

Demand Persists for Experienced Health IT Staff

Executive Summary

With the adoption of the Health Information Technology Act (HITECH) in 2009, healthcare providers anticipated needing a larger pool of qualified IT staff to implement new systems. Because many organizations were expecting to install systems and train clinicians to use them to qualify for incentive payments, many HIT executives predicted that there would be a competitive market for professionals with experience in implementing electronic health records (EHRs) and other clinical systems.

A 2010 survey by the College of Healthcare Information Management Executives (CHIME) affirmed those expectations, with 59 percent of respondents reporting shortages on their IT staffs. Now, in mid-2012, even with two years of focused attention on implementing EHRs at the nation's hospitals, the need is just as acute. CHIME's most recent IT staffing survey found that 67 percent of respondents are experiencing shortages.

The percentage of respondents to the 2012 CHIME CIO survey on IT staffing who expressed concern that staffing challenges will negatively impact their organizations' chances to receive HITECH stimulus fund payments dropped slightly when compared with 2010. In responding to the 2012 survey, a total of 59 percent said shortages either would definitely or possibly affect chances of qualifying for funding, compared with a total of 70 percent who responded in 2010.

Compared with results of the 2010 survey, staff shortages remain largely similar, when results are analyzed by organization type or by various bed size categories. The most recent survey found that 71 percent of respondents reported vacancy rates of less than 10 percent in their IT departments.

Respondents to the 2012 survey indicated that their strategies for dealing with shortages haven't changed much over the past two years – the approach most often mentioned is hiring third-party consultants, although a slightly lower percentage of respondents said they were using consultants in 2012.

Retention of IT staff is a growing concern among CHIME members who responded to the surveys. In 2012, 85 percent of respondents indicated they were worried about retaining IT staff,

compared with only 76 percent of respondents in 2010. Current concerns about retention may reflect apprehension over the increasing number of IT projects, which include electronic health records, ICD-10 planning in advance of the eventual use of ICD-10 codes, health information exchange initiatives and other efforts that involve IT and impact hospital operations.

In indicating areas of expertise that are most-in need on the IT workforce, respondents to the 2012 survey said that clinical software implementation and support was highest in demand, mirroring results from the 2010 survey. Most CIO respondents said they expect their budgets for IT staff would grow only slightly next year; 66 percent of respondents estimated that their budgets for staffing in 2013 would rise by only 4 percent or less over what was budgeted for 2012. As for the next frontier of needed skills, respondents identified business intelligence, analytics, program management, clinical software and data management to be areas of need.

The 2012 survey also sought to assess the impact of the new national Health IT Workforce Development program, developed by the Office of the National Coordinator for Health Information Technology for the purpose of providing non-degree health IT training programs that can be completed in six months or less. The 2012 survey found that 68 percent of respondents are aware of the community college and university-based training programs, which have graduated 8,000 by July 2012. However, only 12 percent of responding CIOs who know of the programs reported hiring its graduates.

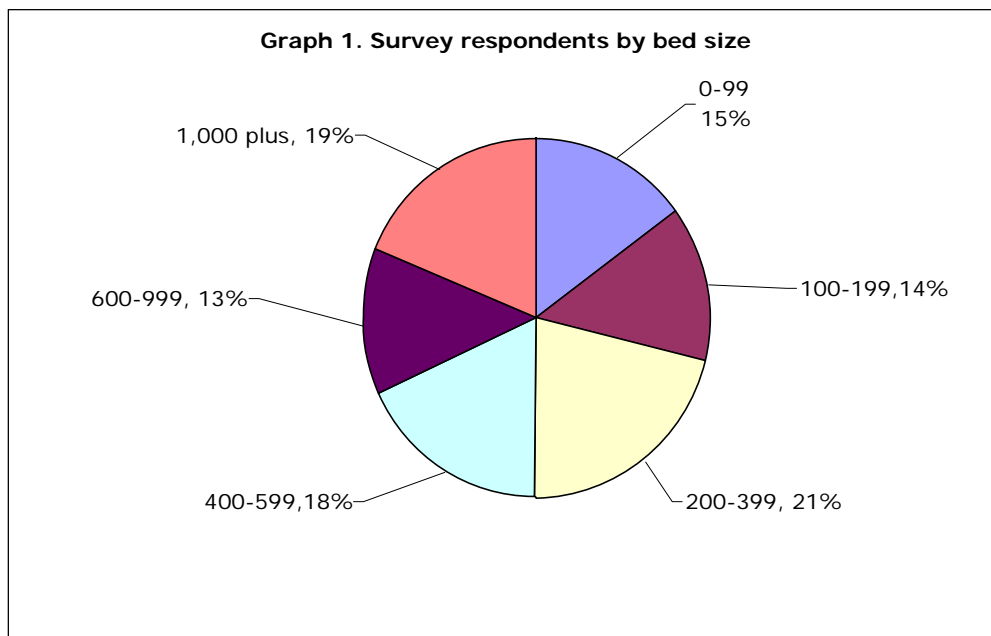
Other results suggest that CIOs currently are looking to fill IT positions with workers who have specialized knowledge of health IT and/or how it can be applied in clinical settings. Most survey respondents said they primarily were interested in applicants with backgrounds in health IT, with some reporting that they were looking for applicants with backgrounds in clinical informatics or having some clinical experience. Applicants with IT experience in non-healthcare settings and prospective employees who come from a non-IT health background also scored relatively well. However, applicants with only education but no experience, or those with only coding knowledge, ranked at the bottom of respondent preferences.

