



American Society of  
Radiologic Technologists

**RADIATION THERAPY  
STAFFING SURVEY  
2007**

**A Nationwide Survey of Radiation Therapy Facility Managers and Directors  
Conducted by  
The American Society of Radiologic Technologists**

**Reported October 2007**

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## EXECUTIVE SUMMARY

In July 2007, ASRT mailed an invitation that referenced an online link to the Radiation Therapy Staffing Survey to each of the 2,321 ARRT registrants who had listed a managerial job title and identified radiation therapy as their primary sphere of employment. An additional 1,503 invitations were sent to radiation therapists in the SK&A health care database who did not match ARRT registrants. ASTRO approved the use of their membership list, which added an additional 598 unique members who received the postal invitation in early August. Likewise, 595 Society of Radiation Oncology Administrators (SROA) members were e-mailed a link to the survey in mid-August 2007. ASRT also made the survey available to the general public via the ASRT Web site, which resulted in 70 volunteers completing the survey. The total that received an invitation to the survey was 5,018. The final return for the survey was 575, resulting in a return percentage of 11.46%. This is considerably lower than the return rate for the 2005 radiation therapy staffing survey (which was about 18%) and is sufficiently low to call into question whether the staffing profiles of facilities whose managers were willing to respond to this staffing survey (and thus are represented in the current report) differ reliably and substantially from the staffing profiles of facilities whose managers were not willing to share their staffing information (anonymously).

### Respondents and Their Facilities

- About 53% of the respondents chose “Department/Facility Manager or Director” as closest to their job titles, with another 30% choosing “Chief Therapist” and 3%, “Chief Dosimetrist.”
- About 50% of the respondents indicated that their facilities are located in a community hospital; 34.2% in a freestanding clinic; 8.8% in a university medical center; 2.6% in a teaching facility, and 1.9% in a government hospital.
- Almost all (95%) of the facilities provide conformal radiation therapy delivery; 75% to 95% provide CT simulation, brachytherapy and IMRT; 47% provide stereotactic/gamma knife/mammosite; 36%, fractionated stereotactic therapy; and 24% each, whole-body irradiation and pediatric radiation therapy. The number of services checked as being provided by a given facility ranged from zero to all 9 of the 9 items on the non-exhaustive checklist, with a mean of 4.82, median of 4.71, and mode (20% of the facilities) of 4.
- University medical centers provide significantly more services (mean of 7.56 of the 9 listed services) than community hospitals (mean of 4.80 services). This was especially true of whole-body irradiation (provided by 78% of the university medical centers in our sample versus 14.7% of community hospitals), pediatric radiation therapy (80% vs. 12.3%), fractionated radiation therapy (78% vs. 18%), stereotactic/gamma knife/mammosite (82% vs. 31.6%) and brachytherapy (96% vs. 77.9%).
- About 20% of the respondents consider their facilities to be in rural locations; 38.8% suburban; and 41.2% urban.

### Staffing of Facilities

- The typical (median) facility reported having a 2007 budget that provided for 5.20 FTE radiation therapists, 1.51 medical dosimetrists, 1.08 medical physicists, 1.89 radiation oncologists, 1.94 nurses, 2.42 administrative staff, and almost no physician assistants (.05 FTE; 91.3% of facilities report zero FTEs) or ancillary staff (.08 FTE; 56.5% zero FTEs).
- Based on respondents’ reports of the number of budgeted 2007 FTEs in each specialty that were currently vacant and recruiting, it is estimated that 5.4% of all FTEs budgeted for radiation therapists, 8.8% of dosimetrist positions, 10.7% of medical physicist positions, 10.4% of radiation oncologist positions, 7.2% of nursing positions, 7.0% of ancillary staff positions and 7.4% of administrative staff FTEs in U.S. radiation therapy facilities are unfilled.

