
Environmental Scan of the Radiographer's Workplace: Technologist vs. Administrator Perspectives, 2001



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Background and Objectives

Background & Objectives

- ◆ Founded in 1920, the American Society of Radiologic Technologists (ASRT) is the largest radiologic science organization in the world, with more than 93,000 members worldwide. The mission of the ASRT is to provide members with educational opportunities, promote radiologic technology as a career and monitor state and federal legislation that affects the profession.
- ◆ To understand the current workplace and use this information to better position and market the radiologic technology profession, the ASRT commissioned Savitz Research Solutions to perform a three-phase assessment of the radiologic technologist's workplace.
- ◆ The objectives of the assessment were to:
 - ◇ Gain a broad understanding of the workplace as perceived by radiologic technologists compared with administrators' perceptions of the workplace.
 - ◇ Identify factors and attributes that drive job and career satisfaction.
 - ◇ Gain an understanding of the general working conditions of radiologic technologists.
 - ◇ Explore the details behind what is considered "best" and "worst" of class.
 - ◇ Define the various workplace segments as perceived by technologists and relate those workplace segments to the segments into which technologists fall.
- ◆ This report details the results of Phase I of the environmental scan.

Methodology

Methodology

The ASRT commissioned Savitz Research Solutions to perform a three-phase assessment of the radiologic technologist workplace.

Phase I was designed to gain a general understanding of workplace conditions and attitudes and how workplace perceptions differ between technologists and administrators, and to identify primary drivers of technologist satisfaction and retention. The objectives of Phase I were to:

- ◇ Gauge overall technologist satisfaction with job, career and workplace.
- ◇ Gauge satisfaction in terms of attitudes and workplace conditions and determine their individual impact on overall satisfaction.
- ◇ Understand work policies and practices for the radiologic technologist as perceived by technologists and administrators.
- ◇ Identify gaps in perceptions of workplace conditions between technologists and administrators.

Ten in-depth interviews were conducted among members of the ASRT Board of Directors and other radiologic organizations to ensure that the Phase I survey covered all aspects of the radiologic technologist workplace.

Methodology

A total of 3,200 mail surveys were sent to a stratified random sample of technologists and administrators drawn from the registrant database of the American Registry of Radiologic Technologists (ARRT). Only respondents certified in radiography were included in the sample of technologists. The administrator sample included only those respondents specifying radiography as their primary sphere of employment.

To ensure an adequate response, a 5-to-1 mail out was conducted for administrators and a 4-to-1 mail out was conducted for technologists. Although previous studies had response rates of close to 50%, a more conservative return rate was assumed for this survey due to the longer questionnaire. The actual response rate for administrators was 31% and 25% for technologists.

The mail surveys were sent out and returned as follows:

	Total Sent	Total Returned	Response Rate
Administrator	1,500	458	31%
Supervisor / Assistant Chief Technologist	500	137	27%
Chief Technologist	500	150	30%
Administrator / Manager	500	171	34%
Technologist	1,700	418	25%

Note that technologists were not divided into staff technologist and senior staff technologist groups before the mail out so only the combined technologist response rate can be calculated.

Methodology

The questionnaire included the following areas :

- ◆ Active employment status
- ◆ Career satisfaction
 - ◇ Choose same career path (technologists only)
- ◆ Attributes
 - ◇ Overall (6 attributes), current workplace (28 attributes)
 - ◇ Radiology staff/job (28 attributes), general conditions (27 attributes)
- ◆ Current position
 - ◇ Current position, years in radiologic science/current position, hours/shift worked
 - ◇ Inpatient/outpatient care, generalist/specialist, trauma unit
 - ◇ Productivity measurement, on call
- ◆ Current facility
 - ◇ Workplace comparison rating, reasons for workplace comparison rating
 - ◇ Primary facility, number of beds, equipment, age of equipment, location, commute
- ◆ Associations
 - ◇ ASRT membership, organization fees
- ◆ Demographics
 - ◇ State, age, gender, marital status, education

Executive Summary

Executive Summary

Introduction

- ◆ Founded in 1920, the American Society of Radiologic Technologists (ASRT) is the largest radiologic science organization in the world, with more than 93,000 members worldwide. Its mission is to provide members with educational opportunities, promote radiologic technology as a career and monitor legislation.
- ◆ The ASRT commissioned a three-phase study of the radiologic technologist workplace to gain a better understanding of the current workplace and use this information to position and market the radiologic technologist profession.
- ◆ The objectives of Phase I were to:
 - ◇ Gauge overall technologist satisfaction with job, career and workplace.
 - ◇ Gauge satisfaction in terms of attitudes and workplace conditions and determine their individual impact on overall satisfaction.
 - ◇ Understand work policies and practices for the radiologic technologist as perceived by technologists and administrators.
 - ◇ Identify gaps in perceptions of workplace conditions between technologists and administrators.
- ◆ A total of 3,200 surveys were sent to a stratified random sample of technologists and administrators drawn from the registrant database of the ARRT, with the technologist sample restricted to those holding a radiography certification.

	Total Sent	Total Returned	Response Rate
Administrator	1,500	458	31%
Technologist	1,700	418	25%

Executive Summary

Attributes Gap Analysis

Overall Attributes

- ◆ On an overall basis, administrators gave statistically significantly higher scores than technologists on all attributes rated.
 - ◇ The biggest difference of opinion between administrators and technologists occurred on the “radiology administration” attribute. The administrators were statistically significantly more likely to give this attribute a “very good” or “good” rating than technologists.
 - ◇ This relationship between position in the organizational hierarchy and perceptions of the workplace was further demonstrated when the administrators were divided into more specific job titles. The higher the position in the organization, the more positive the administrator felt about the overall technologist work environment. This was not true, however, for the two technologist levels. Senior staff technologists were usually very similar to and sometimes more negative in their ratings than the regular staff technologists.

Executive Summary

Attributes Gap Analysis

Current Workplace Attributes

- ◆ Administrators were generally more positive about current workplace conditions than were technologists.
 - ◇ Administrators gave higher ratings than technologists on 23 of the 28 current workplace attributes. Of these 23 attributes, 17 were at a statistically significant level.
 - ◇ The only two attributes that technologists rated statistically significantly higher than administrators were “senior care” and “janitorial service.”
 - ◇ The greatest differences of opinion were that administrators were much more positive than technologists about the quality of online communications (i.e., e-mail and Internet access), on- and off-site training and verbal and written communications with the chief technologist.

Executive Summary

Attributes Gap Analysis

Job Attributes

- ◆ Administrators were consistently more positive about job conditions than were technologists.
 - ◇ The biggest difference of opinion between administrators and technologists was administrators' greater belief that technologists have input concerning scheduling. Administrators also believed that technologists receive more respect and support from the chief technologist than was perceived by the technologists.

Staff/Facility Attributes

- ◆ Administrators definitely had a more positive opinion about staff and facility conditions (on 21 of the 27 attributes) than technologists.
 - ◇ Administrators were more likely than technologists to believe that the technologist's input is welcome and that men and women are treated the same. Technologists also disagreed when it came to receiving guidance. A significantly higher percentage of administrators than technologists believed that technologists receive proper orientation on imaging equipment (84% vs. 65%), receive proper orientation on scheduling systems (63% vs. 50%) and receive proper performance evaluations (78% vs. 60%). Administrators also were more likely to believe that equipment is well maintained than were technologists (80% vs. 63%).

Executive Summary

Attributes Regression Analysis

- ◇ A series of regression analyses were performed to identify the key drivers that most influence primary facility ratings by administrators and technologists in terms of the technologist work environment.
- ◇ Looking at a model combining Q7, Q8 and Q9 attribute ratings, more of the variables came from the Q7 “current workplace” attributes than from Q8 or Q9 individually. For administrators, eight attributes were significant drivers of their perceptions of the primary facility rating concerning the technologist environment, but “safe environment at work” had by far the largest impact. For technologists, six attributes were significant drivers of the primary facility rating and most were about equally important.

Executive Summary

Attributes Regression Analysis (cont.)

- ◇ Four of the attributes were drivers of both administrators' and technologists' primary facility rating. Administrators had four unique drivers, while technologists had two unique drivers.
- ◇ It should be noted that one of the Q9 drivers, "people they [technologists] work with act professionally," actually received a negative weight in the regression equation for administrators. However, a positive correlation existed between this variable and each of the overall satisfaction ratings. This indicates that administrators' satisfaction was influenced by the *difference* between one of the other predictors (e.g., "respect received from doctors" or from the equation using Q9 attributes only, "appreciated by coworkers") and the extent to which they act professionally. Perceiving more mutual appreciation among coworkers or more respect of "their" technologists by doctors than professionalism among their staff didn't have much influence on administrators' satisfaction; however, perceiving more professionalism than mutual appreciation or respect definitely lowered administrators' satisfaction with their facility.

Shared Drivers	Administrator Unique Drivers	Technologist Unique Drivers
Q7 Safe environment at work	Q7 In-house/On-site training	Q8 Ability to influence career
Q7 Working order of building	Q8 Respect received from doctors	Q9 Adequate support staff
Q7 Imaging equipment	Q8 Accuracy able to achieve	
Q9 Facility is well known	Q9 People work with act professionally	

Executive Summary

Attribute Reduction

- ◆ Q7, Q8 and Q9 attributes were examined to determine whether they could be reduced to a more manageable, but equally predictive, set of attributes for Phase 2 and 3 of the project. This was accomplished by a combination of regression, factor and correlation analysis.
- ◆ Each attribute then was examined and: 1) retained if it was a primary driver in the Q7, Q8 and Q9 combined regression; 2) combined with other attributes within the factor group to form a new attribute; or 3) removed if it had a high correlation with another attribute from another question and if it was logical to do so.
- ◆ The initial 83 attributes were reduced to 26 attributes to be used to segment the radiologic technologist work environment in Phase 3 of the study:
 - ◇ Q7 Attributes: Imaging equipment, safe environment at work, internal/on-site training, working order of building, insurance benefits, retirement benefits, records management system, location meets personal needs, lifestyle amenities like day care or a fitness center, communications within radiology department, online communications and reimbursement for work-related expenses.
 - ◇ Q8 Attributes: ability to influence career, accuracy they are able to achieve, respect from doctors, appropriate patient load, respect from nurses, job security and on-call requirements.
 - ◇ Q9 Attributes: people they work with act professionally, have adequate support staff, facility is well known, their input is welcome, receive proper education in the jobs they do, receive proper compensation and receive proper performance evaluation.

Executive Summary

Current Position

- ◆ More than half of all technologists “probably” or “definitely” would choose the same career in radiologic science.
- ◆ As could be expected, administrators have been involved with radiologic science and their current position longer than have technologists.
 - ◇ Administrators tended to work more hours per week than did technologists.
- ◆ Administrators and technologists were in agreement in several areas:
 - ◇ Most technologists worked the day shift.
 - ◇ Approximately 71% of work was outpatient, while 29% was inpatient care.
 - ◇ About 43% of technologists worked in the trauma unit at least once per week.
 - ◇ The main method of measuring productivity was patient or unit related.
- ◆ Administrators and technologists differed in several workplace perceptions:
 - ◇ Administrators (64%) were more likely to say that technologists are generalists (rather than specialists) than technologists were to say that they are generalists (57%).
 - ◇ However, this may be due to the fact that technologists were asked to rate their own position and administrators rated most technologists at their facility. Moreover, the difference shrinks to 5.5% (nonsignificant) after controlling for the setting (urban vs. suburban vs. rural).
 - ◇ Administrators (72%) said technologists are paid for being on call, but only 56% of technologists said that they, individually, receive on-call pay. Because this is likely to be a matter of policy for all technologists within a given facility, this gap *cannot* be accounted for by the difference in wording of the two questionnaires.

Executive Summary

Current Facility

- ◆ Administrators gave a statistically significantly higher workplace rating (4.01 on a 1 to 5 scale) than did technologists (3.85).
 - ◇ Administrators were more likely than technologists to say their current workplace is “much better,” while technologists were more likely than administrators to say “somewhat better” or “about the same.”
 - ◇ The main areas that are better than previous workplaces are administration/staff, patient environment, facility and hours.
- ◆ The majority of respondents worked in a hospital (62%) or clinic (22%) environment.
 - ◇ Respondents worked in hospitals with an average of 269 beds.
- ◆ Administrators and technologists generally agreed on the type and age of equipment available in the radiology department.
 - ◇ The largest difference in opinion concerned “Internet access” and “e-Mail.” Administrators were much more likely than technologists to believe the environment was “very good” or “good” in terms of these services, though part of this gap may be due to differences in access to services of the two groups.
- ◆ Administrators were more likely to say they work in a rural area, while technologists were more likely to indicate that they work in an urban area.
- ◆ Technologists said they have a slightly longer commute to work than did administrators.

Executive Summary

Differences in Opinions Within Administration

- ◆ The higher the management level, the less similar respondents' perceptions are to technologists. Interestingly, staff technologists were slightly more positive than higher-level senior staff technologists.
- ◆ Comparing administrators to chief technologists, administrators:
 - ◇ Were more likely to think technologists get on-call pay.
 - ◇ Thought the technologist's work conditions were better.
 - ◇ Were not significantly different in age.
- ◆ Comparing chief technologists to assistant chief technologists, chief technologists:
 - ◇ Generally believed technologist's work environment was better.
 - ◇ Were more likely to work in a clinic, which can influence other responses unique to the chief technologist.
 - ◇ Were older.
- ◆ Comparing assistant chief technologists to senior staff technologists, assistant chief technologists:
 - ◇ Were more positive about the technologist work environment.
 - ◇ Were less positive about the accuracy technologists are able to achieve and the pride technologists feel.
 - ◇ Were younger but have reached a higher level of education.
- ◆ Senior staff technologists were generally less positive about their work environment than technologists.
 - ◇ They were older and have put more time into their career than technologists. Education differences are ambiguous: Senior staff technologists were significantly less likely than technologists to list an associate degree as their highest educational attainment, but significantly *more* likely to list a high-school diploma, a certificate or an advanced certificate as their highest level of education.

Executive Summary

Conclusions

- ◆ There are several areas in which administrators and technologists agreed on workplace conditions:
 - ◇ Shared drivers of their primary facility rating were “safe environment at work,” “working order of building,” “imaging equipment” and “facility is well known.”
 - ◇ Almost all administrators (94%) said that most technologists work the day shift. This was confirmed by the majority of technologists (76%) who reported that they work the day shift.
 - ◇ Approximately 71% of patient work was outpatient, while 29% was inpatient care.
 - ◇ About 43% of technologists worked in the trauma unit at least once per week.
 - ◇ The main method of measuring productivity was patient or unit related
 - ◇ The main aspects of the current workplace considered by respondents as being better than their previous workplace were administration/staff, patient environment, facility and hours.
 - ◇ The majority of respondents worked in a hospital or clinic environment.
 - ◇ Respondents worked in hospitals with an average of 269 beds.
 - ◇ Respondents generally agreed on the type and age of equipment available in the radiology department.

Executive Summary

Conclusions

- ◆ There were several areas in which administrators and technologists did not agree on workplace conditions:
 - ◇ Administrators gave generally higher scores on almost all attributes rated.
 - ◇ Unique drivers of the administrator primary facility rating were “in-house/on-site training,” “respect received from doctors,” “accuracy able to achieve” and “people they [technologists] work with act professionally.” Again, this last attribute received a negative weight in the regression formula but had a positive overall correlation, indicating the possibility that professionalism can become too high for some administrators.
 - ◇ Unique drivers of the technologist primary facility rating were “ability to influence career” and “adequate support staff.”
 - ◇ Administrators were more likely than technologists to consider technologists “generalists” (65% vs. 57%). This may be due to the fact that administrators were more likely than technologists to work in a rural facility (32% vs. 21%), and technologists in rural facilities are more likely to be “generalists” than technologists in urban facilities. However, the difference shrinks to 5.5% after controlling for rural vs. suburban vs. urban settings. It also may be evidence of administrators’ perceptions corresponding with reality, since most technologists do in fact consider themselves generalists.

Executive Summary

Conclusions (cont.)

- ◆ Other areas in which administrators and technologists did not agree on workplace conditions included:
 - ◇ Administrators were more likely than technologists to say that technologists are paid for being on call.
 - ◇ Administrators were more likely than technologists to say that their current workplace is “much better” than their previous workplace. Technologists were more likely than administrators to say it is “somewhat better” or “about the same” as their previous workplace.
 - ◇ Administrators were more likely than technologists to report that the Internet and e-mail are available to the radiology department at their workplace. Whether this indicates that administrators have more access than technologists to these services or that administrators and technologists differ in their level of awareness of availability of technology depends upon how broadly these two groups interpreted “radiology department.”

Executive Summary

Conclusions (cont.)

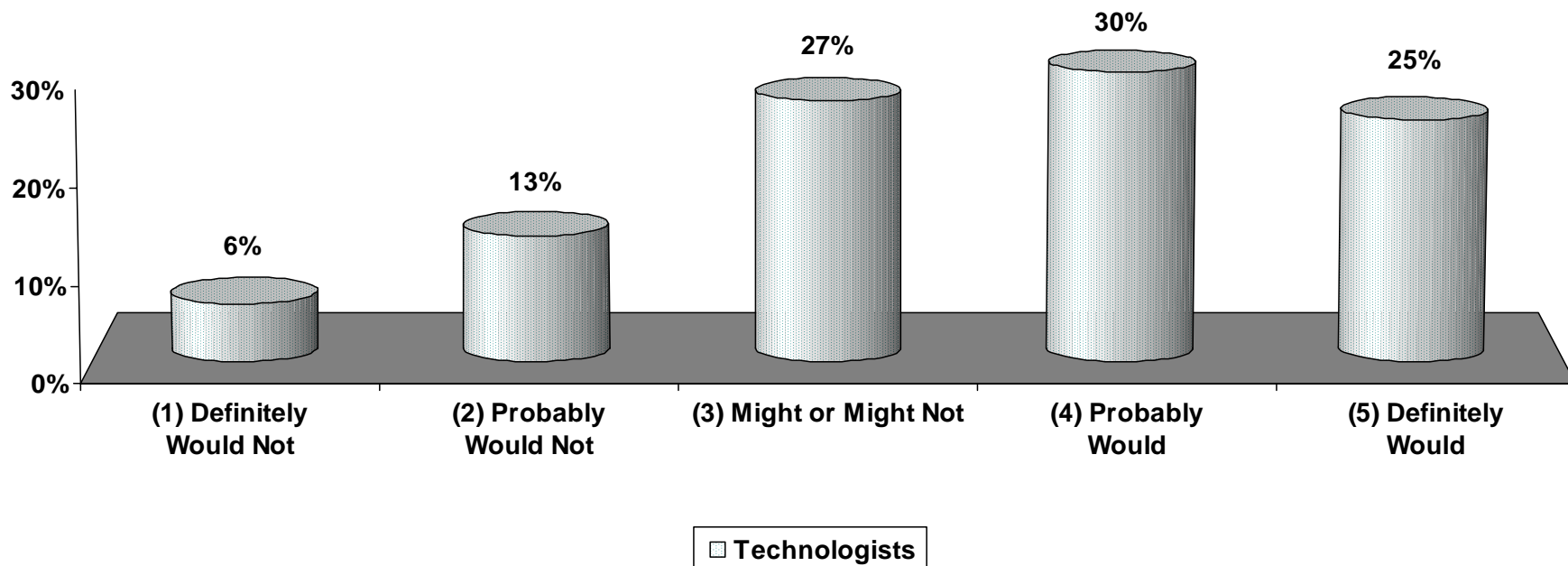
- ◆ Administrators tended to work more hours than technologists and were more likely than technologists to be male, older, married and better educated.
- ◆ The farther up the organizational hierarchy, the more positive a respondent felt about the technologist's work environment and the greater the gap was between administrator perceptions vs. technologist perceptions.
- ◆ Senior staff technologists had a more professional view of their vocation than regular staff technologists in that they gave a higher rating on "mastered profession," "skills are in demand," "work with reputable radiologists" and "continuing education is critical." However, senior staff technologists had a somewhat more jaded view of the work environment than staff technologists. Senior staff technologists were more likely than technologists to give lower ratings concerning "coworkers being properly credentialed," "janitors," "safety," "training," "uniform reimbursements" and "break room facilities."

Career Satisfaction - Detailed Findings

Career Satisfaction

More than half of the technologists said they “probably” or “definitely” would choose the same career, while a quarter said they “might or might not.” About one-fifth of technologists said they “probably” or “definitely” would not choose the same career. Administrators were not asked this question.

