National State of the Industry Report

for Home Health and Hospice

2013 - 2014

Contact Information

The National State of the Home Care and Hospice Industry Report was developed by the Business Intelligence Division of Fazzi Associates.

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Contents

Our Sincere Thanks

On behalf of the sponsors and co-sponsors of the 2013 – 2014 State of the Home Care and Hospice Industry Study, we are pleased to provide a full summary of the major findings in this report.

With the rapidly changing home care and hospice environment, it is critical that agency leaders be aware of not only the changes taking place but the implication of those changes. It is essential for agency leaders to learn what others in the field are doing in response to these significant changes, particularly changes driven by the enactment and steady implementation of the various models associated with the Affordable Care Act.

In presenting this report, we would like to thank the two IT sponsors who underwrote much of the cost for the study: Delta Health Technologies and HealthWyse. Both of these companies have been dedicated to not only providing exceptional IT products for our industry, they have also been committed to finding ways to help the industry grow and prosper throughout the country. Their willingness to sponsor the study and to allow the major findings to be shared free with the entire industry exemplifies this commitment.

We would also like to thank the industry co-sponsors. They include the National Association for Home Care & Hospice, NAHC Forum of State Associations, Community Health Accreditation Program (CHAP) and The Joint Commission. These four groups have had a long history of supporting the efforts of home care and hospice programs to better serve millions of patients throughout the country. We are indebted to this long history of commitment and deeply appreciative to their incredible support of this effort.

We would like to express our appreciation to two other groups. First, our National Steering Committee who helped guide and shape the focus of this study. Their input and guidance clearly helped to ensure that we focused on the issues that matter most to agency leaders. Second, the over 1,100 agency leaders that participated in this study! If there was anything that stood out in this study it was that we are blessed by agency leaders who are not only committed to their agency, but are open, willing, and committed to sharing their knowledge in the hopes that it would help other agencies better serve clients.

Finally, I would like to thank the incredible staff from Fazzi. They are bright, interesting, inquisitive, and committed to having the highest standards in research and report presentation. To each of them I would like to express my sincere thanks.

Dr. Robert Fazzi, Founder and Managing Partner

Fazzi Healthcare Solutions

Executive Summary

The 2013 National State of the Home Care and Hospice Industry Study was designed to provide agency leaders with insights on industry trends and best practices in the key areas of information technology/electronic health records, telehealth, new healthcare models, and organizational practices of home health care.

The study included over 1,100 home health agencies of all sizes, all auspices, rural and urban, for-profit and not-for-profit, hospital-based and freestanding. The study was sponsored by Delta Health Technologies and HealthWyse, and co-sponsored by Community Health Accreditation Program (CHAP), Fazzi Associates, The Joint Commission, NAHC Forum of State Associations, and National Association for Home Care and Hospice (NAHC).

Starting in January 2013, this first-of-its-kind national effort was implemented in distinct phases:

Recruitment of National Steering Committee. An essential part of the design of the project was to ensure that it was overseen and guided by experts in the field. In addition to representatives of the sponsoring groups, leaders in some of the industry's most well-known and respected agencies were recruited to the National Steering Committee. *See page 4 for National Steering Committee Members.*

Development of Web Survey. To ensure that the study focused on the issues and questions that were of most importance to the industry, an internet survey was designed for national input from agency leaders to make suggestions on questions that they would like to see addressed.

Development of Survey Instrument. Using a highly interactive process, members of the committee reviewed the recommendations from the national web survey and added questions and issues that they felt needed to be addressed. Each issue was reviewed, refined, and ultimately approved for inclusion in the study.

Field Testing and Verifying Survey Instrument. Following the identification of a set of draft questions, researchers completed the process of structuring the questions and putting them in a survey format. The individual questions and survey instrument were then field tested with agency leaders in different parts of the country, refined, and field tested again, until all questions resulted in consistent understanding and responses by those being interviewed.

Identification of Agencies to Be Surveyed. Key to the success of the survey was ensuring that a strong representation of all of the major segments of home care agencies were included in the survey. Eligible agencies needed to have met three criteria:

- Medicare-certified
- Revenues of $500,000 or higher
- Home Health Compare scores for two or more reporting periods

Finally, strong representations of the following types of agencies were included: hospital-based versus freestanding, urban versus rural, profit versus not for profit, and five revenue categories.

Table 1: **Percentage of Survey Respondents by Ownership and Revenue**

Revenue	Freestanding	Hospital-based	Hospital Affiliated	Gov't
$500,000 - $2M	78.2%	13.3%	1.7%	4.8%
$2M - $5M	77.8%	10.5%	7.0%	2.3%
$5M - $10M	77.4%	12.3%	7.7%	2.6%
$10M - $20M	73.9%	10.1%	11.6%	0.0%
> $20M	51.3%	7.7%	35.9%	0.0%
Total	76.7%	11.9%	6.0%	3.4%

Survey Administration. Phone interviews of over 1,100 agency leaders across the country were made to generate a solid understanding of what these agencies are undertaking and planning in terms of IT, telehealth, and operational best practices. The survey was conducted over a seven week period beginning in March 2013. Average interview time per respondent was 25 minutes.

Analyzing the Findings: Once the survey was completed, researchers and senior managers from Fazzi Associates began an intensive review of the data incorporating an array of segmented analyses using a standard research analysis tool, the Statistical Package for the Social Sciences (SPSS). Assessment was conducted on individual agency performance to compare profitability and quality on practices used. *See page 34 for Survey Methodology.*

This report provides a comprehensive summary of some of the major trends, findings, and strategies from the State of the Home Care and Hospice Industry Study.

Table 2: **Participating Agencies by State**

Alabama	22	Louisiana	37	Oklahoma	33
Alaska	1	Maine	5	Oregon	5
Arizona	6	Maryland	6	Pennsylvania	29
Arkansas	26	Massachusetts	17	Puerto Rico	5
California	35	Michigan	48	Rhode Island	4
Colorado	28	Minnesota	28	South Carolina	10
Connecticut	9	Mississippi	5	South Dakota	3
DC	3	Missouri	37	Tennessee	28
Delaware	3	Montana	7	Texas	191
Florida	68	Nebraska	8	Utah	10
Georgia	18	Nevada	4	Vermont	3
Hawaii	1	New Hampshire	9	Virgin Islands	1
Idaho	7	New Jersey	7	Virginia	24
Illinois	65	New Mexico	14	Washington	12
Indiana	40	New York	15	West Virginia	12
Iowa	29	North Carolina	31	Wisconsin	19
Kansas	16	North Dakota	2	Wyoming	1
Kentucky	15	Ohio	42		

Sponsors

Delta Health Technologies

HealthWyse

Co-sponsors

Community Health Accreditation Program (CHAP)

Fazzi Associates

The Joint Commission

NAHC Forum of State Associations

National Association for Home Care and Hospice (NAHC)

National Steering Committee

Lucy Andrews, At Your Service HC, CEO; VP, NAHC Board of Directors

Sherl Brand, Home Care Association of NJ, Executive Director; Chair, Forum of State Associations

Rich Brennan, NAHC, VP of Technology Policy, Government Affairs; Executive Director, Home Care Technology Association of America (HCTAA)

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Cindy Senger, Director Home & Community Services, Avera St. Luke's

Karen Thompson, Home Health (SOMC), Director, Southern Ohio Medical Center

Andrea Le Blanc, COO, Androscoggin Home Care & Hospice

Susan Freeman, COO, Alacare Home Health & Hospice

Back Office and Financial Billing

Home health care agency departments that handle operations, accounting, billing, human resources, etc. are included in the term "back office". In much of home health, the back office system was the first step into the use of technology. When used effectively, automated back office and billing tasks can lead to increased productivity, improvement in quality, and the ability for trending and benchmark reporting. One objective of this study was to determine how many agencies have moved to automated systems and how satisfied are they with the software.

What percent of agencies use electronic back office billing systems?

Of agency respondents in this study, 89.9 percent have a back office system. Out of those respondents, 82.0 percent have purchased or leased from a vendor, while 7.9 percent have developed their own systems in-house. As seen in Table 3, hospital-based agencies are slightly higher users of electronic financial systems than their counterparts.

Table 3: **Agencies Using Electronic Back Office Systems**

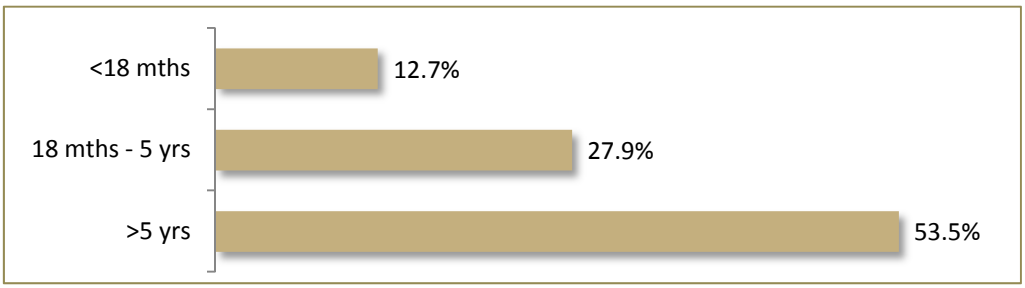
Type of Agency	Percentage
Hospital-based	93.8%
Hospital Affiliated	91.5%
Freestanding	89.2%
Government	89.8%

There does not appear to be any relationship between legal status and the utilization of electronic back office solutions as 88.4 percent of not for profit agencies utilize an electronic system, and 82.5 percent of for-profit agencies do.

For this study, we determined profitability ranking from the lowest (negative) quartile to the highest (positive) quartile as described in the methodology section of this report. According to study responses, the least profitable agencies are just as likely to have a billing and back office system as the most profitable.

Most agencies had back office systems for far longer than eighteen months. More than half (53.5%) of the respondents with financial billing and back office software have had their system for more than five years.

Chart 1: **Length of Time Using Billing and Back Office Software System**



Are agencies satisfied with current billing back office solutions and vendors?

