILLIONS)</i>	68
<i>FIGURE 5 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY TYPE, 2013-2020 (\$ MILLIONS)</i>	68
MARKET BY REGION	69
MARKET OVERVIEW	69
MARKET REVENUE	70
<i>TABLE 16 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY REGION, THROUGH 2020 (\$ MILLIONS)</i>	71
<i>FIGURE 6 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY REGION, 2013-2020 (\$ MILLIONS)</i>	71
MARKET SHARE	71
<i>TABLE 17 MARKET SHARE FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY REGION, 2014 (%)</i>	72
<i>FIGURE 7 MARKET SHARE FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY REGION, 2014 (%)</i>	72
PMEPS USED FOR DIAGNOSIS AND TESTING	72
Market Overview	73
Market Revenue	73
<i>TABLE 18 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR DIAGNOSTICS AND TESTING BY REGION, THROUGH 2020 (\$ MILLIONS)</i>	74
<i>FIGURE 8 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR DIAGNOSTICS AND TESTING BY REGION, 2013-2020 (\$ MILLIONS)</i>	75
PMEPS USED FOR THERAPY	75
Market Overview	75
Market Revenue	76
<i>TABLE 19 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR THERAPY BY REGION, THROUGH 2020 (\$ MILLIONS)</i>	77
<i>FIGURE 9 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR THERAPY BY REGION, 2013-2020 (\$ MILLIONS)</i>	77
PMEPS USED FOR FIRST AID AND OTHER APPLICATIONS	77
Market Overview	78
Market Revenue	78
<i>TABLE 20 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY REGION, THROUGH 2020 (\$ MILLIONS)</i>	79
<i>FIGURE 10 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY REGION, 2013-2020 (\$ MILLIONS)</i>	79
MARKET BY PORTABILITY	79
MARKET OVERVIEW	80
MARKET REVENUE	80

TOPIC	PAGE NO.
<i>TABLE 21 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY TYPE OF PORTABILITY, THROUGH 2020 (\$ MILLIONS)</i>	81
<i>FIGURE 11 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY TYPE OF PORTABILITY, 2013-2020 (\$ MILLIONS)</i>	81
MARKET SHARE	81
<i>TABLE 22 MARKET SHARE OF PORTABLE MEDICAL EQUIPMENT PRODUCTS BY TYPE, 2014 (%)</i>	82
<i>FIGURE 12 MARKET SHARE OF PORTABLE MEDICAL EQUIPMENT PRODUCTS BY TYPE, 2014 (%)</i>	82
PMEPS USED FOR DIAGNOSIS AND TESTING	82
Market Overview	83
Market Revenue	83
<i>TABLE 23 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR DIAGNOSIS AND TESTING BY TYPE OF PORTABILITY, THROUGH 2020 (\$ MILLIONS)</i>	84
<i>FIGURE 13 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR DIAGNOSIS AND TESTING BY TYPE OF PORTABILITY, 2013-2020 (\$ MILLIONS)</i>	84
PMEPS USED FOR THERAPY	85
Market Overview	85
Market Revenue	86
<i>TABLE 24 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR THERAPY BY TYPE OF PORTABILITY, THROUGH 2020 (\$ MILLIONS)</i>	86
<i>FIGURE 14 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR THERAPY BY TYPE OF PORTABILITY, 2013-2020 (\$ MILLIONS)</i>	86
PMEPS USED FOR FIRST AID AND OTHER APPLICATIONS	87
Market Overview	87
Market Revenue	88
<i>TABLE 25 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY TYPE OF PORTABILITY, THROUGH 2020 (\$ MILLIONS)</i>	88
<i>FIGURE 15 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY TYPE OF PORTABILITY, 2013-2020 (\$ MILLIONS)</i>	88
CHAPTER 7 INDUSTRY STRUCTURE	91
DIAGNOSIS AND TESTING	91
MARKET LEADERS	91
<i>TABLE 26 LEADING MANUFACTURERS/SUPPLIERS OF PMEPS FOR DIAGNOSIS AND TESTING, 2014</i>	91
MARKET SHARE	93
<i>TABLE 27 MARKET SHARES OF MANUFACTURERS/SUPPLIERS OF PMEPS FOR DIAGNOSIS AND TESTING, 2014 (%)</i>	93
<i>FIGURE 16 MARKET SHARES OF MANUFACTURERS/SUPPLIERS OF PMEPS FOR DIAGNOSIS AND TESTING, 2014 (%)</i>	93
THERAPY	94
MARKET LEADERS	94
<i>TABLE 28 LEADING MANUFACTURERS/SUPPLIERS OF PMEPS FOR THERAPY, 2014</i>	94
MARKET SHARE	95
<i>TABLE 29 MARKET SHARES OF MANUFACTURERS/SUPPLIERS OF PMEPS FOR THERAPY, 2014 (%)</i>	96
<i>FIGURE 17 MARKET SHARES OF MANUFACTURERS/SUPPLIERS OF PMEPS FOR THERAPY, 2014 (%)</i>	97