Choose Same Radiologic Science Career
(Scale: 5 = Definitely Would; 1 = Definitely Would Not)
Mean = 3.56



Respondents answering: Technologists (n=418)

Q4A. If you could go back in time and had the chance to do it all over again, how likely would you be to choose your same career in radiologic sciences?

Attributes - Detailed Findings

Gap Analysis

In the next series of questions, administrators were asked how they think technologists view their workplace and technologists were asked how they actually view their workplace.

For example, in Q8 administrators were asked, “Please think about the radiology staff (i.e., staff technologist or senior staff technologist) at your facility. Please answer each of the following in terms of these staff technologists.” Technologists were asked, “Please rate your current job on each of the following.”

The attributes are listed as they appear in the technologist version of the questionnaire.

Overall Attributes

In all areas, administrators typically gave higher ratings than technologists.

On Q4, respondents were asked to give overall ratings on six key areas: “primary facility,” “radiology department,” “job” (administrators rated “hospital administration”), “coworkers” (administrators rated “radiology staff”), “radiology administration” and “overall radiologic patient care.”

- ◇ Administrators gave statistically significantly higher ratings on all attributes compared with technologists.
- ◇ When looking at the difference in mean ratings given by administrators and technologists, “primary facility you work at” and “overall radiologic patient care” had the least difference of opinion.
- ◇ The largest difference was with the rating of “your radiology administration.” Administrators were much more positive than technologists.

Overall Attributes

When asked to give an overall rating for six key areas, administrators were statistically significantly more likely to give higher mean ratings than were technologists. The smallest gap occurred for “primary facility” and the biggest gap for “radiology administration.”

(Note that the wording for one rating was different for the two groups of respondents. Administrators rated “hospital administration,” and technologists rated “your job.” The wording was considered sufficiently different to warrant no comparison for the rating.)

Overall Attributes Mean Ratings (Scale: 5 = Very Good; 1 = Very Poor)

Q4 Overall Attributes Mean Ratings	Administrators	Technologists	Gap
Primary Facility You Work At	4.40 *	4.21	-0.19
Overall Radiologic Patient Care	4.58 *	4.39	-0.19
Radiology Staff / Coworkers	4.41 *	4.15	-0.26
Radiology Department	4.36 *	4.10	-0.26
Radiology Administration	4.15 *	3.55	-0.60
Hospital Administration / Your Job	3.87	4.15	n/a

* Significant difference between administrators/technologists at the 95% confidence level.
Note: Ranked in descending order according to the gap (technologist mean rating minus administrator mean rating).

Respondents answering: Administrators (n=340-454); technologists (n=382-417)

Q4. Using the scale below, please give an overall rating for the following.

Current Workplace Attributes

On Q7, respondents were asked to rate 28 workplace attributes including training, convenient location, commute, safety, communications with the chief technologist, benefits, building, equipment, facilities, janitorial service, telecommunications and uniform reimbursement/assistance.

- ◇ Administrators gave statistically significantly higher ratings on 17 attributes than technologists while technologists gave statistically significantly higher ratings than administrators on 2 attributes.
- ◇ When considering the quality of “senior care,” “day care” and “janitorial service,” technologists thought more highly of their current workplace than did administrators.
- ◇ When it came to “fitness center,” “uniform reimbursement/assistance,” “working order of building,” “building security,” “employee lounge/break room facilities” and “communications equipment,” technologists and administrators generally agreed on workplace conditions.
- ◇ On 19 of the 28 attributes rated, technologists thought less highly of their current workplace than did administrators. The biggest differences of opinion occurred on “e-mail,” “Internet access,” “external/off-site training,” “verbal communications with chief technologist,” “in-house/on-site training” and “written communications with chief technologist.”

Current Workplace Attributes

The biggest difference between technologist and administrator ratings involved telecommunications, training and communications.

Current Workplace Attributes Mean Ratings (Scale: 5 = Very Good; 1 = Very Poor)

Q7 Current Workplace Attributes Mean Ratings	Administrator	Technologist	Gap	Q7 Current Workplace Attributes Mean Ratings	Administrator	Technologist	Gap
Senior Care	3.16	3.55 *	0.39	Dental Insurance Benefits	3.61 *	3.45	-0.16
Day Care	3.10	3.36	0.26	Image Processing Equipment	3.95 *	3.79	-0.16
Janitorial Service	3.40	3.56 *	0.16	Retirement Benefits	3.76 *	3.60	-0.16
Fitness Center	3.54	3.59	0.05	Imaging Equipment	3.93 *	3.76	-0.17
Uniform Reimbursement/Assistance	3.04	3.04	0.00	Vision Insurance Benefits	3.46 *	3.26	-0.20
Working Order Of Building	4.08	4.04	-0.04	Tuition Assistance	3.79 *	3.57	-0.22
Building Security	3.86	3.79	-0.07	Life Insurance Benefits	4.01 *	3.78	-0.23
Employee Lounge/Breakroom Facilities	3.42	3.35	-0.07	Health Insurance Benefits	3.92 *	3.64	-0.28
Communications Equipment	3.91	3.82	-0.09	Written Communications	4.17 *	3.88	-0.29
Location Convenient To Family Needs	4.20	4.09	-0.11	In-House/On-Site Training	3.80 *	3.49	-0.31
Location Convenient To Home	4.22	4.10	-0.12	Verbal Communications	4.26 *	3.95	-0.31
Records Management Systems	3.74 *	3.61	-0.13	External/Off-Site Training	3.51 *	3.13	-0.38
Safe Environment At Work	4.47 *	4.32	-0.15	Internet Access	4.07 *	3.65	-0.42
Safe Commute To Work	4.32 *	4.17	-0.15	E-Mail	4.17 *	3.72	-0.45

* Significant difference between administrators and technologists at the 95% confidence level.

Note: Ranked in descending order according to the gap (technologist mean rating minus administrator mean rating).

Respondents answering: Administrators (n=95-455); technologists (n=91-418)

Q7. Please rate your current workplace on each of the following.

Job Attributes

On Q8, respondents were asked to rate 28 job-related attributes including respect received, amount of pride job gives, work and patient load, job security, autonomy, safety, support, scheduling, duties, time with patients, stress, ability to influence career and performance, learning experience, overtime, accuracy, on-call requirements, coworkers and skills.

- ◇ Administrators gave statistically significantly higher ratings on 14 attributes than technologists, while technologists gave statistically significantly higher ratings than administrators on two attributes.
- ◇ When it came to the “amount of pride your job gives you” and “accuracy you are able to achieve,” technologists thought more highly of their job conditions than did administrators.
- ◇ Technologists and administrators generally agreed on job conditions involving “respect received from doctors,” “respect received from coworkers,” “respect received from nurses,” “you feel safe at your job,” “ability to influence your performance,” “job security/ability to stay employed,” “level of autonomy you have,” “health care professionals you work with are team players” and “workload allows you to do an effective job.”
- ◇ On 17 of the 28 attributes rated, technologists thought less highly of their job conditions than did administrators, especially on “your ability to provide input on scheduling,” “support from chief technologist,” “scheduling process” and “respect you receive from chief technologist.”

Job Attributes

When administrators were asked to rate the radiology staff and technologists were asked to rate their job, the largest gaps between technologists and administrators involved the scheduling process and perceived support and respect from the chief technologist.

Job Attributes Mean Ratings (Scale: 5 = Very Good; 1 = Very Poor)

Q8 Job Attributes Mean Ratings	Admini- strator	Techno- logist	Gap	Q8 Job Attributes Mean Ratings	Admini- strator	Techno- logist	Gap
Amount Of Pride Job Gives	4.02	4.20 *	0.18	Variety Of Duties	4.20 *	4.06	-0.14
Accuracy (They/You) Are Able To Achieve	4.11	4.21 *	0.10	Ability To Influence Career	3.69 *	3.54	-0.15
Respect Received From Doctors	3.82	3.87	0.05	Proper Amount Of Time With Patients	3.86 *	3.71	-0.15
Respect Received From Co-Workers	4.09	4.12	0.03	No Excessive Mental Stress	3.47 *	3.29	-0.18
Respect Received From Nurses	3.54	3.57	0.03	Support From Co-Workers	4.18 *	4.00	-0.18
Feel Safe At Job	4.33	4.30	-0.03	Feel (They / You) Are Indispensable	3.85 *	3.65	-0.20
Ability To Influence Performance	4.09	4.05	-0.04	On-Call Requirements	3.67 *	3.47	-0.20
Job Security - Ability To Stay Employed	4.45	4.40	-0.05	Patient Load	3.81 *	3.57	-0.24
Level Of Autonomy	4.12	4.05	-0.07	Provided With The Skills To Grow	3.73 *	3.49	-0.24
Work With Team Players	3.89	3.79	-0.10	No Excessive Physical Stress	3.55 *	3.29	-0.26
Workload Allows For Effective Job	3.85	3.75	-0.10	Respect From Chief Technologist	4.39 *	4.05	-0.34
Overall Learning Experience	3.98	3.87	-0.11	Scheduling Process	3.92 *	3.47	-0.45
Overtime Requirements	3.73	3.61	-0.12	Support From Chief Technologist	4.39 *	3.85	-0.54
Quality Of Time Spent With Patients	3.94	3.82	-0.12	Ability To Provide Input On Scheduling	4.03 *	3.46	-0.57

* Significant difference between administrators and technologists at the 95% confidence level.

Note: Ranked in descending order according to the gap (technologist mean rating minus administrator mean rating).

Respondents answering: Administrators (n=285-451); technologists (n=219-417)

Q8. Please (rate) the radiology staff (i.e., staff technologist or senior staff technologist) at your facility.

Q8. Please rate your current job on each of the following.

Staff/Facility Attributes

On Q9, respondents were asked to rate 27 staff and facility attributes, including mastering profession, skills in demand, safety, appreciation, time off, input, coworkers, importance, education, technology, care, facility's reputation, training, support staff, productivity incentives, credentials, equal gender treatment, new-hire bonuses, compensation, equipment, orientation and performance evaluation.

- ◇ Administrators gave statistically significantly higher ratings than technologists on 21 attributes while technologists gave no statistically significantly higher ratings than administrators.
- ◇ When it came to “your facility is well known,” “you are appreciated by others you work with,” “you are appreciated by patients,” “your time off is not interrupted by work” and “you are properly educated in jobs that you do,” technologists and administrators generally agreed on staff and facility attributes.
- ◇ On 22 of the 27 attributes rated, technologists thought less highly of the staff and facility than did administrators. The biggest differences of opinion occurred on “your input is welcomed,” “receive proper performance evaluation,” “women and men are treated equally,” “you are important,” “receive proper orientation on imaging equipment” and “equipment is well maintained.”

Staff/Facility Attributes

On 21 attributes, administrators gave statistically significantly higher mean ratings than did technologists. The attributes that administrators and technologists had the greatest difference of opinion on were “input is welcomed,” “proper performance evaluation,” “women and men are treated equally,” “(they/you) are important,” “proper orientation on imaging equipment” and “equipment is well maintained.”

Staff/Facility Attributes Mean Ratings (Scale: 5 = Completely Agree; 1 = Completely Disagree)

Q9 Staff / Facility Attributes Mean Ratings	Admini- strator	Techno- logist	Gap
Facility Is Well Known	4.17	4.19	0.02
Appreciated By Others Work With	3.98	3.99	0.01
Appreciated By Patients	4.20	4.18	-0.02
Time Off Is Not Interrupted By Work	3.93	3.88	-0.05
Properly Educated In Jobs Done	4.38	4.28	-0.10
Technology Allows For Great Patient Care	3.97 *	3.83	-0.14
Feel Safe At Work	4.39 *	4.24	-0.15
Continuing Education Is Critical	4.36 *	4.21	-0.15
Mastered Profession	4.01 *	3.86	-0.15
Work With Reputable Radiologists	4.29 *	4.14	-0.15
People Ask For (Their / Your) Input	3.96 *	3.80	-0.16
Sign-On Bonuses For New Hires Are Fair	2.98	2.81	-0.17
Have The Technology To Do The Best Job	3.93 *	3.75	-0.18
People Work With Act Professionally	4.02 *	3.80	-0.22

Q9 Staff / Facility Attributes Mean Ratings	Admini- strator	Techno- logist	Gap
Co-Workers Are Certified/Credentialed	4.48 *	4.24	-0.24
Get Adequate Productivity Incentives	2.79 *	2.54	-0.25
Skills Are In Demand	4.68 *	4.40	-0.28
Are Allowed To Provide The Best Care	4.21 *	3.93	-0.28
Proper Compensation For Extra Hours	4.02 *	3.72	-0.30
Have Adequate Support Staff	3.60 *	3.23	-0.37
Proper Orientation On Scheduling Systems	3.74 *	3.30	-0.44
Equipment Is Well Maintained	4.06 *	3.58	-0.48
Proper Orientation On Imaging Equipment	4.12 *	3.63	-0.49
(They / You) Are Important	4.47 *	3.97	-0.50
Women And Men Are Treated Equally	4.27 *	3.77	-0.50
Proper Performance Evaluation	4.01 *	3.49	-0.52
Input Is Welcomed	4.19 *	3.62	-0.57

* Significant difference between administrators and technologists at the 95% confidence level.

Note: Ranked in descending order according to the gap (technologist mean rating minus administrator mean rating).

Respondents answering: Administrators (n=431-452); technologists (n=403-417)

Q9. Still thinking about the overall radiology staff, please indicate how much you agree with each statement.

Q9. Please indicate how much you agree with each statement.

Attributes - Detailed Findings

Regression Analysis

Regression Analysis

A series of regression analyses were performed to show the impact of the Q7 current workplace, Q8 job and Q9 staff/facility ratings on the Q4 primary facility overall rating for administrators and technologists.

The Q4 overall rating of “primary facility you work at” is the dependent variable for this analysis. Eight regression models are reported. Four different regression models were run for each group of respondents.

One set of regression models was run for each of the three main attribute sets (Q7, Q8 and Q9) and a fourth model used all the significant predictor variables from the three main attribute sets. The three sets of attributes used are the ratings of the:

Administrators	Technologists
Current workplace	Current workplace
Senior/staff technologist job	Current job
Radiology staff/facility	Personal/facility

Because regression analysis is sensitive to missing data, attributes with large amounts of missing data have been excluded from the analysis of both groups.

The Q7 (current workplace) missing variables are “external/off-site training,” “vision insurance benefits,” “fitness center,” “day care,” “senior care,” “e-mail,” “Internet access,” “tuition assistance” and “uniform reimbursement/assistance.” There is only one Q8 (technologist’s job/current job) missing variable, “on-call requirements.” There are no Q9 (staff/facility) variables missing.

Regression Analysis

Basically, regression analysis identifies the linear combination of independent (predictor) variables that is most significantly related to the dependent variable.

The attribute “coefficient” is a measure of the attribute’s impact on the Q4 rating of primary facility when all other attributes in the equation are held constant. The larger the coefficient, the larger the impact a one-unit change in the attribute has on the primary facility rating, given that all other attributes are held constant (e.g., considering only facilities that are identical to each other on all attributes other than the one being examined). Sometimes the attribute coefficients are all positive, but usually they are not. When the attribute coefficients are positive, increasing the ratings on these attributes should increase the rating of the Q4 primary facility provided that ratings on all other attributes are held constant.

However, not all attributes are equally easy to change. For instance, some attributes may be near the maximum score. In practice, attributes with high coefficients sometimes are very difficult to change, so focusing on raising scores on attributes with lower coefficients may have more actual impact on overall ratings.

Both the Q9 and the combined Q7, Q8 and Q9 models for administrators have both positive and negative attribute coefficients. The negative attribute coefficient does not mean that the attribute has an overall negative relationship with respondent rating of Q4 primary facility. Instead, the attribute coefficients and constant term are a balance that best predicts using all of the attributes. None of the attributes have an overall negative relationship with respondent rating of Q4 primary facility.

Regression Analysis

Often the mix of positive and negative coefficients is best interpreted as indicating that the **difference** between two attributes (or two averages of attribute sets) is an important predictor of the dependent variable. For example, the Q9 equation for administrators is: Administrator's rating of current facility = 2.389

- ◆ + .156 × (agreement that facility is well known)
- ◆ + .146 × (agreement that technologists are appreciated by people they work with)
- ◆ + .143 × (agreement that equipment is well maintained)
- ◆ + .111 × (agreement that technology allows for great patient care)
- ◆ + .056 × (agreement that technologists get adequate productivity incentives)
- ◆ - .097 × (agreement that people the technologists work with act professionally).

This is equivalent to the following equation: Administrator's rating of current facility = 2.389

- ◆ + .156 × (agreement that facility is well known)
- ◆ + [.146 × (agreement that technologists are appreciated by people they work with)
- ◆ - .097 × (agreement that people the technologists work with act professionally)]
- ◆ + .143 × (agreement that equipment is well maintained)
- ◆ + .111 × (agreement that technology allows for great patient care)
- ◆ + .056 × (agreement that technologists get adequate productivity incentives)

and can be interpreted that administrators are more satisfied with their current facility when they rate it highly on its reputation, well-maintained equipment, use of technology to benefit patients, productivity incentives and on **a greater emphasis on expressing appreciation for coworkers than acting professionally**. For administrators, “acting professionally” may carry a connotation of stiffness or rigidity if not accompanied by expressions of appreciation.

Primary Facility by Current Workplace

Q4 Rating of Primary Facility from Q7 Current Workplace Ratings

The models that predict the Q4 primary facility based on the Q7 current workplace ratings are:

$$\text{Administrator} = 1.245 + (.258 \times A04) + (.200 \times A14) + (.157 \times A01) + (.078 \times A21) + (.076 \times A18)$$

$$\text{Technologist} = 1.643 + (.201 \times A18) + (.156 \times A04) + (.113 \times A14) + (.098 \times A15) + (.089 \times A01)$$

Q7 Current Workplace Attributes	Administrator	Technologist
A7.01 – In-House/On-Site Training	0.157	0.089
A7.04 – Safe Environment At Work	0.258	0.156
A7.14 – Working Order Of Building	0.200	0.113
A7.15 – Building Security	n/a	0.098
A7.18 – Imaging Equipment	0.076	0.201
A7.21 – Records Management Systems	0.078	n/a
Constant Term	1.245	1.643

- ◆ The model for administrators is similar to technologists. Four attributes are common to both, although the impact of these attributes differed between groups. “Imaging equipment” impacts technologists more, while “training,” “safe environment” and “working order of building” impact administrators more.
- ◆ In several cases, the ability to improve an attribute is limited. Improving “imaging equipment” or “working order of building” would impact satisfaction, but neither may be viable due to cost.
- ◆ Although “safe environment at work” would impact both groups, this attribute already has a fairly high mean score, so there is not much room for improvement. But given its impact (large coefficient) especially among administrators, any significant decline in perceived safety would lower the overall rating.
- ◆ While “in-house/on-site training” would have a low or modest impact, with a low mean rating, this attribute may have the most potential for improvement.

Primary Facility by Job

Q4 Rating of Primary Facility from Q8 Job Ratings

The models that predict the Q4 primary facility based on the Q8 job ratings are:

$$\text{Administrator} = 2.056 + (.198 \times A09) + (.132 \times A02) + (.128 \times A25) + (.123 \times A28)$$

$$\text{Technologist} = 2.015 + (.230 \times A09) + (.124 \times A18) + (.112 \times A21) + (.103 \times A03)$$

Q8 Job Attributes	Administrator	Technologist
A8.02 – The Respect They Received From Doctors	0.132	n/a
A8.03 – The Respect They Received From Nurses	n/a	0.103
A8.09 – They Feel Safe At Their Job	0.198	0.230
A8.18 – Patient Load	n/a	0.124
A8.21 – Their Ability To Influence Their Career	n/a	0.112
A8.25 – Accuracy They Are Able To Achieve	0.128	n/a
A8.28 – They Are Provided With The Skills To Grow	0.123	n/a
Constant Term	2.056	2.015

- ◆ Only one attribute was common to the technologist and administrators models. However, because different entities were rated, this is not a surprising finding.
- ◆ These two models have the least predictive power of all the models generated.

