



New Business Opportunities in Telehealth

**Insights from the
Philips' National Study on the
Future of Telehealth and Technology
in Home Care**

October 2007

Symposium 2007


Building the Connected Health Economy:
Innovation, Implementation and Investment

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Goals for the Session

1. To substantiate the business opportunities in providing telehealth to home care agencies.
2. To document the inevitable exponential growth of both the home care field and telehealth in home care.
3. To identify the six forces that will drive all home care agencies into providing telehealth.
4. To provide a status report on present and future adoption rate and future strategies with home care.
5. To share key findings in the Philips National Study on the Future of Technology and Telehealth.




The Four Types of Home Care Agencies That Can and Do Use Telehealth

1. **Certified Home Care:** Provider is Medicare certified and allowed to bill Medicare for reimbursement.
2. **Medicaid Home Care:**
 - ⊖ Mandatory traditional home health benefit,
 - ⊖ Personal care option,
 - ⊖ Home and community-based waivers.
3. **Private Duty Home Care:** Generally paid by private individuals. Most often support for daily living.
4. **Hospice:** Medicare certified hospices are allowed to bill Medicare for reimbursement.



Direct Health Care Expenditures by Sector Year: 2006

Sector	Percentage
Hospital	37%
Physician/Clinical Services	25%
Prescription Drugs	12%
Other	11%
SNF	7%
Dental	5%
Home Care	3%



Why should you be interested in 3%.....

.....because 3% is \$57.9 billion

The Biggest Reason Why Home Care is So Critical to the Future of Health Care

Hospital (per day)	\$5,036
SNF (per day)	\$535
Hospice (per day)	\$136
Home Health (per visit)	\$125

Source: National Association for Home Care & Hospice, Basic Statistics About Home Care, Updated 2007, Table 12: Comparison of Hospital, SNF, and Home Health Medicare Charges, 2004-2006

What Are the Facts?

- I. Number of people served by home care is growing.
- II. Number of agencies serving those people are growing.
- III. Dollars being spent in home care is growing.
- IV. Dollars spent on disease management in home care is growing.
- V. Use of telehealth in home care, particularly with disease management, is growing even more dramatically.
- VI. Biggest growth of all? Future use of telehealth in home care.

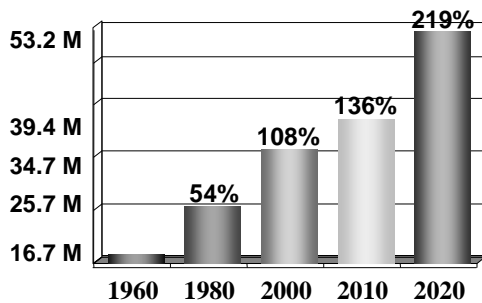


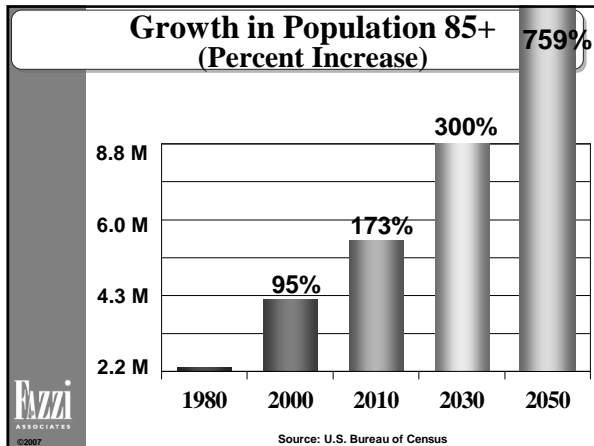
I. Number of People Served is Growing

	2001	2003	2005
Medicare Certified Home Care	2,425,688	2,684,537	2,993,014
Medicaid Home Care	18,786,137	25,262,873	29,250,215
Medicare Hospice	594,436	728,881	865,916
Private Duty Home Care	NA	NA	NA



The Future: Growth in Population 65+ (Percent Increase)