Satisfaction with back office systems varies in areas of functionality as well as by vendor. Asked to rate the level of satisfaction with the "ease of use" of the back office system, 88.7 percent of respondents indicated that they were either *somewhat* or *very satisfied* with their system's user friendliness.

All major IT vendors were included in the survey. In addition, a number of smaller systems were identified by a limited number of respondents. Rating on functionality differed dramatically by vendor. Individual scores ranged from 59.2 percent of clients satisfied to 100 percent of clients satisfied. One hundred percent satisfaction was seen in the tracking recertifications function for seven vendors, followed by tracking visits per day for three vendors.

About 23 percent of responding agencies are looking to either upgrade their current billing back office system or purchase new. Of those making changes, 11.9 percent are looking at a new vendor and an additional 10.5 percent are unsure. Average satisfaction rate of the various functional components within the billing/back office system is shown in Table 4.

Table 4: **Average Satisfaction Rate of Billing Systems**

System Component (All Vendors)	Percentage of Respondents Very or Somewhat Satisfied
Management Reports	85.2%
Tracking Therapy Reassessments	76.8%
Tracking Home Health Aide Supervisions	74.2%
Tracking Recertifications	92.7%
Scheduling	80.8%
MD Order Flow Process	82.9%
Tracking Visits per Day	87.2%
Tracking Patient Supply Use	73.6%

While public reporting on the individual scores of vendors are not included in this report, what was clearly apparent from the study was that there were significant differences between vendors. Agencies interested in purchasing new systems are wise to spend concerted time doing due diligence and interviewing and reviewing a select number of vendors before making a final decision.

How satisfied are agency leaders with IT private duty solutions?

The private duty industry is well positioned for growth given the incentives of health care reform models. During transitions of care, this segment of the industry can be utilized for non-covered home health services such as transportation, chore work, and light housekeeping, all of which will support the effort to keep patients in their home. Successful ACOs and other models are likely to incorporate these services into their plans of care.

One-third of study respondents (33.5%) indicated that they provide private duty services. The majority of agencies providing private duty are freestanding (80.8%) and for profits (66.5%).

More than half (54.9%) of respondents with private duty services have had their financial billing and back office software system for more than five years, and 67.0 percent plan on remaining with their current system.

Study results point to a fairly positive view of financial and back office systems with private duty software components. All but 5.9% of users responded with overall satisfaction of their software.

Table 5: **Satisfaction with Private Duty IS Components**

Component	Percentage Satisfied
Clinical Documentation	78.9%
Scheduling	84.4%
Payroll	74.3%
Billing	90.3%

What did the study reveal about hospice programs in 2013?

This study included 17.5 percent of respondents that indicated they have a hospice program. Of those respondents, 66.8 percent were not for profit agencies. Only 12.6 percent of freestanding agencies reported having a hospice program.

Table 6: **Agencies with Hospice Program**

Type of Agency	Percentage
Hospital-based	39.1%
Hospital Affiliated	39.7%
Freestanding	12.6%
Government	15.0%

More than half (58.7%) of the hospice programs contracted with a medical director versus having a medical director employed by the program. About one-third of the hospice programs had an average caseload for a hospice clinician of 11 to 14 patients. Slightly more than 27 percent of the hospice programs reported that the caseload for social workers was 10 or less patients.

Chart 2: **Average Caseload for Hospice Clinician**

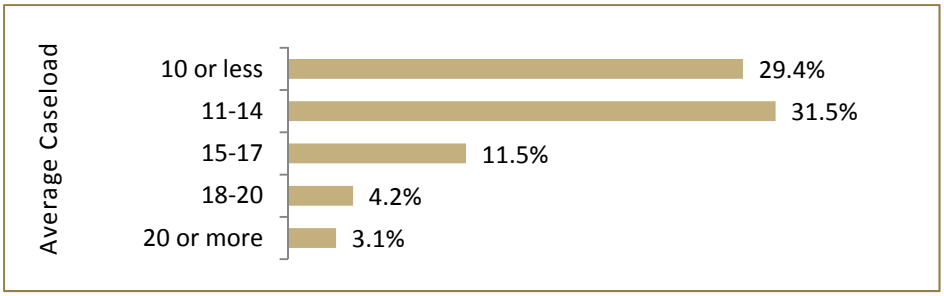


Chart 3: **Average Caseload for Hospice Social Worker**

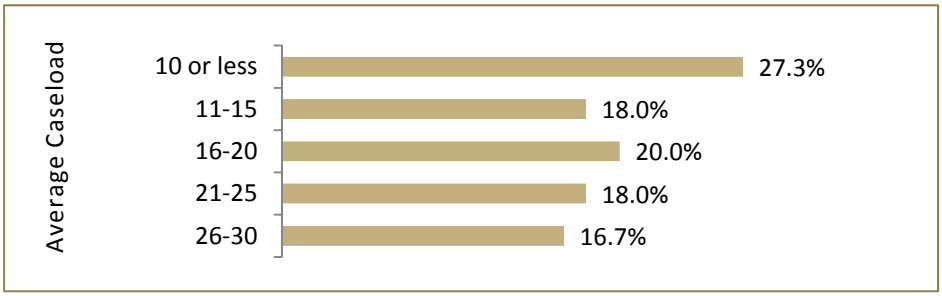
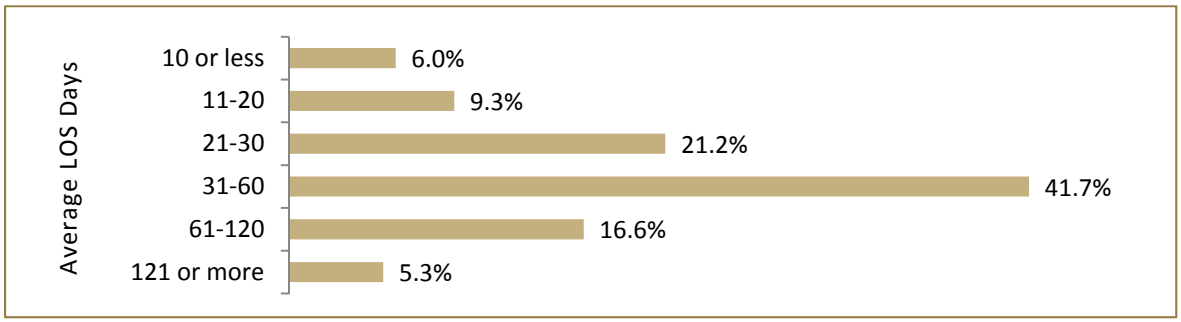


Chart 4: **Average Hospice Patient Length of Stay in Day**



How satisfied are agency leaders with IT hospice solutions?

Of those respondents with a hospice program, 92.1 percent were satisfied with the billing function (see Table 7) with only fair satisfaction ratings for payroll and scheduling software functions.

Table 7: **Software System Satisfaction with Hospice Component**

Hospice Component	% Reporting Satisfaction with Component
Clinical Documentation	83.4%
Scheduling Visits	76.1%
Payroll	66.4%
Billing	92.1%

A key finding was that agencies with hospice programs clearly expect to see growth, in many cases significant, in the future. When asked if the agency expected their hospice census to grow, 77.2 percent responded *yes*. Less than one percent (0.5%) expected their hospice census to decline, and 22.2 percent expected their census to remain the same. Agency leaders will be more dependent on their IT hospice software as their patient census increases.

Hospice Agency Growth

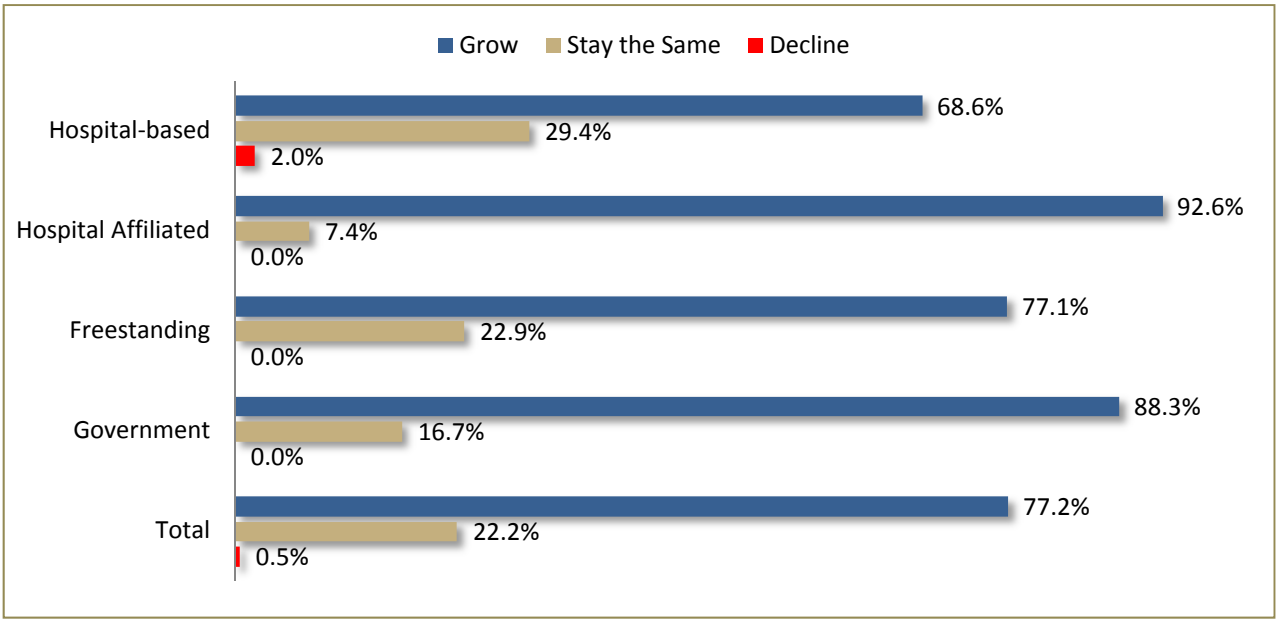
MedPAC reports that 2012 marked more than ten years of growth in the number of hospices. New hospice providers are almost entirely for profits, accounting for 59 percent of hospices in 2012.