Primary Facility by Staff

Q4 Rating of Primary Facility from Q9 Staff/Facilities Ratings

The models that predict the Q4 primary facility based on the Q9 staff/facility ratings are:

$$\text{Admin.} = 2.389 + (.156 \times A15) + (.146 \times A04) + (.143 \times A24) + (.111 \times A16) + (.056 \times A19) + (-.097 \times A14)$$

$$\text{Technologist} = 2.194 + (.175 \times A15) + (.103 \times A16) + (.086 \times A24) + (.084 \times A07) + (.084 \times A18)$$

Q9 Staff / Facility Attributes	Administrator	Technologist
A9.04 – They Are Appreciated By Others They Work With	0.146	n/a
A9.07 – Their Input Is Welcomed	n/a	0.084
A9.14 – People They Work With Act Professionally	-0.097	n/a
A9.15 – Their Facility Is Well Known	0.156	0.175
A9.16 – Their Technology Allows For Great Patient Care	0.111	0.103
A9.18 – They Have Adequate Support Staff	n/a	0.084
A9.19 – They Get Adequate Productivity Incentives	0.056	n/a
A9.24 – Equipment Is Well Maintained	0.143	0.086
Constant Term	2.389	2.194

- ◆ The models share three common attributes, making them somewhat similar despite rating different entities.
- ◆ The negative coefficient for administrators (A9.14 – people work with act professionally) means that as the rating of one attribute goes up, the other goes down. Strictly interpreted, this means that, with scores on all other predictors held constant, the more professional their coworkers act, the lower administrators rate their current workplace. This anomaly is due to the manner in which this variable came into the regression model. Even though the attribute coefficient is negative, the overall relationship between the overall rating and acting professionally is **positive**. Again, the mix of positive and negative coefficients is best interpreted as indicating that the difference between two attributes is an important predictor of the dependent variable.

Primary Facility by Combined Attributes

Q4 Rating of Primary Facility from Q7, Q8 & Q9 Significant Ratings

The models that predict the Q4 primary facility based on the combined Q7, Q8 and Q9 ratings are:

$$\text{Administrator} = 0.810 + (.280 \times A7.04) + (.171 \times A7.14) + (.125 \times A7.01) + (.119 \times A9.15) + (.107 \times A8.25) + (.082 \times A8.02) + (.069 \times A.7.18) + (-.088 \times A9.14)$$

$$\text{Technologist} = 1.186 + (.171 \times A7.18) + (.160 \times A9.15) + (.133 \times A7.14) + (.129 \times A7.04) + (.103 \times A8.21) + (.075 \times A9.18)$$

Q7, Q8 & Q9 Significant Attributes	Administrator	Technologist
A7.01 – In House/On Site Training	0.125	n/a
A7.04 – Safe Environment At Work	0.280	0.129
A7.14 – Working Order Of The Building	0.171	0.133
A7.18 – Imaging Equipment	0.069	0.171
A8.02 – The Respect They Receive From Doctors	0.082	n/a
A8.21 – Their Ability To Influence Their Career	n/a	0.103
A8.25 – Accuracy They Are Able To Achieve	0.107	n/a
A9.14 – The People They Work With Act Professionally	-0.088	n/a
A9.15 – Their Facility Is Well Known	0.119	0.160
A9.18 – They Have Adequate Support Staff	n/a	0.075
Constant Term	0.810	1.186

- ◆ Most of the variables in these models are common or very similar, and most of the variables come from the Q7 attributes that rate current workplace.
- ◆ For technologists, six attributes entered the model, and most were about equally important in the overall ratings. For administrators, eight attributes entered the model, but “safe environment at work” had by far the largest impact on the overall rating. “Working order of the building” also was important.

Attributes - Detailed Findings

Attribute Reduction

Attribute Reduction

Attribute Reduction

To reduce the number of attributes to be used in Phase 3 of the environmental scan, we looked at three different analyses.

- Step 1 – Regression. When all attributes in Q7, Q8 and Q9 were included in a regression against the overall rating of the workplace (Q4) by administrators or technologists, the attributes identified as significant predictors of Q4 were retained to be included in Phase 3. These attributes are identified with a double asterisk (**). When regressions were run on Q7, Q8 and Q9 **independently** and an attribute was found to be a significant predictor of Q4, that attribute was identified with a single asterisk (*) and considered for retention in Phase 3, depending on redundancy in factors and between question correlations.
- Step 2 – Factor. If a set of attributes tended to be rated similarly (e.g., all high or all low) by an given technologist, then these attributes constituted a factor group. Each attribute's factor group was identified with a number (i.e., "4"). This simply provides an indication of the attributes that **may** group well together. If an attribute did not load well (i.e., <0.60), a decision was made whether to keep the attribute in the factor group based on logical fit or keep the attribute independent. The attributes that remain independent because of low factor weights are labeled "i."
- Step 3 – Correlation. Attributes were compared between Q7, Q8 and Q9 of the technologists. If two attributes correlated highly (>0.50) and they fit logically, then those attributes were combined and absorbed into either the factor group or the individual attribute from the question that made the most sense. These inter-question correlations are designated "Q#.#".
- Step 4 – Attribute Reduction. Attributes were then compared and either:
 - 1) Left as is if the attribute was a primary driver in the Q7, Q8 and Q9 combined regression.
 - 2) Combined with other attributes within the factor group to form a new attribute.
 - 3) Removed if the attribute was highly correlated with an attribute retained in another question and it was logical to do so.

The initial 83 attributes were reduced to 26 attributes that are most useful in judging the work environment of a radiologic technologist. In Phase 3, these attributes will be augmented with other nonattitudinal information, such as commute miles, type of facility (i.e., hospital, clinic), age of equipment and age of respondent, to segment radiologic technologists and facilities.

Attribute Reduction

Q7. The Place

- Q7.12 "Dental insurance benefits" (1)
- Q7.10 "Health insurance benefits" (1)
- Q7.11 "Vision insurance benefits" (1)
- Q7.09 "Life insurance benefits" (1)
- Q7.13 "Retirement benefits" (1) (i)
- Q7.18 "Imaging equipment" (**) (2) (Q9.12) (Q9.16) (Q9.24)
- Q7.19 "Image processing equipment" (2) (Q9.12) (Q9.16) (Q9.24)
- Q7.20 "Communications equipment" (2) (Q9.24)
- Q7.21 "Records management system" (*) (2)
- Q7.06 "Location convenient to family needs" (3)
- Q7.03 "Location convenient to home" (3)
- Q7.05 "Safe commute to work" (3)
- Q7.04 "Safe environment at work" (**) (3) (i) (Q8.9)
- Q7.22 "Fitness center" (4)
- Q7.24 "Senior care" (4)
- Q7.23 "Day care" (4)
- Q7.17 "Employee lounge/break facilities" (4) (i)
- Q7.07 "Verbal communications with radiology staff/chief technologist" (5) (Q8.4) (Q8.12)
- Q7.08 "Written communications with radiology staff/chief technologist" (5) (Q8.4) (Q8.12)
- Q7.01 "Internal/on-site training" (**) (5) (i) (Q8.28)
- Q7.02 "External/off-site training" (5) (i) (Q8.28)
- Q7.16 "Janitorial service" (6)
- Q7.15 "Building security" (6)
- Q7.14 "Working order of building (elevators, etc)" (**) (6)
- Q7.26 "Internet access" (7)
- Q7.27 "Tuition assistance" (7)
- Q7.25 "E-mail" (7)
- Q7.28 "Uniform reimbursement/Assistance"(7)

Recommended list of Q7 attributes that should be carried forward to Phase 3:

- | | |
|---|--|
| Imaging equipment | Safe environment at work |
| Internal/on-site training | Working order of building |
| Insurance benefits | Retirement benefits |
| Records management system | The location meets personal needs |
| Lifestyle amenities like day care or a fitness center | Communications within radiology department |
| Online communications | Reimbursement for work related expenses |

Attribute Reduction

Q8. The Job

- Q8.16 “Proper amount of time with patients” (1)
- Q8.17 “Quality of time with patients” (1)
- Q8.19 “Not an excessive amount of mental stress” (1) (Q9.7) (Q9.13)
- Q8.20 “Not an excessive amount of physical stress” (1) Q9.7) (Q9.13) (Q9.18)
- Q8.18 “Patient load” (*) (1)
- Q8.06 “Workload allows to do an effective job” (1) (Q9.13)
- Q8.12 “Support from chief technologist” (2) (Q7.7) (Q7.8) (Q9.7)
- Q8.04 “Respect received from chief technologist” (2) (Q7.7) (Q7.8) (Q9.7)
- Q8.11 “Support from co-workers” (2) (Q9.4) (Q9.7) (Q9.14)
- Q8.01 “Respect received from co-workers” (2) (Q9.4) (Q9.14)
- Q8.13 “Ability to provide input on scheduling” (2) (i) (Q9.7)
- Q8.15 “Scheduling process” (2) (i) (Q9.7) (Q9.26)
- Q8.23 “Overall learning experience” (3)
- Q8.21 “Ability to influence their career” (**) (3) (Q9.7)
- Q8.22 “Ability to influence performance” (3)
- Q8.14 “Variety of duties” (3) (i)
- Q8.28 “Provided with skills to grow” (*) (3) (i) (Q7.1) (Q7.2) (Q9.7) (Q9.19)
- Q8.25 “Accuracy they are able to achieve” (**) (3) (i)
- Q8.07 “Job security – ability to stay employed” (4)
- Q8.08 “The level of autonomy” (4)
- Q8.09 “Feel safe at job” (*) (4) (Q7.4)
- Q8.10 “Feel you are indispensable” (4) (i)
- Q8.05 “Amount of pride job gives” (4) (i)
- Q8.03 “Respect from nurses” (*) (5)
- Q8.02 “Respect from doctors” (**) (5) (Q9.4)
- Q8.27 “Health care professionals you work with are team players” (5) (i) (Q9.4) (Q9.7) (Q9.14)
- Q8.26 “On-call requirements” (6)
- Q8.24 “Overtime” requirements” (6)

Recommended list of Q8 attributes that should be carried forward to Phase 3:

Ability to influence career
Respect from doctors
Respect from nurses
On-call requirements

Accuracy they are able to achieve
Appropriate patient load
Job security

Attribute Reduction

Q9. The People

Q9.07 "Input is welcome" (*) (1) (Q8.4) (Q8.11) (Q8.12) (Q8.13) (Q8.15) (Q8.19) (Q8.20) (Q8.21) (Q8.27) (Q8.28)

Q9.09 "You are important" (1)

Q9.11 "People ask for their input" (1)

Q9.04 "Appreciated by others they work with" (*) (1) (Q8.1) (Q8.2) (Q8.11) (Q8.27)

Q9.14 "People they work with act professionally" (**) (1) (i) (Q8.1) (Q8.11) (Q8.27)

Q9.10 "Continuing education is critical" (1) (i)

Q9.21 "Women and men are treated equally" (1) (i)

Q9.18 "Have adequate support staff" (**) (1) (i) (Q8.20)

Q9.05 "Appreciated by patients" (1) (i)

Q9.13 "Allowed to provide best care" (2) (Q8.6) (Q8.19) (Q8.20)

Q9.12 "Have the technology to do the best job" (2) (Q7.18) (Q7.19)

Q9.16 "Technology allows for great patient care" (*) (2) (Q7.18) (Q7.19)

Q9.24 "Equipment is well maintained" (*) (2) (Q7.18) (Q7.19) (Q7.20)

Q9.17 "Properly educated in jobs that they do" (2)

Q9.25 "Receive proper orientation on imaging equipment" (2) (i)

Q9.26 "Receive proper orientation on scheduling systems" (2) (i) (Q8.15)

Q9.22 "Sign-on bonuses for new hires" (3)

Q9.23 "Receive proper compensation for extra hours" (3)

Q9.27 "Receive proper performance evaluation" (3) (i)

Q9.19 "Get adequate productivity incentives" (*) (3) (i) (Q8.28)

Q9.15 "Facility is well known" (**) (4) (i)

Q9.06 "Time off is not interrupted by work" (4) (i)

Q9.20 "Co-workers are properly certified/credentialed" (4) (i)

Q9.03 "Feel safe at work" (4) (i)

Q9.02 "Skills are in demand" (5)

Q9.01 "Mastered profession" (5)

Q9.08 "Work with reputable radiologists" (5) (i)

Recommended list of Q9 attributes that should be carried forward to Phase 3:

People they work with act professionally

Facility is well known

Receive proper education in the jobs they do

Receive proper performance evaluation

Have adequate support staff

Their input is welcome

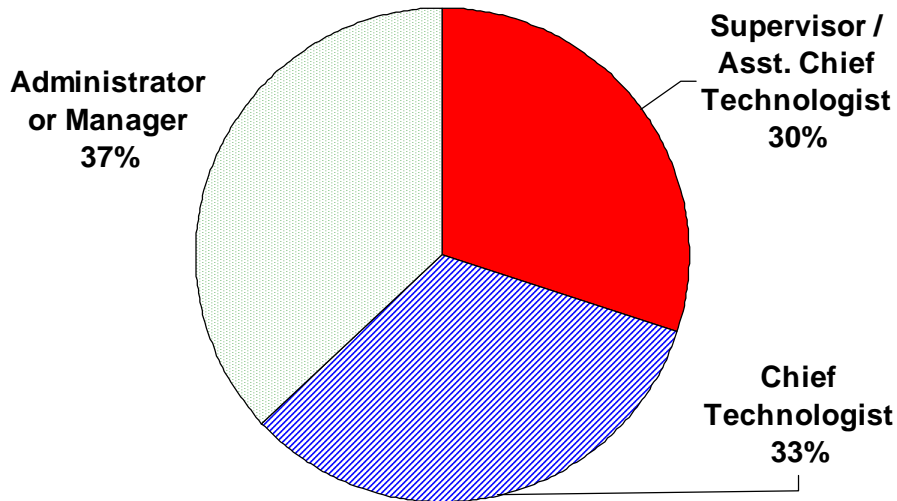
Receive proper compensation

Current Position - Detailed Findings

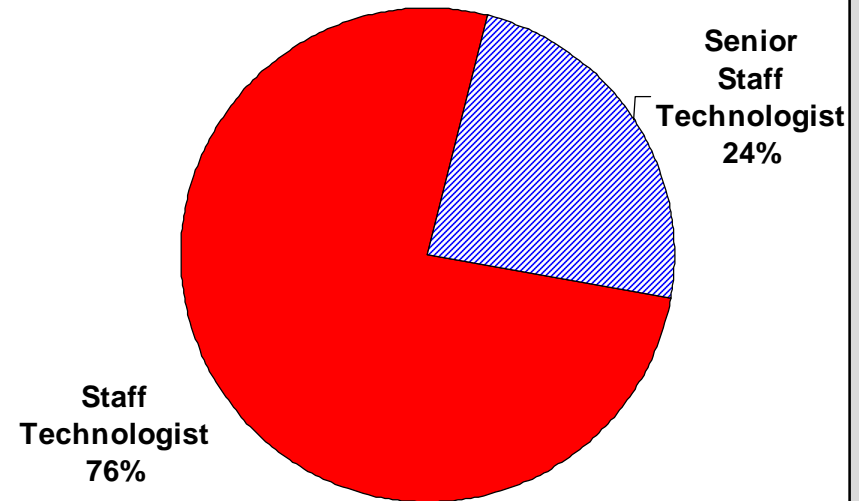
Current Position

Administrators who returned the questionnaire were closely divided among supervisor/assistant chief technologist, chief technologist and administrator or manager personnel. The vast majority of technologists who returned the questionnaire were staff technologists.

**Current Job Position
Among Administrators**



**Current Job Position
Among Technologists**

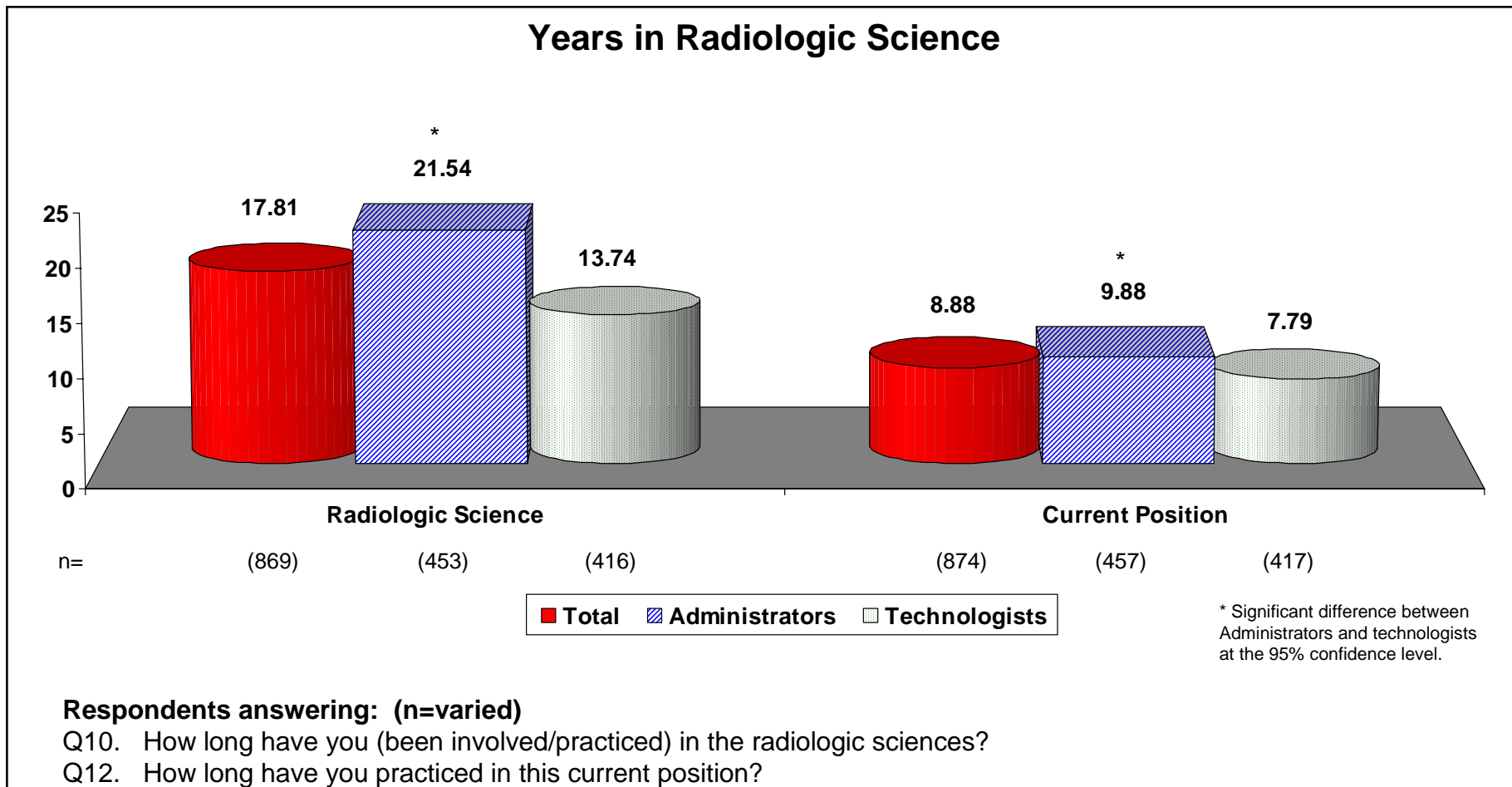


Respondents answering: Administrators (n=458); technologists (n=418)

Q11. Which of the following titles best describes your current job position?

