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Health Information Employer Needs Assessment

July 2013

Led by Bellevue College, the Health eWorkforce Consortium was formed to elevate Health Information Technology workforce development locally and nationally and provide career paths into this promising field for veterans and others. The nine-college consortium includes Bellevue College, Bellingham Technical College, Clark College, Clover Park Technical College, Northern Virginia Community College, Pierce College, Renton Technical College, Spokane Community College, and Whatcom Community College. The Health Information and Management Systems Society (HIMSS) is also a primary partner.

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About WHIIEC

The Washington Health Information Industry-Education Council (WHIIEC) is a volunteer forum for representatives of health information technology employers and educators to collaborate to align education offerings with the staffing needs of employers. It is convened and facilitated by the Health Care Policy Division Director of the Washington Health Care Authority in his role as the State Health Information Technology Coordinator. WHIIEC is staffed by a Staff Liaison and Program Manager within the Health Care Policy Division.

About the Employer Needs Assessment

The assessment was designed and implemented and the report written by Health Care Authority staff in collaboration with WHIIEC membership. It was partially supported by a grant from the United States Department of Labor. Content from the report may be quoted or reproduced with attribution. Please cite the report as Health Information Employer Needs Assessment, Washington Health Information Industry-Education Council (WHIIEC), 2013. For further information about the study please contact hcawhiiec@hca.wa.gov.

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Washington Health Information Industry-Education Council (WHIIEC)

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Executive Summary

The Washington Health Information Industry-Education Council (WHIIEC) is a volunteer forum bringing educators in health information technology (HIT) together with representatives of medical practices, hospitals, public health and other stakeholders to align educational offerings with the HIT staffing needs of employers. In early 2013 WHIIEC conducted an assessment of employers' anticipated needs for HIT human resources capacity in the areas of systems acquisition/update/implementation, systems administration/support and data analysis/reporting/decision support. The assessment also examined how employers planned to meet their HIT staffing needs and the levels of preparation required, as well as challenges to meeting their needs and retaining qualified resources.

Approximately 38% of respondents anticipated needing additional capacity in systems acquisition/upgrade/implementation, 29% in system administration/support and 22% in data analysis/reporting/decision support. On the other hand, 35%, 39% and 38% of respondents in each of those respective areas did not know whether they would need additional resources. Of those reporting an anticipated need, the great majority anticipated needing between 1 and 5 full time equivalents (FTE). The most commonly anticipated way of meeting the need for all but 2 skillsets was to develop existing employees rather than recruit new employees or contract with external consultants. In each of the 3 functional areas the preferred preparation was experience in the field, followed by a baccalaureate degree in a related field. The most commonly reported challenge to obtaining the needed capacity was the lack or cost of qualified outside consultants, followed by the lack or cost of qualified employment candidates. The most commonly experienced obstacle to retaining qualified talent was difficulty finding a good match for required skills, while current employees' lack of needed skills was the second most commonly reported.

Introduction/Context

As healthcare delivery and payment evolves toward value-based models—from early patient-centered medical homes through health homes and accountable care organizations to regional health alliances—it becomes increasingly dependent on effective deployment and use of electronic health records (EHR) and the data extracted from them. Care coordination, evidence-based care, effective surveillance/epidemiology and population-based strategies, as well as incentive payment to providers, all require ready access to usable EHR data. Health care providers, patients, payers, public health entities and policymakers increasingly rely on such data as a basic, routine decision-support tool and the ability to provide and/or access it is now fundamental to fulfilling their respective roles in the healthcare system.

This expanding role for health information has increased a need for talent across the range of skills that touch EHRs, from system acquisition and deployment through system management/administration and data extraction/analysis/reporting. Organizations that have not previously needed technical capacity in this area now have to acquire it either by upgrading existing employees, recruiting new employees or contracting with outside consultants. The required skillsets are specialized, involving familiarity with both technical and clinical variables as well as the unique regulatory environment of healthcare. Moreover, familiarity with an organization's specific proprietary system—either already purchased or a candidate for purchase—is a requisite for effective performance in this area.

To address this evolving need for talent, Washington postsecondary educational institutions have rapidly expanded and enriched their health IT offerings. This development has been spurred in part by targeted federal funding under the American Recovery and Reinvestment Act (ARRA) of 2009 and the Affordable Care Act (ACA) of 2011, in parallel with strengthening of other educational initiatives in healthcare workforce development. In early 2012 an inventory of Health IT educational resources available to Washington residents identified 54 programs/institutions; by mid-2013, the updated version of the inventory identified over 100 such programs

Not surprisingly, then, educators and employers have an interest in ensuring that their education/training offerings in HIT are aligned with employers' staffing needs and the needs of prospective students. This inquiry includes not only curriculum content but what potential students are most likely to benefit and what methods of instruction can best serve them. To address these questions the Washington Health Information Industry-Education Council (WHIIEC) conducted an Employer Needs Assessment in Spring 2013 among Washington health care providers—medical practices, hospitals and community/rural/tribal clinics—to capture an indication of what skillsets they anticipated needing, in what amount, and how they planned to

access them, as a resource in planning how the education community supports them and prospective students in meeting those needs.

WHIIEC took on this task as consistent with its role as a forum that brings together employers and educators, under the facilitation of the Washington Health Care Authority (HCA), to promote a health IT workforce geared to employer needs.

Method

Sample: The sample was self-selected from a universe composed generally from two sources: the memberships of the professional and industry associations represented on WHIIEC (see Attachment 1) and the listserv of Washington Medicaid providers. It is assumed that there was a certain amount, unknown, of overlap among the subsets of this universe (e.g. the Washington State Medical Association and Washington Medical Group Management Association), but absent overlap there was a potential for a universe of over 2000. Essentially all members of these organizations were invited to participate, so the study had the potential to be a census of the universe.

Distribution: Between March 14 and June 30 members of the universe were contacted by email by their respective associations or, in the case of contacts on the Medicaid listserv by the HCA communications unit, using customized variations of a standard message template (see Attachment 2) inviting participation, with a follow-up reminder message a week later. The message identified WHIIEC, explained the purpose of the assessment and directed the recipient to the Survey Monkey site for the instrument and identified a two-week window for response.

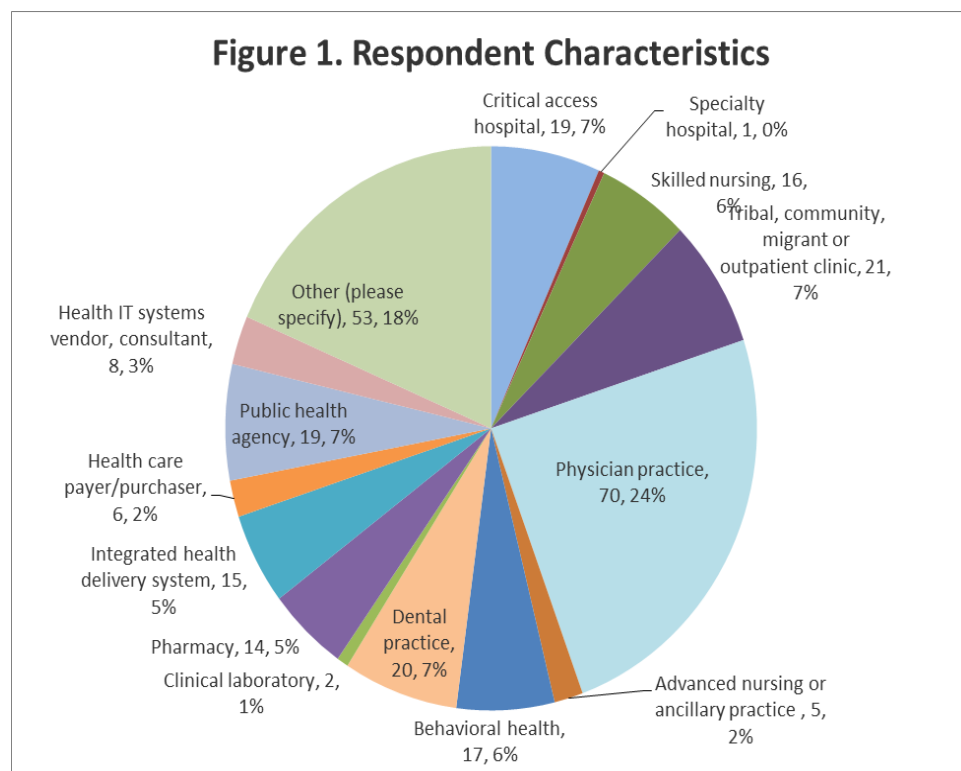
Instrument: The self-administered Survey Monkey instrument (see Attachment 3) included a total of 24 items, including filter questions, and took approximately 15 minutes to complete if the respondent answered all items. Items fell into four major categories:

- 1) Respondent organization demographics (organization type, location, independence v. affiliation);
- 2) Anticipated need for HIT talent in three functional areas: System Acquisition, Upgrade and Implementation; System Administration and Management; and Data Analysis, Reporting and Decision Support;
- 3) Skillsets needed in those 3 functional areas; and

4) Academic preparation needed in each of those functional areas. Additional questions asked for the respondent's perception of facilitators and barriers to meeting the organization's need for HIT talent.

Instrument items about the skillsets required in each of the aforementioned functional areas were loosely modeled on earlier studies, primarily those conducted by Texas State University and the California Community Colleges Chancellor's Office . The remaining items were drafted in-house by WHIEC staff in consultation with the Council, and tested among volunteer representatives of member organizations.