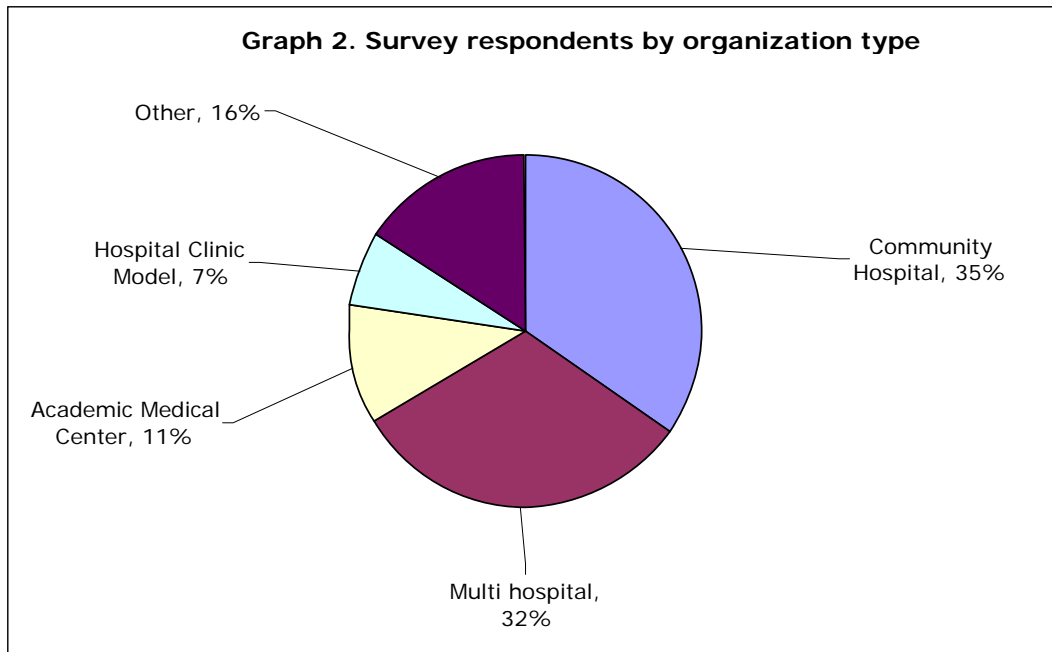
Survey Methodology

CHIME developed the 2012 version of the survey to assess changes in staffing needs since its last survey, conducted in September 2010. The new survey sought to determine:

- CIOs' current perceptions of IT staffing shortages
- How these shortages would affect organizations' deployment of electronic health records and other IT projects
- How organizations are attempting to bolster their IT workforces
- What respondents know about the federal Health IT Workforce Development Program
- What skill sets respondents see as needed by future IT staff

CHIME's membership comprises more than 1,400 chief information officers and other senior healthcare IT executives from a variety of provider organizations, including large hospital systems, community hospitals, for-profit hospitals, and small or rural facilities. CHIME members typically oversee the information services department within their organizations and are leaders in implementing EHRs and other clinical systems. Some 163 CHIME members responded to the Internet-based survey, which was available during July 2012. The graphs below provide information on basic demographics, indicating percentages of respondents by type, bed size and location of healthcare organization.

