

# PHILIPS

## NATIONAL STUDY ON THE FUTURE OF TECHNOLOGY & TELEHEALTH IN HOME CARE

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### EXECUTIVE SUMMARY

Co-sponsored by

**National Association for Home Care & Hospice,  
Philips Home Healthcare Solutions  
and Fazzi Associates, Inc.**

April 2008



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## Acknowledgement

Conducting a study as large and as complex as the Philips National Study on the Future of Technology and Telehealth in Home Care required the support of numerous people and groups. Sponsors of the study would like to express our sincere appreciation to the following groups and individuals:

State Directors of the Home Care and Hospice Associations

Cindy Campbell, Fazzi Associates

Lindsay Doak, Fazzi Associates

Lynn Harlow, Fazzi Associates

Dr. Carl Townsend, Fazzi Associates

Mary St. Pierre, National Association for Home Care & Hospice

Jill Christians, Philips Home Healthcare Solutions

Karen Golden Russell, Philips Home Healthcare Solutions

Michael Lemnitzer, Philips Home Healthcare Solutions

The Over 1,000 Home Care Leaders  
Who Took the Time to Provide Input to the Study  
on the Study's Web Pre-Survey

The 976 Home Care Leaders Throughout the United States  
Who Graciously Agreed to Participate and Share Their Knowledge  
and Insights in Making This Study So Successful



## Philips Home Healthcare Solutions

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March 4, 2008

To the Home Care and Hospice Community:

Philips was pleased to sponsor a study of this magnitude that could provide insights to advance the home care industry. We believe that home health agencies will be a critical part of the solution to the U.S. healthcare crisis and ensure a continuum of care from the hospital to the home. Trends in society – an aging population, the increase in chronic diseases, a looming nursing shortage, and the desire by seniors to live independently in their home – all point to the need for better solutions to help the chronically ill and elderly enjoy a higher quality of life at home, with the support of easy-to-use technology that connects individuals to their care providers.

We were excited to work with Fazzi Associates, and to partner with the National Association of Home Care and Hospice (NAHC), in gathering input from home health agencies of all sizes and types across the U.S. and to share these findings at no cost to the field. The study's recommendations point to the central importance of integrating technology into clinical practice to ensure both quality patient care and operational efficiency, and in combining disease management and telehealth to achieve optimal clinical outcomes and financial performance.

Philips is committed to providing solutions for the home healthcare industry that embody our brand promise of 'sense and simplicity' – from Lifeline medical alert services that enable independent living at home to a growing portfolio of Remote Monitoring solutions that help clinicians manage patients with chronic conditions such as heart failure or pulmonary disease. Building on core competencies in cardiac care, Philips offers comprehensive Home Telehealth products and services, featuring wireless measurement devices and robust web-based clinical support for post-hospital discharge monitoring, as well as cardiac monitoring services, diagnostic arrhythmia and implanted device follow-up, from recently-acquired Raytel Cardiac Services. Philips hopes to partner with leaders in the home care field to help make a difference as the industry evolves and grows in the next few years. We graciously extend our appreciation to everyone who participated in this study.

Cynthia Pacheco, General Manager, Philips Telehealth Solutions

Mike Lemnitzer, Senior Director, Philips Telehealth Solutions



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Val J. Halamandaris, JD  
*President*

March 4, 2008

To the Home Care and Hospice Community:

The National Association for Home Care and Hospice was proud to sponsor this groundbreaking Philips National Study on the Future of Technology and Telehealth in Home Care. We are grateful to Fazzi Associates for helping us plan and execute this study. We believe that they did a truly amazing job of bringing us data which is important for the home care and hospice community as well as the Congress of the United States.

We are grateful to Philips for underwriting this most extensive study of telehealth to date. One finding that is particularly significant is that the utilization of telehealth by home care agencies also correlates directly with providing the highest quality of care. The study should provide a great deal of reassurance for patients and their families that home care is not only keeping up with the times, but is in the forefront in implementing the latest technologies.

We recommend this report to anyone who is interested in high quality home care and hospice services. The findings of this study point the way to the future.

Sincerely,

Val J. Halamandaris



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March 4, 2008

To the Home Care and Hospice Community:

Fazzi Associates was pleased and honored to be both a co-sponsor and the research firm responsible for the Philips National Study on the Future of Technology and Telehealth in Home Care.

Sponsored by Philips Home Healthcare Solutions and co-sponsored by the National Association for Home Care and Hospice, this study is critically important to the future of home care and hospice agencies. It addresses the questions that are most on the minds of agency leaders when it comes to looking at the role of technology and telehealth.