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- Considering facilities with nonzero budgeted FTEs for a given specialist in both 2006 and 2007, the change in individual-facility vacancy rate was statistically nonsignificant (at the .05 level) for all eight listed specialists. In other words, the data are insufficient to tell us whether in the population of all radiation therapy facilities the mean individual-facility vacancy rate increased or decreased from 2006 to 2007 for any of these specialist positions.
- The vacancy rate for radiation therapists as reported by respondents to this year's staffing survey was lower (5%, averaging across the two years) than was reported by respondents to the 2005 staffing survey (7%), while 2006/2007 vacancy rates were higher than 2004/2005 vacancy rates for each of the other seven listed specialties. However, it is not clear whether these differences are statistically significant, nor whether they might be due to the somewhat broader population from which this year's sample was drawn.
- University medical centers report having, on average, more FTEs of each of the eight specialists, except for physician assistants and ancillary staff, than community hospitals and freestanding clinics. And the difference is statistically significant at the .001 level for those six specialists. Mean FTEs for physician assistants did not differ significantly among community hospitals, freestanding clinics, and university medical centers. Mean ancillary-staff FTE, on the other hand, was significantly lower for freestanding clinics than for community hospitals or university medical centers ( $P = .021$ ).

## Recruitment and Retention of R.T.s

- When asked whether recruiting for each specialty in 2007 was more difficult, less difficult, or equally as difficult as it was in 2006, from 49% to 85% of the respondents (across the eight named specialties) who answered chose "same." The percentage that reported they expended more effort in 2007 than in 2006 was substantially higher than those reporting the reverse for dosimetrist, physicist and radiation oncologist positions. The predominant opinion (among those who perceived a difference) was that recruiting for radiation therapists is substantially less difficult (11.9% stated it was more difficult versus 39.4%, less difficult).
- About 61% of the respondents reported a decrease in budgeted FTEs for one or more of the eight named specialties. Of these 319 respondents, about 37% checked one or more of the seven suggested reasons (including "Other") for the decline. Of those, 34 respondents (37%) checked "Patient demand declined" and 34.8% checked "Overall department or facility budget declined, forcing downsizing."
- About 59% of the respondents reported an increase in budgeted FTEs for one or more of the eight named specialties. Of these 308 respondents, about 67% checked one or more of the nine suggested reasons (including "Other") for the increase. Of those, 132 respondents (64%) checked "Patient demand increased," 34% checked "Overall department or facility budget increased, making it possible to add FTEs," 23% checked "Number of staff assigned to each treatment machine increased" and 23% checked "Number of patients that can be processed hourly on each treatment machine decreased."
- A majority (54% to 67%) of the respondents feel that average length of employment and employee turnover rate have remained about the same since January 2006 for radiation therapists, dosimetrists, physicists and radiation oncologists.
- A significantly lower percentage of facilities paid radiation therapists sign-on bonuses in 2007 than in 2006, (27% vs. 20%). A significantly higher percentage of facilities paid radiation oncologists sign-on bonuses in 2007 than in 2006, (4% vs. 2%). The other two specialties showed nonsignificant changes from 2006 to 2007, with 12% to 14% of dosimetrists' and 9% to 10% of physicists' facilities paying sign-on bonuses in 2006 and 2007. The mean size of the bonus was not significantly different in 2007 than the bonus in 2006 for any of these four specialties.
- About 44% of respondents stated that they've experienced consequences of a work force shortage at their facility. Of the 231 who indicated this, 16% and 19% responded that

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their facility experienced increased patient wait times for procedures, and a reduction in the number of staff assigned to each treatment unit, respectively. Also, 10% to 13% reported that they have received more patient complaints, curtailed plans for acquiring new technology or experienced decreased patient satisfaction. An additional 3% to 8% indicated that they've cancelled procedures, curtailed plans for facility expansion, reduced the number of staffed treatment units or discontinued radiation therapy education programs as a consequence of a work force shortage.

- About 94% indicated that their facility has a CT device they use for treatment simulation. Respondents could check all the locations in which the simulator is located, with about 80% of the respondents indicating that the simulator was in the radiation therapy department. About 19% indicated that it was in the radiology department. Respondents were given the opportunity to indicate who typically operates the simulator. About 82% of the respondents chose radiation therapists, followed by CT technologists at 24%.
- About a third of the respondents accepted the invitation to “clarify any of your previous responses or add comments regarding your perception of the potential supply of radiation therapy professionals.” About 47% of those who commented said that their comments “related to a surplus of radiation therapy professionals.”