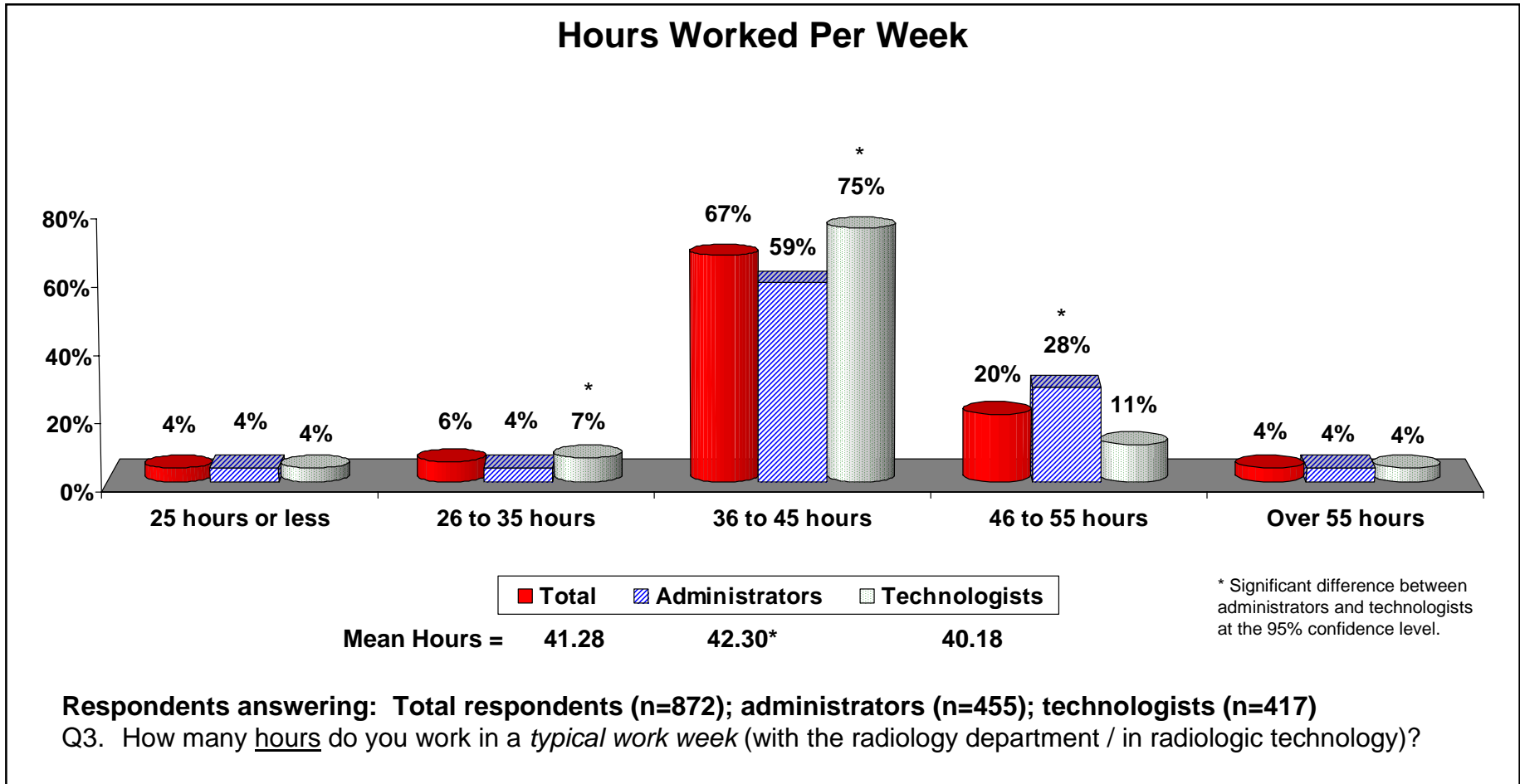
Years in Radiologic Science/Position

As might be expected, administrators have been in the radiologic sciences and in their current position significantly longer than have technologists.



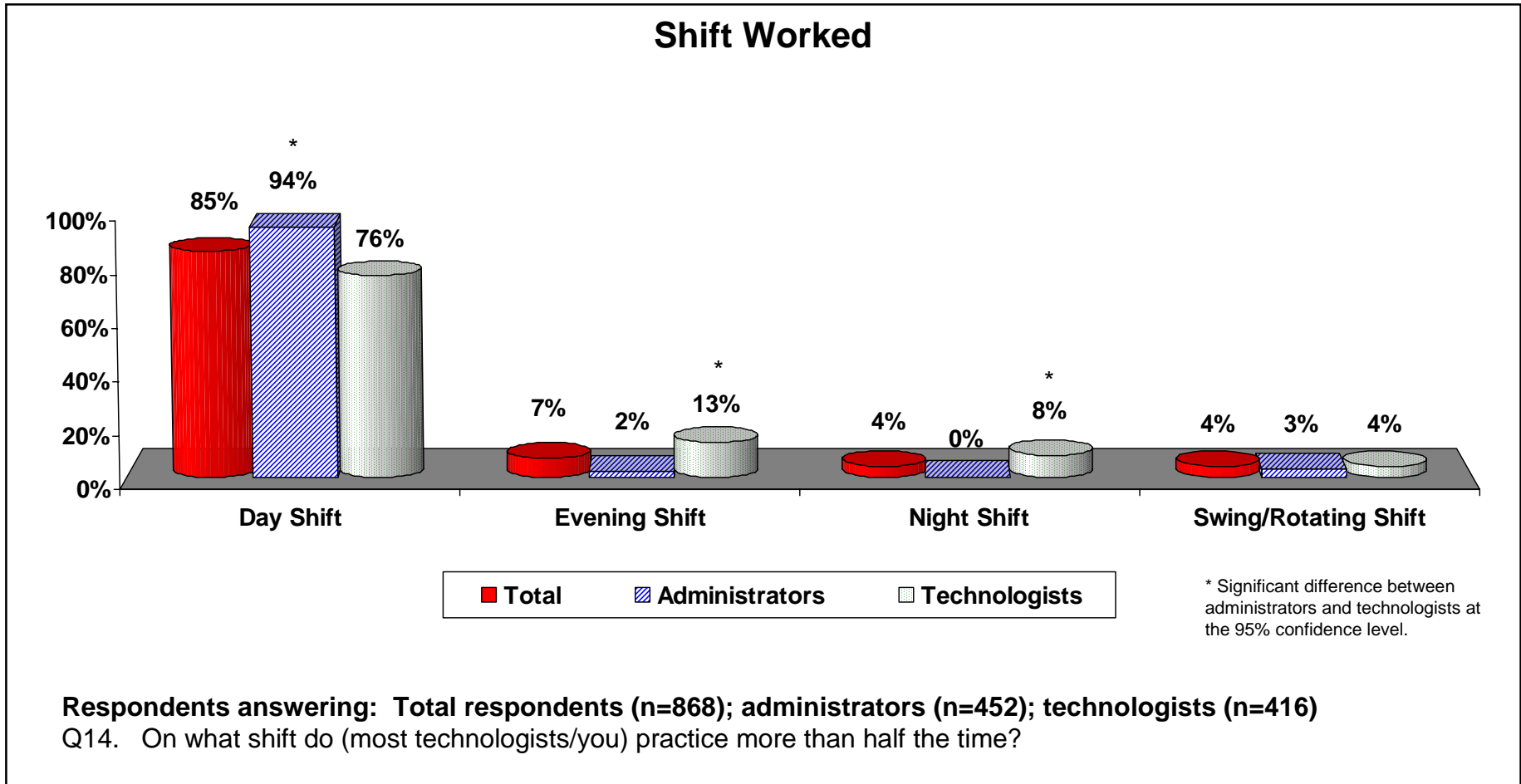
Hours Worked Per Week

Administrators were statistically significantly more likely to work more hours per week compared with technologists. Technologists were statistically significantly more likely than administrators to work 45 hours or less per week, while administrators were more likely than technologists to work 46 to 55 hours per week.



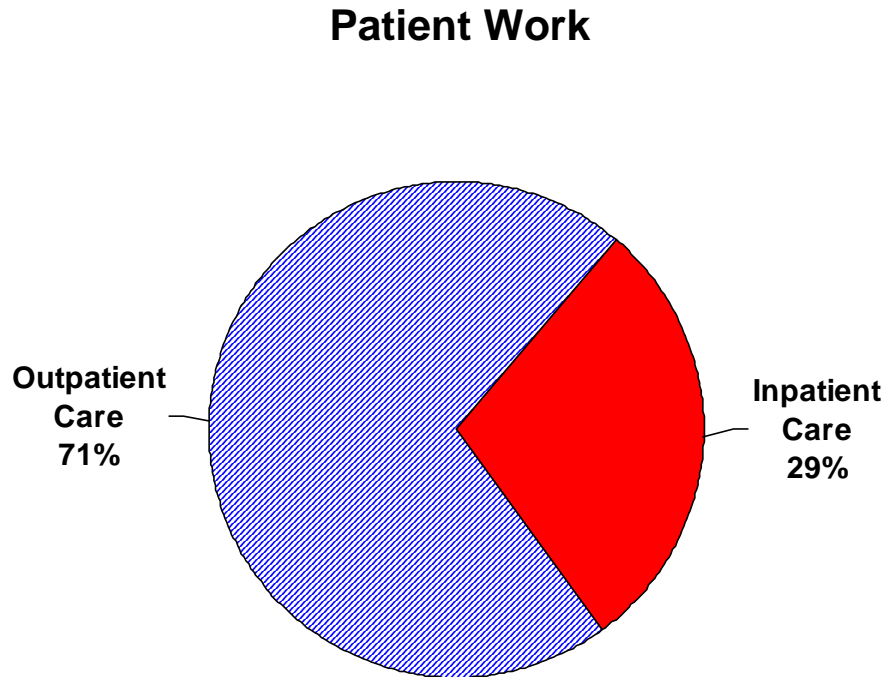
Shift Worked

Due to differences in questionnaire wording, the administrator response cannot be directly compared to the technologist response. Almost all administrators (94%) said that “most” technologists work the day shift, which appears to be confirmed by a majority of technologists (76%) who said that they work the day shift.



Patient Work

Overall, respondents stated that technologists work 71% of the time with outpatient care and 29% with inpatient care.” There is no difference in perception between administrators and technologists.

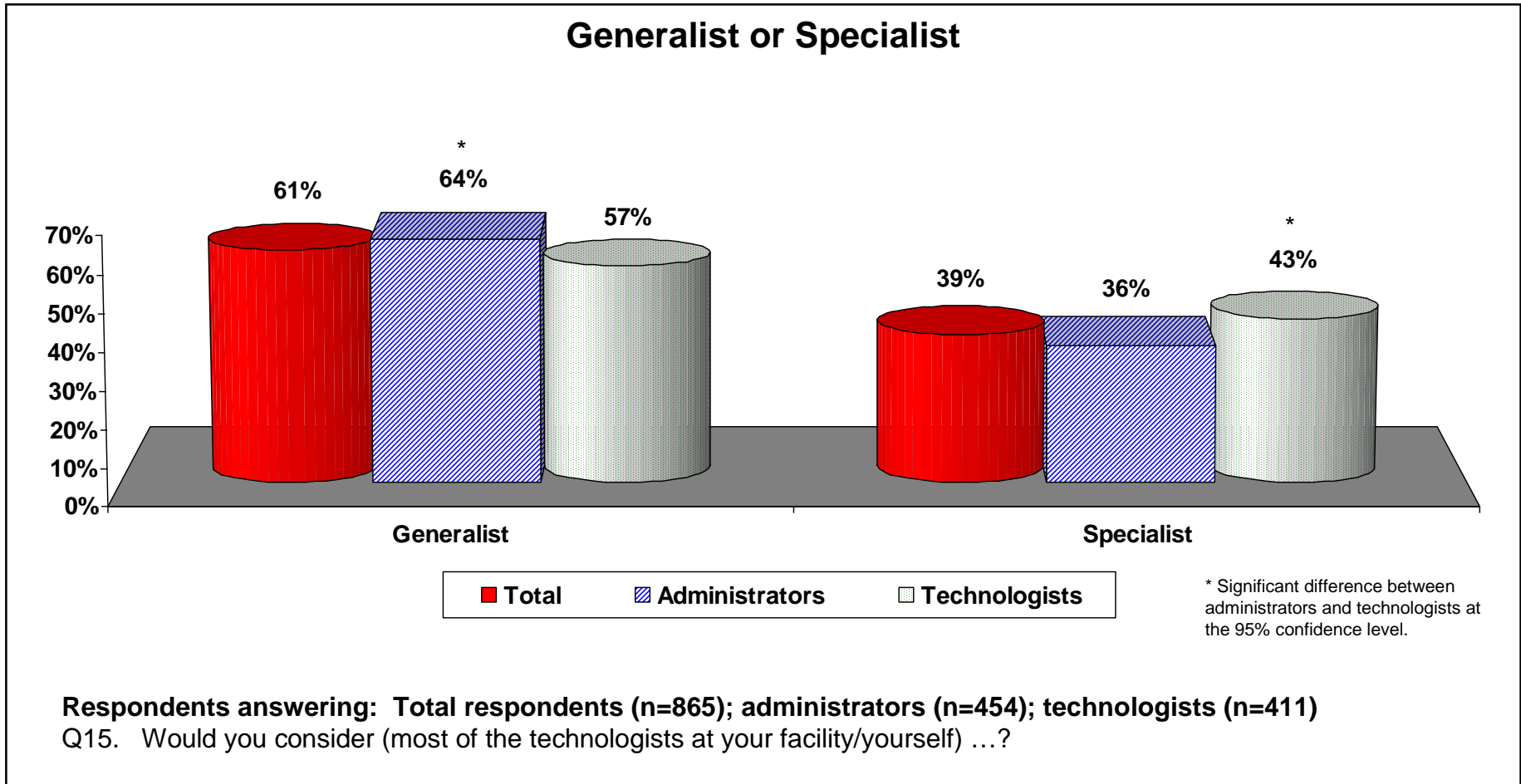


Respondents answering: Total respondents (n=860)

Q13. What percentage of (the technologist's/your) patient work is...?

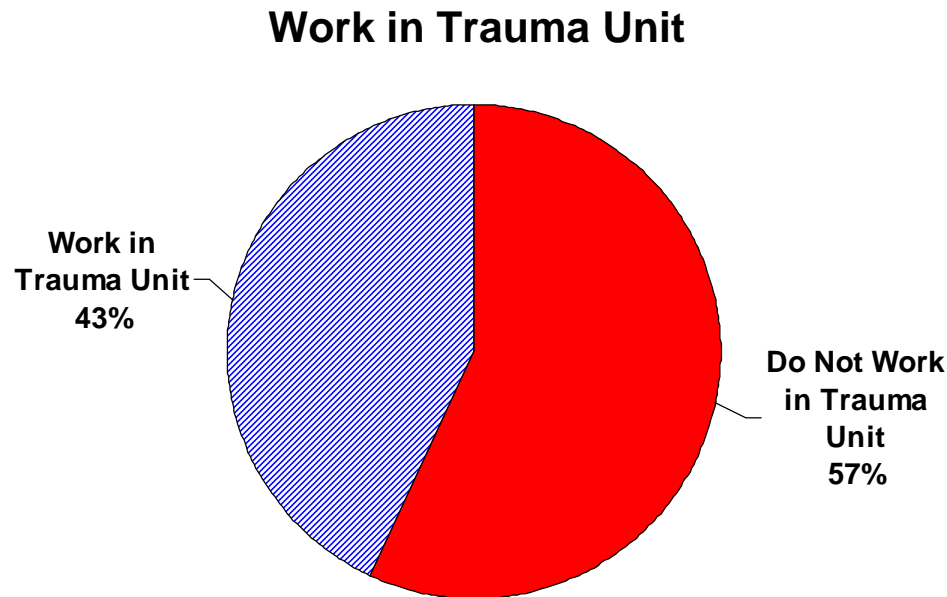
Generalist or Specialist

Administrators (64%) were statistically significantly more likely to perceive technologists as generalists than were technologists (57%) to perceive themselves as generalists. Technologists (43%) were more likely to perceive themselves as specialists than were administrators (36%) to perceive technologists as specialists.



Work in Trauma Unit

About 43% of technologists work in the trauma unit at least once per week. Given the distribution of department sizes, we would expect 47% of radiology departments to have 50% or more technologists who work in the trauma unit, and 32% to have more than half of their technologists working there at least once a week. Since these two figures bracket the 43% of administrators who said that their technologists work in the trauma unit once a week or more, the data are consistent with veridical perception on the part of the administrators.



Respondents answering: Total respondents (n=857)

Q16. Do (technologists/you) work in the trauma unit at least once per week...?

Productivity Measurement

The most popular methods of productivity measurement are “patients seen per technologist,” “patients seen per day,” “turnaround time,” “film quality” and “monitoring by a computer program.” Almost half of all respondents mentioned some form of patient-related productivity measurement while about 43% mentioned a unit-related productivity measurement.

Productivity Measurement

Productivity Measurement	Total	Administrators	Technologists	Productivity Measurement	Total	Administrators	Technologists
	(%)	(%)	(%)		(%)	(%)	(%)
Patient Related (NET)	47	45	50	Monitoring (NET)	28	28	28
How many patients are done per tech	25	25	24	Monitored by a computer program	12	11	13
Daily workload/Patients seen per day	15	14	17	Monitored by supervisor/dept. head	6	4	9 *
Number exams/Patients seen per year	8	6	10	A log book is kept/Checked	5	3	8 *
Patient satisfaction surveys	2	2	2	Monitored by R.I.S.	4	7 *	1
Unit Related (NET)	43	46	39	Through observation	3	4	2
Turnaround/Work in timely manner	13	13	14	Other Monitoring	2	3	0
Film quality evaluated	13	13	12	Other Work (NET)	11	9	13
Number of hours worked	8	10 *	4	Self motivation/Help in other areas	4	3	6
Low reray counts/Number of repeats	7	7	6	Credit for office work/scheduling	4	3	4
How many units per month	7	6	8	Attendance/On time/Dependability	3	2	4
Procedures are counted/evaluated	5	7 *	3	Teamwork/Everyone helps each other	2	2	0
Procedures per hour	2	2	1	Miscellaneous (NET)	11	13	8
				All other	10	11	10

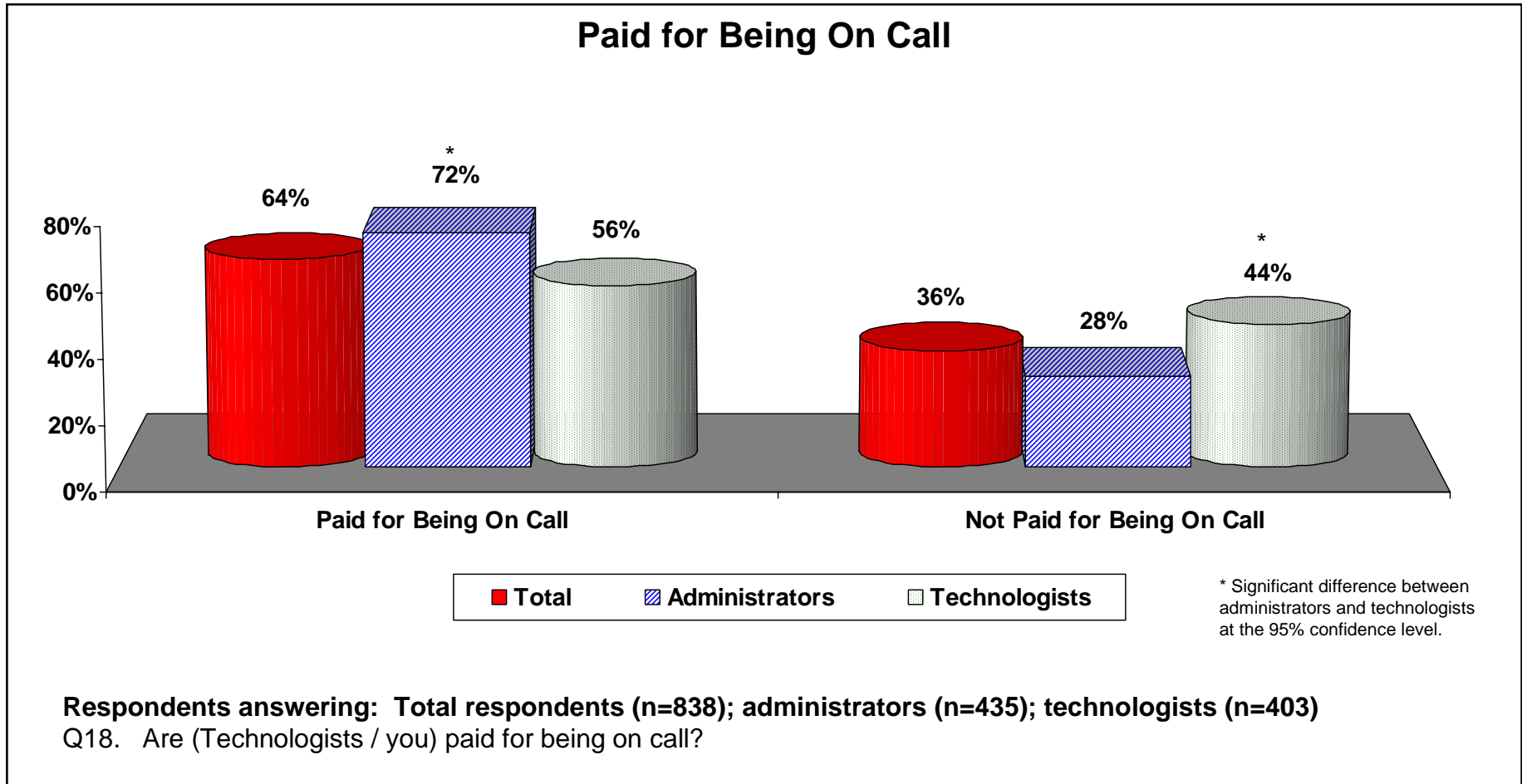
* Significant difference between administrators and technologists at the 95% confidence level.