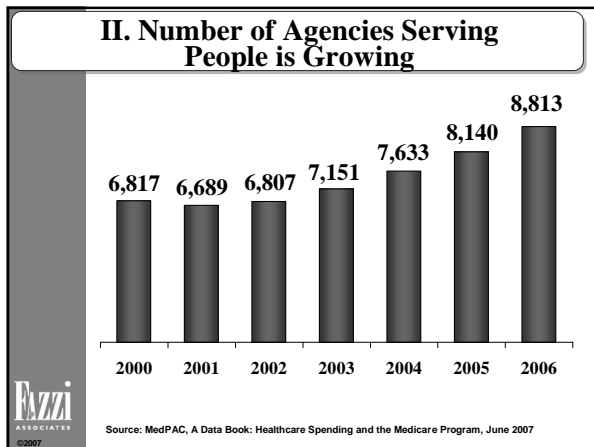
U.S. Population Projections

Age Group	Census 2000	Projected 2010	Projected 2020
Total 65+	34,991,753	40,243,713	54,631,891
65-69	9,533,545	12,172,070	17,618,270
70-74	8,857,441	9,097,439	14,160,889
75-79	7,415,813	↓ 7,186,229	9,449,842
80-84	4,945,367	5,664,517	6,133,982
85+	4,239,587	6,123,458	7,268,908

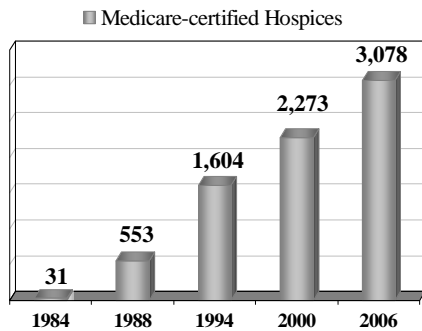
44.4%
2000-2010

71.5%
2000-2020

Source: U.S. Census Bureau, Population Division, Interim State Population Projections, 2005



II. Growth in Hospice Agencies



Source: NAHC, Hospice Facts & Statistics, February 2007, Table 1



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Size of Agencies for Those With Cost Reports

HHA Revenue	Total Agencies	% of Agencies
\$0 - \$500,000	1,144	17%
\$500,000 - \$1 million	1,189	18%
\$1 - \$2 million	1,603	24%
\$2 - \$3 million	897	13%
\$3 - \$4 million	501	7%
\$4 - \$5 million	337	5%
\$5 - \$6 million	230	3%
\$6 million plus	844	13%

Source: CMS Home Health Cost Reports



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III. Dollars Being Spent in Home Care is Growing

	2001	2003	2005
Medicare Certified Home Care	\$8,636,629,198	\$10,148,955,234	\$12,488,196,523
Medicaid Home Care	\$2,572,839,770	\$2,894,079,329	\$3,568,641,833
Medicare Hospice	\$3,690,388,745	\$5,631,298,427	\$7,848,872,435
Medicaid HCBS Waiver	\$14,809,572,845	\$18,901,698,061	\$22,698,020,764

Source: CMS/OIS/HCIS, November 2004 and June 2006



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What Do We Know About This Population?



- Their numbers are increasing.
- The number of frail elderly, the over 85, is growing even more dramatically.
- The number of chronic diseases experienced by this population will grow two ways:
 - By simple growth of the population.
 - By people living longer.
- The cost for serving this population will also grow geometrically.
- Dealing with chronic disease is the most costly issue facing home care and health care in general.

IV. Acuity Challenge: Growing Role of Chronic Disease



- More than half of Americans suffer from one or more chronic diseases.
- The most common chronic diseases cost the economy more than \$1 trillion annually.
- Each year millions of people are diagnosed with chronic disease, and millions more die from their condition.
- The aging population is expected to drive a substantial increase in the number of cases of chronic disease over the next 20 years.

Source: Milken Institute, An Unhealthy America: The Economic Burden of Chronic Disease, Charting a New Course to Save Lives and Increase Productivity and Economic Growth, October 2007

Medicare Home Health Population Principal Diagnosis: 2005




CHF	170,000
COPD	73,000
Diabetes	261,000
Hypertension	116,000


Total Patients Served: 2,976,000

Source: Health Care Financing Review, 2007 Statistical Supplement, Table 7.6, Persons Using Medicare Home Health Agency Services, Visits, Total Charges, Visit Charges, and Program Payments, by Principal Diagnosis Within Major Diagnostic Classifications (MDCs): Calendar Year 2005


Medicare Home Health Visits Principal Diagnosis: 2005	
CHF	3,573,000
COPD	1,481,000
Diabetes	14,188,000
Hypertension	2,323,000