Results



Respondent Characteristics: A total of 297 responses was received. Ten responses were eliminated as possible duplicates, leaving a sample of 287. Of these, 47 indicated they do not use HIT or do not know how they use it. These latter two groups did not complete the remainder of the questionnaire, leaving an analysis sample of 240. Among the entire sample the largest group was physician practices (70, or 25%) followed by tribal/community/migrant clinics, (21, or 7%) and dental practices (20, or 7%). The “other” self-identified category (See

Attachment 4) accounted for 53 respondents or 19%, and included a diverse range of entities such as acute hospitals, staffing agencies, ambulance services and senior centers. Some respondents in this category also identified themselves as Federally Qualified Health Centers (FQHC), which probably could have identified themselves as tribal, community, migrant or other outpatient clinics. Respondents were predominantly independent operations (207, or 73%) as opposed to affiliated.

In terms of geographic distribution the largest concentration of all respondents was, not surprisingly, in the Seattle and Spokane areas, with 56 and 43 respondents respectively. These were followed by the Everett, Tacoma, Vancouver and Olympia areas with 30, 30, 22 and 16 respondents respectively. The Tri-Cities, Yakima and Wenatchee areas accounted for 15, 12 and 10 respondents respectively. The remainder were headquartered out of state, primarily pharmacy-related, ambulance services and systems vendors. It should be noted that each of the areas mentioned above included both urban and exurban/rural respondents; for example, respondents in the Everett area came from Friday Harbor (San Juan Island), Darrington and Deming/Glacier as well as Everett and Bellingham.

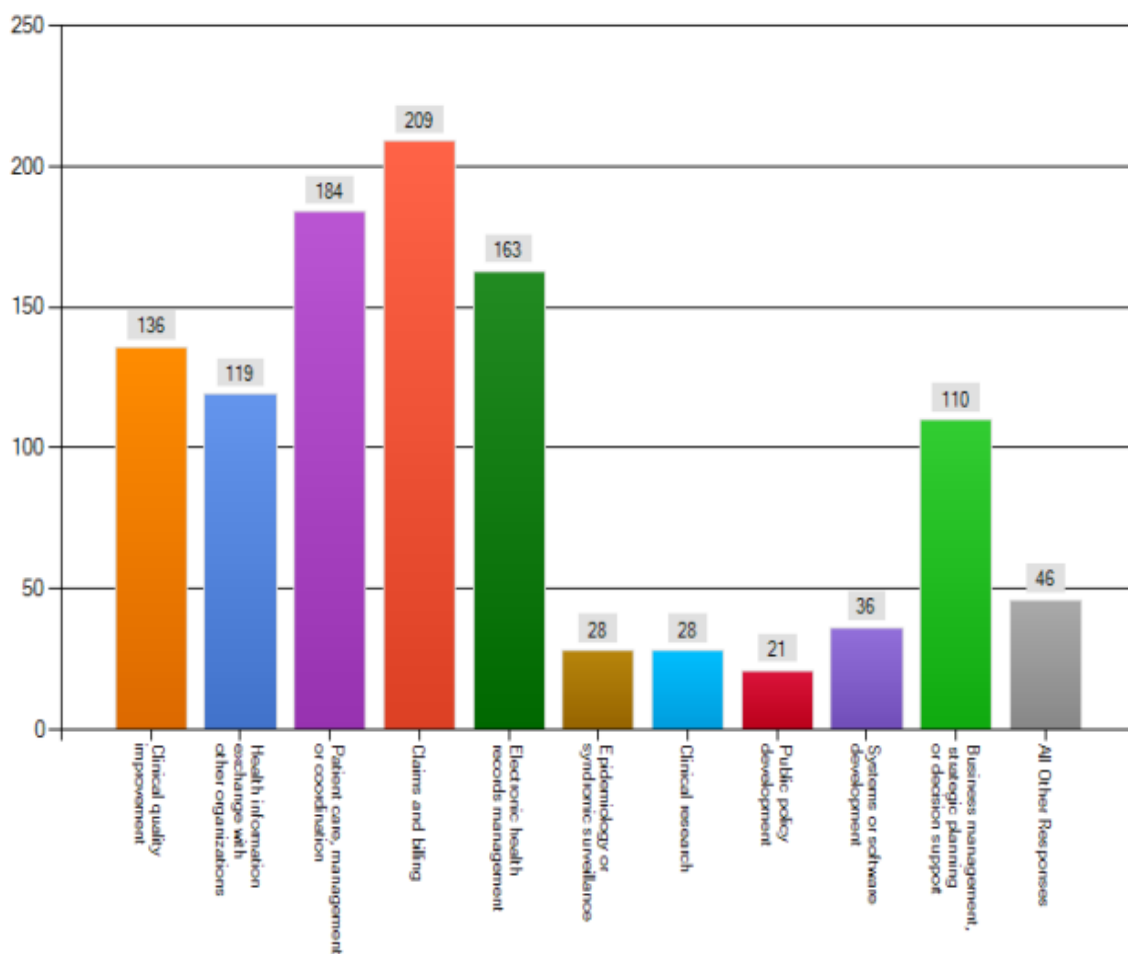
Given the self-selection of respondents and the mechanics of disseminating the invitation among the universe of potential respondents, it is difficult to generalize about how representative this population is among potential employers of HIT resources, a fact which has implications for the inferences that can be drawn from results. It is assumed that some populations, particularly health care purchasers/insurers are underrepresented due to the fact that their trade association does not participate in the Council and did not disseminate the invitation among its membership. The same may be true of public health agencies as well, although they were invited via the Washington Medicaid listserv.

Uses of HIT: The most common reported use of health information technology was claims and billing (209) followed by patient care/coordination/management (184), EHR management (163) and clinical quality management (136). All other named uses were selected by fewer than half the respondents. Twenty-nine respondents volunteered additional uses, ranging from government-mandated reporting to staff performance tracking and telemedicine. Twenty-one respondents, 7%, did not know how their organizations used HIT, which may be a function of who within the organization responded to the questionnaire.

While the use of HIT appears predominantly concentrated in the activities noted above, it is important to recognize the wide range of uses being made (See attachment 5). These uses touch a variety of essential functions within organizations, such as legal compliance, clinical quality management/improvement, business management/strategic planning, public policy

development, specialized applications like telemedicine and everyday management like patient scheduling/eligibility/referrals, provider credentialing and employee performance evaluation. The skillsets and depth of human resources needed to support HIT activity may vary with the organization, but those needs appear to be fundamental to its operations. Access to the human resources to meet those needs is essential, not a discretionary component of management.

Figure 2: Uses of HIT



Resources Needed: Respondents were asked whether they anticipated a need for more human resources in HIT within the next 3 years, in each of three different functional areas: System acquisition/upgrade/implementation, system administration/support and data analysis/reporting/decision support. Of the 229 who responded, 87--almost 39% --reported an anticipated need for additional resources in system acquisition/upgrade/implementation.

Figure 3a: Anticipated Need for Resources-- System Acquisition/Upgrade/Implementation