TOPIC	PAGE NO.
FIRST AID AND OTHER APPLICATIONS	97
MARKET LEADERS	97
<i>TABLE 30 LEADING MANUFACTURERS/SUPPLIERS OF PMEPS FOR FIRST AID AND OTHER APPLICATIONS, 2014</i>	97
MARKET SHARE	98
<i>TABLE 31 MARKET SHARES OF MANUFACTURERS/SUPPLIERS OF PMEPS FOR FIRST AID AND OTHER APPLICATIONS, 2014 (%)</i>	98
<i>FIGURE 18 MARKET SHARES OF MANUFACTURERS/SUPPLIERS OF PMEPS FOR FIRST AID AND OTHER APPLICATIONS, 2014 (%)</i>	98
CHAPTER 8 MARKET BY APPLICATION	101
GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT BY END USER	101
<i>TABLE 32 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY END USER, THROUGH 2020 (\$ MILLIONS)</i>	102
<i>FIGURE 19 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY END USER, 2013-2020 (\$ MILLIONS)</i>	102
MARKET SHARE	102
<i>TABLE 33 MARKET SHARE FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY END USER, 2014 (%)</i>	103
<i>FIGURE 20 MARKET SHARE FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY END USER, 2014 (%)</i>	103
PMEPS USED FOR DIAGNOSIS AND TESTING	103
Market Overview	104
Market Revenue	104
<i>TABLE 34 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR DIAGNOSIS AND TESTING BY END USER, THROUGH 2020 (\$ MILLIONS)</i>	105
<i>FIGURE 21 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR DIAGNOSIS AND TESTING BY END USER, 2013-2020 (\$ MILLIONS)</i>	105
PMEPS USED FOR THERAPY	105
Market Overview	106
Market Revenue	106
<i>TABLE 35 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR THERAPY BY END USER, THROUGH 2020 (\$ MILLIONS)</i>	107
<i>FIGURE 22 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR THERAPY BY END USER, 2013-2020 (\$ MILLIONS)</i>	107
PMEPS USED FOR FIRST AID AND OTHER APPLICATIONS	107
Market Overview	108
Market Revenue	108
<i>TABLE 36 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY END USER, THROUGH 2020 (\$ MILLIONS)</i>	109
<i>FIGURE 23 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY END USER, 2013-2020 (\$ MILLIONS)</i>	109
CHAPTER 9 PATENT ANALYSIS	111
PATENTS BY YEAR	111
<i>TABLE 37 NUMBER OF PATENTS FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY YEAR, 2013 TO JULY 2015</i>	112
<i>FIGURE 24 NUMBER OF PATENTS FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY YEAR, 2013 TO JULY 2015</i>	112
PATENTS BY TYPE	112