What is clear from the study is that the four major technologies – fiscal, billing and backroom technologies, point of care technology, electronic medical records and telehealth – are the foundation for the future of agencies. Generating insights and information on trends and experiences of agencies throughout the country provides leaders with a better knowledge on the realities and implications of these technologies.

It is also important to acknowledge and celebrate the incredible contribution that Philips has made to the home care and hospice community. Rather than conducting a private study, Philips opted to initiate a study and make results available to every agency in the country and to others concerned and committed to improving services to patients throughout the country. Philips' commitment to the future of home care and hospice reflects on the integrity and vision of this leading edge telehealth company.

The same can be said for the National Association for Home Care and Hospice. Led by Val Halamandaris and Mary St. Pierre, NAHC took a leadership role in promoting and encouraging agencies to participate in the study. Thanks to their leadership, over 1,000 leaders offered recommendations on issues that they felt should be addressed in the study and another 976 actually participated in the national survey.

Finally, we would like to thank the wonderful leadership provided by the National Steering Committee. Led by recognized leaders from every region of the country, their active involvement helped to ensure that we addressed the questions that mattered most.

To all of those involved in the process, our sincere thanks for making this study so successful and so helpful. And to agencies reviewing this report, our best wishes on using insights from this report in helping to shape your future technology and telehealth strategies.

Tim Ashe, Partner and Co-Director  
Fazzi Associates

Bob Fazzi, Managing Partner and Co-Director  
Fazzi Associates

## Executive Report

The Philips National Study on the Future of Technology and Telehealth in Home Care is the largest technology and telehealth study in the history of home care. It addresses the role of technology and telehealth in service delivery by Medicare certified agencies to more than 4.2 million seniors each year.

Sponsored by Philips Home Healthcare Solutions and co-sponsored by the National Association for Home Care and Hospice (NAHC) and Fazzi Associates, the study took nearly a year to complete and involved agencies in every region and every state. Nine hundred and seventy-six (976) agencies representing every major segment of home care participated. Fazzi Associates, a national consulting, benchmark and research firm that specializes in home and community based services, coordinated the effort.

What makes this study particularly valuable is the fact that for agencies over \$1 million in Medicare revenue, a statistically representative sample was taken on a number of variables. These included a representative sample by size (\$1 to \$3 million, \$3 to \$6 million and over \$6 million in annual revenue), by ownership (freestanding versus hospital-based), by legal status (not-for-profit versus for-profit) and by area (rural versus urban). A sizeable sample (100 plus) of agencies under \$1 million in Medicare revenue were also surveyed. While not statistically representative, the sample closely approximated the make-up of this segment of the industry.

### **What Was the Approach to the Survey?**

From the beginning, the Philips Study was designed to incorporate the thinking, needs and expectations of leaders in the field. While four areas were covered (fiscal, billing and backroom technology, point of care technology, electronic medical records and telehealth), the primary focus was on telehealth related inquiries.

What is particularly noteworthy is how the study was approached. Rather than generating a list of questions and asking agencies to respond, the sponsors were intent on ensuring that the study explored questions and issues that were of greatest interest to agency leaders. The process involved strategies designed to maximize input and involvement of the entire field.

A National Steering Committee of highly respected agency leaders was recruited to oversee and guide the direction and focus of the study. Committee members came from every region of the country and represented the full range of agency types, i.e. urban and rural, hospital-based and freestanding, for-profit and not-for-profit, and all sizes in terms of revenue.

The year-long effort also included an open invitation to the entire field to suggest questions and topics that they wanted to see included in the study. More than 1,000 agency staff participated in a web based input survey. All recommended questions were then reviewed by the National Steering Committee at a two-day planning meeting in Chicago. Using this input, the committee developed the most comprehensive survey on technology and telehealth in the history of home care. It was tested, modified and validated prior to being conducted in the second and third quarters of 2007.

### **What Did the Philips' Study Focus On?**

Based on the findings from the national web survey and the input from the National Steering Committee, the survey was designed to address the four major home care technology areas. Most questions, however, pertained to telehealth related experience and activities. The four areas covered in the study included:

- Fiscal, Billing and Backroom Technology
- Point of Care Technology (clinical software and POC devices)
- Electronic Medical Records
- Telehealth and Remote Patient Monitoring Technology

What emerged was a far clearer perspective than ever before on the incredible growth, impact and acceptance of telehealth and technology in home care. Technology and telehealth have clearly moved to the forefront of service delivery in agencies throughout the country.