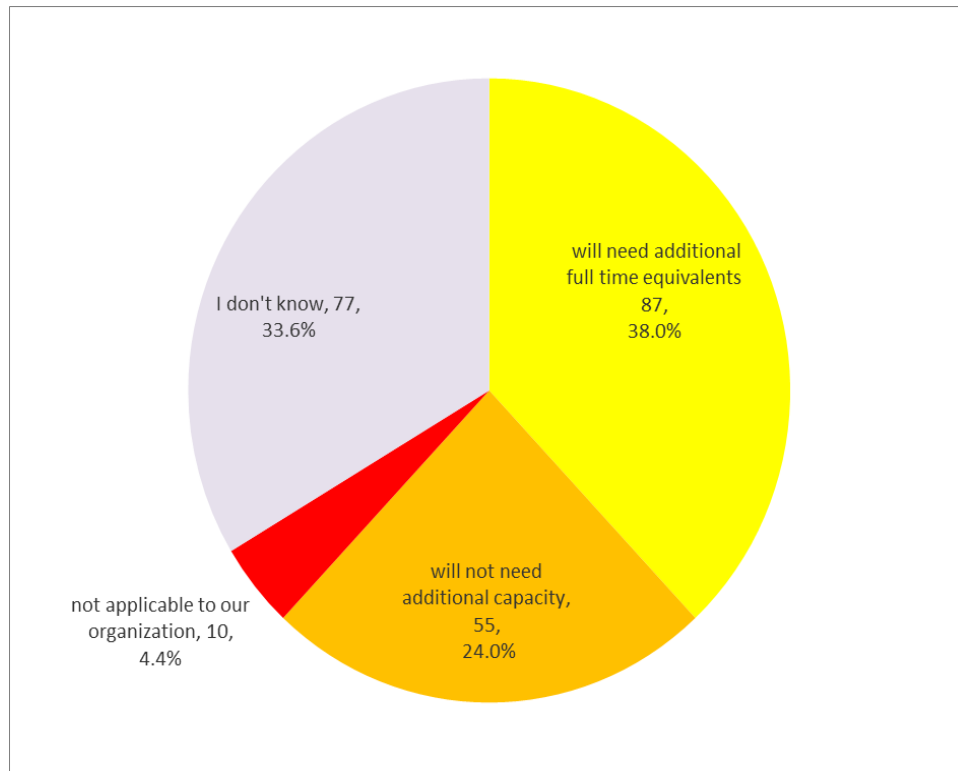


Figure 3b: Anticipated need for Resources: System Administration/Support

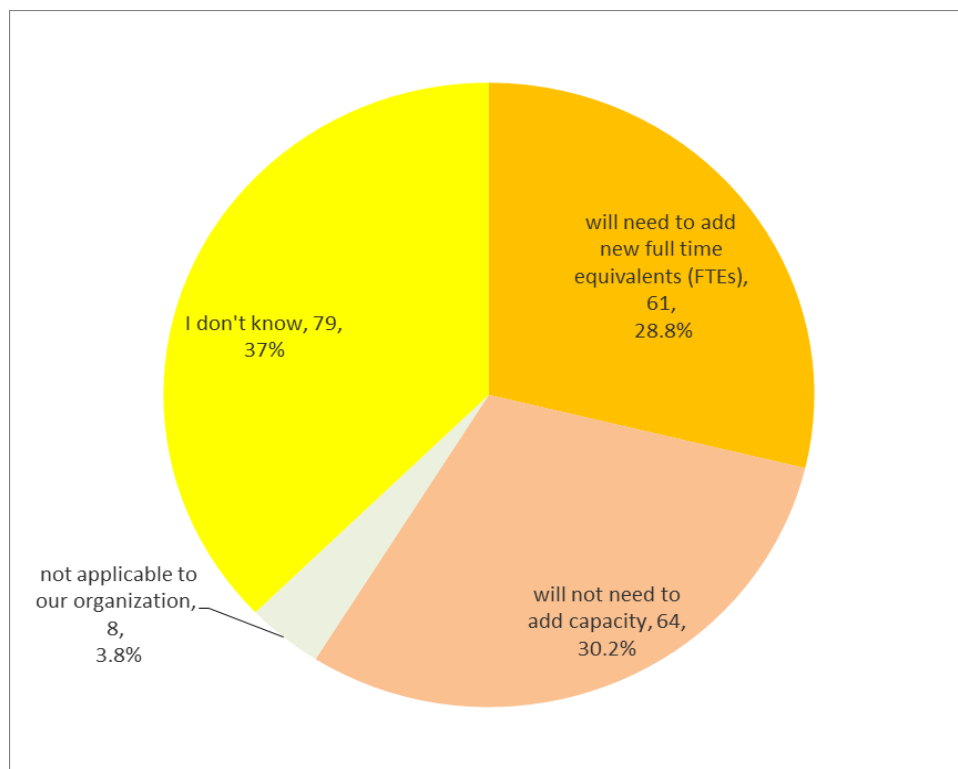
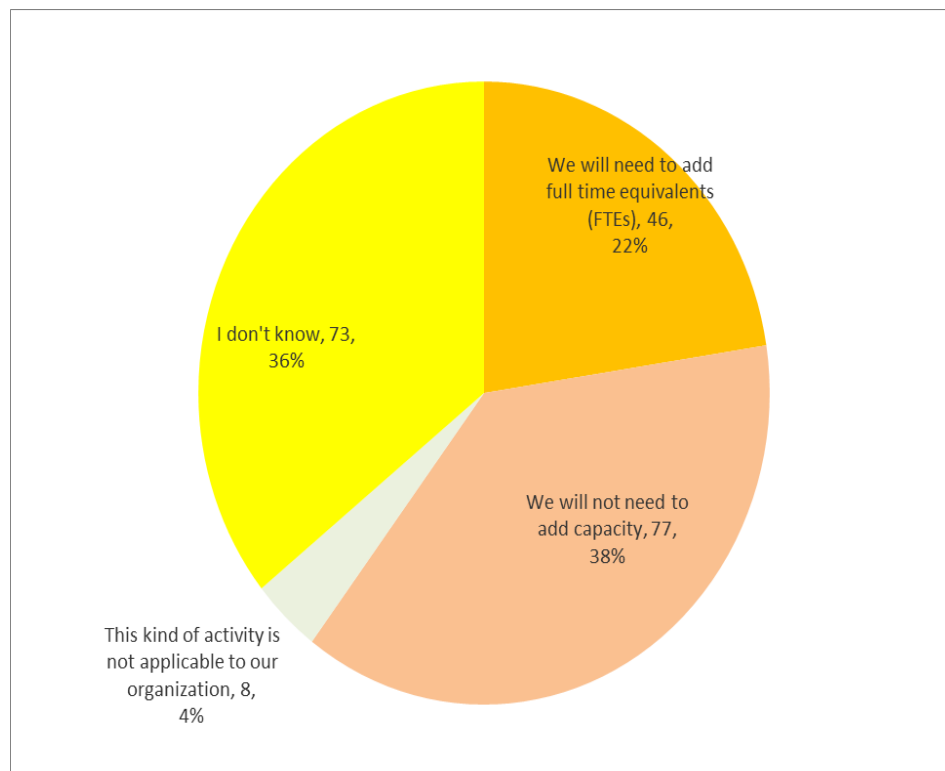


Figure 3c: Anticipated Need for Resources: Data Analysis/Reporting/Decision Support



Sixty-one (29%) out of 212 respondents anticipated need for additional resources in system administration/support, and 46 of 204 (23%) expect to need additional resources in data analysis/reporting/decision support. Conversely, 55 respondents (24) % reported that they did not anticipate needing additional resources in system acquisition/upgrade/implementation, as did 64 (32%) in system administration/support and 77 (40%) in data analysis/reporting/decision support. This pattern may reflect the stage in which most respondents found themselves with regard to HIT implementation and use, which is somewhat corroborated by their reported needs for specific skillsets as discussed below. It should also be noted that in each functional area between 8 and 10 respondents indicated they were not engaged in that activity.

Viewed more closely, there was variation among respondent types in anticipated need for additional resources: In the area of system acquisition/upgrade/implementation, for example, only 18 of 70 physician practices anticipated such need, while 1/3 (6 of 18) of critical access hospitals did, 8 of 19 public health agencies, 8 of 23 tribal/community/migrant health centers, 9 of 17 behavioral health providers and half (7 of 14) integrated health care systems anticipated such need. In systems administration/support, physician practices again were the lowest proportionally in anticipated need, 10 of 70. Five of 19 public health agencies anticipated a need, while 8 of 23 tribal/community/migrant health centers, 5 of 18 critical access hospitals, 8 of 17 behavioral health facilities and 7 of 14 integrated health systems anticipated a need for

additional resources. In the area of data analysis/reporting/decision support, 20 of 70 physician practices reported anticipating a need for additional resources, while 4 of 19 public health agencies, 8 of 23 tribal/community/migrant health centers, 6 of 18 critical access hospitals, 6 of 16 integrated health systems and 8 of 31 behavioral health facilities anticipated such a need.

A salient finding was that 77 (35% of respondents in this functional area) did not know whether they would need additional resources in systems acquisition/upgrade implementation, 79 (39%) in system administration and 73 (38%) in data analysis/reporting/decision support. This may result from the difficulty in anticipating needs 3 years ahead in a rapidly evolving environment like HIT (especially with regard to government directives) , a relatively low organizational priority for anticipating such needs, the individual respondent's lack of familiarity with organizational thinking in this area or a combination of these and/or other variables.

Among the respondents stating an anticipated need for additional resources, the overwhelming expected need was for between 1 and 5 FTEs in each of the functional areas, possibly reflecting the expectation that the same individuals would/could fulfill all the functional areas as the need arose. Note that the wording of these items did not specify the number of FTEs required *uniquely* for the functional area in question.