Respondents answering: Total respondents (n=536); administrators (n=300); technologists (n=236)

Q17. How is (your technologist's/your) productivity measured?

Paid for Being On Call

Administrators (72%) were statistically significantly more likely to say that technologists get paid for being on call than technologists (56%) were to say they receive on-call pay.

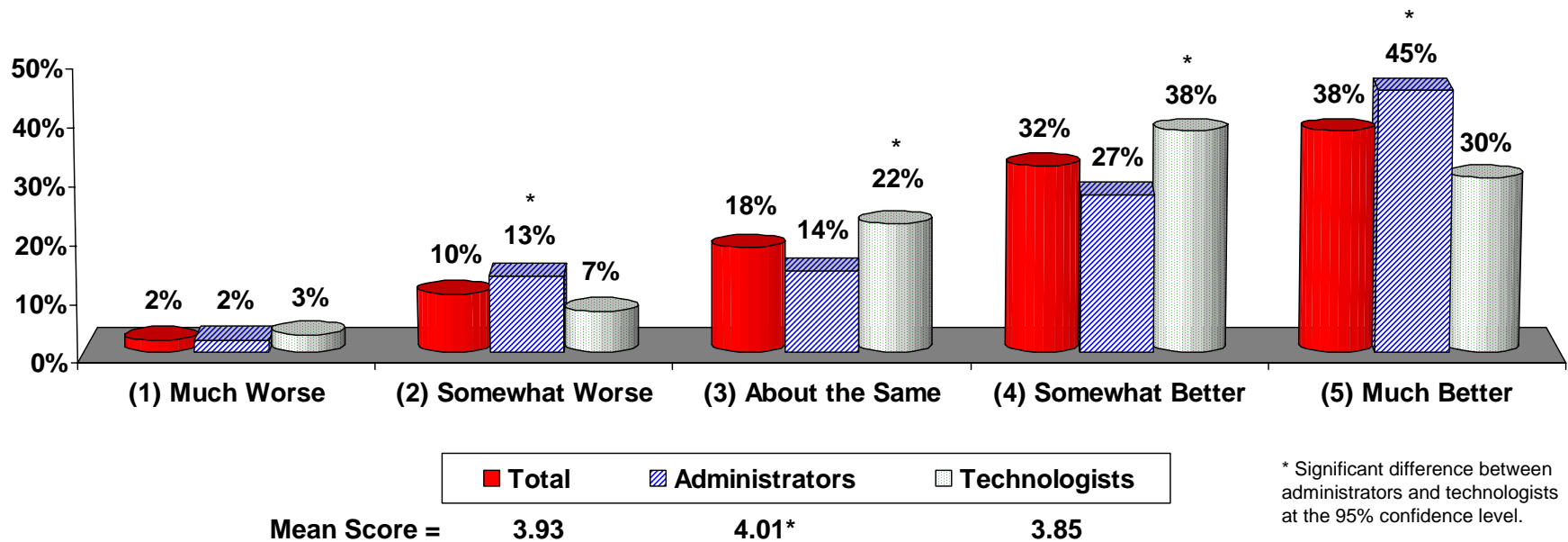


Current Facility - Detailed Findings

Workplace Comparison Rating

Administrators were statistically significantly more likely to rate their current workplace higher than were technologists. Administrators were much more likely than technologists to say their workplace is “much better” than their previous workplaces, while technologists gave more conservative “somewhat better” and “about the same” scores.

Current Workplace Comparison Rating
(Scale: 5 = Much Better; 1 = Much Worse)



Respondents answering: Total respondents (n=722); administrators (n=371); technologists (n=351)

Q5. Of all the places you have worked at, how does your current place of work compare?

Reasons for Workplace Rating

Almost one-third of respondents said better administration and staff were the reason they rated their current workplace better than their last workplace. Other reasons for rating their current workplace better included better patient environment, better facility and better hours.

Reasons For Workplace Comparison Ratings

Note: Dash = Zero (0) Respondents.
0% = Less than 0.5% Respondents.

Reasons for Workplace Comparison Rating	Total (%)	Administrators (%)	Technologists (%)
BETTER (NET)	59	60	59
Better Administration/Staff (SUB-NET)	30	31	30
Great/Nice/Caring co-workers	9	10	8
Better management/administration	9	8	9
More team effort	7	7	6
Other Better Administration/Staff	16	16	16
Better Patient Environment (SUB-NET)	15	16	13
Patients given good care/treated with respect	7	9	6
Slower paced/Less stress/Have time with patients	6	7	5
Other Better Patient Environment	2	2	3
Better Facility (SUB-NET)	12	11	13
Technology/Equipment is better/up to date	11	11	11
Other Better Facility	2	1	3
Better Hours (SUB-NET)	11	9	14 *
Do Not Have to be On Call	3	1	4 *
Other Better Hours	11	8	14
Better Pay (SUB-NET)	8	8	8
Positive Work Environment (SUB-NET)	8	8	7
Better Career Opportunity (SUB-NET)	7	6	8
Miscellaneous (SUB-NET)	11	12	10

Reasons for Workplace Comparison Rating	Total (%)	Administrators (%)	Technologists (%)
SAME (NET)	11	7	15 *
Duties are the same	3	2	4
Poor staffing/Everyone is overworked	3	2	3
It's the same wherever you work	2	1	3
Every place has problems/No job is perfect	2	0	3 *
Other same reasons	6	4	7
WORSE (NET)	32	33	31
Lack of administrative support	5	6	5
Equipment is old/Out of date/Poor facilities	5	7 *	3
Understaffed	4	5	3
Underpaid	3	2	4 *
Facility is small	2	2	1
Other worse reasons	10	11	9

* Significant difference between administrators and technologists at the 95% confidence level.

Respondents answering: Total respondents (n=757); administrators (n=398); technologists (n=359)

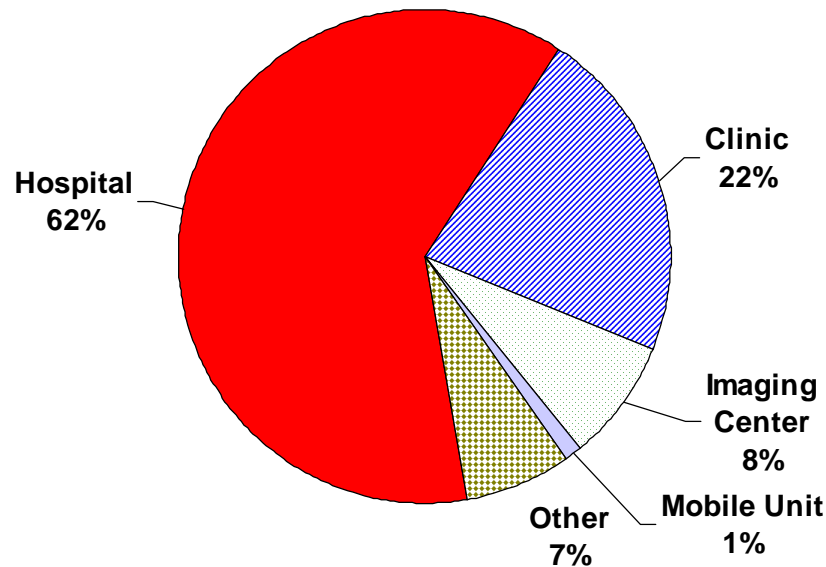
Q5. Of all the places you have worked at, how does your current place of work compare?

Q6. Why do you say that?

Primary Facility Worked At

The majority of respondents work at hospitals while another quarter work at clinics. There is no significant difference in the primary facility where administrators and technologists work.

Primary Facility Worked At



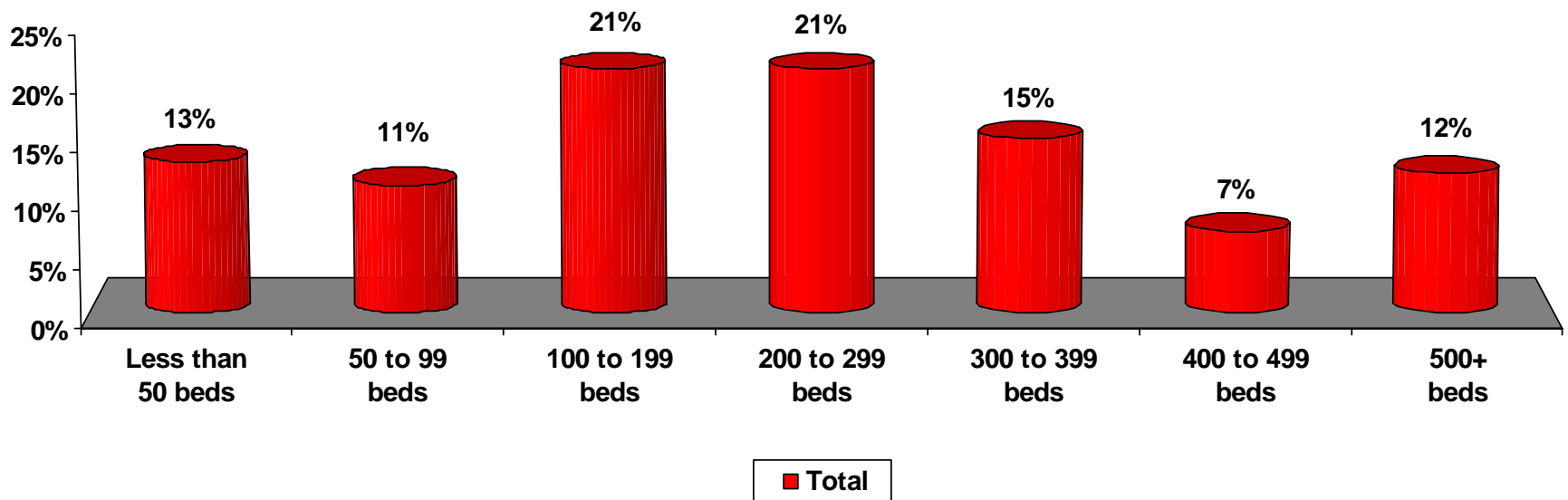
Respondents answering: Total respondents (n=875)

Q19. Would you consider the primary facility you work at a....?

Hospital Size

About 42% of respondents work in hospital facilities with 100 to 299 beds. There is no significant difference in the average number of beds at the hospitals where administrators and technologists work.

Hospital Size by Average Number of Beds
Mean = 269 beds



Respondents answering: Total respondents (n=546)

Q20. If you work in a hospital, how many beds does it have...?

Radiology Department Equipment

Among the equipment listed on the questionnaire, almost all of the respondents cited “x-ray” and “lead apron” as being radiology department equipment. Administrators were more likely to cite “image processing,” “up-to-date reference books,” “e-mail,” “Internet access” and “online scheduling” than were technologists.

Radiology Department Equipment and Equipment Age

Radiology Department Equipment	Total (%)	Administrators (%)	Technologists (%)	Age of Equipment (Years)
X-Ray	99	99	99	8.46
Lead Apron	99	99	99	5.81
Image Processing	95	97 *	93	6.70
Radiation Exposure Monitor	87	88	87	4.83
Thyroid Collar	80	81	79	4.86
Up-to-Date Reference Books	67	72 *	62	3.92
E-Mail	63	73 *	53	3.23
Internet Access	61	72 *	50	2.76
Spiral CT	60	59	61	3.25
Online Image Transmission	40	43	37	2.92
Online Scheduling	29	34 *	25	3.60
PACS	22	20	23	2.58
Electron Beam CT	10	10	11	4.64

* Significant difference between administrators and technologists at the 95% confidence level.

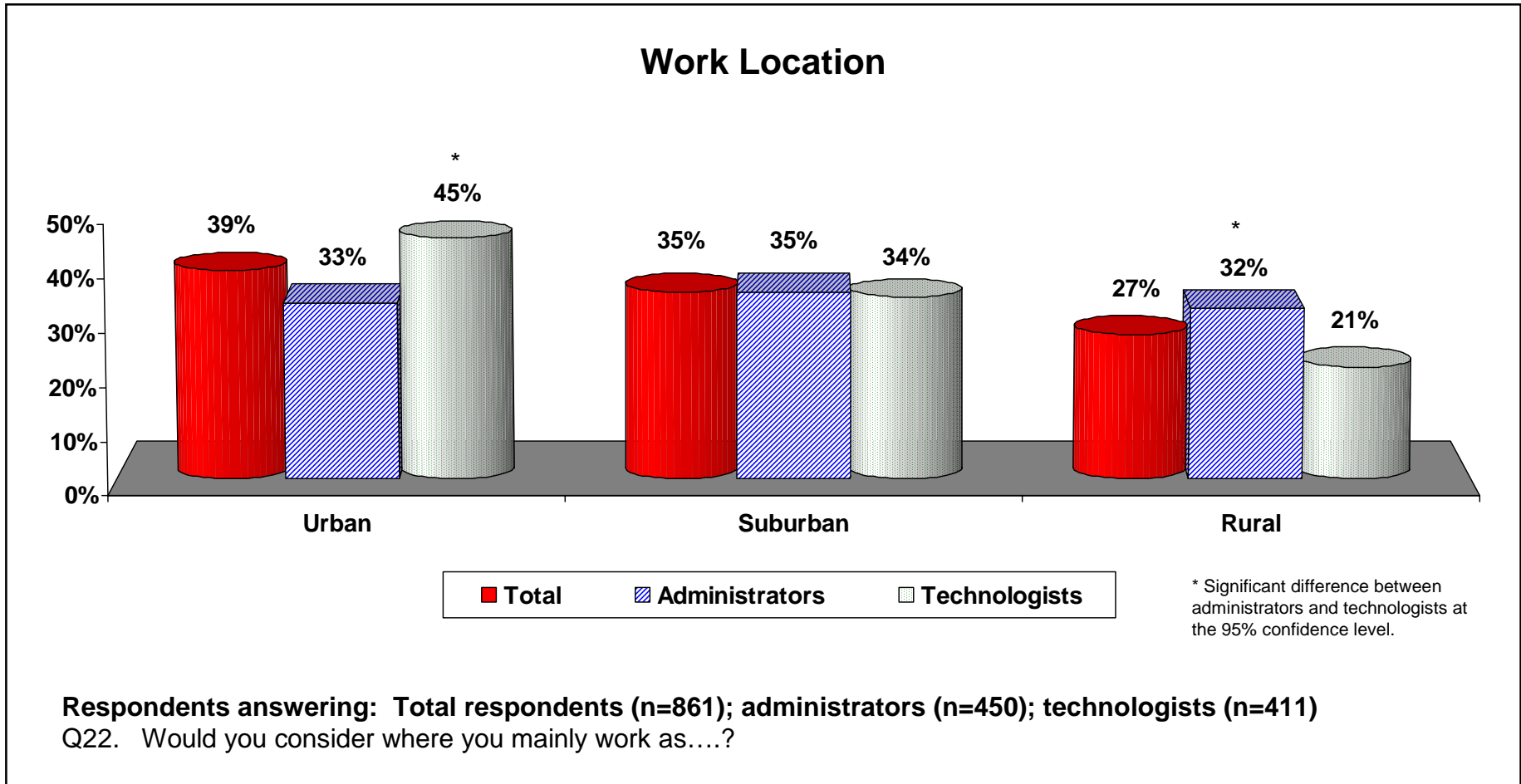
Note: “Age of equipment” is based on respondents answering “have equipment” (n=55-779).

Additional Radiology Department Equipment	Total (%)	Administrators (%)	Technologists (%)
MRI / Open MRI	7	7	6
Mammogram	5	6	5
C Arm	5	3	6
Ultrasound	4	5	2
Portables	3	1	4 *
NM / Nuclear Medicine	3	3	2
Bone Density	2	2	2
V/S	2	2	2
Dexascanner	2	2	2
PET Scan	1	2 *	0
Digital Angio Fluoros / Fluoro Suite	1	2 *	0
CR / Computer Radiology	1	1	1
Digital Image Transmission	1	1	0
Sonogram	0	0	1
BMD	0	0	-
Other	3	3	3

Respondents answering: Total respondents (n=795-867); administrators (n=414-453); technologists (n=381-414)
 Q21. Please indicate all of the equipment/systems that are available to the radiology department at your workplace and give your best estimate as to its age.

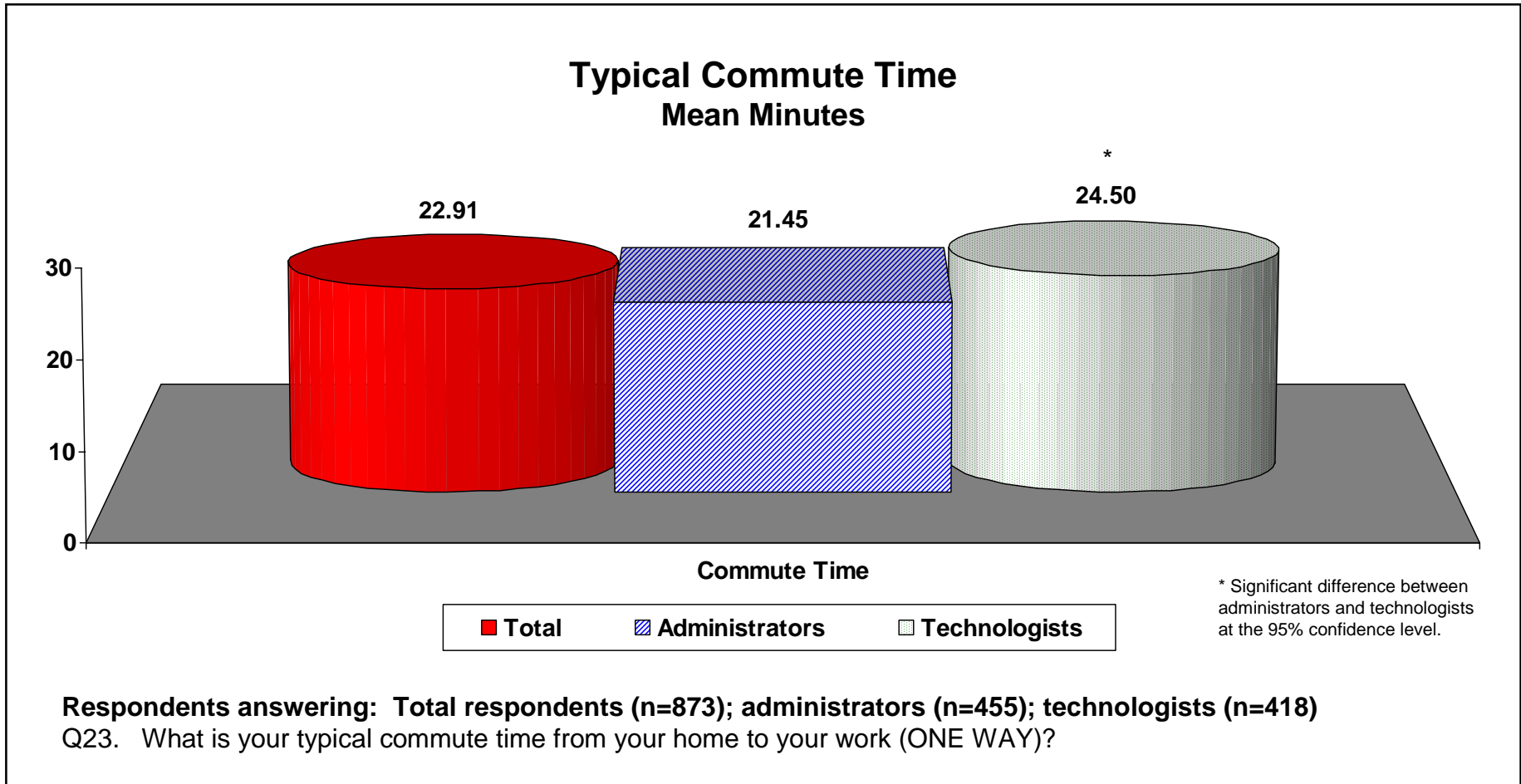
Work Location

Administrators were statistically significantly more likely than technologists to perceive their work location as being in a rural area, while technologists were more likely than administrators to perceive their work location as being in an urban area.