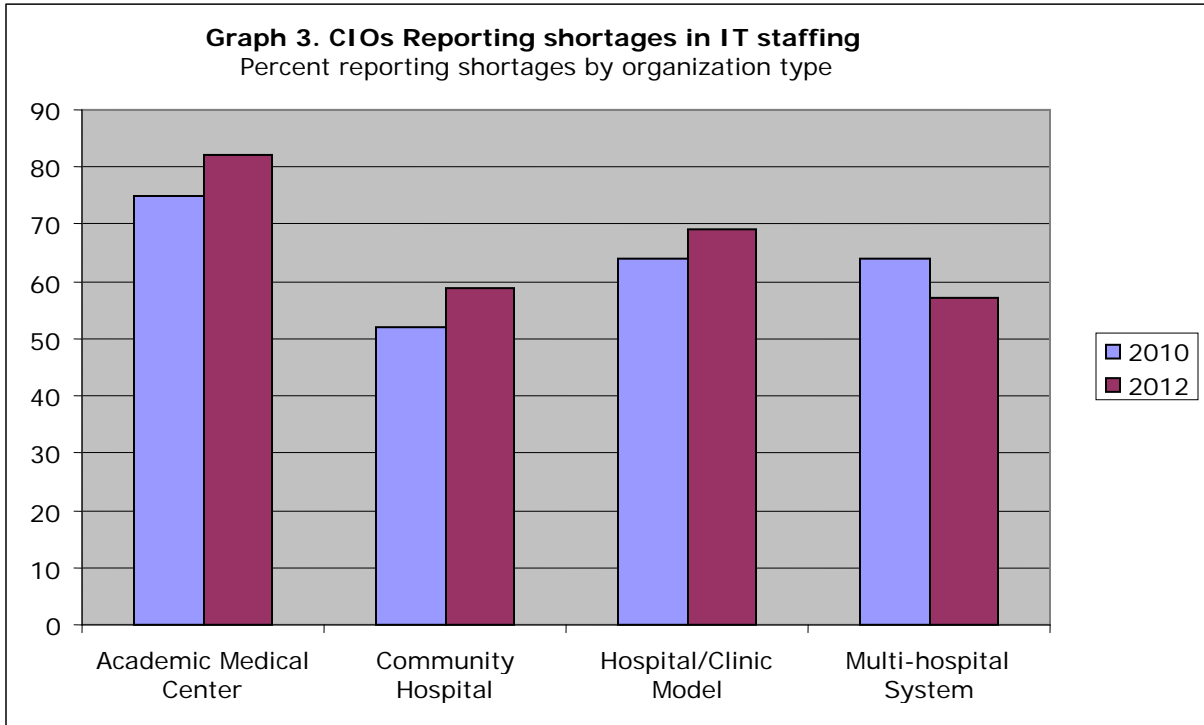




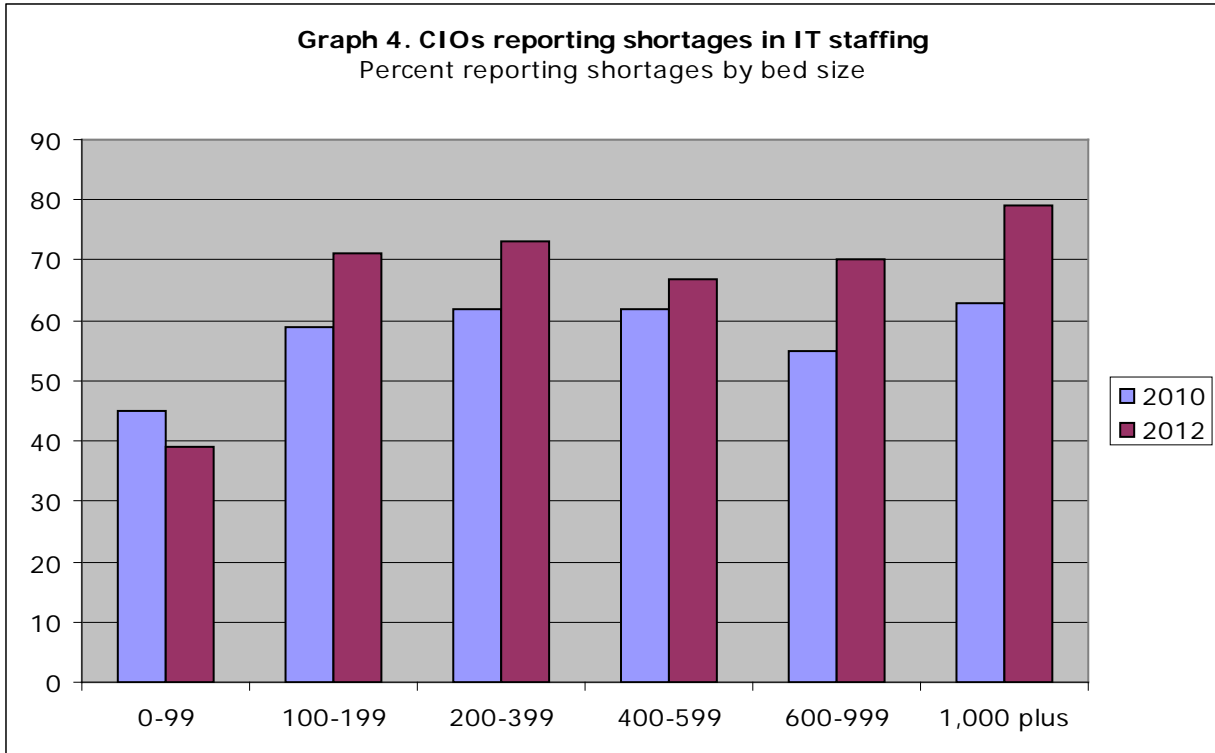
Current Staff Shortages

Some 67 percent of healthcare CIOs responding to the CHIME survey reported IT staff shortages, compared with 59 percent reporting openings on their IT staffs in 2010. Meanwhile, about 33 percent of respondents said they were not experiencing IT staff shortages.