Figure 4a: FTEs Needed in Systems Acquisition/Upgrade/Implementation

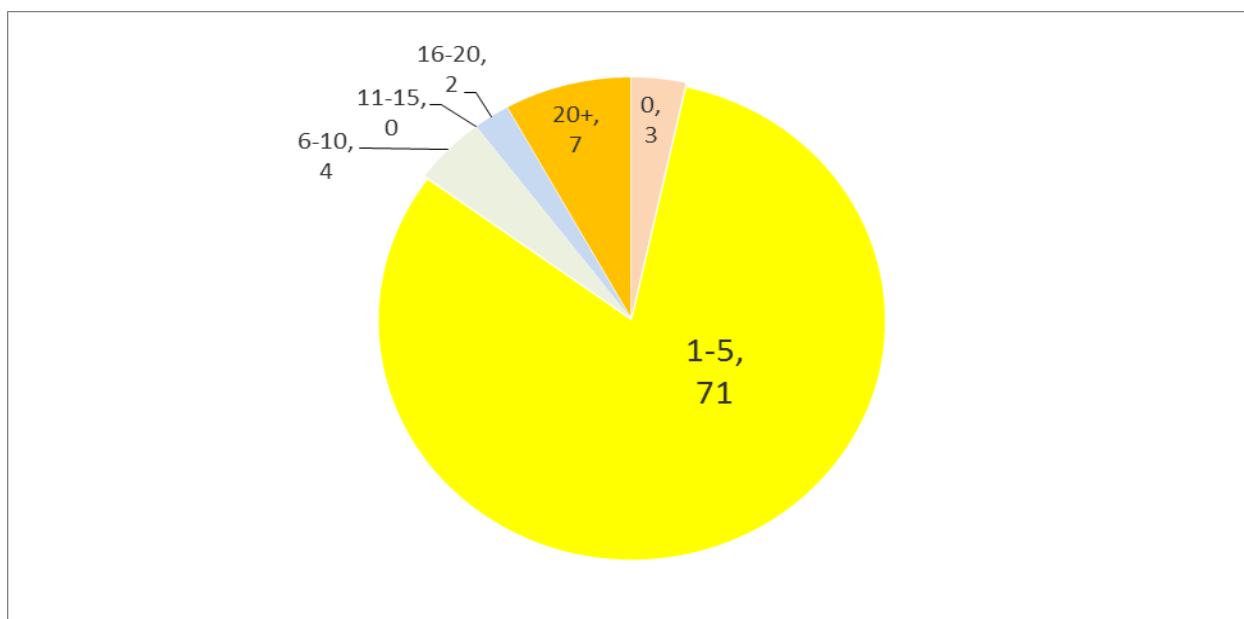


Figure 4b: FTEs Needed in System Administration/Support

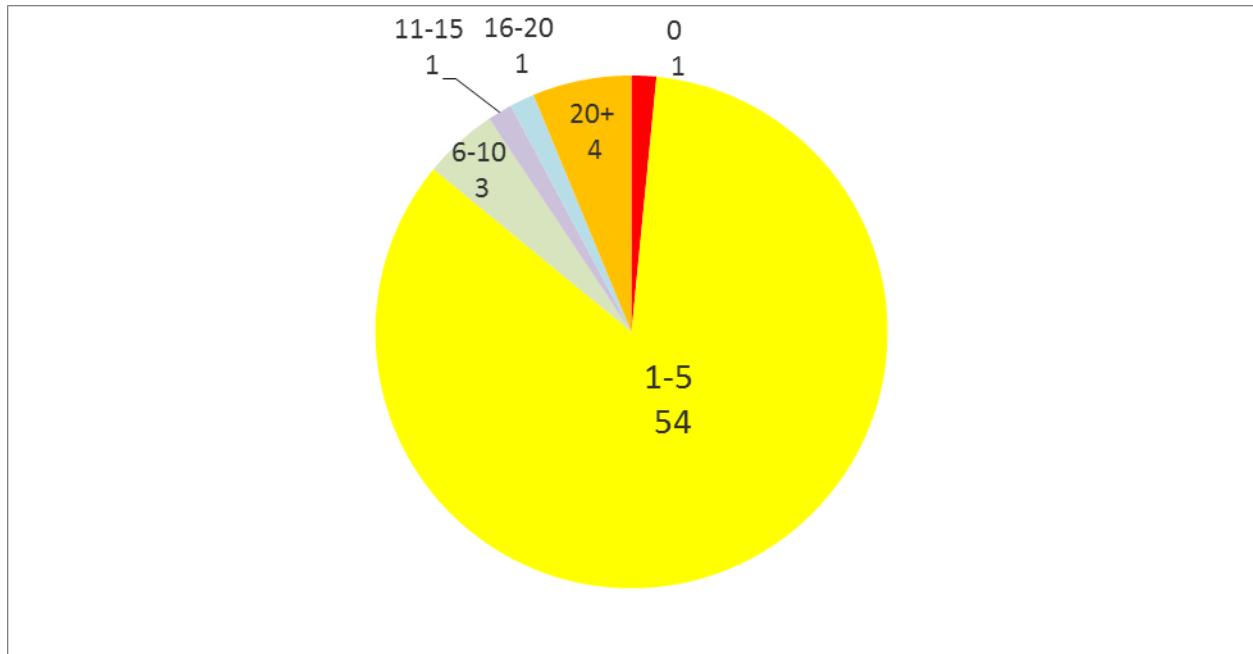
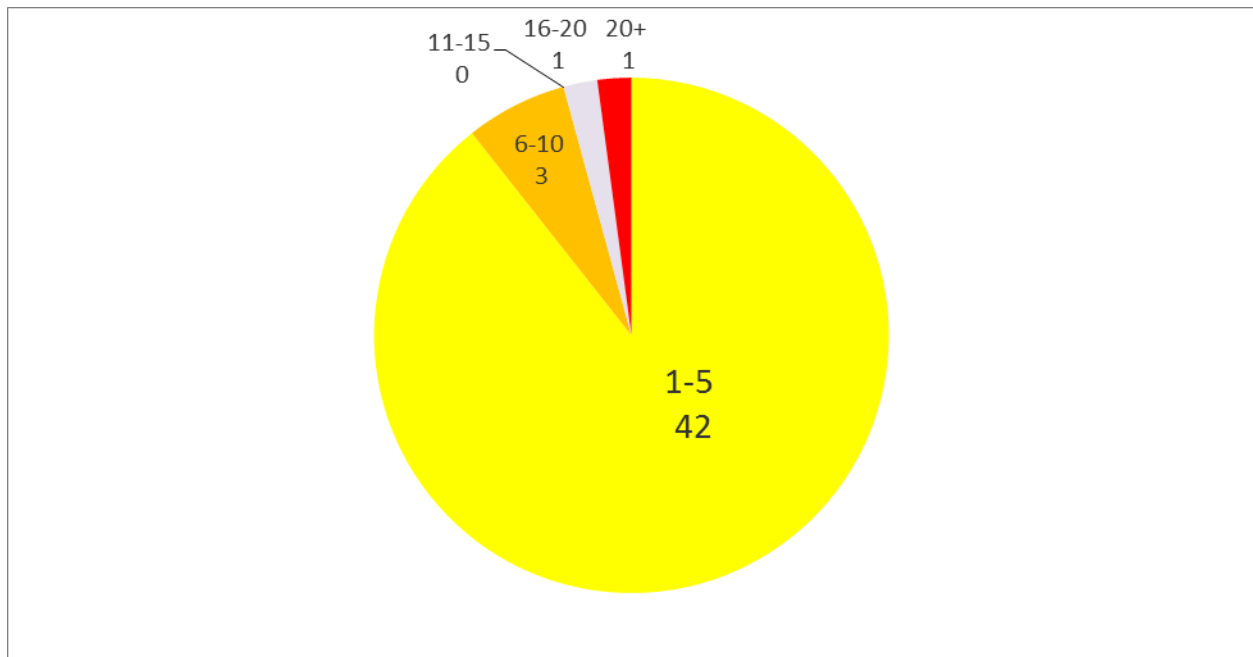


Figure 4c: FTEs Needed in Data Analysis/Reporting/Decision Support



Of the 87 respondents who anticipated the need for additional capacity in systems acquisition/upgrade/implementation, 71 anticipated needing between 1 and 5 FTEs, 4 anticipate needing 6-10, 2 anticipate 16-20 and 7 will need 20 or more. Of the latter group, not surprisingly two were integrated health care systems.

Of the 64 who anticipate needing additional capacity in system administration/support, 54 anticipate needing 1 to 5 FTEs, 3 expect to need 6-10, 1 anticipates 16-20 and 4 anticipate 20 or more. Of the latter, one is a systems vendor, one a public health agency and the other two are integrated healthcare systems.

Forty-seven respondents anticipate needing additional capacity in data capture/analysis/reporting, of whom 42 anticipate needing between 1 and 5 FTEs and one anticipates 16-20. The sole respondent anticipating a need for 20 or more is an integrated healthcare system.

Skillsets Needed: In each of the 3 functional areas respondents were asked how they planned to meet their indicated need for additional resources of specific relevant skillsets (See Attachment 6). For two skillsets—knowledge of IT system architecture enterprise architecture/design and ability to design IT databases and systems—the preferred strategy to meet the need was outsourcing/contracting with external consultants. For all other skillsets across all 3 functional areas the preferred method was to develop incumbent employees. For no skillset did a plurality of respondents plan to meet its need by recruiting new employees, and in fact one respondent indicated it was reducing IT staff to release resources for clinical activity. There was little discernible pattern to the distribution of the preferred method of meeting anticipated need across respondent type. For a list of additional skillsets in each functional area, see Attachment 6.

Developing Skillsets: For each of the 3 functional areas—system acquisition/upgrade/implementation, system administration/support and data analysis/reporting/decision support—respondents were asked the level of educational preparation likely to be required to fill their needs. Among those who responded, the most common response was “experience in the subject area”—26 out of 75 for system acquisition/upgrade/implementation, 24 of 55 for system administration/support and 14 of 42 for data analysis/reporting/decision support. Baccalaureate-level preparation was the second most common choice at 13, 12 and 12 for the three activity areas respectively. Associate degrees were selected by 6, 2 and 4 respondents for the three respective activity areas, while graduate programs were named by 3, 6 and 2 respectively. Certificate programs were selected by 5, 3 and 1 respondents in each of the respective functional areas. However, “don’t know”

was again prominent at 15, 8 and 9 respectively, perhaps reflecting the same uncertainties that drove responses to the question of anticipated need in each of those areas. There was little discernible pattern relating the preferred level of preparation to the preferred method of meeting the need (developing existing employees v. recruitment v. contracting with outside consultants), nor across respondent types. Note that in data analysis/reporting/decision support graduate programs were divided into 2 choices.