"Between 2011 and 2012, the number of for profit hospices increased 6.9 percent, while the number of nonprofit hospices was relatively flat, and the number of government hospices declined by about 3 percent."

"As of 2012, about 71 percent of hospices were freestanding, 15 percent were hospital based, 13 percent were home health based, and less than 1 percent were SNF based."

MedPAC. Report to the Congress: Medicare Payment Policy. March 2014.

Chart 5: **Expectation of Hospice Census in the Next Twelve Months**



Point of Care Technology

Advances in technology are increasing the amount of information sharing that is possible from the patient home. Physician orders, electronic health records, documentation, help with decision making and diagnoses, can be completed at the point of care.

How prevalent is the use of Point of Care technology?

Currently, 57.8 percent of study respondents utilize POC systems. Nearly 80 percent of agencies with revenues greater than $10 million have POC compared to 47.1 percent of agencies with revenues under $2 million (Chart 6).

Hospital affiliated agencies have a higher utilization of POC systems than other ownership type agencies. As shown in Table 8, just over half (52.3%) of freestanding agencies use POC technology.

Chart 6: **Percent of Agencies Using POC by Revenue**

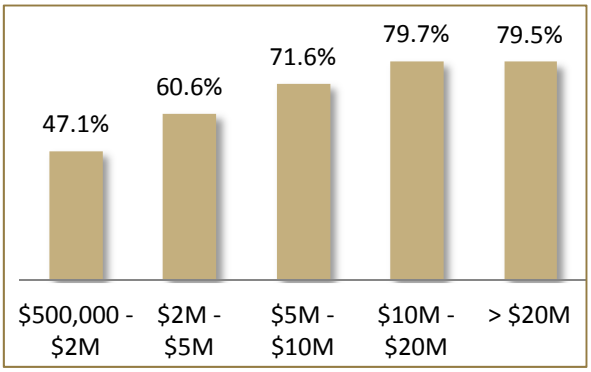


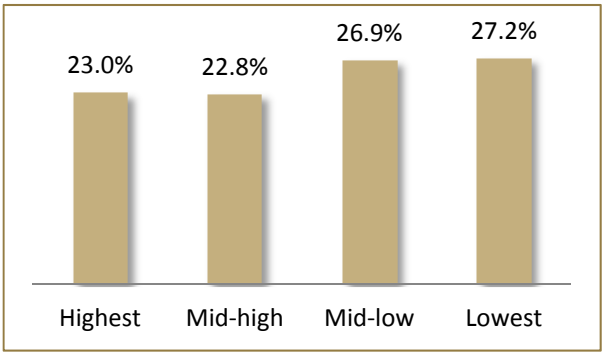
Table 8: **Percent of Agencies by Type with POC Systems**

Agency Type	% with POC System
Hospital Affiliated	85.1%
Hospital-based	78.9%
Government	56.4%
Freestanding	52.3%

Is there any relationship between POC use and how profitable an agency is?

We sectioned all participating agencies into four levels of profitability from the highest 25% to the lowest 25%. Study findings did not suggest a significant difference in how profitable an agency is using POC technology. What Fazzi discovered through other studies is that it is often not having the technology that makes a difference; it is the proper use of the technology. POC technology is a means to improved efficiencies and profitability can be achieved by improving processes both prior to and after POC use in the agency.

Chart 7: **Use of POC by Profitability Rank**

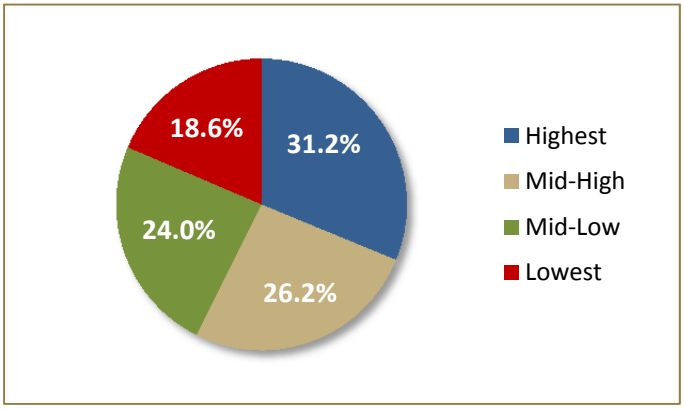


Is there any relationship between POC use and how an agency ranks in quality scores?

Unlike the area of profitability, our findings indicated that when it comes to use of POC, there was a difference in quality. As shown in Chart 8, nearly 60 percent of the agencies using POC have higher scores in Home Health Compare.

What is clear is that quality scores can be increased by use of POC technology with trainings, processes for efficiency, and vendor support.

Chart 8: **Use of POC by Quality Score**



What trends are we seeing in the type of POC system devices?

Devices used in conjunction with POC systems evolved more slowly than the development of new technology. Although keeping pace with innovation can be costly for home health agencies, study findings suggest that those looking to purchase new devices will switch from laptops to tablets. Findings from this study show laptop use decreasing from 65.5 percent to 32.1 percent as shown in Charts 9 and 10. A good part of this transition can be attributed to the fact that a high percentage of clinicians have used tablets (iPad, Kindle, etc.) in their homes and are comfortable using this technology.

Chart 9: **Current Device Use**

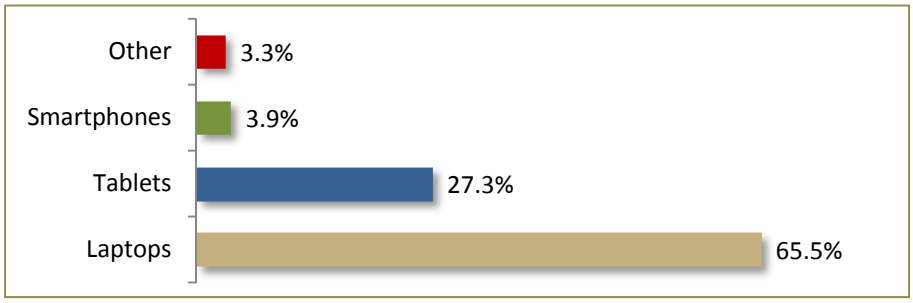
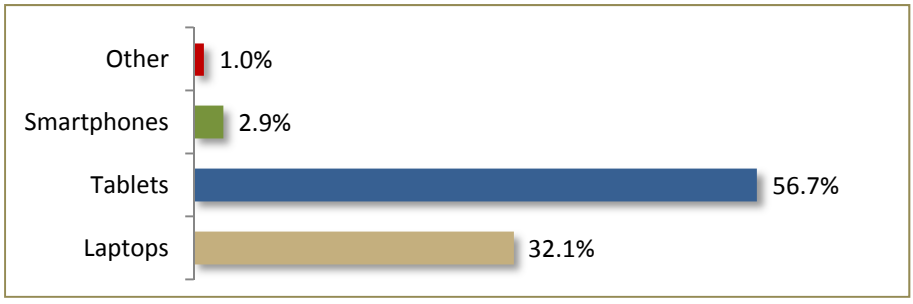


Chart 10: **Future Device Choice**



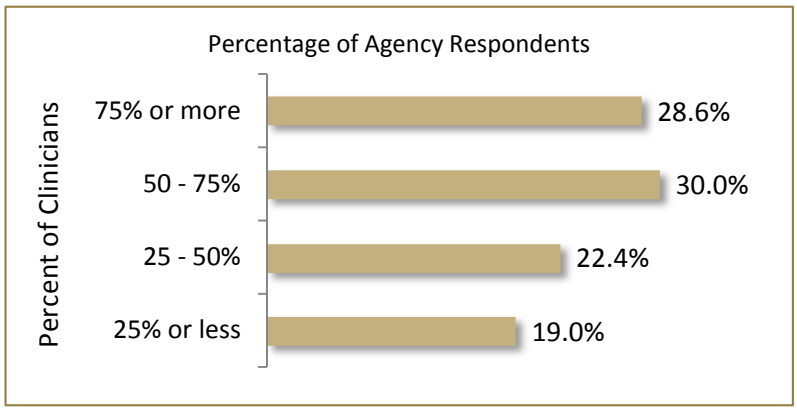
Are clinicians documenting in the patient home with their POC system?

While 80.5 percent of responding agencies using POC said that they require clinicians to document in the home, compliance with that requirement varies. Some of the most common reasons from clinicians for the variance are:

- Patients don't like it when the computer is used in front of them
- The computer is too slow and documenting later can be done faster
- The patient's home is unsanitary

Chart 11 shows the percentage of agencies with the estimated percent of time that their clinicians actually document in the home.

Chart 11: **Estimated Documentation Completed in Home**



How satisfied is the industry with the electronic systems they use?

We asked respondents if their software system provided them with a patient-centric record for the care that they provide across program lines, and if that system met their program needs. Of those responding that they had a patient-centric record for care, 46.4 percent said the system met their needs, and 8.5 percent said the system somewhat met their needs. Another 31.9 percent said the system did not meet their needs at all, and the remainder, 13.2 percent were unsure.

OASIS Assessment

Consultant and former California OASIS coordinator Michael McGowan conducts the following experiment when offering full-day seminars. He asks his audiences to complete an OASIS assessment on him, interviewing him and recording the conditions and complaints he presents as though he were a patient, at the beginning of the day. At noon, he asks them to complete another OASIS form but he does not remain in the room or answer their questions. Finally, he has them do a third one at the end of the day.

He determines accuracy by comparing the answers with each other. The results show thatparticipants' OASIS answers are nearly 95% in agreement in the morning assessment, less than 80% aligned with each other at noon and barely 60% in agreement at the end of the day.

Reprinted with permission from Tim Rowan's Home Care Technology Report http://homecaretechreport.com

Are many agencies looking to purchase new systems in the next year?