What also emerged was the realization that while there were four major technologies, the need for seamless integration of these technologies was becoming of greater importance to agency directors. When home care agencies began using the first set of technologies in the late 1980s (fiscal, billing and backroom technology), most of those purchasing a system were not thinking of how these technologies would integrate with point of care technology, let alone electronic medical records and telehealth. Later, as the need and advantages of integrating

backroom with point of care technology become more obvious, integration became of greater interest. Today, there are very few agencies who don't ask the question, "How does this technology integrate with the other three technologies?" when purchasing a new product.

### Who Was Surveyed?

The study focused on a representative sample of the industry. Researchers were able to identify the trends, experiences, buying decisions, strategies, results, etc. of all major segments of home care with Medicare revenues in excess of \$1 million. And, for the first time ever, a statistically valid representation of actual users of telehealth were identified and surveyed.

A total of 976 agency leaders were interviewed. Their candid responses and extensive insights helped to generate a report that provides the field with a full view and appreciation for the present and future use of technology and telehealth in the home care industry. Agencies involved in the survey included:

#### Ownership

<b>Freestanding</b>	685	70.2%
<b>Hospital-based</b>	291	29.8%
<b>Total</b>	976	100.0%

#### Legal Status

<b>For-Profit</b>	512	52.5%
<b>Not-for-Profit</b>	362	37.1%
<b>Other</b>	102	10.5%
<b>Total</b>	976	100.0%

#### Annual Revenue

<b>&lt;\$1M</b>	100	10.2%
<b>&gt;=\$1M and &lt;\$3M</b>	412	42.2%
<b>&gt;=\$3M and &lt;\$6M</b>	262	26.8%
<b>&gt;=\$6M</b>	202	20.7%
<b>Total</b>	976	100.0%

#### Geographic Area

<b>Rural</b>	297	30.4%
<b>Urban</b>	679	69.6%
<b>Total</b>	976	100.0%

It is interesting to note that 17.1% of the 976 respondents report using a telehealth system. While their views, levels of satisfaction and dissatisfaction differed, nearly all reported (89.1%) that despite the challenges, cost and barriers they faced in starting their program, given everything they knew today, they still would have purchased a telehealth system. An in-depth analysis of telehealth agencies is found in Section IV of this report.

## What Did the Study Focus On?

The study focused on the questions that were of greatest interest to those completing the web survey. Also included were targeted questions that the members of the National Steering Committee felt were critical to better understand the present and future trends in the four technologies.

Note: Because many of the significant differences were by size of agency, we have opted to present tables of most findings by revenue categories.

The findings are divided into four sections. The first section deals with three technologies: fiscal, billing and backroom technology, point of care technology and electronic medical records. Some of the findings are below. The remaining three sections focus on various aspects of telehealth and remote patient monitoring technology.

### **I. Fiscal, Billing and Backroom Technology, Point of Care Technology and Electronic Medical Records**

- 97.3% Agencies that have formal fiscal, billing and backroom systems.
- 21.6% Agencies that plan on purchasing a new system in next 12 months.
- 43.9% Hospital-based agencies planning a purchasing a system from a new vendor.
- 58.6% Agencies that have some form of electronic medical record system capable of recording, storing and accessing records on-site or from distance sites.
- 22.7% For-profit agencies that report that they plan on replacing or upgrading their system in the next 12 months.
- 40.0% Agencies with annual revenue over \$6 million stating that they will be replacing or upgrading their electronic medical record system with a new vendor.
- 79.1% Non-profit agencies responding that they have a POC system.
- 31.6% Agencies reported that it has taken more than 12 weeks to reach their former clinical productivity level after adopting a POC system. Note: 6.4% report that they have never reached it.
- 16.8% Agencies that are planning on replacing or upgrading their present system.

- 31.3% Agencies that are planning on going to a new vendor for their POC system.

One of the findings from the study that is important to note is the great confusion over the definition of electronic medical records. Some agencies adhere to the premise that any record that is stored electronically is an electronic medical record. Others feel that an electronic record is a record that is electronically transferred between various medical sites. Clarification and development of a uniform definition of electronic medical records in home care is certainly warranted, particularly in light of federal initiatives for all health providers to have electronic medical records by 2014.

For a more detailed of findings on these three technologies, see Section I.

## **II. Present Use of Telehealth Systems**

Because of the growing interest and adoption of telehealth services by agencies throughout the field, a great deal of effort was spent on identifying agency experiences and preferences related to telehealth. Section II provides an overview of the adoption rates of agencies using telehealth as well as information on what they use, what they like and future buying decisions. Among the findings related to use of telehealth systems include:

- 17.1% Agencies reporting that they use some type of telehealth system.
- 32.0% Agencies with over \$6 million in annual revenue that provide telehealth services.
- 26.8% Agencies responding that it took over 180 days to make a purchasing decision.
- 35.7% Agencies that lease rather than purchase their system.
- 90.0%+ Agencies that list the same three specific core components as part of their telehealth system.
- 16.2% Agencies that plan on replacing or upgrading their telehealth systems in the next 12 months.