CIOs' responses to this question varied by organization type and bed size group. Respondents from academic medical centers were the most likely to report staff shortages, with 82 percent indicating unfilled positions. Some 69 percent of CIOs from multi-hospital systems; 64 percent of respondents from hospital/clinic model facilities; and 59 percent from community hospitals also reported staff openings (See Graph 3).



When results are analyzed by bed size groups, the percentage of respondents reporting staff openings are fairly consistent, with the exception of respondents from the smallest facilities – only 39 percent of respondents from facilities with fewer than 100 beds reported IT staff shortages, down from 45 percent in 2010. In all other bed size groups, a higher percentage of respondents reported shortages in 2012 vs. 2010; percentages of respondents in the most recent survey reporting staff openings ranged from 67 percent to 79 percent (See Graph 4).



The 2012 survey asked respondents if the majority of their hospitals were located in urban, rural, suburban or a mixture of settings. When asked about staffing shortages, a higher percentage of suburban respondents reported openings (71 percent), with mixed and rural settings reporting slightly lower shortages of 69 percent and 68 percent, respectively. Some 56 percent of respondents from urban settings reported openings.

Percentages of Positions Open

The 2012 survey asked respondents to estimate the percentage of full-time equivalent positions that were open positions on their IT staffs (Table 1). Results for all respondents show that the majority reported that fewer than 10 percent of IT staff positions were open, with 44 percent having fewer than 5 percent of positions, while another 30 percent have 5 to 9 percent of FTE positions open on IT staffs.

% of positions open	Percent
No Open Positions	3
0 to 4 percent	41
5 to 9 percent	30
10 to 14 percent	15
15 to 19	6
20 percent or more	6

Percentages of positions open, however, can fail to fully represent individual organizations' staffing situations. For example, some large IT departments may have 500 or more FTEs, so a 10 percent shortage represents 50 open positions. Conversely, in smaller organizations with less IT staff capacity, even one opening can seriously impact IT rollouts if that open spot is a key position and no other staff person has expertise in that area.

In analyzing the percentages of FTE positions open by organization type and bed size (Tables 2 and 3), the vast majority of respondents reported fewer than 14 percent of IT staff positions open.