Of study respondents who currently don't have a POC system, 42.1 percent indicated they plan on purchasing a system within the year. One quarter (25.2%) of those currently using a POC system are planning on purchasing new POC devices in the next year, and 37.6 percent of those planning an upgrade or new purchase have had their system over 5 years.

How profitable an agency is does not seem to be a factor in making new purchases over the next twelve months. One quarter (25.8%) of those planning purchases fall in the top rank of profitability while one quarter (25.1%) of those in the lowest rank of profitability are planning the same.

How widespread is the use of electronic health records (EHR)?

When asked if the agency had an electronic system to collect, store, and access medical records either in the field or office, 78.1 percent reported that they use some form of electronic health record. The study shows that there is less adoption of EHR by agencies with revenues of under $2 million.

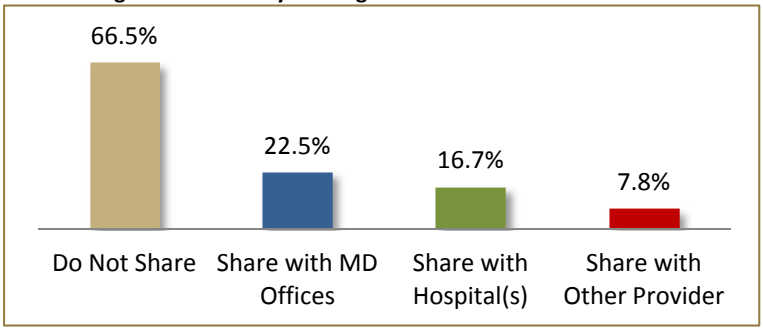
Table 9: **Agencies Using EHR**

Revenue	Percentage of Agencies Using EHR
$500K - $2M	72.8 %
$2M - $5M	80.4 %
$5M - $10M	81.9 %
$10M - $20M	77.9 %
>$20M	81.6 %

Has the industry started to share patient data via electronic health records?

Thirty three percent of study respondents indicated that they currently share electronic health records (EHR) with another provider, either hospital, MD office, SNF, etc. The sharing of EHR is expected to grow as we move into the evolving community partnership models in response to the Affordable Care Act.

Chart 12: **Agencies Currently Sharing EHR**

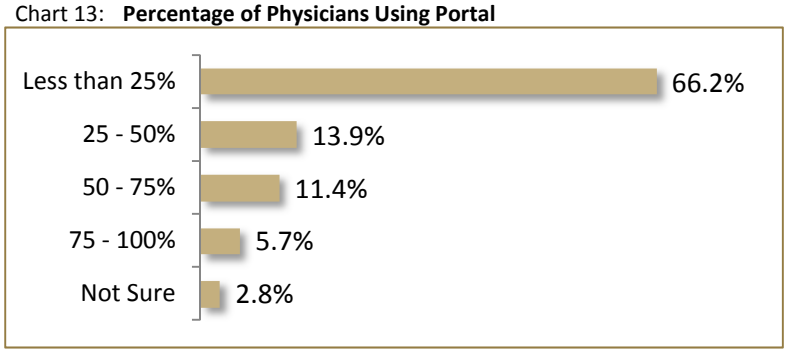


In a related question, study respondents were asked how important it is for vendors to be developing interfaces in order to share data, and 72.9 percent responded *very important* and 22.7 percent responded *somewhat important*.

How prevalent is the use of physician portals?

Slightly over one-third (34.7%) of respondents currently offer referring physicians to utilize a portal into their system. That number is likely to grow as physicians along with several other Medicare providers are required to have electronic medical records. Portals that are embedded in an agency's software can make this step in home health communication much easier.

Chart 13: **Percentage of Physicians Using Portal**



Use of EHR among Physicians

In 2013, the National Ambulatory Medical Care Survey (NAMCS) EHR Survey showed that about 78% of office-based physicians used any EHR system.

Adoption of a basic EHR system varied across the nation; from 21% in New Jersey to 83%in North Dakota. The percentage of physicians using any type of EHR system ranged from 66% in New Jersey to 94% Minnesota.

Sixty-nine percent of physicians intended to participate in the Medicare or Medicaid EHR Incentive Programs as of 2013.

U.S. Department of Health and Human Services. NCHS Data Brief. No. 143. January 2014. Use and Characteristics of Electronic Health Record Systems Among Office-based Physician Practices: United States, 2001-2013

What trends are we seeing in regards to web-based vs server-based systems?

Access to data through software has shifted as technology moves more toward web and cloud-based systems. Software platforms can lessen resource burdens while providing immediate access to patient information.

Study respondents were asked the type of EHR software the agency used and then asked if and when they would replace the system, what type of software platform they would look to purchase. Results showed that respondents using a server-based platform will move to web-based software or a combination of both as shown in Charts 14 and 15.

Chart 14: **Current Platform**

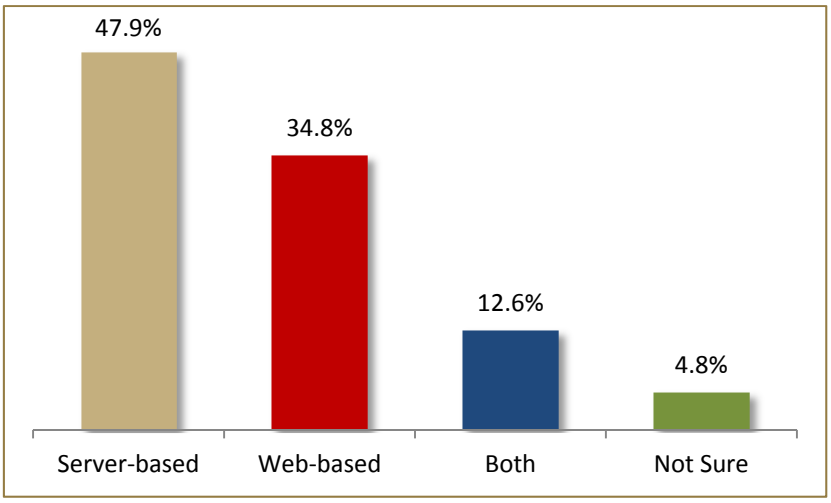
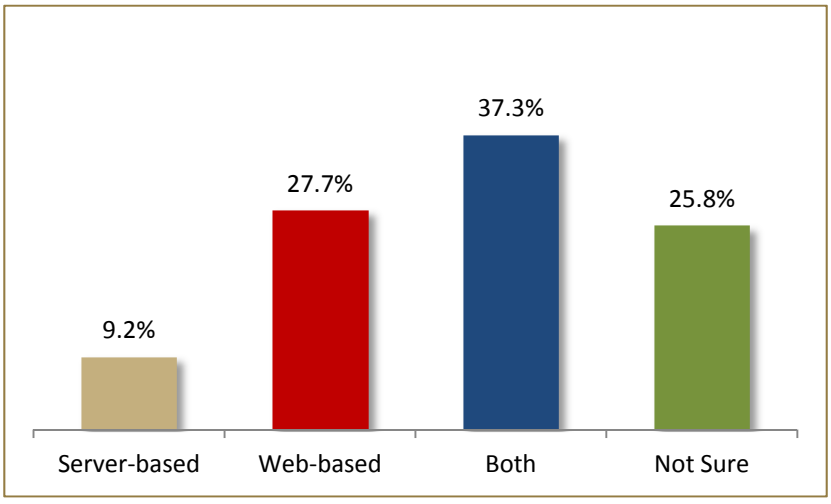


Chart 15: **Future Purchase**



The Cloud

Cloud technology is actually a "service model" and a new version of an older concept. Instead of electronic data being stored on a server in the agency, the data is stored to an off-site system which is maintained by a third party.

The healthcare industry has started this transition more slowly than other industries but with the requirements of the Affordable Care Act as well as the more recent HITECH Act, healthcare leaders are widening both their options and their attitudes towards increased technology adoption including cloud computing.

Having a mobile workforce as in home care is one of the greatest reasons to migrate to this virtual IS infrastructure. Cloud providers typically work with multiple devices allowing access to information from virtually anywhere that has internet access. It's not necessary to travel with a portable device.

Data stored on cloud systems can be encrypted, require authentication, and/or limit authorization, and having real-time information reduces the time lag that many agencies experience as they wait for data to sync (or be hand carried) to the office.

Being an early adopter of cloud computing may position an agency as a progressive and serious contender for an ACO partner.

Telehealth

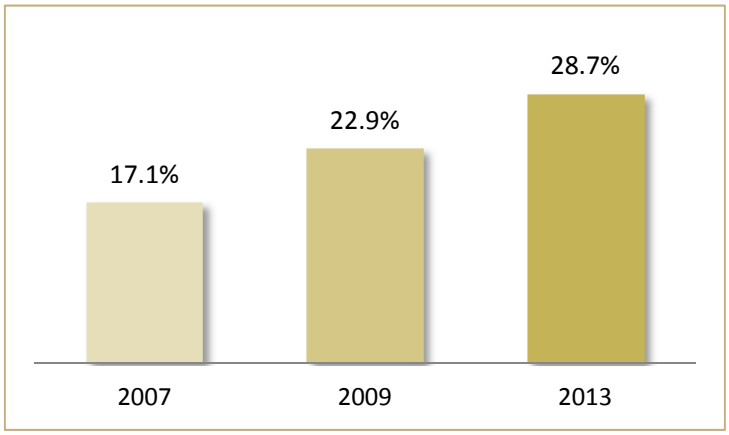
Mobile technology and connectivity devices have gained considerable ground in the past few years. Remotely communicating and transmitting health information reduces errors, standardizes and facilitates reporting, and is easily and quickly updated.

More accountability has been placed on healthcare providers after and between physical healthcare encounters. Telehealth solutions are an option to bridge those encounters and increase opportunities for providers to intervene in a patient's condition when necessary.

What percent of the industry currently uses some form of telehealth?