TOPIC	PAGE NO.
<i>TABLE 38 NUMBER OF PATENTS FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY TYPE, 2013 TO JULY 2015</i>	113
<i>FIGURE 25 NUMBER OF PATENTS FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY TYPE, 2013 TO JULY 2015</i>	113
PATENTS BY COUNTRY	114
<i>TABLE 39 NUMBER OF PORTABLE MEDICAL ELECTRONIC PRODUCTS BY COUNTRY, 2013 TO JULY 2015</i>	114
<i>FIGURE 26 NUMBER OF PORTABLE MEDICAL ELECTRONIC PRODUCT PATENTS BY COUNTRY, 2013 TO JULY 2015</i>	114
<i>TABLE 40 NUMBER OF PATENTS AND PERCENTAGE SHARES FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY COUNTRY, 2013 TO JULY 2015 (%)</i>	115
<i>FIGURE 27 NUMBER OF PATENTS AND PERCENTAGE SHARES FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY COUNTRY, 2013 TO JULY 2015 (NO. OF PATENTS/%)</i>	116
PATENTS BY COMPANY	116
<i>TABLE 41 PORTABLE MEDICAL ELECTRONIC PRODUCTS PATENTS BY COMPANY, 2013 TO JULY 2015 (NO. OF PATENTS)</i>	117
PATENTS BY ASSIGNEE	119
<i>TABLE 42 PATENTS BY ASSIGNEE FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS, 2013 TO JULY 2015 (NO. OF PATENTS)</i>	119
<i>FIGURE 28 PATENTS BY ASSIGNEE FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS, 2013 TO JULY 2015 (NO. OF PATENTS)</i>	119
CHAPTER 10 CURRENT SITUATION	121
<i>FACTORS AFFECTING PORTABLE MEDICAL EQUIPMENT PRODUCTS</i>	121
DRIVERS OF THE MARKET FOR PMEPS	121
Aging Population	121
Self-Testing and Self-Monitoring	122
Product Launches	122
Increase in Range of Customers	122
Equipment Sharing and Transportability	123
Convenient Medical Care	123
Design Versatility	123
Falling Prices of PMEPs	123
RESTRAINTS AND CHALLENGES FOR THE MARKET	123
Rising Cost Pressures and Reimbursement Policies	123
Regulatory Pressures	124
MARKET OPPORTUNITIES	124
CHAPTER 11 COMPANY PROFILES	126
ABBOTT LABORATORIES	126
APEX BIOTECHNOLOGY CORP.	127
ARKRAY USA INC.	127
B. BRAUN MELSUNGEN AG (B. BRAUN MEDICAL INC.)	128
BAYER HEALTHCARE	128
CAREFUSION CORP.	128
CONTEC MEDICAL SYSTEMS CO. LTD.	130
COVIDIEN	130
GE HEALTHCARE	131

TOPIC	PAGE NO.
JOHNSON & JOHNSON	131
MEDTRONIC INC.	132
MINDRAY MEDICAL INTERNATIONAL LTD.	132
NIPRO DIAGNOSTICS INC.	133
OMRON HEALTHCARE INC.	133
PANASONIC CORP.	133
PHILIPS HEALTHCARE	134
RESOUND	135
RION CO. LTD.	135
ROCHE DIAGNOSTICS	136
SIEMENS HEALTHCARE GMBH	137
SONOVA HOLDING AG	137
SMITH & NEPHEW	138
STARKEY HEARING TECHNOLOGIES	138
WELCH ALLYN	139
WIDEX	139
WILLIAM DEMANT HOLDING A/S	140