Typical Commute Time

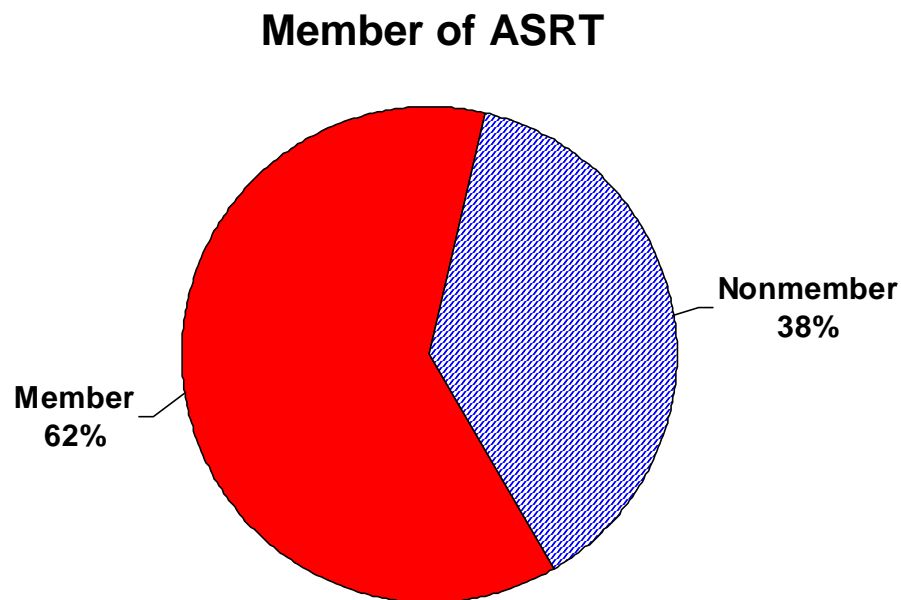
Technologists (25 minutes) have a statistically significantly longer commute time compared with administrators (21 minutes).



Associations - Detailed Findings

Associations

Almost two-thirds of respondents are members of the ASRT. There is no significant difference in the percentage of administrators and technologists who are members of the ASRT. In comparing this to ARRT and ASRT membership lists, which indicate that about 45% of all registered technologists are ASRT members, this indicates that the study somewhat over-represents ASRT members.



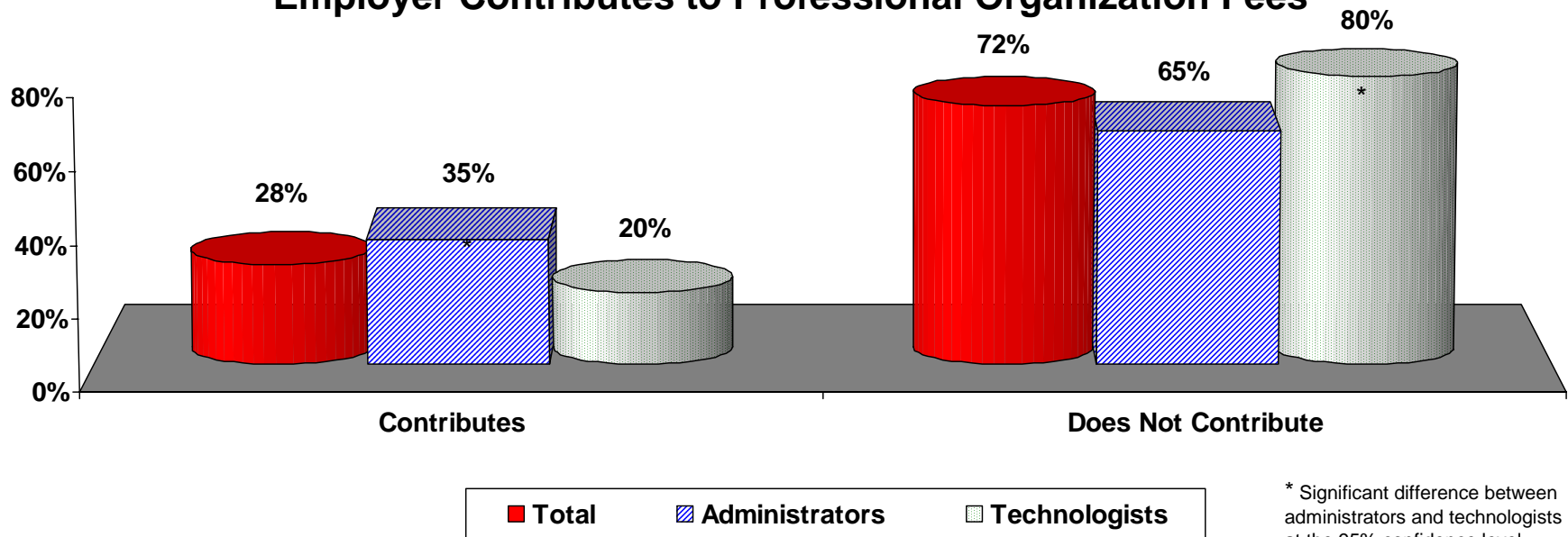
Respondents answering: Total respondents (n=874)

Q25. Are you a current member of the ASRT (American Society of Radiologic Technologists)?

Professional Organization Fees

Administrators (35%) were statistically significantly more likely to have their employer contribute to their professional organization fees than were technologists (20%).

Employer Contributes to Professional Organization Fees



* Significant difference between administrators and technologists at the 95% confidence level.

Respondents answering: Total respondents (n=868); administrators (n=457); technologists (n=411)

Q26. Does your employer contribute to any of your professional organization fees?

Comparison of Respondents

Comparison by Satisfaction

Comparison of Respondents by Satisfaction

Respondents were profiled by comparing the respondents who rated their primary facility as either “very good” or “good” (more satisfied respondents) with the respondents who rated their primary facility as “fair,” “poor” or “very poor” (less satisfied respondents).

- ◆ Compared to less satisfied respondents, more satisfied respondents were more likely to:
 - ◇ Choose the same career in radiologic science (among technologists).
 - ◇ Say that “great/nice/caring coworker” or “patient given good care” are reasons why their current workplace is better than prior workplaces.
 - ◇ Have been involved/practiced in radiologic science for 20 years or more.
 - ◇ **Not** work on a swing/rotating shift.
 - ◇ Have their productivity measured in some form or fashion.
 - ◇ **Not** work in a hospital.
 - ◇ Have online capabilities (online scheduling, e-mail and Internet access) and up-to-date reference books.
 - ◇ Work on newer x-ray and image processing equipment.
 - ◇ Have a shorter commute to work.
 - ◇ Have an employer that contributes to professional organization fees.
 - ◇ Be female.

Comparison by Position

Comparison of Respondents by Position

In comparing specific administration levels to those of the technologists, several consistencies were found.

The three administration levels in the study were:

- ◆ Administrator or manager
- ◆ Chief technologist
- ◆ Supervisor or assistant chief technologist

The two technologist levels were:

- ◆ Senior staff technologist
- ◆ Staff technologist

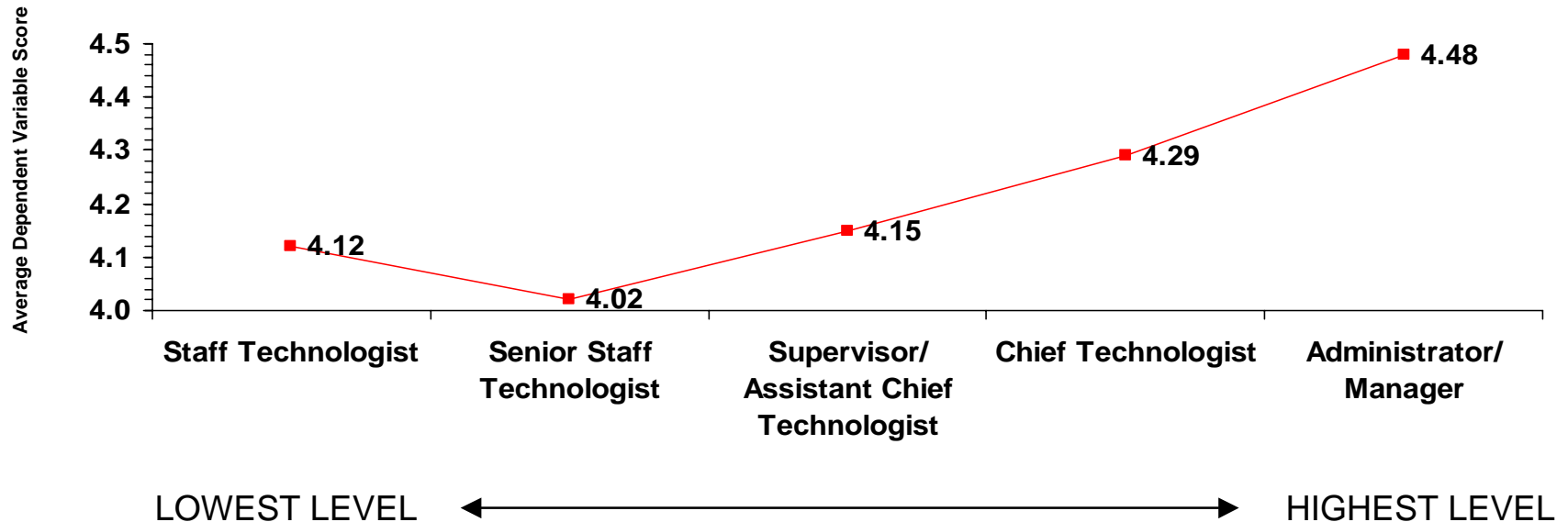
Comparison by Position

Comparison of Respondents by Position

The higher the respondent's management level in the organization, the less similar his or her perceptions were to the technologist. Also, the higher the management level of the respondent, the more positive he or she was toward the technologists' work environment.

One interesting anomaly was that staff technologists were somewhat **more** positive about the work environment than the higher level senior staff technologists. When comparing the various levels to the average of all dependent variable ratings (i.e., radiology department overall, primary facility you work at overall), the graph resembles a hockey stick.

Attitude Toward Technologist's Work Environment



Administrator vs. Chief Technologist

Administrators were different from chief technologists in that:

- ◆ Administrators were much more likely to believe radiologic technologists were paid for being on call.
- ◆ Administrators were more likely to:
 - ◇ Rate “hospital administration” higher.
 - ◇ Rate “radiology administration” higher.
 - ◇ Believe facility is more in order and secure.
 - ◇ Have online communications.
 - ◇ Feel more positive about radiologic technologists’ job security and career development.
 - ◇ Believe radiologic technologists are more appreciated and important.
 - ◇ Believe that radiologic technologists receive support, proper orientation, equal treatment, recognition and feedback.
 - ◇ Believe radiologic technologist is a specialist position rather than a generalist position.
 - ◇ Believe that radiologic technologists work in the trauma unit at least once a week.
 - ◇ Be in a hospital rather than a clinic.
 - ◇ Get reimbursement for professional fees.
 - ◇ Be male.
 - ◇ Have a higher education.
- ◆ Administrators were less likely to believe productivity is measured by using procedures counted and less likely to be measured using film quality or overall performance/productivity.
- ◆ There was no difference in “age” or “years worked in profession” between the two levels.

Chief Technologist vs. Assistant Chief Technologist

The chief technologist differs from the supervisor/assistant chief technologist in that:

- ◆ Chief technologists feel much more positive about the “people” aspects of the technologist job, including the respect technologists receive and the quality technologists are allowed to achieve.
- ◆ Chief technologists are more likely than supervisors/assistant chief technologists to:
 - ◇ Rate “radiology administration” higher.
 - ◇ Have uniform reimbursement/assistance.
 - ◇ Have been in radiologic science a few years longer.
 - ◇ Think that radiologic technologists have a lower ratio of inpatient care and a higher ratio of outpatient care.
 - ◇ Be in a clinic.
 - ◇ Be older.
- ◆ Chief technologists are less likely to:
 - ◇ Feel technologist skills are in demand.
 - ◇ That their facility is well known.
 - ◇ Think radiologic technologists are paid for being on call.
 - ◇ Be in a hospital. If they are in a hospital, it is much smaller.

Supervisor/Assistant Chief vs. Senior Staff Technologist

Supervisor/assistant chief technologists were different from senior staff technologists in that:

- ◆ Supervisors were more likely than senior staff technologists to believe technologists are paid for being on call.
- ◆ They felt **more** positive about:
 - ◇ “Radiology administration.”
 - ◇ “Overall radiologic patient care.”
 - ◇ The facility in general, especially the training, insurance benefits and communications that radiologic technologists receive.
 - ◇ Scheduling input and process for technologists.
 - ◇ Aspects of the technologist’s job, especially their input being welcomed and valued, as well as being provided the tools and support to provide the best patient care.
- ◆ Supervisors felt **less** positive than senior staff technologists about:
 - ◇ The amount of pride the job gives the technologist and the accuracy technologists can achieve.
- ◆ They had spent the same amount of time in the profession, but less time at their current position.
- ◆ They were younger, married and had reached a higher education level.
- ◆ They were more likely to work in a rural location and less likely to work in an urban location.

Senior Staff Technologist vs. Staff Technologist

Comparison of Respondents by Position

The senior staff technologist was different from the staff technologist in that:

- ◆ They tended to be **less** positive about the workplace in general, especially in terms of safety, training, retirement benefits and general building conditions.
- ◆ They viewed coworkers and administrators very similarly except they were less likely to believe that co-workers are properly certified.
- ◆ They generally put more value on professionalism and education.
- ◆ They had spent almost twice as long in the profession and had been in their current position longer.
- ◆ They were older.

Demographics - Detailed Findings

Region

Region

Note that there are very small sample sizes in this table and the results should be applied with caution. Of those participating in this survey, regions IX and X have the greatest percentage of technologists in comparison with administrators, while regions II and III have a greater percentage of administrators in comparison with technologists.

Region I	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island
Region II	New York, New Jersey
Region III	Pennsylvania, Delaware, DC, Maryland, Virginia, West Virginia
Region IV	Alabama, Florida, Georgia, Kentucky, Mississippi, N. Carolina, S. Carolina, Tennessee
Region V	Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin
Region VI	Arkansas, Louisiana, New Mexico, Oklahoma, Texas
Region VII	Iowa, Kansas, Missouri, Nebraska
Region VIII	Colorado, Montana, N. Dakota, S. Dakota, Utah
Region IX	Arizona, California, Nevada
Region X	Alaska, Hawaii, Idaho, Oregon, Washington

Region

Level	I	II	III	IV	V	VI	VII	VIII	IX	X
Administrators	39%	67%	57%	43%	42%	46%	43%	65%	7%	11%
Technologists	61%	33%	43%	57%	58%	54%	57%	35%	93%	89%
Respondents answering	(47)	(49)	(70)	(148)	(166)	(88)	(56)	(37)	(42)	(18)

Age, Gender and Marital Status

The average age for all respondents is 42 years. Administrators tended to be older, male and married compared to technologists.

AGE, GENDER AND MARITAL STATUS

Note: Dash = Zero (0) Respondents.
0% = Less than 0.5% Respondents.

	Total	Admini- strators	Techno- logists
Base: Total Respondents	(864)	(453)	(411)
Age			
18 to 30	15%	7%	24% *
31 to 35	12%	12%	11%
36 to 40	12%	10%	13%
41 to 45	18%	19%	16%
46 to 50	20%	25% *	15%
51 to 55	15%	16%	13%
56 and older	10%	12%	8%
Mean Age	42.49	44.77*	39.99

	Total	Admini- strators	Techno- logists
Base: Total Respondents	(876)	(458)	(418)
Gender			
Male	28%	33% *	22%
Female	72%	67%	78% *
Base: Total Respondents	(874)	(457)	(417)
Marital Status			
Married	72%	78% *	65%
Single	28%	22%	35% *

* Significant difference between administrators and technologists at the 95% confidence level.

Education

The most common degree held among all respondents is an associate degree. Administrators were statistically significantly more likely than technologists to have bachelor's and master's degrees while technologists were more likely than administrators to have associate degrees.

EDUCATION

Note: Dash = Zero (0) Respondents.
0% = Less than 0.5% Respondents.

	Total	Admini- strators	Techno- logists
Base: Total Respondents	(876)	(458)	(418)
Education			
High school or equivalent	3%	2%	3%
Certificate	23%	25%	20%
Advanced Certificate(s)	11%	11%	11%
Associate Degree	45%	37%	55% *
Baccalaureate Degree	15%	20% *	10%
Master's Degree	3%	5% *	1%
Doctoral Degree	0%	0%	-

* Significant difference between administrators and technologists at the 95% confidence level.

Appendices

Appendix A: Factor Analysis

Extraction method: Principal component analysis.

Rotation Method: Varimax with Kaiser Normalization

Factor Analysis - Q7 Administrator

ROTATED LOADINGS MATRIX

Q7 Administrator

Q7 Administrator Rotated Component Matrix	Component						
	1	2	3	4	5	6	7
Q7.23 Day care	0.831			0.104			0.167
Q7.24 Senior care	0.805						0.158
Q7.22 Fitness center	0.753			0.381			
Q7.26 Internet access	0.737	0.257	0.217			0.125	
Q7.25 E-Mail	0.718	0.236	0.316			0.237	-0.134
Q7.27 Tuition assistance	0.504	0.278	0.148	0.218		0.298	
Q7.28 Uniform reimbursement/assistance	0.395	0.267	0.204	0.358			0.164
Q7.10 Health Insurance benefits		0.802	0.178			0.105	
Q7.12 Dental Insurance benefits	0.116	0.789			0.133		0.138
Q7.11 Vision Insurance benefits	0.231	0.760	-0.107	0.114			
Q7.09 Life Insurance benefits		0.716	0.198	0.134		0.267	
Q7.13 Retirement benefits	0.100	0.706	0.234	0.194			
Q7.19 Image processing equipment			0.795	0.213			
Q7.20 Communications equipment		0.109	0.747	0.132	0.151	0.228	
Q7.18 Imaging equipment	0.152		0.732	0.223			0.225
Q7.21 Records management systems	0.186		0.528	0.198	0.102	0.283	
Q7.16 Janitorial service			0.128	0.770	0.119		
Q7.17 Employee Lounge/Breakroom facilities	0.189		0.104	0.622		0.158	0.183
Q7.15 Building Security	0.117	0.230	0.316	0.617	0.178	0.106	
Q7.14 Working order of building (Elevators, etc.)	0.188	0.165	0.410	0.616	0.161		
Q7.04 Safe environment at work	0.142		0.262	0.520	0.385	0.275	
Q7.06 Location convenient to family needs	0.109			0.113	0.897		0.116
Q7.03 Location convenient to home			0.107		0.895		
Q7.05 Safe commute to work		0.117		0.249	0.794	0.188	
Q7.08 Written communications w/(Rad staff/Chief Tech)	0.174	0.122	0.186	0.153		0.849	0.157
Q7.07 Verbal communications w/(Rad staff/Chief Tech)	0.132		0.175	0.207	0.125	0.832	0.163
Q7.02 External/Off site training		0.166		0.278		0.187	0.750
Q7.01 In house/On site training	0.244	0.126	0.296		0.103	0.137	0.715

Factor Analysis - Q8 Administrator

Q8 Administrator

ROTATED LOADINGS MATRIX

Q8 Administrator Rotated Component Matrix	Component				
	1	2	3	4	5
Q8.16 Proper amount of time with patients	0.771	0.178	0.155	0.329	
Q8.18 Patient load	0.769	0.217	0.124		0.116
Q8.06 Workload allows (them/you) to do an effective job	0.768	0.147	0.309		0.196
Q8.17 Quality of time spent with patients	0.749	0.263	0.181	0.239	
Q8.19 Not an excessive amount of mental stress	0.747	0.149	0.205	0.157	0.290
Q8.20 Not an excessive amount of physical stress	0.733		0.129	0.212	0.290
Q8.07 Job security - Ability to stay employed		0.773		0.126	
Q8.09 Feel safe at job	0.154	0.691	0.205	0.228	
Q8.10 Feel (they / you) are indispensable	0.226	0.642		0.125	0.163
Q8.08 The level of autonomy	0.292	0.634	0.282	0.233	
Q8.23 Overall learning experience		0.523	0.149	0.230	0.464
Q8.22 Ability to influence performance	0.274	0.505	0.208	0.229	0.432
Q8.25 Accuracy (they / you) are able to achieve	0.394	0.468	0.328		0.183
Q8.01 The respect received from Co-Workers	0.105	0.166	0.767	0.164	0.135
Q8.03 The respect received from Nurses	0.251	-0.114	0.706		0.251
Q8.02 The respect received from Doctors	0.258		0.666	0.107	0.316
Q8.11 Support from Co-Workers		0.349	0.665	0.174	
Q8.05 Amount of pride job gives	0.331	0.444	0.558		0.155
Q8.04 The respect received from Chief Technologist	0.235	0.254	0.551	0.432	
Q8.27 Health care professionals (they/you) work w/are team players	0.202	0.226	0.524	0.150	0.460
Q8.15 Scheduling process	0.245	0.212	0.120	0.796	0.195
Q8.13 Ability to provide input on scheduling	0.203	0.154	0.145	0.790	0.176
Q8.14 Variety of duties	0.182	0.259	0.217	0.649	0.218
Q8.12 Support from Chief Technologist	0.263	0.334	0.418	0.451	
Q8.26 "On call" requirements	0.138		0.256		0.762
Q8.21 Ability to influence career	0.269	0.365		0.331	0.576
Q8.28 Provided with the skills to grow		0.473	0.116	0.235	0.550
Q8.24 Overtime requirements	0.315	0.157	0.224	0.202	0.538