Figure 5a: Preferred Means of Accessing Skills in System Acquisition/Upgrade/Implementation

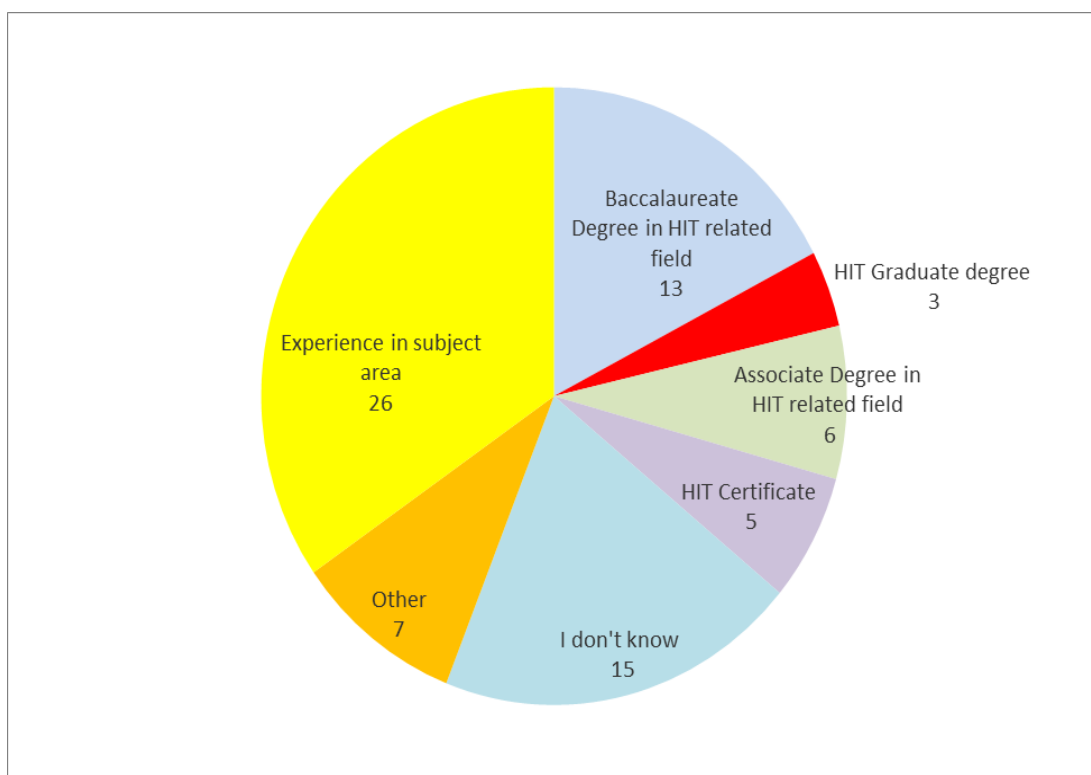


Figure 5b: Preferred Means of Accessing Skills in System Administration/Support

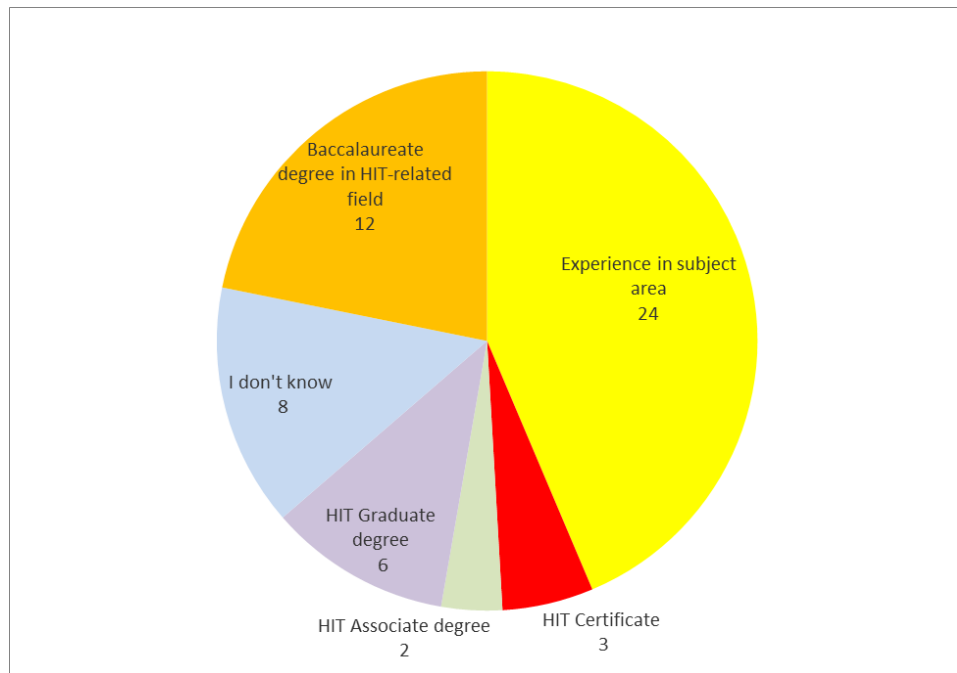
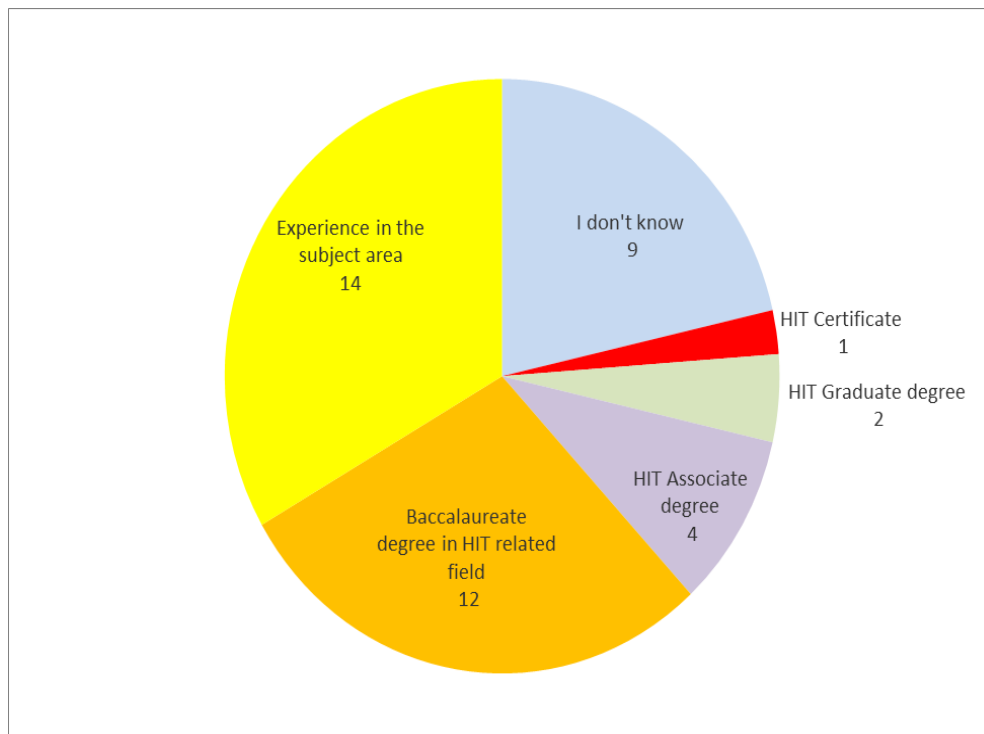
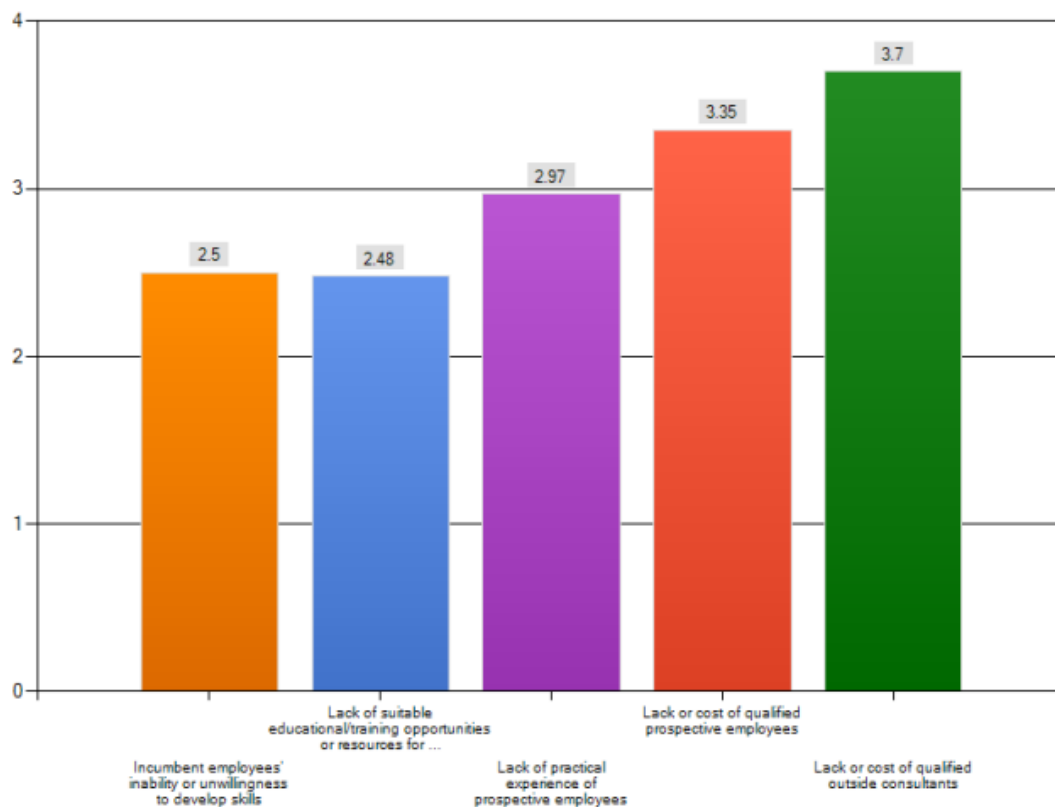


Figure 5c: Preferred Means of Accessing Skills in Data Analysis/Reporting/Decision Support