LIST OF TABLES

TABLE HEADING	PAGE NO.
SUMMARY TABLE GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY REGION, THROUGH 2020 (\$ MILLIONS)	7
TABLE 1 TECHNOLOGICAL MILESTONES OF PORTABLE MEDICAL ELECTRONIC PRODUCTS	10
TABLE 2 TYPES OF PORTABLE MEDICAL ELECTRONIC PRODUCTS BASED ON THEIR APPLICATIONS	15
TABLE 3 PREMARKET APPROVALS FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS USED FOR DIAGNOSIS AND TESTING, 2011 TO APRIL 2015	22
TABLE 4 PRE-MARKET APPROVALS FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS USED FOR THERAPY, 2011 TO APRIL 2015	38
TABLE 5 PRE-MARKET APPROVALS FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS USED FOR FIRST AID AND OTHER APPLICATIONS, 2011 TO APRIL 2015	39
TABLE 6 CLASS I RECALLS ISSUED FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS, 2011 TO APRIL 2015	41
TABLE 7 CLASS II RECALLS ISSUED FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS, 2011 TO APRIL 2015	43
TABLE 8 CLASS III RECALLS ISSUED FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS, 2011 TO APRIL 2015	47
TABLE 9 NEW PRODUCT/PLATFORM LAUNCHES IN PORTABLE MEDICAL DEVICES FROM TOP MANUFACTURERS, 2013 TO AUGUST 2015	50
TABLE 10 MERGERS AND ACQUISITIONS INVOLVING TOP PORTABLE MEDICAL DEVICE COMPANIES, 2013 TO AUGUST 2015	53
TABLE 11 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY TYPE, THROUGH 2020 (\$ MILLIONS)	58
TABLE 12 MARKET SHARE OF PORTABLE MEDICAL EQUIPMENT PRODUCTS BY TYPE, 2014 (%)	59
TABLE 13 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR DIAGNOSTICS AND TESTING BY TYPE, THROUGH 2020 (\$ MILLIONS)	62
TABLE 14 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR THERAPY BY TYPE, THROUGH 2020 (\$ MILLIONS)	66
TABLE 15 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY TYPE, THROUGH 2020 (\$ MILLIONS)	68
TABLE 16 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY REGION, THROUGH 2020 (\$ MILLIONS)	71
TABLE 17 MARKET SHARE FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY REGION, 2014 (%)	72
TABLE 18 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR DIAGNOSTICS AND TESTING BY REGION, THROUGH 2020 (\$ MILLIONS)	74
TABLE 19 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR THERAPY BY REGION, THROUGH 2020 (\$ MILLIONS)	77
TABLE 20 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY REGION, THROUGH 2020 (\$ MILLIONS)	79
TABLE 21 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY TYPE OF PORTABILITY, THROUGH 2020 (\$ MILLIONS)	81
TABLE 22 MARKET SHARE OF PORTABLE MEDICAL EQUIPMENT PRODUCTS BY TYPE, 2014 (%)	82
TABLE 23 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR DIAGNOSIS AND TESTING BY TYPE OF PORTABILITY, THROUGH 2020 (\$ MILLIONS)	84
TABLE 24 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR THERAPY BY TYPE OF PORTABILITY, THROUGH 2020 (\$ MILLIONS)	86

TABLE HEADING	PAGE NO.
TABLE 25 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY TYPE OF PORTABILITY, THROUGH 2020 (\$ MILLIONS)	88
TABLE 26 LEADING MANUFACTURERS/SUPPLIERS OF PMEPS FOR DIAGNOSIS AND TESTING, 2014	91
TABLE 27 MARKET SHARES OF MANUFACTURERS/SUPPLIERS OF PMEPS FOR DIAGNOSIS AND TESTING, 2014 (%)	93
TABLE 28 LEADING MANUFACTURERS/SUPPLIERS OF PMEPS FOR THERAPY, 2014	94
TABLE 29 MARKET SHARES OF MANUFACTURERS/SUPPLIERS OF PMEPS FOR THERAPY, 2014 (%)	96
TABLE 30 LEADING MANUFACTURERS/SUPPLIERS OF PMEPS FOR FIRST AID AND OTHER APPLICATIONS, 2014	97
TABLE 31 MARKET SHARES OF MANUFACTURERS/SUPPLIERS OF PMEPS FOR FIRST AID AND OTHER APPLICATIONS, 2014 (%)	98
TABLE 32 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY END USER, THROUGH 2020 (\$ MILLIONS)	102
TABLE 33 MARKET SHARE FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY END USER, 2014 (%)	103
TABLE 34 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR DIAGNOSIS AND TESTING BY END USER, THROUGH 2020 (\$ MILLIONS)	105
TABLE 35 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR THERAPY BY END USER, THROUGH 2020 (\$ MILLIONS)	107
TABLE 36 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY END USER, THROUGH 2020 (\$ MILLIONS)	109
TABLE 37 NUMBER OF PATENTS FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY YEAR, 2013 TO JULY 2015	112
TABLE 38 NUMBER OF PATENTS FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY TYPE, 2013 TO JULY 2015	113
TABLE 39 NUMBER OF PORTABLE MEDICAL ELECTRONIC PRODUCTS BY COUNTRY, 2013 TO JULY 2015	114
TABLE 40 NUMBER OF PATENTS AND PERCENTAGE SHARES FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY COUNTRY, 2013 TO JULY 2015 (%)	115
TABLE 41 PORTABLE MEDICAL ELECTRONIC PRODUCTS PATENTS BY COMPANY, 2013 TO JULY 2015 (NO. OF PATENTS)	117
TABLE 42 PATENTS BY ASSIGNEE FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS, 2013 TO JULY 2015 (NO. OF PATENTS)	119