Source: Health Care Financing Review, 2007 Statistical Supplement, Table 7.6, Persons Using Medicare Home Health Agency Services, Visits, Total Charges, Visit Charges, and Program Payments, by Principal Diagnosis Within Major Diagnostic Classifications (MDCs): Calendar Year 2005

Medicare Home Health Cost Per Individual for Four Diseases: 2005	
CHF	\$2,558
COPD	\$2,482
Diabetes	\$5,652
Hypertension	\$2,582


Source: Health Care Financing Review, 2007 Statistical Supplement, Table 7.6, Persons Using Medicare Home Health Agency Services, Visits, Total Charges, Visit Charges, and Program Payments, by Principal Diagnosis Within Major Diagnostic Classifications (MDCs): Calendar Year 2005

Total Medicare Home Health Cost for All Patients: 2005	
CHF	\$433,864,000
COPD	\$179,368,000
Diabetes	\$1,462,254,000
Hypertension	\$297,456,000


Source: Health Care Financing Review, 2007 Statistical Supplement, Table 7.6, Persons Using Medicare Home Health Agency Services, Visits, Total Charges, Visit Charges, and Program Payments, by Principal Diagnosis Within Major Diagnostic Classifications (MDCs): Calendar Year 2005

What Do We Know About People With Chronic Diseases

- They are hospitalized more.
- They visit the emergency room more.
- They are more costly than the average person of their age.
- They represent a high proportion of all home health patients.
- They have the highest risk of being institutionalized.

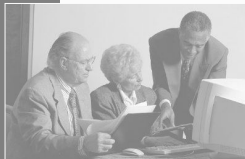


Putting It Together

Growing Revenue Challenges
+ Growing Quality Challenges
+ Growing Staffing Challenges
+ Growing Competitive Challenges
+ Growing Patient Acuity Challenges
= **Greater Need for Telehealth**



How Does the Government View the Future of Technology and Telehealth in Home Care?




"...home-care systems are the fastest growing segment of the medical device industry."

Food & Drug Administration's
Center for Devices and Radiological
Health, DHHS




Goals for the Philips National Study on the Future of Technology and Telehealth in Home Care

- To determine the level of technology and telehealth adoption by the home care industry.
- To provide insights on how specific segments of the industry approach telehealth and technology.
- To identify future decisions and strategies that will be used by agencies in telehealth and technology in the next one to three years.
- To provide leaders with the insights needed to make strategic decisions related to their future use of telehealth and technology.



The Philips National Study: Background Information

- **Sponsor:** The Philip's Consumer Healthcare Solutions
- **Co-Sponsors:** The National Association for Home Care and Hospice and Fazzi Associates
- **Length of Time:** Nine Months
- **Primary Focus:** Home Care and Hospice's four main types of technology:
 - Backroom fiscal, billing, payroll, HR IS services
 - Point of Care
 - Electronic Medical Records
 - Telehealth



Number of Participating Agencies by State

Alabama	16	Indiana	34
Alaska	2	Iowa	11
Arizona	16	Kansas	12
Arkansas	12	Kentucky	13
California	53	Louisiana	35
Colorado	15	Maine	6
Connecticut	12	Maryland	4
Delaware	2	Massachusetts	11
Florida	50	Michigan	43
Georgia	17	Minnesota	24
Hawaii	2	Mississippi	10
Idaho	3	Missouri	19
Illinois	59	Montana	7



Number of Participating Agencies by State

Nebraska	5	Rhode Island	3
Nevada	5	South Carolina	14
New Hampshire	10	South Dakota	1
New Jersey	14	Tennessee	29
New Mexico	11	Texas	134
New York	22	Utah	8
North Carolina	31	Vermont	4
North Dakota	3	Virginia	23
Ohio	46	Washington	15
Oklahoma	23	West Virginia	15
Oregon	10	Wisconsin	16
Pennsylvania	45	Wyoming	3



Key Representative Sample Segments

Total Agencies = 976

	Telehealth Status
Telehealth	202
Non Telehealth	774

	Annual Revenues
<\$1M	101
\$1M- \$3M	412
\$3- \$6M	262
>\$6M	201



Philips Study Results

Total Agencies = 976

	Ownership
Freestanding	684
Hospital-based	292

	Legal Status
For-Profit	512
Not For-Profit	361
Other	103

	Location
Primarily Rural	299
Primarily Urban	677



The Present: What's Happening With Telehealth in Home Care?