Of the study respondents, 28.7 percent indicated that they have a telehealth program. According to Fazzi study findings in past years, growth continues from a rate of 17.1 percent of agencies using telehealth in 2007 and 22.9 percent in 2009.

Chart 16: **Home Health Use of Telehealth**



Telehealth in Hospitals

Telehealth adoption in U.S. hospitals varies by state with differences attributed to state policy. States are more likely to adopt telehealth if policies promote private payer reimbursement, while less likely states require licensing of out-of-state providers. By late 2012, Alaska had the highest rate of telehealth adoption (75 percent) and Rhode Island had only a slight adoption.

In a recent survey of acute care hospitals, 42 percent have telehealth capabilities. Those hospitals are more likely to be part of a larger system and not for profit. They are also more apt to be a teaching hospital, have greater capacity for technology, and serve more rural areas.

Hospitals are less likely to adopt telehealth if they are in a less competitive market and serve an urban area.

HealthAffairs. Telehealth Among US Hospitals: Several Factors, Including State Reimbursement And Licensure Policies, Influence Adoption. February 2014

Are there any differences in telehealth use between various types of agencies?

Comparing our 2009 telehealth study with this study's findings, the greatest areas of telehealth growth have been in for profit agencies (64.0%) and agencies that are hospital-based (49.8%). The highest overall percentage of telehealth use remains with not for profit agencies and those that are hospital affiliated. Although urban agencies have greater telehealth use, a greater percentage of growth (25.0%) was seen by agencies in a rural setting.

Out of those agencies without a telehealth program, 19.4 percent plan on starting one within the year, and 17.5 percent were unsure.

Table 10: **Telehealth Use by Agency Type**

Agency Type	Percentage in 2009	Percentage in 2013
Not-for Profit	39.3%	43.1%
For Profit	13.6%	22.3%
Governmental	20.0%	20.5%
Freestanding	19.2%	25.5%
Hospital-based	26.1%	39.1%
Hospital Affiliated	41.4%	53.7%
Rural Agencies	21.2%	26.5%
Urban Agencies	23.4%	29.0%

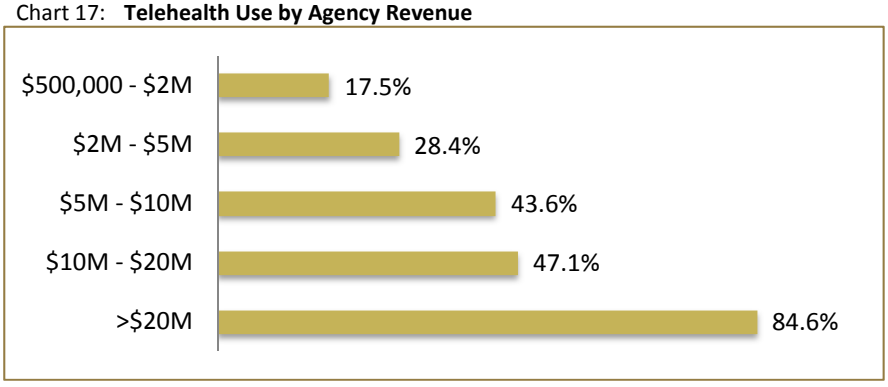
Table 11: **Percentage of Agencies Planning to Start a Telehealth Program within One Year**

Agency Type	Yes	No	Not Sure
Hospital-based	18.3%	69.5%	12.2%
Hospital Affiliated	51.6%	32.3%	16.1%
Freestanding	18.3%	63.4%	18.3%
Government	12.9%	71.0%	16.1%
Total	19.4%	63.1%	17.5%

Does agency size factor into telehealth use?

Study findings suggest that the larger the agency, the more likely they have a telehealth program. Of respondents using telehealth, 84.6% have home health revenue greater than $20 million.

Chart 17: **Telehealth Use by Agency Revenue**



What about quality? Does the use of telehealth improve agency outcomes?

When asked if their telehealth program impacted the agency's overall quality of care delivered, 72.9 percent indicated that telehealth had improved their quality of care, and 64.4 percent saw an increase in patient care coordination. Although a correlation was not found in Home Health Compare ranking, respondents identified areas that they experienced a change in outcomes as shown in Table 12.

Table 12: **Percentage with Outcome Changes Since Using Telehealth**

Area of Impact with Telehealth Use	Percent of Respondents
Decrease in Unplanned Hospitalizations	69.8%
Decrease in Emergent Care	65.1%
Improvement in Patient Self Care	56.1%
Increase in Patient Satisfaction	64.2%

These self-reported improvements are aligned with the goals of the Affordable Care Act's Triple Aim to improve the patient experience, to improve population health, and to reduce costs. Improvements like these, when supported by agency data, positions agencies to initiate partnerships with community providers including patient-centered medical homes, ACOs, and less formal collaboratives.

Was there any impact in home health agencies using telehealth?

In looking at some of the factors that drive profitability, study respondents indicated a positive impact in the following:

- 37.1% increase in referrals
- 41.0% decrease in visits per episode
- 25.1% lower agency costs

The fact that an agency has a telehealth program can mean many things. In the area of increasing referrals for instance; if the agency leadership has not developed a marketing strategy that includes or leads with a telehealth program, the referrals will not be impacted by use of telehealth alone. An agency needs to develop and implement a full program around their telehealth investment in order to achieve success and to see a return on that investment.

As with other technologies, the major difference between successful agencies and those less successful is not in having the system but in using the system in an optimal manner.

How well are agencies utilizing the telehealth devices that they have?

A significant finding related to the actual use of telehealth units. Of agencies using telehealth, 27.2 percent responded that less than one quarter of their telehealth units are in use on a given day. A number of factors may lead to this trend of low utilization:

- Lack of an agency-wide strategy for telehealth
- Strategy exists but is not followed through
- Inadequate training of clinicians
- Perception by some clinicians that it is "more work" to coordinate

More than half the agencies using telehealth reported having an operational system in place for more than three years, and 40.7 percent have had their telehealth system for more than five years.

This study indicates that value increases in agencies with more robust programs. The agencies reporting utilization at 75-100 percent;

- Reported an increase in overall quality (87.9%)
- Achieved lower unplanned hospitalization rates (81.6%)
- Attained higher patient satisfaction ratings (77.8%)
- Saw improvements in care coordination (73.5%)
- Reported an increase in patient self care (63.2%)

Hospital affiliated agencies tend to be more aggressive in the use of telehealth systems with 48.6 percent reporting that 75-100 percent of units are normally in use. On the opposite side, 30.8 percent of hospital-based agencies and 25.2 percent of freestanding agencies report that less than 25 percent of their units are in use on any given day. Underuse of these systems is both costly and reduces their impact on quality and profitability.

How large are telehealth programs in most home health agencies?

When asked how many telehealth units the agency has, 32.3 percent responded in the 10-25 category. Large agencies (those with higher revenues) tend to have "larger" telehealth programs as 65.2 percent of all agencies with over 50 units have revenues greater than $10 million. Within one year, 32.5 percent of agencies are planning to add additional units to their program either with an existing or new vendor.

Where is the industry at in terms of integrating telehealth data into the EHR?

Based on our study findings, only 40.5 percent of agencies with telehealth programs have the capability of integrating the telehealth data into their clinical record. Data integration should improve as the move to consolidate and transfer health information advances.

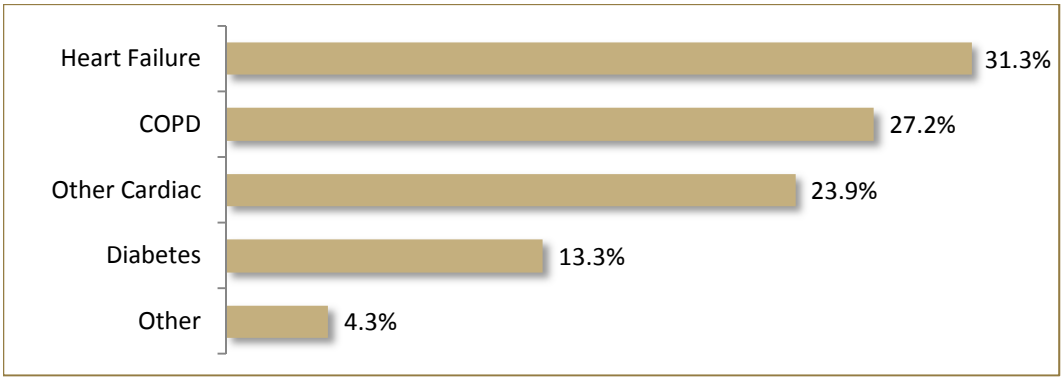
With telehealth monitoring devices, vital sign information along with peripheral device-driven data (oxygen saturation levels, blood glucose etc.) are stored and forwarded on a regular basis and create trending information that can prove invaluable. Of course, the value is highest when the data can be accessed from other health providers in addition to the home health agency managing the program.

With what patient populations are agencies using telehealth?

Telehealth is clearly used to help manage various chronic diseases. One hundred percent of respondents report that they use their systems to serve patients with one or more chronic diseases; heart failure, COPD, diabetes, or other cardiac conditions.

Two of the disease management telehealth programs shown in Chart 18 align with penalties under the Medicare Hospital Readmissions Reduction Program that went into effect in 2012. The first round of penalties focused on 30-day readmissions for heart failure, pneumonia, and acute MI. Additionally, the Medicare Hospital Readmissions Reduction Program will add exacerbation of COPD as a penalty-triggering measure in 2015. *See page 27 for agency use of disease management standards of care.*

Chart 18: **Percentage of Agencies Using Disease Management Telehealth Programs**



The home health industry has been working on the goal of reducing unnecessary hospitalizations for several years and has the expertise to manage these patients at home. With increased incentives on the part of hospitals (and in many cases affiliated physician groups), it is significant to partner and leverage home health's experience in the area of telehealth and disease management.

Operational Practices

A constant pressure on home health agencies is maintaining productivity while providing quality care to patients. An objective of this study was to provide the home health industry with insights on best practices of leading agencies, including productivity. Comparing, experiencing, and benchmarking methods or standards will lead to cost effective operations with the most efficient delivery of care.