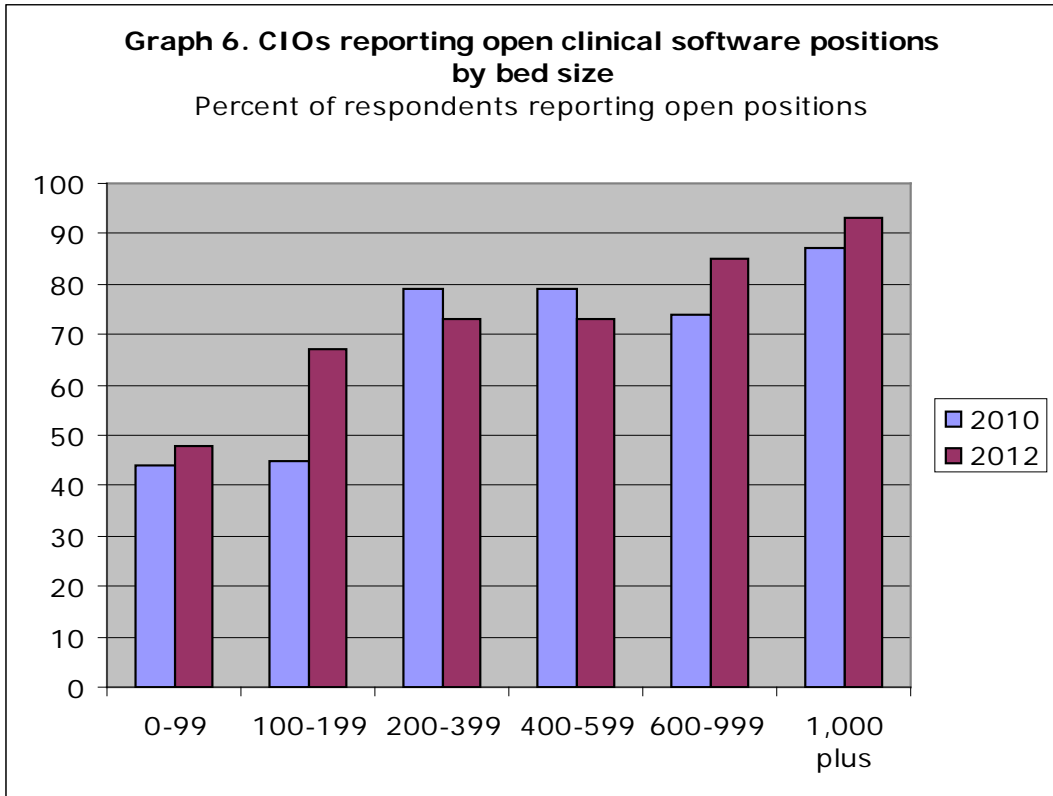
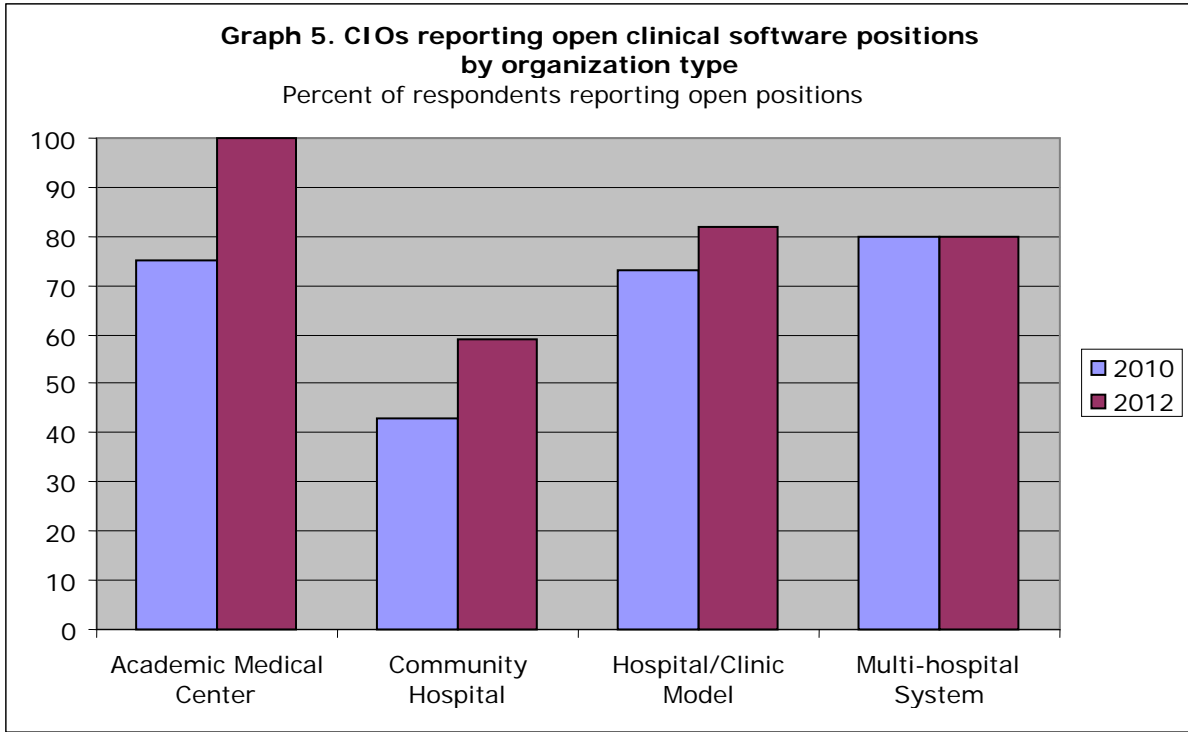
% of positions open	Academic Medical Center	Community Hospital	Hospital/Clinic Model	Multi-hospital System
No Open Positions	0	5	0	2
0 to 4 percent	35	52	36	35
5 to 9 percent	35	20	36	49
10 to 14 percent	24	14	18	8
15 to 19	0	4	0	6
20 percent or more	6	5	9	0

Table 3. IT Staff Shortages percent by bed size						
% of positions open	0-99 beds	100-199 beds	200-399 beds	400-599 beds	600-999 beds	1000+ beds
No open positions	4	5	3	3	0	0
0 to 4 percent	44	48	46	37	45	32
5 to 9 percent	9	19	33	47	25	36
10 to 14 percent	13	10	15	10	30	14
15 to 19 percent	9	5	3	0	0	18
20 percent or more	22	14	0	3	0	0

It is not necessarily surprising to see those facilities with fewer beds have higher rates of open FTE positions because each open position represents a larger share of their department's staff. However, this same paradigm means that every staff is likely responsible for more work than their counterparts in larger hospitals.