## INTRODUCTION

### Background

Few things could be more important for the discipline — radiation therapists, other specialists involved in radiation oncology and their managers alike — than accurately assessing the current supply and demand for radiation therapy professionals. ASRT's 2005 *Radiation Therapy Staffing Survey* provided a snapshot of this supply and demand balance and provided information about what directors and managers believed were the reasons behind unfilled vacancies. The 2007 *Radiation Therapy Staffing Survey* updates the findings of the 2005 survey and provides the first opportunity to compare radiation therapy staffing trends across a fairly long interval.

### Sample Design

ASRT sent an invitation to participate in the *Radiation Therapy Staffing Survey* via e-mail, the USPS or both to 5,082 managers within the radiation therapy discipline.

Source	Invitations Sent	Completed Invitations Delivered	Returned Questionnaires	Rate
<b>ARRT and SK&amp;A</b>	3,824	<= 3,824	403	>= 10.5%
<b>ASTRO</b>	598	<= 598	32	>= 5.4%
<b>SROA</b>	660	595	66	>= 11.1%
<b>Volunteers</b>	1 (posted on Web)	1	70	7000%
<b>Unknown</b>	?	?	4	?
<b>Total</b>	5,083	<= 5,018	575	>= 11.5%

To reduce return postage costs and minimize the labor involved in verifying handwritten responses, ASRT directed recipients of the invitation to take the study online on the ASRT Web site.

### Response Rates

As of mid September 2007, ASRT had received 575 completed surveys. Thus, the overall return rate was about 12%. (The return rate as a percentage of invitations actually received was somewhat higher than this since a substantial percentage of e-mailed invitations did not reach the intended inboxes and an unknown but probably substantial percentage of postal invitations also failed to reach intended invitees.)

### Margin of Error

The sample size of 575 returns yields a margin of error for overall percentages (the width of the 95% confidence interval for the population percentage) of a maximum of plus or minus 4%.

For percentages computed on subsets of respondents, the margin of error increases as the square root of the size of the subset. Thus, the margin of error for percentages based on a subset of 100 respondents is plus or minus 10% or less, and for a subset of 30 respondents is plus or minus 18% or less. (The "or less" comes from the fact that the margin of error for percentages is greatest in the 40% to 60% range and is less than one-half as wide for percentages less than 5% or greater than 95%.)

## Definitions of Statistics

The statistics reported in the question summaries include:

- **Frequency:** The number of responses given for each variable.
- **Percent:** The number of responses for each variable divided by the total number of usable surveys, including missing values.
- **Valid Percent:** The number of responses for each variable divided by the total number of usable surveys, excluding missing values.
- **Missing:** The number of respondents who either did not answer the question or who gave an unusable response.
- **Mean:** The arithmetic average, i.e., the sum of the values of all observations divided by the number of observations.
- **Median:** The value above and below which one-half of the observations fall, the 50th percentile. Usually, because of rounding, no number precisely satisfies the definition of the median. In such cases, linear interpolation is used to estimate the median in the population of unrounded scores.
- **Mode:** The figure that more respondents report than any other figure.
- **Standard deviation:** The square root of the average squared difference between each score in the set and the mean score. Subsets of respondents who have nearly identical responses on a given variable have a near-zero standard deviation, while subsets of respondents with very different responses have a high standard deviation. The major reason for using this relatively complex measure of variation is its close relationship to percentiles. For most sets of scores, about 95% of the individual scores fall within two standard deviations of the mean, and the mean of the set of scores have a 95% chance of falling within two “standard errors” of the corresponding population mean. The standard error is simply the standard deviation divided by the square root of the number of scores in the set.
- ***t*:** A sample statistic whose value is used to test the **null hypothesis** that the difference between two means observed in our sample is due entirely to chance fluctuation around corresponding means that do *not* differ from one another in the population to which we wish to generalize our results (in this case, all U.S. radiation therapy facilities). The larger the absolute value of *t*, the more implausible the null hypothesis is and thus the more confident we can be that the direction of the difference observed in our sample matches the directions of the corresponding population difference. Because differences based on large samples more closely approximate the differences in the population from which they are sampled, *t* has a **degree of freedom parameter** [usually listed in parentheses immediately after the *t*, as in “*t*(571)”] associated with it.
- **p-value:** The probability that a *t* as large as or even larger in absolute value than the one we observed in our sample would occur in random sampling from a population in which the null hypothesis of a zero population difference is true. If this value is smaller than some pre-selected value (often .05, but in the present report usually .01) called the **alpha level** (or just “level”) of the test, we proceed to discuss the observed sample difference as though it is representative of (perfectly matches) the corresponding population difference.