LIST OF FIGURES

FIGURE TITLE	PAGE NO.
SUMMARY FIGURE GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY REGION, 2013-2020 (\$ MILLIONS)	7
FIGURE 1 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY TYPE, 2013-2020 (\$ MILLIONS)	58
FIGURE 2 MARKET SHARE OF PORTABLE MEDICAL EQUIPMENT PRODUCTS BY TYPE, 2014 (%)	59
FIGURE 3 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR DIAGNOSTICS AND TESTING BY TYPE, 2013-2020 (\$ MILLIONS)	63
FIGURE 4 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR THERAPY BY TYPE, 2013-2020 (\$ MILLIONS)	66
FIGURE 5 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY TYPE, 2013-2020 (\$ MILLIONS)	68
FIGURE 6 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY REGION, 2013-2020 (\$ MILLIONS)	71
FIGURE 7 MARKET SHARE FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY REGION, 2014 (%)	72
FIGURE 8 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR DIAGNOSTICS AND TESTING BY REGION, 2013-2020 (\$ MILLIONS)	75
FIGURE 9 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR THERAPY BY REGION, 2013-2020 (\$ MILLIONS)	77
FIGURE 10 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY REGION, 2013-2020 (\$ MILLIONS)	79
FIGURE 11 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY TYPE OF PORTABILITY, 2013-2020 (\$ MILLIONS)	81
FIGURE 12 MARKET SHARE OF PORTABLE MEDICAL EQUIPMENT PRODUCTS BY TYPE, 2014 (%)	82
FIGURE 13 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR DIAGNOSIS AND TESTING BY TYPE OF PORTABILITY, 2013-2020 (\$ MILLIONS)	84
FIGURE 14 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR THERAPY BY TYPE OF PORTABILITY, 2013-2020 (\$ MILLIONS)	86
FIGURE 15 GLOBAL MARKET FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY TYPE OF PORTABILITY, 2013-2020 (\$ MILLIONS)	88
FIGURE 16 MARKET SHARES OF MANUFACTURERS/SUPPLIERS OF PMEPS FOR DIAGNOSIS AND TESTING, 2014 (%)	93
FIGURE 17 MARKET SHARES OF MANUFACTURERS/SUPPLIERS OF PMEPS FOR THERAPY, 2014 (%)	97
FIGURE 18 MARKET SHARES OF MANUFACTURERS/SUPPLIERS OF PMEPS FOR FIRST AID AND OTHER APPLICATIONS, 2014 (%)	98
FIGURE 19 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY END USER, 2013-2020 (\$ MILLIONS)	102
FIGURE 20 MARKET SHARE FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS BY END USER, 2014 (%)	103
FIGURE 21 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR DIAGNOSIS AND TESTING BY END USER, 2013-2020 (\$ MILLIONS)	105
FIGURE 22 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR THERAPY BY END USER, 2013-2020 (\$ MILLIONS)	107
FIGURE 23 GLOBAL MARKET FOR PORTABLE MEDICAL EQUIPMENT PRODUCTS FOR FIRST AID AND OTHER APPLICATIONS BY END USER, 2013-2020 (\$ MILLIONS)	109
FIGURE 24 NUMBER OF PATENTS FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY YEAR, 2013 TO JULY 2015	112

FIGURE TITLE	PAGE NO.
FIGURE 25 NUMBER OF PATENTS FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY TYPE, 2013 TO JULY 2015	113
FIGURE 26 NUMBER OF PORTABLE MEDICAL ELECTRONIC PRODUCT PATENTS BY COUNTRY, 2013 TO JULY 2015	114
FIGURE 27 NUMBER OF PATENTS AND PERCENTAGE SHARES FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS BY COUNTRY, 2013 TO JULY 2015 (NO. OF PATENTS/%)	116
FIGURE 28 PATENTS BY ASSIGNEE FOR PORTABLE MEDICAL ELECTRONIC PRODUCTS, 2013 TO JULY 2015 (NO. OF PATENTS)	119