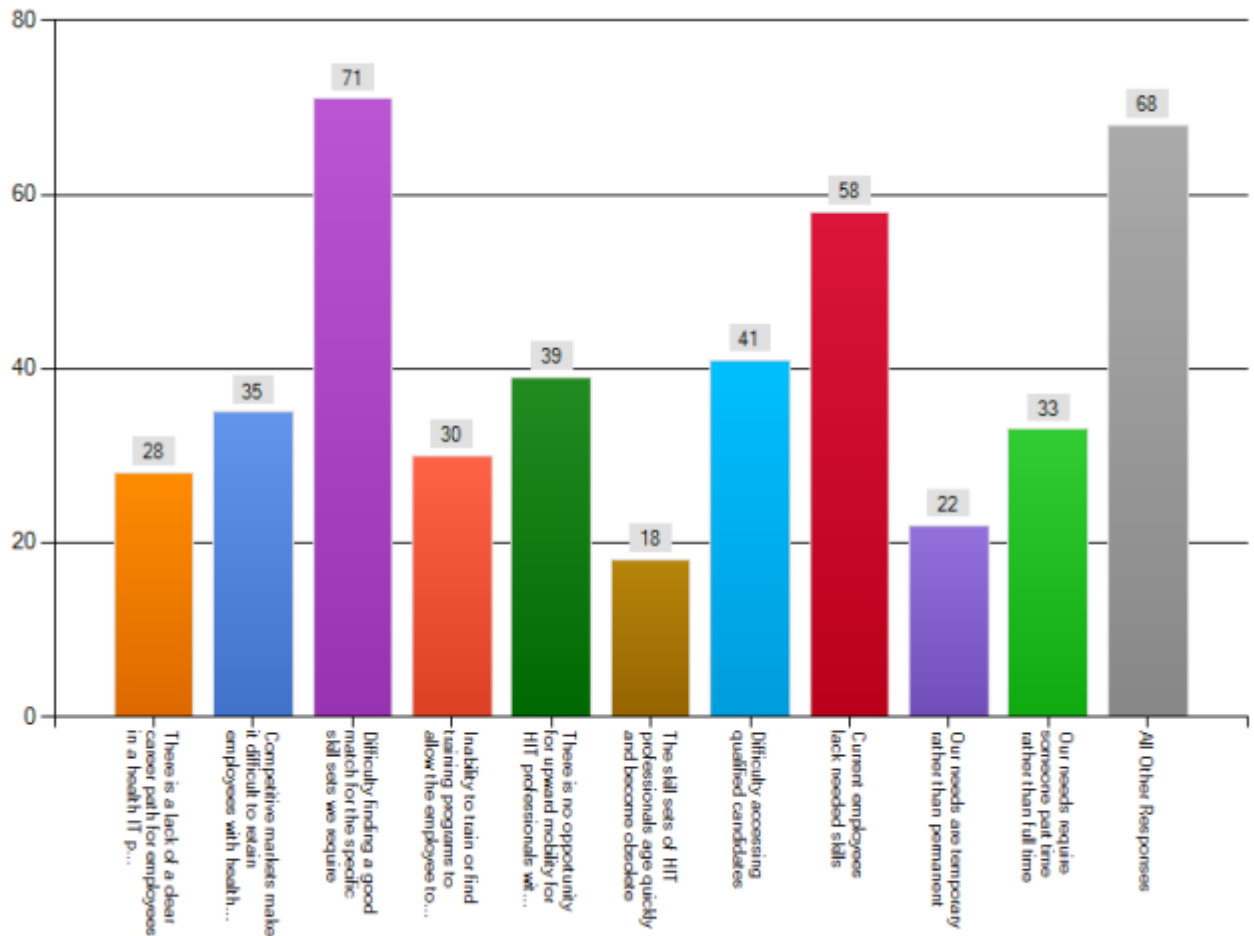
Challenges in Filling Resource Needs: Respondents were asked to identify factors which they expect to inhibit their ability to meet their requirements for HIT human resources over the next three years. The most frequently reported challenge was the cost or lack of qualified outside consultants, with a score of 3.71 on a five-point scale. The second-rated challenge was the lack or cost of qualified prospective employees (3.35) and third was prospective employees' lack of practical experience (2.97).

Figure 6: Challenges in Filling Resource Needs



Difficulties in Employee Retention: Respondents were asked whether they had experienced difficulty in HIT employee retention due to a variety of possible causes. The most commonly selected causes were difficulty finding a good match with the specific skillsets required (71 of 155 responses, or 42%), current employees' lack of necessary skills (58 responses, or 38%) and difficulty accessing qualified candidates (41 responses, or 26%). For a list of "other" responses volunteered, see Attachment 7.

Figure 7: Difficulties in Employee Retention



Discussion

This assessment is believed to be the first statewide effort to capture a sense of Washington’s need for professional resources in health IT over the next few years, and the role for postsecondary education in filling that need. It is not intended to be definitive but it offers some potentially useful guidance to planning for education in health IT workforce development, and for further investigation in this area.

Study Limitations/Caveat: The ability to draw inferences from the results of this assessment is subject to the limitations of the data it produced. Chief among these considerations are:

- **Sampling Issues:** Prospective respondents were invited by their respective professional or industrial societies to participate, so they were not only self-selected, but may or may not have been the individuals within their organizations best qualified to respond. It is also possible that some responses may be duplicative given that an individual may have received the invitation through more than one society of which s/he is a member, or more than one individual within an employer organization may have received invitations from more than one society. Since respondents were not required to identify themselves, duplicates could not be positively identified. However, an effort was made to identify apparent duplications of responses entered on a single computer.

One important consequence of this sampling method is the difficulty in establishing a denominator population of employers, so that inferences about the scale of need are not feasible. Given the potential for overlap, a sum of membership counts of the participating societies can exaggerate that population size, and the mix of respondents can skew the projected amount of additional resources needed per employer organization.

Finally, the size of the response samples for most items on the questionnaire do not lend themselves to parametric analysis, so only descriptive statistics can be extracted.

- **Timing:** Due to misunderstandings, conflicting demands on the societies that distributed the invitation and other variables, the assessment was in the field from mid-March through June, during which a number of events may have occurred to influence respondents' perceptions.
- **Scope of Inquiry:** To minimize barriers to participation, the scope of the assessment was limited to respondents' anticipated future needs in health IT personnel resources, how they expected to fill those needs and the level of candidates' academic preparation required to do so. Relevant additional information, outside that scope, could have touched on several topic areas such as the respondent's perception of the importance of health IT human resources relative to other management challenges, or his/her level of familiarity with the educational resources available to current and prospective employees.

Uses of Health IT: The range of respondents confirms the sense that the employment market in health IT covers an extremely broad scope, from the obvious health care providers—hospitals, clinics, integrated delivery systems—to the less obvious, such as staffing agencies,

school-based health services and senior centers. As one might expect, the range and scale of uses of health IT seem concentrated most in the clinical areas—hospitals and medical practices—where payer incentives are most prevalent, but respondents in all specified categories as well as almost all of those enunciated in the “other” category—were able to identify ways they used health IT. In their planning, both prospective employees and educators in the field would be well served to remember the range of organizational settings in which health IT is applied.

Perceived Need for Additional Resources: As noted above, in the area of systems acquisition/upgrade/implementation the anticipated need for larger increases in capacity (20 FTEs or more) was somewhat concentrated in public health agencies and integrated health systems. At the opposite extreme, the anticipated need for 1-5 FTEs appeared for a broader range of organizational types, particularly critical access hospitals, physician practices and tribal/community/rural clinics. This same pattern held largely true in the areas of system administration/support and data analysis/reporting/decision support.

Again as noted earlier, the “don’t know” response was the second most frequently selected in the areas of system acquisition/upgrade/implementation and system administration/support. A plurality of respondents also chose it in the area of data analysis/reporting/decision support. These results suggest an opportunity—possibly for the education community among others-- to assist employers in gauging their needs in this area, and focusing their attention on this need.

Meeting the Need: In all three areas of health IT activity—system acquisition/upgrade/implementation, system administration/support and data analysis/reporting/decision support—respondents across all employer types felt they would most likely meet their anticipated needs by developing existing employees, while outsourcing to consultants was the second most popular option. Not surprisingly physician practices, critical access hospitals and tribal/community/rural clinics, which may be relatively small enterprises, were heavily represented in this group. Among the smaller groups of those who expected to meet their needs by recruiting new employees, however, there was a less clear pattern of which employer types were represented.

Skills Preparation: A plurality of respondents expected to meet their needs in all but 2 of the identified skillsets, across all 3 activity areas, mainly by developing existing employees. Respondents also most frequently selected “experience in the subject area” as the most appropriate preparation to meet their need—25 out of 76 in the area of system acquisition/upgrade/implementation, 24 of 55 in system administration/support and 14 of 42 in data analysis/reporting/decision support. The nuances of this set of expectations may deserve further examination—if employers expect to acquire the additional capacity they need primarily by means of their existing employees’ acquiring more experience, those employees

need the ability and willingness to learn. As discussed below, however, employers question that willingness and ability.

A second observation about preparation is that formal education—specifically at the baccalaureate level—was seen as relatively more important in data analysis/reporting/decision support, the area most removed from the technical aspects of IT, than in the other two functional areas. Baccalaureate-level preparation was chosen by 12 of 42 respondents in this area, compared with 13 of 75 in system acquisition/upgrade/implementation and 12 of 55 in system administration support. This may suggest opportunities for more interdisciplinary curriculum development to strengthen the linkages between information science and quantitative methods/management science.