## Calculating Percent Vacancy Rates

With some exceptions, we calculated the individual facility vacancy rate for a particular specialty at a given facility as the number of FTEs reported as budgeted for that specialty, divided into the number of FTEs for that specialty reported to be “vacant and recruiting.” The major exception to this calculation arose when the number of budgeted FTEs was zero. In that case, we assigned the individual facility vacancy rate a missing-value code and did not use it in calculating descriptive statistics for that specialty’s vacancy rates. The zero value for budgeted FTE was, however, retained in calculating descriptive statistics, with the result that the N on which

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descriptive statistics for budgeted FTE and vacant-and-recruiting FTE were based was always larger than the N on which the “percent vacant and recruiting” statistic was based.

Another major exception occurred when a nonzero budgeted FTE was entered, but the space for vacant and recruiting FTE was left blank. We treated the “missing” vacant-and-recruiting FTE as zero in all subsequent calculations.

We define the estimated percent of unfilled positions for a given specialty in the population of radiation therapy facilities as:

$$\frac{(\text{total No. of FTEs vacant and recruiting})}{(\text{total No. of FTEs budgeted}) \text{ for that specialty}}$$

This equals:

$$\frac{(\text{mean No. of vacant-and-recruiting FTEs per facility}) \times (\text{total No. of facilities})}{(\text{mean No. of budgeted FTEs per facility}) \times (\text{total No. of facilities})}$$

The total number of facilities that employ a given specialty is unknown, but drops out of the above equation, which reduces to:

$$\frac{(\text{mean No. of vacant and recruiting FTEs per facility})}{(\text{mean No. of budgeted FTEs per facility})}$$



## FACILITY DEMOGRAPHICS

Title of individual who completed the questionnaire:	Frequency	Percent	Valid Percent	Cumulative Percent
Department/facility manager or director	304	52.9	53.1	53.1
Chief therapist	173	30.1	30.2	83.4
Chief dosimetrist	17	3.0	3.0	86.4
Other	78	13.6	13.6	100.0
Total	572	99.5	100.0	
Missing	3	.5		
Total	575	100.0		

### Type of Facility:

	Frequency	Percent	Valid Percent	Cumulative Percent
Community hospital	285	49.6	49.9	49.9
Government hospital	11	1.9	1.9	51.8
University medical center	50	8.7	8.8	60.6
Freestanding clinic	195	33.9	34.2	94.7
Teaching facility	15	2.6	2.6	97.4
Other	15	2.6	2.6	100.0
Total	571	99.3	100.0	
Missing	4	.7		
Total	575	100.0		

### Radiation Therapy Services Provided:

	N*	Percent of Responses	Percent of Cases*
CT simulation	490	17.7%	89.1%
Brachytherapy	414	14.9%	75.3%
IMRT	523	18.9%	95.1%
Whole-body irradiation	129	4.7%	23.5%
Pediatric therapy	117	4.2%	21.3%
Stereotactic/gamma knife/MammoSite	260	9.4%	47.3%
Fractionated stereotactic therapy	195	7.0%	35.5%
Conformal radiation therapy delivery	530	19.1%	96.4%
Other	116	4.2%	21.1%
Total*	2,774	100.0%	504.4%

\* Frequencies sum to more than 575 and percents to more than 100% because most facilities provide multiple radiation therapy services.

No single combination of services characterized more than 13% of the facilities. The most common combinations were CT simulation, brachytherapy, IMRT and conformal radiation therapy delivery (13%); the same services except brachytherapy (10%); and all eight services on the list (6%).

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### State in which facility is located:

All states and the District of Columbia were represented in the returns, except Alaska, Montana and Rhode Island.