- What percentage of agencies are presently using telehealth?
- Is there any difference between segments of home care?
- How long have they been using telehealth?
- What is the likelihood that non-telehealth agencies will buy telehealth systems in the future?



Present Use of Telehealth Systems

Do you presently have some type of Telehealth or Remote Patient Monitoring system?

	Yes	No
All	17.1%	82.9%
Under \$1 Million	9.0%	91.0%
Over \$6 Million	32.0%	68.0%
Hospital-based	15.0%	85.0%
Not for Profit	23.6%	76.4%



32.4%

Percentage of agencies who presently do not have a telehealth system but are planning on purchasing a system in the next twenty-four months.

16.5%: Agencies not sure and are considering it.



Length of Time Using Telehealth	
<i>How long have you used your telehealth system?</i>	
Less than one year	24.4%
1 – 3 Years	44.0%
3 – 5 Years	22.0%
More than five years	9.5%

- | For Home Care to Grow in Telehealth, Questions That Must Be Answered | |
|--|--|
| <ul style="list-style-type: none"> • How receptive are patients to having units in their home? • How receptive are clinical staff to having a telehealth program? • What impact do telehealth programs have on clinical operations? • What impact do telehealth programs have on quality? • What impact do telehealth programs have on profitability? | |

How Receptive Are Patients to Having a Telehealth System in Their House?	
<i>Percentage of Patients Who Refuse the System</i>	
Less than 5%	64.3%
5% to 10%	19.6%
11 – 20%	8.9%
More than 20%	7.1%

Note: Rural agencies has the least rejection rate: 70.0% at less than 5%

Why Patients Refuse to Have Systems in Their Homes



Fear of equipment (31.1%) and intrusiveness of equipment (24.0%) were the two biggest reasons why patients said no.



Source: Philips National Study on the Future of Technology and Telehealth in Home Care, Fazzi Associates: 2007

Receptivity of Staff to Having Telehealth Services in Their Agency

	Before Program Implemented	After One Year
Not Receptive	21.4%	12.3%
Indifferent	14.6%	10.0%
Receptive	45.7%	52.3%
Very Receptive	18.3%	25.4%



What Impact Has Telehealth Had on Clinical Operations?

	Increase	Decrease	No Impact	Don't Know
Clinical Caseloads	19.8%	13.2%	63.5%	0%
Clinical Productivity	31.7%	6.0%	60.5%	4.1%
On-Site Visits by Clinical Staff	13.6%	49.7%	36.5%	0%
Referrals	45.2%	0.6%	50.0%	4.2%



70.8%

Percentage of agencies that report that patient satisfaction scores go up with patients who receive telehealth services.

0%: Agencies reporting it goes down.



Source: Philips National Study on the Future of Technology and Telehealth in Home Care, Fazzi Associates: 2007

Has Your Telehealth Program Improved Any of the Following Quality Indicators?

	Yes	No	Don't Know
Overall Quality	88.6%	3.6%	7.8%
Emergent Care	79.8%	8.9%	11.3%
Unplanned Hospitalizations	75.4%	14.4%	10.2%
Patient Satisfaction	70.8%	15.5%	13.7%



75.9%

An additional finding: Percentage of agencies report that telehealth services has led to patients improving self care.



Source: Philips National Study on the Future of Technology and Telehealth in Home Care, Fazzi Associates: 2007

The One Strategic Clinical Area That Most Agencies Are Interested in: Disease Management



- What percentage of agencies use telehealth as part of a diseased management program?
- What impact does telehealth have on quality outcomes within a disease management program?
- What impact does telehealth have on financial outcomes in a disease management program?



Agencies Who Use Telehealth as Part of Their Disease Management Program

Is your telehealth service part of a disease management program?