Challenges in Meeting Resource Needs: This area underscores two interrelated themes with potential implications for health IT education. The highest-ranked challenges were “lack or cost of qualified outside consultants” and “lack or cost of qualified prospective employees”, followed by “lack of practical experience of incumbent employees”.

As noted earlier, employers preferred developing existing employees as their means to acquire needed capacity in all 3 functional areas, and they preferred experience in the field as the mode of preparation.

If employers feel that they can’t access or can’t afford qualified new employees or consultants, and that their existing employees don’t have the necessary experience, this suggests the need/opportunity for educators to develop innovative means of offering training to those already in the health, IT or health IT workforce and to raise employer awareness of what educational offerings can contribute to incumbent employee career development and to the supply of new prospective employees.

Difficulties with Employee Retention: Respondents were asked about their experiences with challenges in keeping qualified health IT employees. Their predominant choices of response may suggest the possibility that they were focusing as much on recruitment as retention, because the most frequent responses were “Difficulty of finding a good match for the skills we require”, “Current employees lack needed skills” and “Difficulty accessing qualified candidates”. Nonetheless, these responses may also suggest opportunities for educators to improve their outreach to employers regarding the skills their programs can bring to existing employees and their graduates can offer when an employer needs new team members. If skills

acquisition—either by existing or by prospective new employees—is seen as a major obstacle to retention, appropriately targeted education offers an effective solution.

Summary Observations

Despite the limitations of this assessment, it provides some indications of employers' perceptions of their needs and the opportunities for alignment of educational resources with those needs

- *Employers see a clear future need for additional human resources in HIT.* A plurality of respondents (38%) see a need in the field of system acquisition/update/implementation while 29% anticipate a need in system administration/support and 23% in data analysis/reporting/decision support.
- *Many employers are unsure about their future HIT capacity needs* and how they will fill them. In each of the three functional areas a substantial minority of respondents did not know whether they would need additional resources within the next 3 years, and at least one in five who expected to need more resources did not know how they would obtain them.
- *Employers face a conundrum:* They seek to meet their needs by developing existing employees and perceive a lack of the needed skills as their greatest challenge in gaining the additional capacity they expect to need. However, they do not feel there are adequate suitable education and training resources available for those employees.
- *Employers do not see the education system as their primary resource to fill their needs.* They value experience more than formal education/training for two of the three functional areas they were asked to consider.
- *Employers do not see recruiting new employees as the primary means of meeting their needs.* For each of the skillsets identified, the preferred approach was to develop existing employees or outsource to consultants. This preference may limit their options in accessing the resources they need, unless ways are found to identify strong candidates within an organization and facilitate their development.
- *The challenges to acquiring and retaining needed personnel go beyond the immediate need to access technical skills.* Issues like the lack of advancement opportunities or a defined career ladder, the cost of competing with others for access to qualified

consultants or job candidates, rapid obsolescence of skills, mobility of talent and other variables suggest that meeting needs will require a more comprehensive approach than traditional employee development, recruitment or consultation contracting.

Collectively these observations point to one dominant conclusion: Success in developing the HIT workforce Washington needs will require collaboration between employers and educators. Employers will have to tap the resources of the academic community to access the skillsets they need, either to upgrade existing employees or attract new employees or consultants. They will also have to provide the work environment that supports skills development, through flexibility in scheduling/work arrangements, funding educational advancement of employees, hosting internships and developing career ladders. Educators must develop flexible models of instruction to accommodate working students, the specialized skillset needs of employers and the variety of backgrounds learners will bring to the educational setting. Most importantly, employers and educators must develop and promote the dialogue that will inform effective alignment of learning with the employer's and student's needs.

Opportunities for Further Investigation

This high-level assessment raises at least as many questions as it seeks to answer. In particular, it suggests the value of looking more closely at questions such as:

- How does knowing and planning for health IT human resource needs fit in employers' priorities?
- How much do employers know about their needs within a planning horizon that's realistic in terms of training/education/employee development lead time?
- How much do employers know about the relative cost effectiveness of recruiting new health IT employees, developing incumbents or outsourcing contracts?
- How familiar are employers with the various educational offerings for existing or prospective employees?
- How willing are employers to facilitate employee development in health IT, e.g. flexible work schedules, educational subsidies, hosting internships, etc?

This is by no means an exhaustive list but it indicates some areas in which further investigation may be useful. Such investigation should focus on finding ways employers and educators can collaborate to develop the expanded resource pool that will be needed to fulfill the promise of health information technology.

Attachments

1. Organizations Distributing Invitation to Participate
2. Templates for Invitation and Followup Messages
3. Survey Instrument
4. Identified “Other” Respondents
5. Identified “Other” Uses of HIT
6. Identified “Other” Skillsets
 - System Acquisition/Upgrade/Implementation
 - System Administration/Support
 - Data Analysis/Reporting/Decision Support
7. Identified “Other” Difficulties in HIT Employee Retention

Attachment 1: Organizations Distributing Invitation to Participate

Indian Health Commission-Washington

Health Information Management Systems Society-Washington

Medical Group Management Association-Washington

Washington Association of Community and Migrant Health Centers*

Washington State Hospital Association

Washington State Medical Association

*Did not distribute to general membership but invited specific members to participate

Attachment 2: Templates for Invitation and Followup Messages

(Date)

Re: Health Information Technology
Solicitation of Information for
Washington Health Information Industry Education Council (WHIIEC)

Dear Member:

I am contacting you on behalf of (organization), which participates in the Washington Health Information Industry-Education Council (WHIIEC), seeking your guidance as an industry professional in Health Information Technology.

WHIIEC is an independent forum convened by the Health Care Authority as a coordinated and collaborative venue for Washington state employers in relation to education and training programs in Health Information Technology (HIT). Its purpose is to best prepare and place learners in meeting the evolving needs for professional and technical HIT staff. As the competition for qualified HIT personnel intensifies, there is an increasing premium on being able to match candidate skills with employer needs.

Toward that goal, we are seeking guidance from key individuals in health care entities, *as employers*, so that the WHIIEC can better understand how educational and professional development programs can best support HIT staffing needs in our state. If you'd like additional information on WHIIEC please visit the WHIIEC web page to learn more:

www.healthit.wa.gov/whiiec.html.

Request: To understand better the staffing needs of HIT employers, we'd greatly appreciate your taking about 8-10 minutes to participate in the employer needs assessment at <http://surveymonkey.com/s/BELLEVEUEWAHIT2> by **Friday, May 31, 2013**.. Your input will be valuable in matching educational offerings with the needs of Washington HIT employers like yourself.

If you have any questions about the assessment or would like additional information about WHIIEC, please contact WHIIEC project manager Steve Lewis at steve.lewis@hca.wa.gov or by phone at 360.725.0862.

Alternative Key Contact Person

If there is another person in your organization who would be a more appropriate key contact for this purpose, please forward this communication to that individual or individuals. So that we are kept apprised, please copy Mr. Lewis at the email address noted above when forwarding this letter to that other party.

Also, you may receive this request from more than one source. In that event, please respond only once. Survey Monkey automatically blocks a second response from the same computer.

Thank you very much for considering this request. Through your feedback, we believe we can achieve a mutually beneficial outcome of preparing a qualified HIT labor force that will meet the employment needs of Washington's health care organizations.

Sincerely,

(Name)

(Organizational Title)

Subject: WHIIEC Employer Needs Assessment

(date)

Dear Member,

About a week ago I contacted you on behalf of (organization) the Washington Health Information Industry-Education Council (WHIIEC), in which we participate. I encouraged you to go online and complete the Employer Needs Assessment at <http://surveymonkey.com/s/BELLEVEUWAHIT2> The questionnaire is intended to help align the health IT educational programs in the state with the staffing needs of employers like yourself.

If you haven't done so yet, please go to the above link and complete the questionnaire by **Friday, April 5**. If you have any questions you can contact the project coordinator, Steve Lewis at 360.725.0862 or steve.lewis@hca.wa.gov.

Many thanks for your help in this effort.

(name)

(organization title)

Health IT Assessment

Introduction

Thank you for agreeing to complete this brief survey about your health information technology (health IT) staffing needs for the Washington Health Information Industry-Education Council (WHIIEC). WHIIEC is a forum for Health Information Technology employers and education programs to align career development offerings in the state with the needs of employers. Your responses to these questions will help substantially in that effort.

PLEASE NOTE: You may receive this request from more than one source. If that occurs, please respond only once. Thank you in advance for your help.

1. Which of the following best describes your organization (Please choose only one)

- ☐ Critical access hospital
- ☐ Specialty or rehabilitation hospital
- ☐ Skilled nursing, nursing home, home health care or long term facility
- ☐ Tribal, community, migrant or outpatient clinic
- ☐ Physician practice
- ☐ Advanced nursing or ancillary practice (eg physical, occupational therapy, chiropractic)
- ☐ Behavioral health clinical practice
- ☐ Dental practice
- ☐ Clinical laboratory
- ☐ Pharmacy
- ☐ Integrated health delivery system
- ☐ Health care payer/purchaser, including administrative service organizations
- ☐ Public health agency
- ☐ Health IT systems vendor, consultant, value added contractor
- ☐ Other (please specify)

2. Is your organization (Please choose only one)

- ☐ Independent
- ☐ Affiliated with a system, network or other grouping

Health IT Assessment

3. What is the zip code of your main operational location? (Please enter a 5 digit zip code eg: 98011)

4. How does your organization use Health IT? (Please choose all that apply. You must choose at least one.)

- ☐ Clinical quality improvement
- ☐ Health information exchange with other organizations
- ☐ Patient care, management or coordination
- ☐ Claims and billing
- ☐ Electronic health records management
- ☐ Epidemiology or syndromic surveillance
- ☐ Clinical research
- ☐ Public policy development
- ☐ Systems or software development
- ☐ Business management, strategic planning or decision support
- ☐ We do not use health IT.
- ☐ I don't know

5. Are there other ways that your organization used Health IT (not specified in Question 4)? You may list up to 3 ways. You may also skip this question.