Highly Skilled IT Staff Still are in Demand

When respondents were asked about the kinds of skills most often in demand, 74 percent of healthcare CIOs said they most need clinical software implementation and support staff, which lead efforts to implement clinical systems such as electronic health records and computerized provider order entry. Graphs 5 and 6 show the percentages of respondents from different types of organizations and bed size groups that indicated openings among clinical software specialists. In terms of other types of job positions open, some 47 percent said they needed infrastructure staff, while 45 percent reported the need to fill business software implementation and support staff. Respondents were able to choose all answers that applied to their situations.



The Impact of Staff Shortages

CIOs responding to the CHIME survey continue to predict that their IT staffing gaps will affect their ability to complete projects and could impair their organizations' ability to qualify for stimulus funding. Some 71 percent of respondents said IT staff shortages could jeopardize an enterprise IT project, up from 62 percent who answered similarly in the 2010 survey.

When asked to assess the impact that IT staffing shortages could have on their organization's ability to receive federal stimulus funding, 13 percent said the shortages "definitely will affect" their chances, compared with 10 percent in 2010; 45 percent said staff shortages "possibly would affect" their chances of qualifying, compared with 51 percent in 2010; and 42 percent said their efforts to obtain stimulus funding wouldn't be impacted by the staffing shortage, compared with 39 percent in 2010.

By hospital type, respondents from hospital/clinic models and community hospitals predicted the most impact of staffing shortages on their chances to receive federal EHR incentive payments. Some 82 percent of respondents from hospital/clinic models, and 65 percent of respondents from community hospitals said staff shortages either would definitely or possibly affect their chances to receive stimulus funding. Some 55 percent of respondents from multihospital systems and 59 percent of respondents from academic medical centers responded similarly.

By bed size group, the biggest impact of staff shortages on receiving stimulus funding was reported by CIOs from smaller organizations. When asked if staff shortages would impair their organization's ability to receive stimulus funding, 75 percent of respondents from facilities with 100 to 199 beds, and 72 percent of respondents from organizations with 200 to 299 beds responded that shortages would definitely or possibly affect their chances. Percentages of respondents by bed size group included 99 beds or fewer, 57 percent; 400-599 beds, 44 percent; 600 to 999 beds, 50 percent; and 1,000 or more beds, 48 percent.

Strategies for Addressing Staff Shortages

In attempting to deal with staff shortages in the face of rising IT demand, CIOs reported using a variety of approaches (Table 4). In the 2012 survey, the leading strategy for coping with shortages was hiring third-party consultants, which was mentioned by fewer respondents than in the 2010 survey. Other top approaches mentioned by respondents included hiring staff within the organization and training them in IT; using a mix of strategies – typically more than one of the choices on the survey – to cope with shortages; or using recruiters to find and place qualified staff.

Table 4. Chief strategies for coping with IT staff shortages	
Hiring third-party consultants	28%
Hiring from within the organization and retraining	20%
Other (multiple strategies)	18%
Using recruiters to find and place qualified staff	15%
Depending on HIT vendors to provide implementation staff	8%
Other kinds of outsourcing	6%
Developing a pipeline of students by collaborating with local colleges and universities	2%

Strategies that were mentioned less frequently in the recent survey included using HIT vendors' implementation staff; using other kinds of outsourcing; and the stand-alone strategy of developing a pipeline of students by collaborating with local colleges and universities.

Most Respondents Aware of Federal Program, Hiring Still in Early Stages

In anticipation of IT staff shortages at healthcare organizations, federal policymakers launched a national workforce program with the hopes of producing 10,500 new health IT professionals annually.

As part of the HITECH Act, the Office of the National Coordinator for Health Information Technology (ONC) funded the Health IT Workforce Development Program to foster a highly skilled health IT workforce. Thus far, ONC has awarded \$116 million in funding to nearly 100 community colleges and universities. By July 2012, more than 8,000 graduates have been trained through these programs.

One of the goals of the 2012 survey was to determine what respondents know about ONC's Health IT Workforce Development Program. The survey found that ONC has been successful so far in promoting the training programs, with two out of every three respondents indicating they are aware of the programs. Hiring of graduates is still in the early stages with 12 percent of responding CIOs who knew of the programs reporting that they have hired graduates.

Most Valued Candidate Attributes

CIO respondents also clearly believe they need IT staff who have some familiarity and/or experience with healthcare in general and HIT applications in particular. In the 2012 staffing survey, CIOs were asked what competencies or areas of knowledge are generally lacking in candidates being considered for IT staff positions; respondents most frequently mentioned that candidates lacked knowledge of healthcare and related IT applications. Also rated high as a concern in hiring decisions were a lack of practical experience; lack of experience with an organization's system; and an inability to interact successfully with front-line users.