Factor Analysis - Q9 Administrator

Q9 Administrator

ROTATED LOADINGS MATRIX

Q9 Administrator Rotated Component Matrix	Component					
	1	2	3	4	5	6
Q9.04 Appreciated by others (they / you) work with	0.729		0.226	0.182	0.209	
Q9.14 People (they / you) work with act professionally	0.666	0.253	0.277			
Q9.05 Appreciated by patients	0.635	0.163			0.178	
Q9.13 Are allowed to provide the best care	0.554	0.446	0.164	0.250	0.127	
Q9.11 People ask for (their / your) input	0.539		0.356	0.270	0.352	-0.160
Q9.07 Input is welcomed	0.489		0.403	0.397	0.219	0.143
Q9.01 Mastered profession	0.488	0.226		-0.214	0.193	0.333
Q9.03 Feel safe at work	0.481	0.130		0.283	0.295	0.248
Q9.18 Have adequate support staff	0.423	0.281	0.258	0.406		0.190
Q9.16 Technology allows for great patient care	0.210	0.798	0.155	0.118		
Q9.12 Have the technology to do the best job	0.211	0.777	0.156	0.123		
Q9.15 Facility is well known		0.633			0.207	0.107
Q9.24 Equipment is well maintained	0.149	0.584	0.371	0.201		0.249
Q9.26 Receive proper orientation on scheduling systems	0.180		0.773		0.109	
Q9.25 Receive proper orientation on imaging equipment	0.133	0.355	0.657	0.120	0.162	0.184
Q9.27 Receive proper performance evaluation		0.175	0.637	0.337	0.142	0.162
Q9.23 Receive proper compensation for extra hours		0.176	0.109	0.702	0.154	0.185
Q9.22 "Sign on" bonuses for new hires are fair				0.607	0.198	-0.153
Q9.21 Women and men are treated equally	0.215		0.308	0.499	0.139	0.230
Q9.19 Get adequate productivity incentives	0.343	0.288	0.235	0.498	-0.120	
Q9.06 Time off is not interrupted by work	0.349	0.182	0.169	0.457		0.222
Q9.10 Continuing education is critical	0.119	0.145	0.347		0.669	
Q9.02 Skills are in demand	0.182		-0.110		0.651	0.351
Q9.09 (They / You) are important	0.355		0.308	0.147	0.645	
Q9.08 Work with reputable Radiologists	0.160	0.218	0.114	0.249	0.496	
Q9.20 Co-Workers are properly certified/credentialed			0.136	0.155		0.757
Q9.17 Properly educated in jobs that (they / you) do	0.361	0.322	0.252		0.222	0.498

Factor Analysis - Q7 Technologist

Q7 Technologist

ROTATED LOADINGS MATRIX

Q7 Technologist Rotated Component Matrix	Component						
	1	2	3	4	5	6	7
Q7.12 Dental Insurance benefits	0.841	0.130		0.138			
Q7.10 Health Insurance benefits	0.840					0.147	0.136
Q7.11 Vision Insurance benefits	0.812	0.145		0.134			0.177
Q7.09 Life Insurance benefits	0.753	0.177		0.199	0.123		0.156
Q7.13 Retirement benefits	0.571	0.184				0.122	0.235
Q7.18 Imaging equipment	0.173	0.819	0.118			0.144	
Q7.19 Image processing equipment	0.128	0.800	0.115	0.133	0.153	0.150	
Q7.20 Communications equipment	0.175	0.777	0.102	0.113	0.242	0.188	
Q7.21 Records management systems	0.197	0.690			0.188	0.134	0.203
Q7.06 Location convenient to family needs			0.911			0.139	
Q7.03 Location convenient to home			0.895				
Q7.05 Safe commute to work		0.113	0.862		0.103	0.148	
Q7.04 Safe environment at work		0.268	0.441		0.349	0.348	
Q7.22 Fitness center	0.126	0.180	0.128	0.783			
Q7.24 Senior care	0.259			0.775		0.247	0.116
Q7.23 Day care	0.149			0.769	0.220		0.305
Q7.17 Employee Lounge/Breakroom facilities		0.416		0.458		0.403	0.181
Q7.07 Verbal communications w/(Rad staff/Chief Tech)		0.138	0.111		0.891	0.111	0.133
Q7.08 Written communications w/(Rad staff/Chief Tech)		0.167			0.858	0.142	0.201
Q7.01 In house/On site training	0.262	0.329		0.297	0.592		
Q7.02 External/Off site training	0.324	0.346	0.108	0.395	0.504		
Q7.16 Janitorial service			0.101	0.142		0.819	
Q7.15 Building Security	0.219	0.188		0.148	0.105	0.737	
Q7.14 Working order of building (Elevators, etc.)	0.179	0.349	0.190		0.101	0.661	0.179
Q7.26 Internet access	0.248	0.153			0.102	0.169	0.789
Q7.27 Tuition assistance	0.210			0.246	0.171		0.700
Q7.25 E-Mail	0.260	0.206	0.104	0.300		0.153	0.673
Q7.28 Uniform reimbursement/assistance	0.211	0.308	0.236	0.301	0.156		0.408

Factor Analysis - Q8 Technologist

Q8 Technologist

ROTATED LOADINGS MATRIX

Q8 Technologist Rotated Component Matrix	Component					
	1	2	3	4	5	6
Q8.16 Proper amount of time with patients	0.835	0.111	0.192	0.144		
Q8.17 Quality of time spent with patients	0.799	0.124	0.203	0.163		0.149
Q8.19 Not an excessive amount of mental stress	0.730	0.196	0.127	0.220	0.290	0.143
Q8.20 Not an excessive amount of physical stress	0.726	0.192	0.142	0.117	0.260	0.229
Q8.18 Patient load	0.720		0.306	0.165		0.156
Q8.06 Workload allows (them/you) to do an effective job	0.665	0.115	0.118	0.334	0.241	0.274
Q8.12 Support from Chief Technologist	0.146	0.809		0.282		0.211
Q8.04 The respect received from Chief Technologist	0.118	0.767		0.236	0.170	0.220
Q8.11 Support from Co-Workers	0.108	0.645	0.189	0.275	0.407	
Q8.01 The respect received from Co-Workers		0.615	0.132	0.159	0.502	
Q8.13 Ability to provide input on scheduling	0.438	0.578	0.411			
Q8.15 Scheduling process	0.517	0.547	0.335			
Q8.23 Overall learning experience	0.105	0.171	0.756	0.264	0.188	0.162
Q8.21 Ability to influence career	0.321	0.195	0.714	0.185		
Q8.22 Ability to influence performance	0.265		0.691	0.201	0.206	0.180
Q8.14 Variety of duties	0.393	0.351	0.582			
Q8.28 Provided with the skills to grow	0.178	0.403	0.529	0.191	0.131	0.280
Q8.25 Accuracy (they / you) are able to achieve	0.172		0.494	0.300		0.359
Q8.07 Job security - Ability to stay employed	0.121	0.143		0.797		
Q8.08 The level of autonomy	0.136	0.195	0.172	0.619	0.291	
Q8.09 Feel safe at job	0.160	0.178	0.313	0.603	0.240	
Q8.10 Feel (they / you) are indispensable	0.344	0.164	0.148	0.590		
Q8.05 Amount of pride job gives	0.177	0.187	0.202	0.521	0.379	
Q8.03 The respect received from Nurses	0.203	0.113			0.816	
Q8.02 The respect received from Doctors	0.134	0.193	0.218	0.225	0.754	
Q8.27 Health care professionals (they/you) work w/are team players	0.234	0.450	0.263		0.455	0.270
Q8.26 "On call" requirements	0.237	0.215	0.133			0.791
Q8.24 Overtime requirements	0.238	0.171	0.253	0.126		0.779

Factor Analysis - Q9 Technologist

ROTATED LOADINGS MATRIX

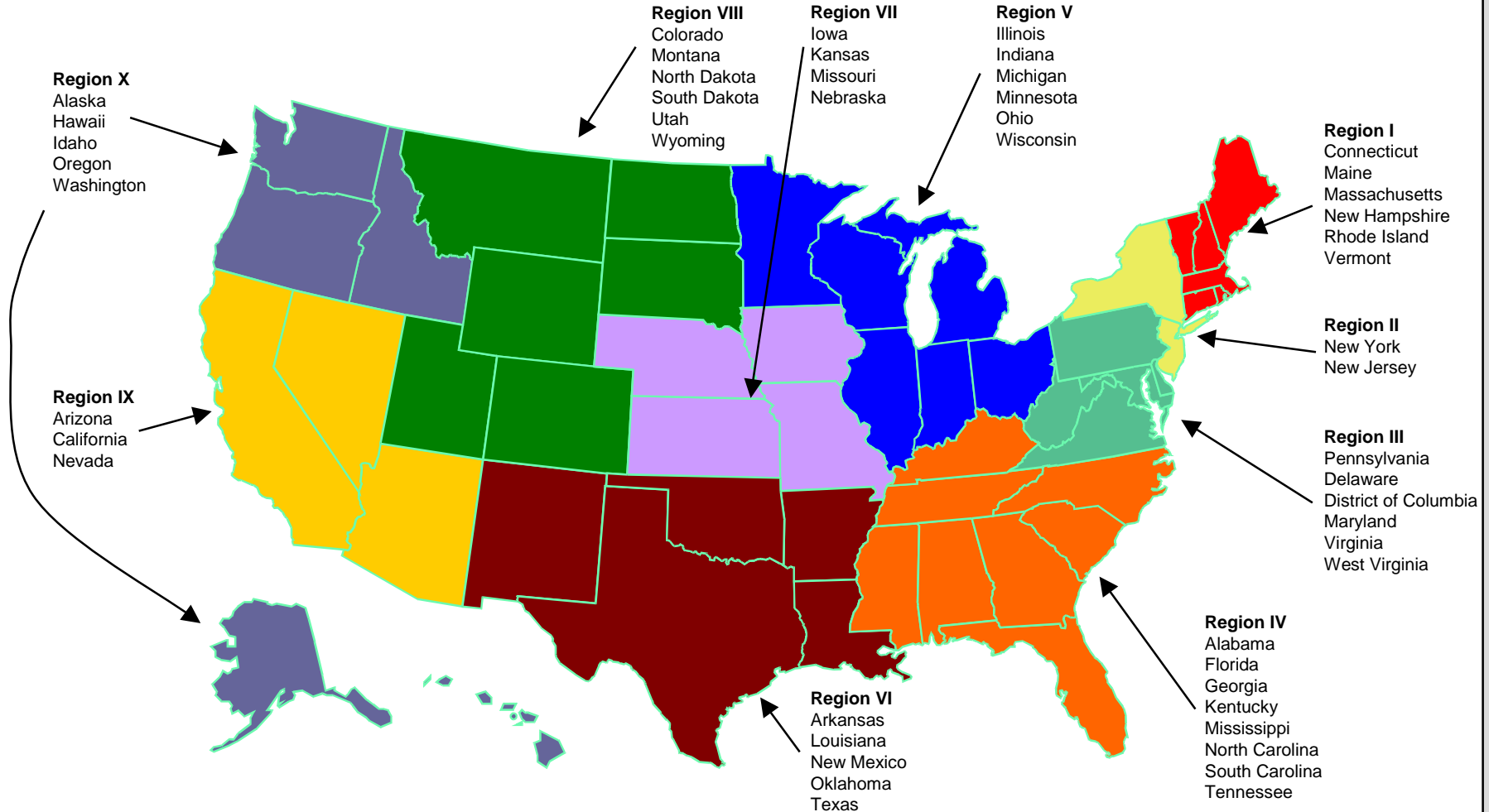
Q9 Technologist

Q9 Technologist Rotated Component Matrix	Component				
	1	2	3	4	5
Q9.07 Input is welcomed	0.748	0.235	0.269	0.209	
Q9.09 (They / You) are important	0.729	0.157		0.134	0.338
Q9.11 People ask for (their / your) input	0.699	0.193			0.343
Q9.04 Appreciated by others (they / you) work with	0.689	0.142	0.141	0.261	0.103
Q9.14 People (they / you) work with act professionally	0.547	0.280	0.226	0.281	
Q9.10 Continuing education is critical	0.499	0.119		-0.196	0.445
Q9.21 Women and men are treated equally	0.474	0.173	0.281	0.231	
Q9.18 Have adequate support staff	0.429	0.402	0.322	0.235	-0.100
Q9.05 Appreciated by patients	0.415	0.209	-0.135	0.221	0.297
Q9.13 Are allowed to provide the best care	0.354	0.743		0.125	
Q9.12 Have the technology to do the best job		0.737	0.129	0.194	0.260
Q9.16 Technology allows for great patient care	0.139	0.734		0.364	
Q9.24 Equipment is well maintained	0.171	0.674	0.266	0.122	
Q9.17 Properly educated in jobs that (they / you) do	0.154	0.621		0.260	0.150
Q9.25 Receive proper orientation on imaging equipment	0.280	0.560	0.457		
Q9.26 Receive proper orientation on scheduling systems	0.319	0.528	0.484	-0.112	
Q9.22 "Sign on" bonuses for new hires are fair			0.700		
Q9.23 Receive proper compensation for extra hours		0.152	0.686	0.291	0.104
Q9.27 Receive proper performance evaluation	0.261	0.431	0.507		
Q9.19 Get adequate productivity incentives	0.385	0.400	0.460		
Q9.15 Facility is well known		0.160		0.716	0.217
Q9.06 Time off is not interrupted by work	0.246	0.205		0.587	-0.131
Q9.20 Co-Workers are properly certified/credentialed	0.253	0.213	0.129	0.431	
Q9.03 Feel safe at work	0.286	0.213	0.165	0.406	0.356
Q9.02 Skills are in demand	0.210				0.728
Q9.01 Mastered profession		0.146			0.635
Q9.08 Work with reputable Radiologists	0.254		0.315	0.199	0.400

Appendix B: Region Map

Region Map

Respondents who indicated that their workplace is in one of the 50 states or the District of Columbia were placed in the following 10 regions:



Appendix C: Administrator Questionnaire

ASRT WORKPLACE SURVEY 2001

AFinal

PLEASE ANSWER ALL QUESTIONS IN TERMS OF YOUR JOB THAT INVOLVES YOU IN RADIOLOGIC SCIENCES ONLY. DO NOT INCLUDE OTHER JOBS YOU MAY HAVE.

1. Are you presently involved in the Radiologic Technology profession?
 Yes No → (PLEASE RETURN THIS QUESTIONNAIRE IN THE POSTAGE PAID ENVELOPE.)

2. Please indicate which of the following best describes your current position?
 Staff Technologist/Sr. Staff Technologist → (PLEASE RETURN THIS QUESTIONNAIRE IN THE POSTAGE PAID ENVELOPE.)
 Supervisor or Assistant Chief Technologist Chief Technologist
 Administrator or Manager Other (WRITE IN) _____

3. How many hours do you work in a typical work week in/with the Radiology department? ("X" ONE BOX)
 Under 16 16-25 26-35 36-45 46-55 Over 55

4. Using the scale below, please give an overall rating for the following: ("X" ONE BOX FOR EACH)

	Very ⊗ Poor	Poor	Fair	Good	Very Good ⊗	Not Applicable
	1	2	3	4	5	X

The primary facility you work at.....	[]	[]	[]	[]	[]	[]
The Radiology department	[]	[]	[]	[]	[]	[]
Radiology staff.....	[]	[]	[]	[]	[]	[]
Hospital administration.....	[]	[]	[]	[]	[]	[]
Radiology administration	[]	[]	[]	[]	[]	[]
Overall radiologic patient care	[]	[]	[]	[]	[]	[]

5. Of all the places you have worked at, how does your current place of work compare?
 (SELECT ONE ONLY – IF YOU'VE NEVER WORKED ELSEWHERE, "X" THIS BOX [] → SKIP TO Q.7)

1..... 2..... 3..... 4..... 5

⊗ Current place is Much WORSE Current place is Somewhat WORSE Current place is About THE SAME Current place is Somewhat BETTER Current place is Much BETTER

6. Why do you say that? (PLEASE WRITE IN YOUR ANSWER AND BE AS SPECIFIC AS POSSIBLE.)

7. Please rate your current workplace on each of the following? ("X" ONE BOX FOR EACH)

	Very ⊗ Poor	Poor	Fair	Good	Very Good ⊗	Does not Exist
	1	2	3	4	5	X
In house/On site training.....	[]	[]	[]	[]	[]	[]
External/Off site training.....	[]	[]	[]	[]	[]	[]
Location convenient to home	[]	[]	[]	[]	[]	[]
Safe environment at work	[]	[]	[]	[]	[]	[]
Safe commute to work.....	[]	[]	[]	[]	[]	[]
Location convenient to family needs	[]	[]	[]	[]	[]	[]
Verbal communications with Radiology staff	[]	[]	[]	[]	[]	[]
Written communications with Radiology staff	[]	[]	[]	[]	[]	[]
Life Insurance benefits	[]	[]	[]	[]	[]	[]
Health Insurance benefits	[]	[]	[]	[]	[]	[]
Vision Insurance benefits.....	[]	[]	[]	[]	[]	[]
Dental Insurance benefits	[]	[]	[]	[]	[]	[]
Retirement benefits	[]	[]	[]	[]	[]	[]
Working order of building (Elevators, etc.)	[]	[]	[]	[]	[]	[]
Building Security	[]	[]	[]	[]	[]	[]
Janitorial service	[]	[]	[]	[]	[]	[]
Employee Lounge/Breakroom facilities.....	[]	[]	[]	[]	[]	[]
Imaging equipment	[]	[]	[]	[]	[]	[]
Image processing equipment.....	[]	[]	[]	[]	[]	[]
Communications equipment	[]	[]	[]	[]	[]	[]
Records management systems.....	[]	[]	[]	[]	[]	[]
Fitness center	[]	[]	[]	[]	[]	[]
Day care	[]	[]	[]	[]	[]	[]
Senior care	[]	[]	[]	[]	[]	[]
E-Mail	[]	[]	[]	[]	[]	[]
Internet access.....	[]	[]	[]	[]	[]	[]
Tuition assistance.....	[]	[]	[]	[]	[]	[]
Uniform reimbursement/assistance	[]	[]	[]	[]	[]	[]

8. Please think about the Radiology staff (i.e Staff Technologist or Sr. Staff Technologist) at your facility. Please answer each of the following in terms of these staff technologists.
("X" ONE BOX FOR EACH)