1.
2.
3.

6. In the next three years, will your organization likely need additional capacity in *health IT system acquisition, upgrade or implementation*?

- ☐ We will need additional full time equivalents (FTE)
- ☐ We will not need additional capacity
- ☐ This kind of activity is not applicable to our organization
- ☐ I don't know

Health IT Assessment

7. How many full time equivalents (FTE) do you anticipate you will need in *health IT system acquisition, upgrade or implementation*?

- ☐ 0
- ☐ 1-5
- ☐ 6-10
- ☐ 11-15
- ☐ 16-20
- ☐ 20+

8. How will your organization most likely acquire each of the following skills needed in *health IT system acquisition, upgrade or implementation*? (Please choose the best answer in each row)

	Develop incumbent employees	Recruit new employees	Outsource/contract with consultants	Not applicable
Knowledge of IT products, familiarity with vendors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Knowledge of federal Health IT directives, especially meaningful use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Knowledge of HIT enterprise architecture/design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding which HIT systems can produce the data needed for your purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Are there are other skill sets in the area of *Health IT system acquisition, upgrade or implementation* for which you will need additional capacity in the next three years,? Please list up to 3. (You may skip this question)

1.
2.
3.

Health IT Assessment

10. What level of educational preparation will most of your Health IT personnel likely need to perform successfully in *Health IT system acquisition, upgrade or implementation*?

Please choose one answer.

- ☐ Experience in the subject area
- ☐ Certificate in Health IT
- ☐ Associate Degree in Health IT related field
- ☐ Baccalaureate Degree in Health IT related field
- ☐ Graduate degree in health IT
- ☐ I don't know
- ☐ Other (please specify)

11. In the next three years, will your organization likely need additional capacity in *health IT system administration and support*?

- ☐ We will need to add new full time equivalents (FTEs)
- ☐ We will not need to add capacity
- ☐ This kind of activity is not applicable to our organization
- ☐ I don't know

12. How many FTEs do you anticipate you will need in *health IT system administration and support*?

- ☐ 0
- ☐ 1-5
- ☐ 6-10
- ☐ 11-15
- ☐ 16-20
- ☐ 20+

Health IT Assessment

13. How will your organization most likely acquire each of the following skills needed in *Health IT system administration and support*? (Please choose the best answer in each row)

	Develop incumbent employees	Recruit new employees	Outsource/contract with consultants	Not applicable
Knowledge of HIPAA and state privacy regulations/requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project management, such as initiating, planning, executing and monitoring EHR/HIT-related projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Management skills to direct technical and nontechnical staff regarding EHR/HIT systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strategic thinking related to EHR/HIT implementation/management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to interact effectively with senior management and above in HIT governance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to design HIT databases and systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership in redesigning workflow processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding of how health information should flow in your organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Are there are other skill sets in the area of *Health IT system administration and support* for which you will need additional capacity in the next three years,? Please list up to 3. (You may skip this question)

1.
2.
3.

Health IT Assessment

15. What level of educational preparation will most of your HIT personnel need to perform successfully in *Health IT system administration and support*? Please choose one answer.

- ☐ Graduate degree in HIT
- ☐ Certificate in Health IT
- ☐ Associate degree in Health IT-related field
- ☐ Baccalaureate degree in Health IT-related field
- ☐ Graduate degree in Health IT
- ☐ Experience in subject area
- ☐ I don't know
- ☐ Other (please specify)

16. In the next three years, will your organization likely need additional capacity in *data analysis/reporting/decision support*?

- ☐ We will need to add full time equivalents (FTEs)
- ☐ We will not need to add capacity
- ☐ This kind of activity is not applicable to our organization
- ☐ I don't know

17. How many FTEs do you anticipate you will need in *data analysis/reporting/decision support*?

- ☐ 0
- ☐ 1-5
- ☐ 6-10
- ☐ 11-15
- ☐ 16-20
- ☐ 20+

Health IT Assessment

18. How will your organization most likely acquire each of the following skills needed in data analysis/reporting/decision support? (Please choose the best answer in each row)

	Develop incumbent employees	Recruit new employees	Outsource/contract with consultants	Not applicable
Advanced clinical knowledge and understanding of uses of Health IT for patient management/education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data management, data mining/report creation, and data sharing skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to use analytics/data from Health IT systems for strategic planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to design HIT databases and systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. Are there are other skill sets in the area of data management/analysis/decision support for which you will need additional capacity in the next three years,? Please list up to 3. (You may skip this question)

1.
2.
3.

20. What level of educational preparation will most of your HIT personnel likely need to perform successfully in data management/analysis/decision support? (Please choose one answer)

- ☐ Graduate degree in HIT
- ☐ Certificate in Health IT
- ☐ Associate degree in Health IT related field
- ☐ Baccalaureate degree in Health IT related field
- ☐ Graduate degree in Health IT
- ☐ Experience in the subject area
- ☐ I don't know
- ☐ Other (please specify)

Health IT Assessment

21. What do you expect to be your challenges in meeting your Health IT skills needs in the next three years? Please rate the following on a scale of 5 points by their difficulty, with 1 as the least difficult and 5 as the most difficult. (After your first choice, the system automatically assigns a ranking. Please use the pull down to change that ranking. It will autosort by ranking after each choice)

Incumbent employees' inability or unwillingness to develop skills

Lack of suitable educational/training opportunities or resources for incumbent employees

Lack of practical experience of prospective employees

Lack or cost of qualified prospective employees

Lack or cost of qualified outside consultants

22. Have you experienced any of the following difficulties with HIT employee retention? (Please choose all that apply; you must choose at least one)

- ☐ There is a lack of a clear career path for employees in a health IT position
- ☐ Competitive markets make it difficult to retain employees with health IT skills
- ☐ Difficulty finding a good match for the specific skill sets we require
- ☐ Inability to train or find training programs to allow the employee to advance through the organization
- ☐ There is no opportunity for upward mobility for HIT professionals within the organization
- ☐ The skill sets of HIT professionals age quickly and become obsolete
- ☐ Difficulty accessing qualified candidates
- ☐ Current employees lack needed skills
- ☐ Our needs are temporary rather than permanent
- ☐ Our needs require someone part time rather than full time
- ☐ Health IT professionals seek other employment when they become aware of the challenges within our organization.
- ☐ Our organization has had no difficulties retaining employees in health IT positions
- ☐ Other (please specify)

23. If you'd like to see the results of this survey, or are interested in further dialogue with WHIEC on HIT staffing issues, please provide your email address.

Health IT Assessment

24. Thank you for participating in this survey. If you have any additional comments or feedback that you would like to share, please let us know.

Attachment 4: Self-Identified “Other” Respondents

Nurse Midwifery Practice

Staffing Agency

Acute Hospital

Mobile Dental Unit

WA Department of Health

DME Vendor

Counseling/Social Services

Community Service Agency

Care Management Program

Home Health

Hospice

Area Agency on Aging

Department of Corrections/Mental Health

County CD/Mental Health Agency

Podiatry Practice

Ambulance

Long Term Care Authorizer

Speech Therapy Practice

Occupational Therapy Practice

Optometric Practice

Long Term Care Facility

School-based Services

Attachment 5: Identified “Other” Uses of HIT

Medical Device Management	Laboratory Tracking
Social Security Portal	Claims Reconciliation
Eligibility	Exporting Services to DBHR TARGET
Patient Scheduling	System Behavioral Healthcare
Quality/Safety Reporting	Practice Management
System Communications	Enterprise Data Warehouse
Prior Authorization	File Management
Education	
Rural Telemedicine	
Medications Management	
Performance Management	
Clinician Credentialing	
Mandatory Encounter Reporting	
Paperless Charts	
Referrals	
Tracking Client Services	
Videoconferencing	
Pharmacy	
Email Encryption	
Compliance/Privacy Monitoring	
Transmitting x-rays	
Virtual Lifetime Record	

Attachment 6: Identified “Other” Skillsets Desired

System Acquisition/Upgrade/Implementation

Predictive Analysis

Information Security

IT Support for Telemedicine

Transition of Current Records to New Systems

Experience in Systemwide Golive

Standard Transaction Formats

Interfacing

Software Development

Development of Community-wide Systems

Reporting

Electronic Health Records

Database Administration

Integration Across Systems

Customer Service

Clinical Decision Support

Business Intelligence Analysis

Telemedicine Educator/Trainer

Content Translation/Vocabulary

Data Mining

Realtime Clinical Dashboard Protocols

Meaningful Use-required Data Collection/Reporting

Systems Administration/Support

Sequel Server or Oracle

System Architect

Data Queries

Data Analysis/Reporting/Decision Support

(None reported)

Attachment 7: Identified “Other” Difficulties in HIT Employee Retention

As a nonprofit, cannot compete for employees

Small operation, Office Manager fills HIT functions

Lack of funds to hire specific HIT staff, functions absorbed by other staff

Use external consultants (very expensive), no HIT employees