In addition, when CIOs were asked to name the most important attributes and competencies needed by health IT professionals, they most frequently named actual experience in a health IT shop, clinical informatics experience, and education in IT theory and practice in a real-world setting. At the other end of the spectrum, in rating the most important attribute or competency, respondents were least likely to mention coding knowledge, willingness to start "at the bottom" in an IT shop and education in IT theory and practice in a classroom setting.

While health IT still appears to be an area where qualified personnel are needed, it appears that it will take more time before graduates from the federal programs will significantly reduce current staff shortages.

Budget Increases for IT Staff Appear Minimal

In anticipation of budget increases for IT staffs in 2013, more than half of CIO respondents believe their budgets will grow next year to help address staff shortages. However, budget increases for staffing appear to be minimal, and CIOs may use these increases to keep current employees instead of hiring new ones.

Some 52 percent of respondents to the 2012 survey said their organizations will allocate more money to address IT staffing. However, 86 percent respondents said they expect budget increases of less than 10 percent for IT staffing 2013. Furthermore, some 41 percent of respondents said they would try to keep promising employees by paying them more, which could potentially absorb additional budget funds for IT staffing (Table 9).

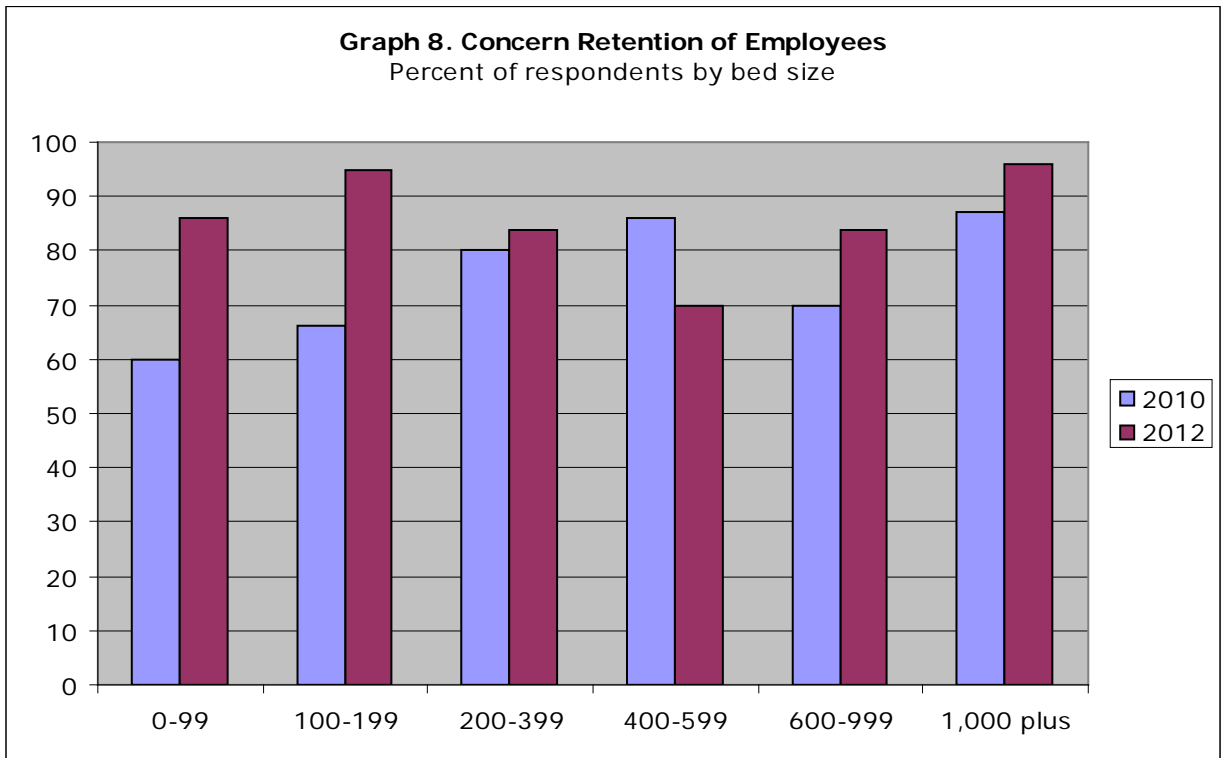
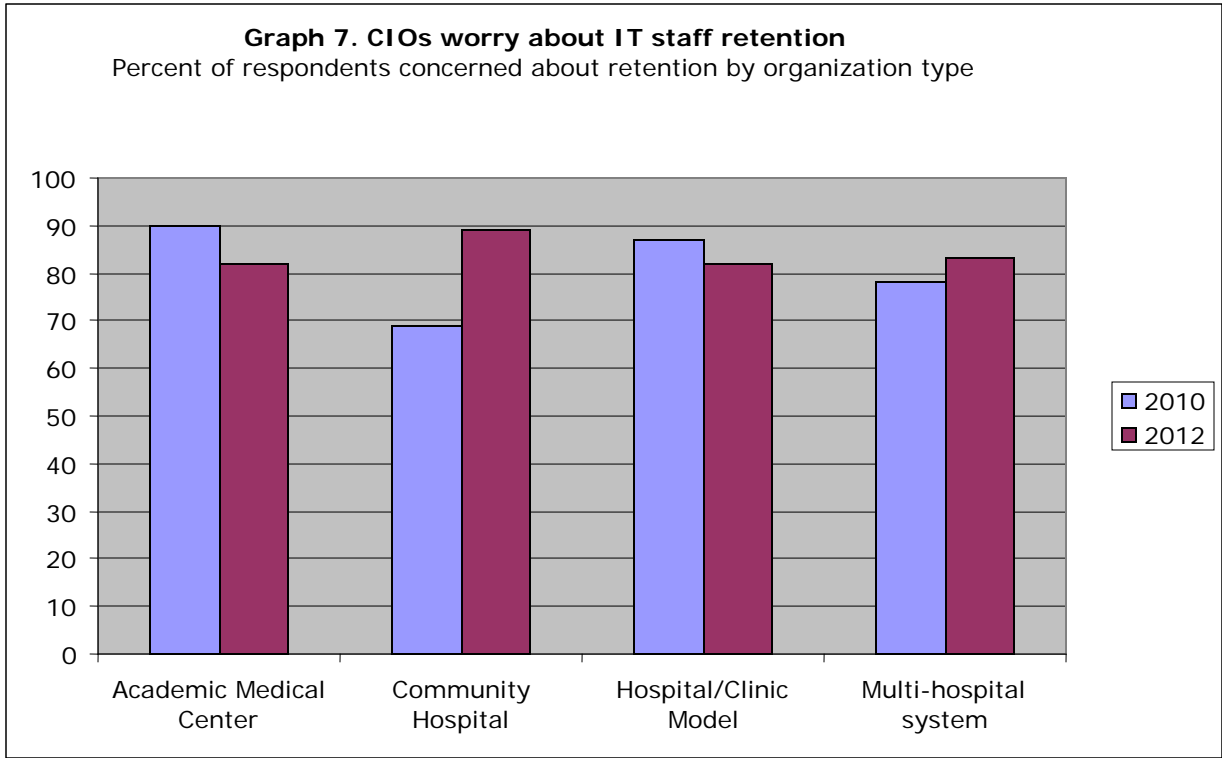
No increase in budget for IT staff	33
0 to 4 percent	33
5 to 9 percent	20
10 to 14 percent	10
15 to 19 percent	1
20 percent or more	2