	Very ⊗Poor 1	Poor 2	Fair 3	Good 4	Very Good ⊕ 5	Not Applicable X
The respect they receive from Co-Workers.....[]	[]	[]	[]	[]	[]	[]
The respect they receive from Doctors.....[]	[]	[]	[]	[]	[]	[]
The respect they receive from Nurses.....[]	[]	[]	[]	[]	[]	[]
The respect they receive from Chief Technologist.....[]	[]	[]	[]	[]	[]	[]
Amount of pride their job gives them.....[]	[]	[]	[]	[]	[]	[]
Workload allows them to do an effective job[]	[]	[]	[]	[]	[]	[]
Their job security - Ability to stay employed[]	[]	[]	[]	[]	[]	[]
The level of autonomy they have.....[]	[]	[]	[]	[]	[]	[]
They feel safe at their job.....[]	[]	[]	[]	[]	[]	[]
Feel they are indispensable.....[]	[]	[]	[]	[]	[]	[]
Support from Co-Workers.....[]	[]	[]	[]	[]	[]	[]
Support from Chief Technologist.....[]	[]	[]	[]	[]	[]	[]
Their ability to provide input on scheduling.....[]	[]	[]	[]	[]	[]	[]
Variety of duties.....[]	[]	[]	[]	[]	[]	[]
Scheduling process.....[]	[]	[]	[]	[]	[]	[]
Having proper amount of time with patients[]	[]	[]	[]	[]	[]	[]
Quality of time spent with patients.....[]	[]	[]	[]	[]	[]	[]
Patient load.....[]	[]	[]	[]	[]	[]	[]
Not an excessive amount of mental stress[]	[]	[]	[]	[]	[]	[]
Not an excessive amount of physical stress.....[]	[]	[]	[]	[]	[]	[]
Their ability to influence their career.....[]	[]	[]	[]	[]	[]	[]
Their ability to influence their performance.....[]	[]	[]	[]	[]	[]	[]
Their overall learning experience.....[]	[]	[]	[]	[]	[]	[]
Their overtime requirements.....[]	[]	[]	[]	[]	[]	[]
Accuracy they are able to achieve.....[]	[]	[]	[]	[]	[]	[]
Their "On call" requirements.....[]	[]	[]	[]	[]	[]	[]
Health care professionals they work with are team players.....[]	[]	[]	[]	[]	[]	[]
They are provided with the skills to grow.....[]	[]	[]	[]	[]	[]	[]

9. Still thinking about the overall Radiology staff, please indicate how much you agree with each statement. ("X" ONE BOX FOR EACH)

	Completely ⊗Disagree 1	Disagree Somewhat 2	Neither Agree or Disagree 3	Agree Somewhat 4	Completely Agree ⊕ 5
They've mastered their profession.....[]	[]	[]	[]	[]	[]
Their skills are in demand.....[]	[]	[]	[]	[]	[]
They feel safe at work.....[]	[]	[]	[]	[]	[]
They are appreciated by others they work with.[]	[]	[]	[]	[]	[]
They are appreciated by patients.....[]	[]	[]	[]	[]	[]
Their time off is not interrupted by work.....[]	[]	[]	[]	[]	[]
Their input is welcome.....[]	[]	[]	[]	[]	[]
They work with reputable Radiologists.....[]	[]	[]	[]	[]	[]
They are important.....[]	[]	[]	[]	[]	[]
Their continuing education is critical.....[]	[]	[]	[]	[]	[]
People ask for their input.....[]	[]	[]	[]	[]	[]
They have the technology to do the best job[]	[]	[]	[]	[]	[]
They are allowed to provide the best care.....[]	[]	[]	[]	[]	[]
The people they work with act professionally ...[]	[]	[]	[]	[]	[]
Their facility is well known.....[]	[]	[]	[]	[]	[]
Their technology allows for great patient care...[]	[]	[]	[]	[]	[]
They're properly educated in jobs that they do..[]	[]	[]	[]	[]	[]
They have adequate support staff.....[]	[]	[]	[]	[]	[]
They get adequate productivity incentives.....[]	[]	[]	[]	[]	[]
Co-Workers are properly certified/credentialed ..[]	[]	[]	[]	[]	[]
Women and men are treated equally.....[]	[]	[]	[]	[]	[]
They feel "Sign on" bonuses for new hires are fair..[]	[]	[]	[]	[]	[]
They receive proper compensation for extra hours ..[]	[]	[]	[]	[]	[]
Their equipment is well maintained.....[]	[]	[]	[]	[]	[]
They receive proper orientation on imaging equipment.....[]	[]	[]	[]	[]	[]
They receive proper orientation on scheduling systems.....[]	[]	[]	[]	[]	[]
They receive proper performance evaluation.....[]	[]	[]	[]	[]	[]

10. How long have you been involved in the Radiologic sciences? (Do not include number of years for preparatory education)

_____ years
(Round to nearest full year)

11. Which of the following titles best describes your current job position? (SELECT ONE ONLY)

- ₁ Staff Technologist ₄ Chief Technologist
₂ Senior Staff Technologist ₅ Administrator or Manager
₃ Supervisor or Assistant Chief Technologist ₆ Other (Please Specify) _____

12. How long have you practiced in this current position?

(Needs to be consecutive) _____ years (Round to nearest full year)

13. What percentage of the Technologist's patient work is...? (WRITE IN PERCENTAGE SO THEY ADD TO 100%)

In-patient care _____% Out-patient care _____% Do not work with patients.....[]

14. On what shift do most Technologists practice more than half the time? (SELECT ONE ONLY)

- ₁ Day Shift ₂ Evening Shift ₃ Night Shift ₄ Swing/Rotating Shift

15. Would you consider most of the Technologists at your facility...? (SELECT ONE ONLY)

- ₁ A generalist ₂ A specialist

16. Do Technologists work in the trauma unit at least once per week? (SELECT ONE ONLY)

- ₁ Yes ₂ No

17. How is your Technologist's productivity measured? (PLEASE WRITE IN AND BE AS DETAILED AS POSSIBLE.)

18. Are Technologists paid for being on call? (SELECT ONE ONLY) ₁ Yes ₂ No

19. Would you consider the primary facility you work at a...? (SELECT ONE ONLY)

- ₁ Hospital ₂ Clinic ₃ Mobile unit ₄ Imaging center ₅ Other

20. If you work in a hospital, how many beds does it have...? (SELECT ONE ONLY)

- ₁ Less than 50 beds ₅ 300-399 beds
₂ 50-99 beds ₆ 400-499 beds
₃ 100-199 beds ₇ 500 or more beds
₄ 200-299 beds ₈ DO NOT WORK IN A HOSPITAL

21. Please indicate all of the equipment/systems that are available to the Radiology Department at your workplace and give your best estimate as to its age. ("X" ONE BOX FOR EACH ITEM AND ESTIMATE AGE)

	Do Not Have	Have	AGE (Newest if more than one) (Round To Whole Years)
	1	2	
X-Ray.....	[]	[]	_____ years
PACS.....	[]	[]	_____ years
Spiral CT.....	[]	[]	_____ years
Electron Beam CT.....	[]	[]	_____ years
Lead Apron.....	[]	[]	_____ years
Thyroid collar.....	[]	[]	_____ years
Radiation exposure monitor.....	[]	[]	_____ years
Image processing.....	[]	[]	_____ years
Online scheduling.....	[]	[]	_____ years
Online image transmission.....	[]	[]	_____ years
E-Mail.....	[]	[]	_____ years
Internet access.....	[]	[]	_____ years
Up-to-date reference books.....	[]	[]	_____ years
(Please write in other important equipment below)			
_____	[]	[]	_____ years
_____	[]	[]	_____ years

22. Would you consider where you mainly work as...? (SELECT ONE ONLY)

- ₁ Urban ₂ Suburban ₃ Rural

23. What is your typical commute time from your home to your work (ONE WAY)?

(WRITE IN TOTAL MINUTES ONE WAY- DO NOT ENTER A RANGE) _____ minutes

24. Workplace Location: 2-Letter State Abbreviation: _____ ZIP Code: _____

25. Are you a current member of the ASRT (American Society of Radiologic Technologists)?

₁ Yes ₂ No

26. Does your employer contribute to any of your professional organization fees? (Whether ASRT or other organization)

₁ Yes ₂ No

27. Your Year of Birth: _____

28. Your Gender: ₁ Male ₂ Female

29. Marital Status: ₁ Married ₂ Single

30. Highest level of education completed: *(SELECT ONE ONLY)*

₁ High school or equivalent ₄ Associate degree ₆ Master's degree
₂ Certificate ₅ Baccalaureate degree ₇ Doctoral degree
₃ Advanced certificate(s)

Thank you for your help. Please return the survey in the postage paid envelope by XXXX.

Appendix D: Technologist Questionnaire

ASRT WORKPLACE SURVEY 2001

TFinal

PLEASE ANSWER ALL QUESTIONS IN TERMS OF YOUR JOB IN RADIOLOGIC SCIENCES ONLY.
DO NOT INCLUDE OTHER JOBS YOU MAY HAVE.

1. Are you presently employed in the Radiologic Technology profession?

₁ Yes ₂ No → (PLEASE RETURN THIS QUESTIONNAIRE IN THE POSTAGE PAID ENVELOPE.)

2. How many hours do you work in a typical work week in Radiologic Technology? ("X" ONE BOX)

₁ Under 16 ₂ 16-25 ₃ 26-35 ₄ 36-45 ₅ 46-55 ₆ Over 55

3. Using the scale below, please give an overall rating for the following: ("X" ONE BOX FOR EACH)

	Very ⊗ Poor 1	Poor 2	Fair 3	Good 4	Very Good ⊕ 5	Not Applicable X
The primary facility you work at.....	[]	[]	[]	[]	[]	[]
The Radiology department	[]	[]	[]	[]	[]	[]
Your job	[]	[]	[]	[]	[]	[]
Your co-workers.....	[]	[]	[]	[]	[]	[]
Your radiology administration.....	[]	[]	[]	[]	[]	[]
Overall radiologic patient care	[]	[]	[]	[]	[]	[]

4. If you could go back in time and had the chance to do it all over again, how likely would you be to choose your same career in Radiologic Sciences? (SELECT ONE ONLY)

₁.....₂.....₃.....₄.....₅
 ⊕ Definitely Would Not Choose It Again Probably Would Not Choose It Again Might or Might Not Choose It Again Probably Would Choose It Again Definitely Would Choose It Again ⊕

5. Of all the places you have worked at, how does your current place of work compare? (SELECT ONE ONLY – IF YOU'VE NEVER WORKED ELSEWHERE, "X" THIS BOX [] → SKIP TO Q.7)

₁.....₂.....₃.....₄.....₅
 ⊕ Current place is Much WORSE Current place is Somewhat WORSE Current place is About THE SAME Current place is Somewhat BETTER Current place is Much BETTER ⊕

6. Why do you say that? (PLEASE WRITE IN YOUR ANSWER AND BE AS SPECIFIC AS POSSIBLE.)

7. Please rate your current workplace on each of the following? ("X" ONE BOX FOR EACH)

	Very ⊗ Poor 1	Poor 2	Fair 3	Good 4	Very Good ⊕ 5	Does not Exist X
In house/On site training.....	[]	[]	[]	[]	[]	[]
External/Off site training.....	[]	[]	[]	[]	[]	[]
Location convenient to home	[]	[]	[]	[]	[]	[]
Safe environment at work	[]	[]	[]	[]	[]	[]
Safe commute to work.....	[]	[]	[]	[]	[]	[]
Location convenient to family needs	[]	[]	[]	[]	[]	[]
Verbal communications with Chief Technologist	[]	[]	[]	[]	[]	[]
Written communications with Chief Technologist	[]	[]	[]	[]	[]	[]
Life Insurance benefits	[]	[]	[]	[]	[]	[]
Health Insurance benefits	[]	[]	[]	[]	[]	[]
Vision Insurance benefits.....	[]	[]	[]	[]	[]	[]
Dental Insurance benefits	[]	[]	[]	[]	[]	[]
Retirement benefits	[]	[]	[]	[]	[]	[]
Working order of building (Elevators, etc.)	[]	[]	[]	[]	[]	[]
Building Security	[]	[]	[]	[]	[]	[]
Janitorial service	[]	[]	[]	[]	[]	[]
Employee Lounge/Breakroom facilities.....	[]	[]	[]	[]	[]	[]
Imaging equipment	[]	[]	[]	[]	[]	[]
Image processing equipment.....	[]	[]	[]	[]	[]	[]
Communications equipment.....	[]	[]	[]	[]	[]	[]
Records management systems.....	[]	[]	[]	[]	[]	[]
Fitness center	[]	[]	[]	[]	[]	[]
Day care	[]	[]	[]	[]	[]	[]
Senior care	[]	[]	[]	[]	[]	[]
E-Mail	[]	[]	[]	[]	[]	[]
Internet access.....	[]	[]	[]	[]	[]	[]
Tuition assistance.....	[]	[]	[]	[]	[]	[]
Uniform reimbursement/assistance	[]	[]	[]	[]	[]	[]

8. Please rate your current job on each of the following? ("X" ONE BOX FOR EACH)

	Very ⓉPoor 1	Poor 2	Fair 3	Good 4	Very Good Ⓣ 5	Not Applicable X
The respect you receive from Co-Workers	[]	[]	[]	[]	[]	[]
The respect you receive from Doctors.....	[]	[]	[]	[]	[]	[]
The respect you receive from Nurses	[]	[]	[]	[]	[]	[]
The respect you receive from Chief Technologist	[]	[]	[]	[]	[]	[]
Amount of pride your job gives you	[]	[]	[]	[]	[]	[]
Workload allows you to do an effective job	[]	[]	[]	[]	[]	[]
Job security - Ability to stay employed	[]	[]	[]	[]	[]	[]
Level of autonomy you have.....	[]	[]	[]	[]	[]	[]
You feel safe at your job	[]	[]	[]	[]	[]	[]
Feel you are indispensable	[]	[]	[]	[]	[]	[]
Support from Co-Workers.....	[]	[]	[]	[]	[]	[]
Support from Chief Technologist.....	[]	[]	[]	[]	[]	[]
Your ability to provide input on scheduling	[]	[]	[]	[]	[]	[]
Variety of duties.....	[]	[]	[]	[]	[]	[]
Scheduling process.....	[]	[]	[]	[]	[]	[]
Proper amount of time with patients.....	[]	[]	[]	[]	[]	[]
Quality of time spent with patients.....	[]	[]	[]	[]	[]	[]
Patient load	[]	[]	[]	[]	[]	[]
Not an excessive amount of mental stress	[]	[]	[]	[]	[]	[]
Not an excessive amount of physical stress.....	[]	[]	[]	[]	[]	[]
Your ability to influence your career.....	[]	[]	[]	[]	[]	[]
Your ability to influence your performance.....	[]	[]	[]	[]	[]	[]
Overall learning experience	[]	[]	[]	[]	[]	[]
Overtime requirements	[]	[]	[]	[]	[]	[]
Accuracy you are able to achieve.....	[]	[]	[]	[]	[]	[]
"On call" requirements	[]	[]	[]	[]	[]	[]
Health care professionals you work with are team players	[]	[]	[]	[]	[]	[]
Provides you with the skills to grow	[]	[]	[]	[]	[]	[]

9. Please indicate how much you agree with each statement. ("X" ONE BOX FOR EACH)

	Completely ⓉDisagree 1	Disagree Somewhat 2	Neither Agree or Disagree 3	Agree Somewhat 4	Completely Agree Ⓣ 5
You've mastered your profession	[]	[]	[]	[]	[]
Your skills are in demand.....	[]	[]	[]	[]	[]
You feel safe at work.....	[]	[]	[]	[]	[]
You are appreciated by others you work with ...	[]	[]	[]	[]	[]
You are appreciated by patients	[]	[]	[]	[]	[]
Your time off is not interrupted by work.....	[]	[]	[]	[]	[]
Your input is welcomed.....	[]	[]	[]	[]	[]
You work with reputable Radiologists	[]	[]	[]	[]	[]
You are important.....	[]	[]	[]	[]	[]
Continuing education is critical.....	[]	[]	[]	[]	[]
People ask for your input.....	[]	[]	[]	[]	[]
You have the technology to do the best job.....	[]	[]	[]	[]	[]
You are allowed to provide the best care.....	[]	[]	[]	[]	[]
The people you work with act professionally	[]	[]	[]	[]	[]
Your facility is well known	[]	[]	[]	[]	[]
Your technology allows for great patient care ...	[]	[]	[]	[]	[]
You're properly educated in jobs that you do	[]	[]	[]	[]	[]
Have adequate support staff	[]	[]	[]	[]	[]
You get adequate productivity incentives	[]	[]	[]	[]	[]
Co-Workers are properly certified/credentialed ..	[]	[]	[]	[]	[]
Women and men are treated equally	[]	[]	[]	[]	[]
"Sign on" bonuses for new hires are fair	[]	[]	[]	[]	[]
Receive proper compensation for extra hours....	[]	[]	[]	[]	[]
Equipment is well maintained	[]	[]	[]	[]	[]
Receive proper orientation on imaging equipment	[]	[]	[]	[]	[]
Receive proper orientation on scheduling systems	[]	[]	[]	[]	[]
Receive proper performance evaluation	[]	[]	[]	[]	[]

10. How long have you practiced in the Radiologic sciences? *(Do not include number of years for preparatory education)*

_____ years
(Round to nearest full year)

11. Which of the following titles best describes your current job position? ***(SELECT ONE ONLY)***

- ₁ Staff Technologist ₄ Chief Technologist
₂ Senior Staff Technologist ₅ Administrator or Manager
₃ Supervisor or Assistant Chief Technologist ₆ Other (Please Specify) _____

12. How long have you practiced in this current position?
(Needs to be consecutive) _____ years *(Round to nearest full year)*

13. What percentage of your patient work is...? ***(WRITE IN PERCENTAGE SO THEY ADD TO 100%)***

In-patient care _____% Out-patient care _____% Do not work with patients.....[]

14. On what shift do you practice more than half the time? ***(SELECT ONE ONLY)***

- ₁ Day Shift ₂ Evening Shift ₃ Night Shift ₄ Swing/Rotating Shift

15. Would you consider yourself...? ***(SELECT ONE ONLY)***

- ₁ A generalist ₂ A specialist

16. Do you work in the trauma unit at least once per week...? ***(SELECT ONE ONLY)***

- ₁ Yes ₂ No

17. How is your productivity measured? ***(PLEASE WRITE IN AND BE AS DETAILED AS POSSIBLE.)***

18. Are you paid for being on call? ***(SELECT ONE ONLY)*** ₁ Yes ₂ No

19. Would you consider the primary facility you work at a...? ***(SELECT ONE ONLY)***

- ₁ Hospital ₂ Clinic ₃ Mobile unit ₄ Imaging center ₅ Other

20. If you work in a hospital, how many beds does it have...? ***(SELECT ONE ONLY)***

- ₁ Less than 50 beds ₅ 300-399 beds
₂ 50-99 beds ₆ 400-499 beds
₃ 100-199 beds ₇ 500 or more beds
₄ 200-299 beds ₈ DO NOT WORK IN A HOSPITAL

21. Please indicate all of the equipment/systems that is available to the Radiology Department at your workplace and give your best estimate as to its age. ***(“X” ONE BOX FOR EACH ITEM AND ESTIMATE AGE)***

	Do Not Have	Have	AGE <i>(Newest if more than one)</i> <i>(Round To Whole Years)</i>
	1	2	
X-Ray.....	[]	[]	_____ years
PACS.....	[]	[]	_____ years
Spiral CT.....	[]	[]	_____ years
Electron Beam CT.....	[]	[]	_____ years
Lead Apron.....	[]	[]	_____ years
Thyroid collar.....	[]	[]	_____ years
Radiation exposure monitor.....	[]	[]	_____ years
Image processing.....	[]	[]	_____ years
Online scheduling.....	[]	[]	_____ years
Online image transmission.....	[]	[]	_____ years
E-Mail.....	[]	[]	_____ years
Internet access.....	[]	[]	_____ years
Up-to-date reference books.....	[]	[]	_____ years
<i>(Please write in other important equipment below)</i>			
_____	[]	[]	_____ years
_____	[]	[]	_____ years

22. Would you consider where you mainly work as...? ***(SELECT ONE ONLY)***

- ₁ Urban ₂ Suburban ₃ Rural

23. What is your typical commute time from your home to your work (ONE WAY)?

(WRITE IN TOTAL MINUTES ONE WAY- DO NOT ENTER A RANGE) _____ minutes

24. Workplace Location: 2-Letter State Abbreviation: _____ ZIP Code: _____

25. Are you a current member of the ASRT (American Society of Radiologic Technologists)?

₁ Yes ₂ No

26. Does your employer contribute to any of your professional organization fees? (Whether ASRT or other organization)

₁ Yes ₂ No

27. Your Year of Birth: _____

28. Your Gender: ₁ Male ₂ Female

29. Marital Status: ₁ Married ₂ Single

30. Highest level of education completed: (**SELECT ONE ONLY**)

₁ High school or equivalent ₄ Associate degree ₆ Master's degree
₂ Certificate ₅ Baccalaureate degree ₇ Doctoral degree
₃ Advanced certificate(s)

Thank you for your help. Please return the survey in the postage paid envelope by XXXX.