What are the Industry standards regarding productivity?

When asked about nursing productivity, six routine visits per day by nursing staff were expected by 37.2 percent of respondents. Almost half (47.1%) reported that their nursing goal was met 90-100 percent of the time while 40.2 percent met it 75-90 percent of the time.

Six visits per day were also expected of physical therapists by 28.1 percent of respondents. Less than half (44.5%) of agencies responded that their physical therapists met their productivity goal 90-100 percent of the time and 25.1 percent said goals were met 75-90 percent of the time.

The difference between the most profitable and the least profitable agencies when it came to productivity standards is shown in Table 13. Agencies with the lowest productivity expectations have the lowest profitability. The highest profitability was found with agencies whose clinicians averaged between six and seven visits. Agencies going beyond the seven productivity level saw a reduction in profitability.

Study findings on quality scores showed one-third (33.6%) of agencies averaging five visits per day in the top quartile. Lowest quality rankings were found in agencies averaging eight or more visits per day. The typical patient caseload that nurses managed at a given time was 27 patients or more by 30.5 percent of agencies. Agencies whose clinicians averaged 27 or more cases were more likely to be in the top 25 percent of profitability and the lowest 25 percent of patient satisfaction.

Chart 19: **Visits per Day Expected From Nursing Staff**

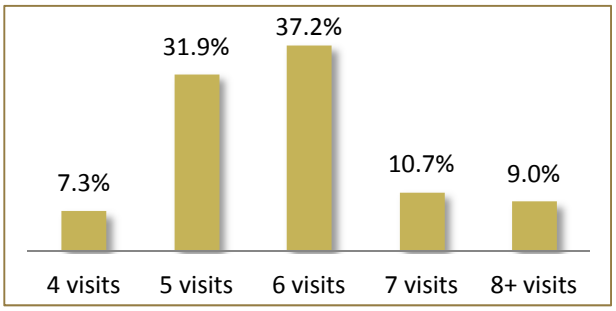


Chart 20: **Visits per Day Expected by Full Time PTs**

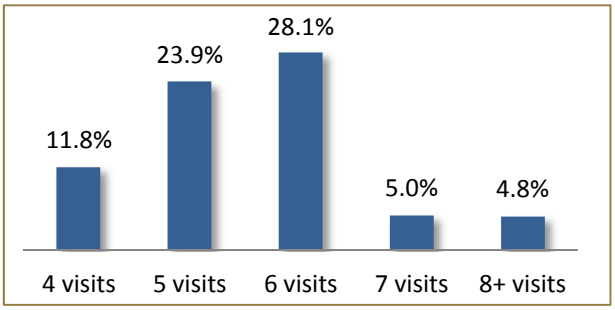


Table 13: **Impact of Average Visits on Profitability**

Routine Visits per Day	Highest 25% in Profitability	Lowest 25% in Profitability
4 or Less	8.6%	27.1%
5	20.3%	27.6%
6	29.0%	23.9%
7	33.9%	22.3%
8 or More	20.6%	21.6%

Table 14: **Impact of Caseload of 27 Patients or More**

Profitability		Patient Satisfaction	
27 Patients or More Caseload			
Highest 25%	33.9%	Highest 25%	14.6%
Lowest 25%	21.5%	Lowest 25%	31.6%

Of those agencies who meet their productivity goals most often, what percentage use POC technology?

Out of agencies responding with a 90 percent or higher success rate in achieving their productivity goals, 54.3 percent use POC technology. However, out of those with a success rate of less than fifty percent, 58.3 percent also use POC.

Although this study does not show a relationship between the use of POC and the ability to meet productivity, POC technology was never intended to be a means to increase productivity in the field. However, ineffective use of POC in the home can negatively impact visit and documentation time. POC also has the capability to improve administrative productivity. Receiving patient documentation in real time from the field decreases the data entry needs in the office and other manual processes that paper documentation demanded. Furthermore, days to RAP should improve significantly if clinicians are documenting timely starting from the home.

Like any well intended strategy or tactic, it takes accountability and effective leadership to ensure that processes (or technology) put in place are being used correctly and consistently after the proper training is provided.

Chart 21: **POC Use in Agencies Meeting Productivity Goal >90% of the Time**

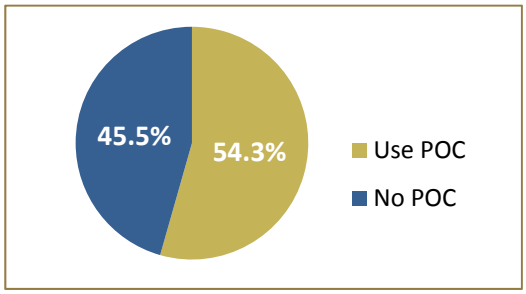
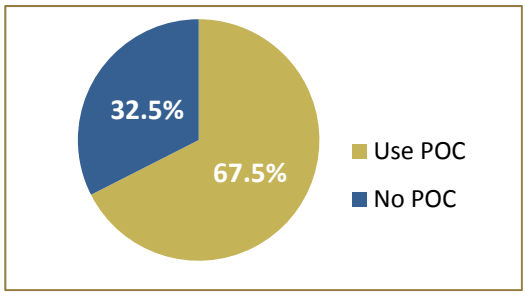


Chart 22: **POC Use in Agencies Meeting Productivity Goal 50% to 75% of the Time**



mHealth

Mobile health encompasses healthcare and medical technologies accessible by mobile devices such as smartphones or tablets.

"mHealth is the use of mobile and wireless devices to improve health outcomes, healthcare services and health research."

Aligned with the "triple aim" of the Affordable Care Act (improve the patient experience, improve population health and lower the cost), mHealth and other technologies will play a critical role in achieving those goals.

mHealth has the potential to change when, where, and how healthcare is provided; to ensure that important social, behavioral, and environmental data are used to understand the determinants of health; and to improve health outcomes.

The demand for mobile health is expected to increase considerably over the next six years.

National Institutes of Health, Office of Behavioral and Social Sciences Research. mHealth is defined by the NIH Consensus Group

How do agencies using POC differ from those that don't when it comes to SOC visits and productivity?

According to our study findings, the most commonly used productivity "credit" for SOC visits is two visits. The range of visits "credited" goes from one (no extra credit) to as many as three visits.

The data shows that there is not much difference in the way agencies measure how many "regular" visits should equal a SOC visit, as 38.3 percent of respondents not using POC consider the SOC visit to be equivalent to two visits, and 47.5 percent of POC users do the same. The time needed to complete a SOC visit is likely based more on the process the clinician uses in the home and how he or she integrates the OASIS assessment into their overall assessment as well as whether or not documentation is completed while in the patient home. Over the years, there has been a number of techniques developed that help improve the accuracy of the OASIS assessments.

Table 15: **Number of Visits Credited for a Start of Care Visit**

	Visit Equivalent				
	1.0	1.5	2.0	2.5	3.0
POC	10.3%	5.1%	47.5%	14.1%	10.5%
No POC	16.2%	8.7%	38.3%	10.2%	11.4%

Are software programs used for OASIS data and who does the final review?

Of agency respondents (69.0%) that used a software program for "scrubbing" OASIS data, the majority (93.9%) were either *somewhat* or *very satisfied* with the program.

Slightly under half (43.9%) of agencies used a clinical supervisor to review OASIS data before submitting a RAP. Nearly the same percentage used a QI/PI clinician (18.8%) as an RN with no other responsibilities (18.9%) to review OASIS assessments. When looking at the quality scores and who performs the final review of SOC, 40 percent of agencies who outsourced the function ranked in the highest quartile, followed by agencies that used a clinical supervisor at 31.7 percent.

How satisfied are agencies with embedded OASIS support tools?

Over half (52.5%) of respondents answered that the amount of "checks and balances" of OASIS are just enough while 40.8 percent would want more embedded "flags" to alert clinicians of inconsistencies or omissions. It appears that IS vendors are keeping up with customer requirements when it comes to OASIS response guidance. Modifications may be in line though with the anticipated release of OASIS-C1.

Are agencies using software-based scheduling systems?

Of the 75.4 percent of respondents that indicated they have a software-based scheduling system, only 1.4 percent indicated their agency has one but does not use it.

Thirty-six percent of agencies use clinical schedulers or supervisors to do their clinical scheduling while 26.2 percent have clinicians do their own (Chart 23 and Table 16).

Chart 23: **Who Does Patient Scheduling**

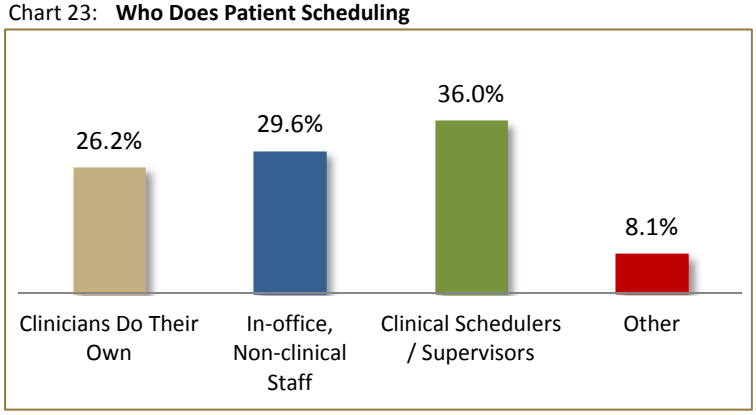


Table 16: **Agencies Using Software-based Scheduling Systems by Type and Position of Patient Scheduler**

Agency Type	Clinicians Do Their Own Scheduling	Use In-office, Non-clinical Schedulers	Use In-office Clinical Schedulers / Clinical Supervisors	Other
Hospital-based	31.1%	22.0%	36.4%	10.6%
Hospital Affiliated	19.4%	40.3%	31.3%	9.0%
Freestanding	24.7%	31.1%	36.4%	7.8%
Government	53.8%	5.1%	35.9%	5.1%

What is interesting to note is that when clinicians do their own scheduling or when scheduling is done by a clinical scheduler, agencies are more likely to be in the top 25 percent in terms of quality as compared to agencies who use a non-clinical scheduler.