Additional findings by agency size, ownership, legal status and area served can be found in this section.

### **III. Strategies to Get Buy-in by Key Constituencies for Telehealth Services**

When introducing a change in an agency, particularly a change that has financial cost as well as implications to service delivery, “how” leaders approach the change effort is important to the ultimate acceptance and success of this effort. The survey explored a number of questions of how leaders approached getting buy-in for these changes. Findings include:

- 41.3% Agencies stating they use specific strategies to educate and obtain manager and supervisory buy-in.
- 57.2% Agencies stating they used specific strategies to educate and get clinical staff buy-in.
- 2.1% Agencies that used cost savings as their primary strategy.
- 66.7% Agencies that used a “nurse champion” to help get clinical staff buy-in.
- 56.9% Agencies reporting that their nurses were very receptive to having a telehealth service after one year as compared to 36.6% at the beginning of the program.
- 63.3% Agencies reporting using specific strategies to get physician buy-in to the services.

This section also includes additional information on what strategies worked the best and which strategies were used less frequently.

### **IV. Experiences With Your Telehealth Service**

For agencies using telehealth services, among questions that most respondents on the web survey wanted answered was, “What was the actual experience of agencies using telehealth services? Did they save money? Did they improve quality? How did patients respond? Were patients satisfied or upset at having telehealth services?” These and a number of other questions were addressed in this section. Findings include:

- 83.9% Agencies stating that fewer than one in ten patients refused the system. Nearly two-thirds reported that fewer than one in twenty refused.

- 71.3% Agencies responding that telehealth services improved patient satisfaction. No agency reported that it reduced patient satisfaction.
- 97.0% Agencies answering that they had criteria for which patients should use telehealth services.
- 49.7% Agencies reporting the use of telehealth services reduced the number of visits per patient.
- 45.2% Agencies for which telehealth services led to an increase in referrals.
- 0.6% Agencies stating telehealth services led to a reduction in referrals.
- 88.6% Agencies reporting that telehealth services led to an increase in quality outcomes.
- 76.6% Agencies stating that telehealth services led to a reduction in unplanned hospitalizations.
- 42.8% Agencies stating that telehealth services led to a reduction in cost. Another 48.2% reported it had no impact.
- 89.1% Agencies reporting that given everything they know today, they would still have started their telehealth service.

What is clear from the study is that technology is the future and that home care agencies throughout the country recognize and are embracing all four types of technology with telehealth services being an area of significant growth. The challenge for agencies is to move in a wise and methodical manner, one that allows agencies to make the right purchasing decisions, the right implementation decisions and the right decisions for the benefit of their patients. The Philips Study represents a positive step in providing leaders with solid information and the foundation for making more educated decisions.

For a copy of the complete report *Philips National Study on the Future of Technology and Telehealth in Home Care*, go to: **[www.Philips.com/HomeCareStudy](http://www.Philips.com/HomeCareStudy)**

## **Steering Committee**

### **Region I**

Joan Hull, Home Health VNA, Massachusetts

### **Region II**

Laurie Neander, At Home Care, New York  
Bridget Gallagher, The Jewish Home and Hospital Lifecare System, New York

### **Region III**

Rhonda Chetney, Sentara Home Care Services, Virginia  
Kristy Wright, VNA Hospice of Western PA, Pennsylvania

### **Region IV**

John G. Beard, Alacare Home Health and Hospice, Alabama

### **Region V**

Cathy Barr, HealthEast Home Care, Minnesota  
Mary Ann Rayrat, RN, MSN, Mercy Home Care/Cranbrook Hospice, Michigan

### **Region VI**

Tasha Mears, LHC Group, Louisiana  
Debra Bilbo, Christus Home Health, Texas

### **Region VII**

Elizabeth Sutter, Iowa Health Home Care, Iowa

### **Region VIII**

Jen Porter, Good Samaritan Society, South Dakota  
Jo Burdick, MeritCare Home Care, North Dakota

### **Region IX**

Marcia Reissig, Sutter Home Health, California  
Lyleen Pricor, Sharp Home Care, California

### **Region X**

Sheryl Olson, Providence Health Systems, Oregon

### **National Association for Home Care and Hospice**

Mary St. Pierre, District of Columbia

### **National**

Erin Denholm, Centura Home Care and Hospice, Colorado  
Susan Sender, Gentiva® Health Services, New York  
Joan Marren, Visiting Nurse Service of New York, New York