	Yes
All	66.3%
Under 1M	76.7%
Over 6M	70.0%
Urban	72.0%
Rural	52.0%

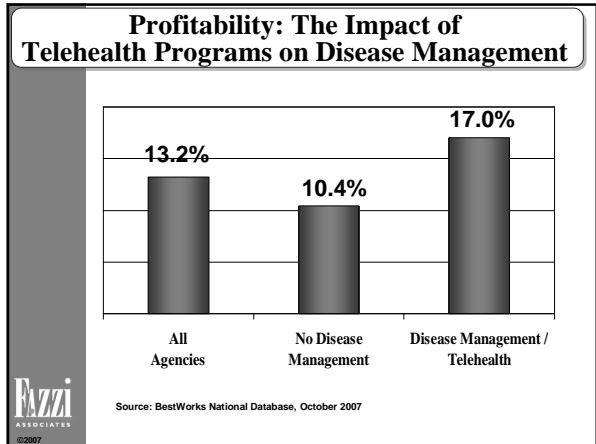


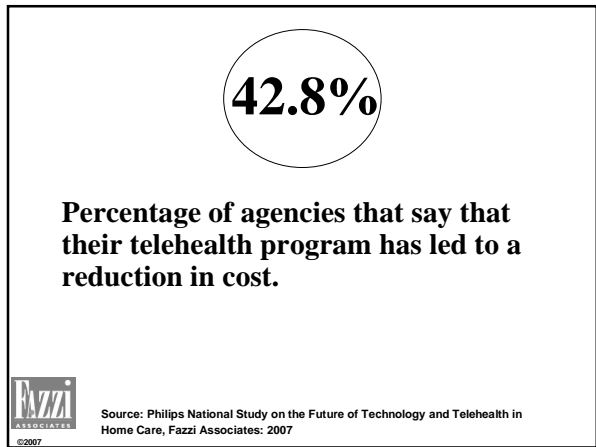
Focus of Telehealth Services in Disease Management

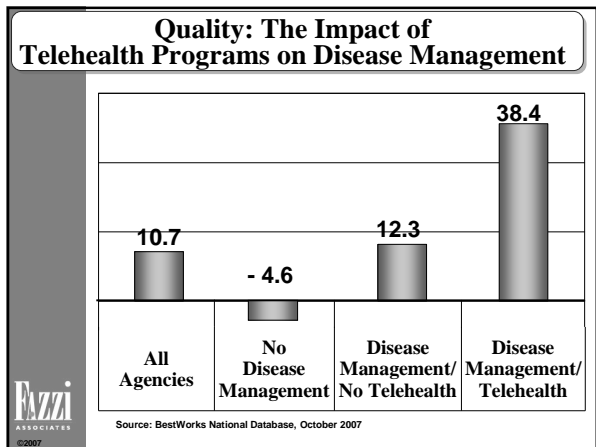
Which of the following diseases are part of your telehealth disease management program?

CHF	93.2%
COPD	78.2%
Diabetes	66.2%
Hypertension	60.2%
Asthma	39.1%











**A View of the Future
of Telehealth in Home Care**




- “Home telehealth improves the quality of care, saves lives, reduces trips to the hospital emergency room....and telehealth saves money.”
- “In the very near future, telehealth will be required of every home care agency in the United States.”

*Val Halamandaris, President and CEO of the
National Home and Hospice Care Association
Source: Caring Magazine: July 2007*



89.9%


**Percentage of telehealth agency leaders
who say that given what they know
now, they would still invest their time
and resources in starting a telehealth
program.**



Source: Philips National Study on the Future of Technology and Telehealth in Home Care, Fazzi Associates: 2007

**Final Insights I:
What Do Telehealth Programs Lead To?**

1. Improve quality of services.
2. Improved quality of Home Health Compare scores.
3. Higher levels of patient satisfaction.
4. Increase levels of patient self care.
5. Greater ability to deal with chronic diseases
6. Increase profitability particularly in relationship to disease management.



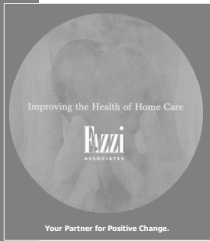
Final Insights II. The Future.....



- Significant number of home care agencies moving into providing telehealth and remote patient monitoring to their patients.
- Significant numbers of patients receiving and demanding telehealth services.
- Significant opportunities for telehealth vendors to dramatically increase their market penetration.



Why Fazzi Associates



"Fazzi Associates is the only national consulting firm to have an operational best practice benchmark service. We have evidence based knowledge and insights into what practices work the best. We use these insights to support and inform clients in all of our operational, strategic, quality and OASIS consulting services."

Dr. Robert Fazzi, President/CEO
Founder: Fazzi Associates



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