What insights were learned about staffing, compensation, and coding?

More than twice as many agencies paid clinical field staff by a per visit model rather than by salary.

In terms of recruiting new staff, there appears to be a growing trend in the difficulty of recruiting key specialties. Physical therapists were *very difficult* to recruit according to 38.5 percent of agencies, while 53.6 percent said recruiting qualified nurses was *somewhat* difficult.

No significant relationship was identified between compensation model and quality ranking. Fifty percent of the lowest quality agencies used per visit rates and 44.6 percent of the highest quality did as well.

When asked who performed ICD-9 coding, 90.1 percent of agencies relied on their own staff. Forty-four percent of agencies said it was either *somewhat* or *very difficult* to recruit certified ICD-9 coders.

Chart 24: **Primary Approach to Compensate Clinical Field Staff**

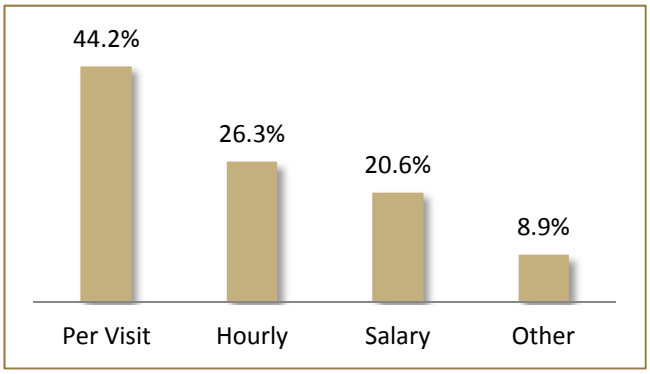


Table 17: **Compensation Model and Profitability**

Compensation Model	Profitability Highest Ranking Agencies	Profitability Lowest Ranking Agencies
Salary	17.9%	27.8%
Per Visit	32.1%	20.1%
Hourly	15.2%	34.0%

Are top agencies using disease management standards of care?

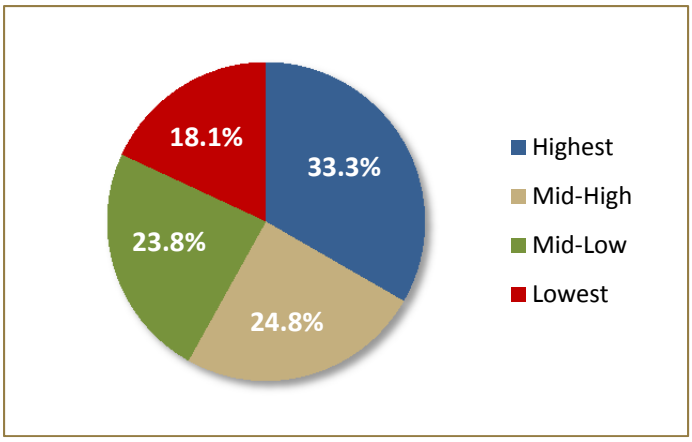
Disease management strategies include prevention and treatment interventions for populations with chronic conditions that improve the quality and cost effectiveness of care. Over half (57.5%) of study respondents use multiple home health disease management programs. Of those respondents, 91.4 percent use a management program for diabetes care (Table 18).

While use of disease management had little impact on profitability, study findings show that it had significant impact on quality. In fact, of those who use a disease management program, one-third ranked in the top quartile of quality and only 18 percent ranked in the bottom quarter (Chart 25).

Table 18: **Agencies with Disease Management Programs and Percentage That Use Program**

Chronic Condition	Percentage of Agencies That Use Program
Cardiac Care	86.8%
Diabetes	91.4%
Heart Failure	93.2%
Joint Replacement	71.4%
Wound/Ostomy	80.4%
Palliative Care	34.4%
COPD/Respiratory	89.4%

Chart 25: **Use of Disease Management and Quality Score**



Future Perspectives

This study asked agency leaders what their key areas of concern were as they looked to the future. Are they worried about costs, mergers, quality, and are they looking to outsource any functions? It was also important to understand how home health agencies were dealing with new healthcare reform models driven by the Affordable Care Act.

What did agency leaders worry most about?

The most prevalent themes that kept industry leaders up at night were not new. The top concerns of nearly half of respondents were **Medicare reimbursement cuts** and **increasing regulatory mandates**.

The top secondary concerns included:

- Growth and market share
- Staffing and hiring
- Staying open and profitable
- Affordable Care Act and healthcare reform
- Competition
- ACOS, partnering, and role with partners/ACOs

Are there concerns with partnering with an ACO?

Most agencies are looking or exploring the possibilities of partnering with an ACO or other new emerging health care model. To be viewed as an ideal partner in a new healthcare reform model, agency leaders listed the top three items they felt they needed to focus on. Most frequently mentioned were **decreasing hospitalization, outcomes (quality of care), and low cost/cost efficiency**. Other items of focus were:

- Patient satisfaction
- Timely initiation of care/ease of referral
- Communication
- EHR/sharing data
- Disease management

MedPAC Recommendations

In the March 2014 Report to Congress, MedPAC maintains its 2011 home health recommendations. The left-over payment recommendations include:

- Begin a two year re-basing of home health rates and eliminate the market basket update.
- Revise home health case-mix system to rely on patient characteristics to set payment for therapy and nontherapy services and no longer use the number of therapy visits as a payment factor.
- Institute a copay for patients that are not admitted from inpatient care.
- Review activities in counties with aberrant home health utilization and suspend payment and enrollment of new providers if they indicate significant fraud.

Other MedPAC recommendations affecting home health services are:

- Establish a hospital readmission reduction policy through a penalty payment for relatively high risk-adjusted rates of hospital readmission.
- Devise a patient assessment instrument that can be commonly used across post-acute care (PAC) settings.

MedPAC Report to the Congress. March 2014. Fact Sheet.

Are many home health agencies currently partnering in new healthcare reform models?

Nearly half (47.5%) of all study respondents indicated that their agencies were involved in at least one of the new models of care, with the most prevalent model being transitional care programs.

Table 19: **Involvement in Healthcare Reform**

Healthcare Reform Model	Percentage of Respondents
Accountable Care Organizations (ACOs)	18.7%
Bundled Partnerships	6.4%
Patient-Centered Medical Homes	12.3%
Transitional Care Programs	20.3%
Other Models	1.9%

Healthcare Models

The Care Transitions Program® developed by Dr. Eric A. Coleman, defines the term "care transitions" as "the movement patients make between health care practitioners and settings as their condition and care needs change during the course of a chronic or acute illness."

Dr. Mary A. Naylor describes transitional care as a "range of time limited services and environments designed to ensure health care continuity and avoid preventable poor outcomes among at risk populations as they move from one level of care to another, among multiple providers and/or across settings."

Care Transitions Program®, Denver, Colorado. http://www.caretransitions.org/definitions.asp Naylor, Mary D., PhD, RN, The Transitional Care Model: Translating Research into Practice. Development and Translation of the Transitional Care Model for Older Adults. University of Pennsylvania.

The Agency for Healthcare Research and Quality (AHRQ) states the Patient-Centered Medical Home model is held accountable for meeting the majority of the patient's health needs by providing comprehensive care with a team of care providers. The care is patient-centered, relationship-based with an orientation toward the whole person. Care is coordinated between providers; hospitals, home health, specialists, etc. The model is committed to quality, quality improvement, and patient safety and satisfaction. AHRQ recognizes that health IT plays a central role in the success and operation of the PCMH. IT is needed to collect, store, and manage personal health information, along with supporting communication, decision-making, and patient self-management.

The National Committee for Quality Assurance. Patient-Centered Medical Home Recognition. http://www.ncqa.org/Programs/Recognition/PatientCenteredMedicalHomePCMH.aspx

Who are the home health leaders in healthcare reform model partnerships?

Tables 20 and 21 show percentage of agency involvement with healthcare reform models by agency size and ownership. The highest percentage of involvement comes from hospital affiliated agencies, and in all four models. Hospital affiliated agencies are most likely to take the lead as there are many that are part of an existing integrated care network.

Table 20: **Participation in Healthcare Reform Models by Agency Revenue**

Revenue Category	ACOs	Patient-Centered Medical Homes	Bundled Partnerships	Transitional Care Programs
$500K - $2M	35.8%	33.9%	33.8%	39.6%
$2M - $5M	28.2%	27.4%	16.1%	27.1%
$5M - $10M	17.6%	20.2%	23.5%	16.4%
$10M - $20M	10.6%	7.2%	10.3%	8.2%
>$20M	7.5%	11.3%	16.2%	8.7%

Table 21: **Participation in Healthcare Reform Models by Agency Type**

Agency Type	ACOs	Patient-Centered Medical Homes	Bundled Partnerships	Transitional Care Programs
Hospital-based	20.3%	17.3%	6%	26.3%
Hospital Affiliated	35.8%	29.9%	20.1%	44.8%
Freestanding	16.2%	8.7%	4.9%	15.6%
Government	15.4%	15.4%	5.0%	15.3%

Representative of the home health industry, more for profit agencies (61.0%) than not for profit agencies (39.0%), are involved in one or more models. Participation by legal status is shown in Table 22.

Table 22: **Participation in Healthcare Reform Models by Legal Status**

Legal Status	ACOs	Patient-Centered Medical Homes	Bundled Partnerships	Transitional Care Programs
For Profit	60.3%	51.6%	61.7%	54.5%
Not For Profit	39.7%	48.4%	38.3%	45.5%

Does having a telehealth program make an agency more attractive to potential partners such as ACOs, Patient-Centered Medical Homes, etc.?