Perhaps as important as finding qualified applicants to fill open positions, is keeping current staff. In 2010, staff retention was a significant concern with some 76 percent of respondents voicing their worry. In 2012, that number has jumped to 85 percent, signaling that demand for qualified employees is higher than ever with Meaningful Use, ICD-10, health information exchange and other initiatives in full swing.

Respondents to the 2012 survey identified a number of approaches they'll use to retain IT staff. In general, the most popular retention strategies reflect approaches that involve little or no additional cost to the organization, continuing a trend first identified in the 2010 survey. For example, the most frequently mentioned approaches involve employee recognition programs, mentioned by 85 survey respondents, and flexible schedules and telecommuting, being used by 84 respondents

However, the third most frequently mentioned strategies do involve additional expense to the organization – increasing pay for current IT staff and providing additional pay for staff education and development. Some 60 respondents said they were increasing pay for current IT staff to keep them on board while 54 respondents indicated they were providing additional funds toward staff education.

Worries about IT staff retention continue to vary by organization type and bed size, growing among almost all bed size groups (Graphs 7 and 8). CIOs at community hospitals, which are typically smaller and have less access to competitive markets for IT staff candidates, understandably are the most concerned about retaining IT staff, although more than 80 percent of the CIOs in each of the hospital type groups said they were concerned about retention.



About CHIME

The College of Healthcare Information Management Executives (CHIME) is an executive organization dedicated to serving CIOs and other senior healthcare IT leaders. With more than 1,400 members and over 87 healthcare IT vendors and professional services firms, CHIME provides a highly interactive, trusted environment enabling senior professional and industry leaders to collaborate; exchange best practices; address professional development needs; and advocate the effective use of information management to improve the health and healthcare in the communities they serve. For more information, please visit www.cio-chime.org