The key to a potential partnership with a healthcare reform model is having a successful telehealth program supported by strong outcomes. Using telehealth with disease management programs that focus on keeping the patient out of the hospital will be a valuable proposition to a potential partnership. The table below shows how prevalent a telehealth program is or is not when it comes to those currently involved in one of the new healthcare reform models.

Table 23: **Respondents with a Telehealth Program and in Partnerships**

Model	Percentage of Respondents
Accountable Care Organizations (ACOs)	40.5%
Bundled Partnerships	43.9%
Patient-Centered Medical Homes	41.4%
Transitional Care Programs	37.8%

What is the connection between those partnering and their quality measures?

Agencies in this study who are currently involved in one of the new models of care are likely to be in the top 25 percent of Home Health Compare rankings as shown in Table 24. Less than 20 percent of those partnering in any of the new care models scored in the bottom rank.

Table 24: **Involvement in Healthcare Reform and Quality**

Model	Percent of Respondents in Top 25% of Home Health Compare
Accountable Care Organizations (ACOs)	27.0%
Bundled Partnerships	32.3%
Patient-Centered Medical Homes	34.9%
Transitional Care Programs	33.0%

Bundled Payments

The Bundled Payments initiative is comprised of four broadly defined models of care, which link payments for multiple services beneficiaries receive during an episode of care. Model 1 includes an episode of care focused on the acute care inpatient hospitalization. Awardees agree to provide a standard discount to Medicare from the usual Part A hospital inpatient payments.

Models 2 and 3 involve a retrospective bundled payment arrangement where actual expenditures are reconciled against a target price for an episode of care.

In Model 2, Retrospective Acute Care Hospital Stay plus Post-Acute Care, the episode of care will include the inpatient stay in the acute care hospital and all related services during the episode. The episode will end either 30, 60, or 90 days after hospital discharge. Participants can select up to 48 different clinical condition episodes.

For Model 3, Retrospective Post-Acute Care Only, the episode of care will be triggered by an acute care hospital stay and will begin at initiation of post-acute care services with a participating skilled nursing facility, inpatient rehabilitation facility, long-term care hospital or home health agency. The post-acute care services included in the episode must begin within 30 days of discharge from the inpatient stay and will end either a minimum of 30, 60, or 90 days after the initiation of the episode. Participants can select up to 48 different clinical condition episodes.

CMS.gov, Innovation Models, Bundled Payments for Care Improvement (BPCI) Initiative

What should agency leaders focus on in order to partner with an ACO?

When asked if the reimbursement was adequate within these new partnerships, 39.9 percent of respondents indicated that it was adequate while 32.9 percent did not. The remainder (27.2%) said that it was too soon to judge.

As home care leaders seek to become meaningful players in the new health care models, it is clear that they must focus on four areas all of which are critical to the success of these new models. Newly emerging models must prove their value when it comes to cost, quality and patient satisfaction. The key quality measure that has been the focus of these new initiatives has been the need to reduce unplanned hospitalization.

These imperatives for the new systems provide a roadmap for home care and hospice agencies. For these agencies to prove their value, they must approach participating in newly emerging systems with the documented substantiation so that they can provide these systems with cost effective options while lowering hospitalization rates, improving quality scores and improving patient satisfaction scores. These are the metrics that the newly emerging systems will be measured on and these are the benefits that well managed home care agencies can provide.

Should we expect more consolidation in the industry?

Less than five percent (4.5%) of participating study respondents indicated that they were considering a merger with another health care entity within the next twelve months**.** Another 5.8 percent responded that they "possibly" would be considering a merger.

Healthcare reform, Medicare cuts, and increased regulatory mandates provide strong arguments for considering some type of partnering with other home health agencies. Instead of competing for the same patients, a more solidified home health delivery system in a community has the capability of being a strong player within a collaborative, cross-provider alliance.

Seventy-five percent of agency respondents that would be considering a merger had total revenues under $5 million. Agencies with revenues from $500,000 to $2 million made up 50 percent of those who were "possibly" considering a merger.

For-profit agencies made up 53.1 percent of those considering a merger within the year, and 72.3 percent of those "possibly" considering. Geographic location of agencies considering or possibly considering a merger is shown in the Table 25.

Table 25: **Location of Agencies Considering or Possibly Considering a Merger in the Next 12 Months**

Region	Percentage
Midwest	39.6%
Northeast	18.8%
Southeast	8.3%
Southwest	22.9%
West	10.4%

ACO-style Care

A study completed by Health Affairs analyzed the effects of new healthcare business models. They analyzed healthcare provision between 2010 and 2012 for 71 hospitals in Illinois covering seven counties and 8.5 million people.

Findings showed that ACO-style care did better than traditional care in lowering avoidable admissions as well as shortening lengths of stay.

Under ACO-style care, discharges dropped 6.3 percent and lengths of stay dipped 3.9 percent, "providing early evidence that hospitals and doctors working under accountable care principles are more successful in keeping patients with chronic conditions out of the hospital, and shortening hospital stays when hospitalization is required."

ACO-style care linked to drop in inpatient use, January 9, 2014, by Zack Budryk, www.fiercehealthcare.com/story/aco-style-care-linked-drop-inpatient-use/2014-01-09

ACO Savings

A CMS report showed that Medicare and Pioneer ACOs saved nearly $400 million in 2012. Of the 114 ACOs established in 2012, first-year expenditures were lower than expected for 54 of the ACOs, and more than half of those 54 generated savings of more than $126 million. Outcomes show signs of ACOs' effectiveness as well. A study published in Health Affairs in January indicated that a drop in inpatient care has accompanied the proliferation of ACOs.

White House pushes ACO expansion in 2014 - FierceHealthcare http://www.fiercehealthcare.com/story/white-house-pushes-aco-expansion-2014/2014-02-04#ixzz2sOKBwgVI , February 4, 2014, by Zack Budryk

Methodology

Criteria for Participation

The overall population of home health agencies selected to participate in the study was defined by the following criteria obtained from the Medicare-certified cost report database and Home Health Compare:

1. Any agency that reported annual revenue greater than $500,000 based on the most recent Medicare Cost Report data released in January 2013.
2. Any agency that reported ownership, legal, and geographic status in Medicare cost report data. Ownership and legal status were also verified in the survey.
3. Any agency meeting criterion 1 and 2 and reported results for the Home Health Compare Quality of Outcome Care measures for the data collection period October 2011 through September 2012 and Patient Satisfaction Survey results for the data collection period July 2011 through June 2012; both released January 2013.
4. Any agency that met the above criteria and had reported Home Health Compare hospitalization rates.

The total sample frame of agencies meeting the above criteria was 5,648. Distribution in the Home Health Compare measures for quality ranking was determined by all survey respondents and calculated into a composite score within a range of 0 (lowest quality) to 100 (highest quality). The quartiles for ranking resulted in:

- Composite score of 75 to 99: Highest 25%
- Composite score of 51 to 74: Mid-high 25%
- Composite score of 25 to 50: Mid-low 25%
- Composite score of 0 to 24: Lowest 25%

Profitability ranking was determined by agency net income as reported in the agency respondent's cost report data. From lowest (negative) net income to highest (positive) net income, the quartiles for ranking profitability resulted in the most profitable agencies in the highest 25 percent ranking and the least profitable agencies in the lowest 25 percent ranking.

Determining Sample Size

Because the total population list identified agencies by each of the above characteristics (with the exception of hospital affiliated agencies), sample size and quotas were determined by Market Street Research of Northampton, Massachusetts. Agencies were categorized into 40 set combinations for the number of contacts needed to achieve a representative sample for each combination of the total population. Random samples were drawn from each combination of the total population of 5,648 to be studied. As cost report data does not signify ownership distinction between hospital-based or hospital affiliated, agencies surveyed were specifically asked for clarification on ownership status to report valid results on each group. The resulting percentage was used to determine the representative sample ultimately used for hospital affiliated agencies.

Survey Administration

Research Data Design of Portland, Oregon (RDD) attempted telephone contacts to each of the potential respondents in the sample frame. Telephone surveys were also made to agencies who volunteered on the Study's web survey. Volunteer agencies totaled 343. The majority of these agencies were in the initial sample list and less than 10 were disqualified as a non-home health agency or did not have Medicare cost report data. Surveys were administered by telephone and were completed over a seven week period beginning in March 2013. Of the 1,398 agency representatives successfully contacted via telephone, 1,104 (78.9%) completed the survey.

Survey Analysis

Survey response data was analyzed using the SPSS statistical software. Because the volume of completed surveys needed to achieve a representative sample for each set combination were not in proportion to the number of agencies in the same combination of the total population the sample was drawn from, results were weighted so that completed surveys by set combination matched their presence in the population. Weighting method was reviewed by the Department of Mathematics and Statistics at University of Massachusetts, Amherst. Weighting resulted in the 1,126 "statistical" completed surveys reflected in the foregoing analyses. Cross tabulations of survey results by quality and profitability performance groups were the primary source of findings, although multiple segmentations of respondents by revenue, geographic area, ownership, legal status, and other characteristics were also analyzed.

Agency respondents were from all 50 U.S. states along with District of Columbia, Puerto Rico, and Virgin Islands. See Table 25 for number of respondent agencies representing the ten standard federal regions (established by the Office of Management and Budget).

Table 26: **States Represented in National State of the Home Care and Hospice Industry, 2013 Study**

Region	Number of Participating Agencies	States Represented
I	47	CT, ME, MA, NH, RI, VT
II	28	NJ, NY, PR, VI
III	77	DE, DC, MD, PA, VA, WV
IV	192	AL, FL, GA, KY, MS, NC, SC, TN
V	242	IL, IN, MI, MN, OH, WI
VI	301	AR, LA, NM, OK, TX
VII	90	IA, KS, MO, NE
VIII	51	CO, MT, ND, SD, UT, WY
IX	46	AZ, CA, HI, NV (AS, GU, MP, Trust Territory of the Pacific Islands)
X	25	AK, ID, OR, WA

Index of Charts and Tables

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Healthcare Solutions