### Urbanity of facility's location:

	Frequency	Percent	Valid Percent	Cumulative Percent
Urban	219	38.1	38.8	38.8
Suburban	233	40.5	41.2	80.0
Rural	113	19.7	20.0	100.0
Total	565	98.3	100.0	
Missing	10	1.7		
Total	575	100.0		

### Therapists per treatment machine during a given treatment session:

	Frequency	Percent	Valid Percent	Cumulative Percent
1.00	6	1.0	1.1	1.1
1.50	5	.9	.9	2.0
1.70	1	.2	.2	2.2
1.75	3	.5	.5	2.7
2.00	402	69.9	73.6	76.3
2.20	2	.3	.4	76.7
2.30	1	.2	.2	76.9
2.50	34	5.9	6.2	83.1
3.00	86	15.0	15.8	98.9
3.50	1	.2	.2	99.1
4.00	4	.7	.7	99.8
5.00	1	.2	.2	100.0
Total	546	95.0	100.0	
Missing	28	4.9		
Implausible*	1	.2		
Total	575	100.0		

\*Recorded as 25 therapists per machine; probably intended to be 2.5.  
Mean therapists per treatment machine = 2.20 (2.24 if "outlier" included).

### Number of new patients per year and patients treated per day:

	Pts treated per day, outliers dropped <sup>a</sup>	New pts per year, outliers dropped <sup>a</sup>	(New pts per year)/(Pts per day), Outliers dropped <sup>a</sup>
Valid	565	486	482
Missing	10	89	93
Mean	52.2749	575.2613	10.5756
Median	43.0000 <sup>b</sup>	405.8846 <sup>b</sup>	9.9561 <sup>b</sup>
Std. Deviation	36.55874	561.63642	5.37384
Minimum	4.00	40.00	1.67
Maximum	289.00	6000.00	60.00
5 <sup>th</sup> Percentile	15.8529 <sup>c</sup>	126.5600 <sup>c</sup>	5.3476 <sup>c</sup>
95 <sup>th</sup> Percentile	119.6429	1660.0000	16.4974

<sup>a</sup> Omits 11 facilities in which the pts per year and pts treated daily were implausible given the facility size.

<sup>b</sup> Calculated from grouped data.

<sup>c</sup> Percentiles are calculated from grouped data.

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### Reliability of treatment machines:

	Frequency	Percent	Valid Percent	Cumulative Percent
Fair	20	3.5	3.6	3.6
Good	212	36.9	38.7	42.3
Excellent	316	55.0	57.7	100.0
Total	548	95.3	100.0	
Missing	27	4.7		
Total	575	100.0		

### Profile Differences Among Facility Types

#### Services Provided:

Service		Percent of Facilities Providing the Service				Chi-square with 3 df for differences
		Community hospital	Freestanding clinic	University medical center	Other or unstated	
CT Simulation	Count	250	147	49	44	28.50***
	%	87.7%	86%	98%	100%	
Brachytherapy	Count	222	110	48	34	42.99***
	%	77.9%	64.3%	96%	77.3%	
IMRT	Count	273	163	49	38	26.29***
	%	95.8%	95.3%	98%	86.4%	
Whole-body irradiation	Count	42	24	39	24	134.60***
	%	14.7%	14%	78%	54.5%	
Pediatric therapy	Count	35	23	40	19	143.31***
	%	12.3%	13.5%	80%	43.2%	
Stereotactic/Gamma Knife/MammoSite	Count	129	59	47	25	67.60***
	%	45.3%	34.5%	94%	56.8%	
Fractionated stereotactic therapy	Count	90	43	41	21	67.79***
	%	31.6%	25.1%	82%	47.7%	
Conformal radiation therapy delivery	Count	275	163	49	43	30.35***
	%	96.5%	95.3%	98%	97.7%	
Other	Count	52	35	16	13	7.72
	%	18.2%	20.5%	32%	29.5%	
Total	Count	285	171	50	44	

Percentages and totals are based on respondents.

\*\*\*  $P < .001$

#### Number of Services Provided:

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Community hospital	285	4.8000	1.61376	.09559	4.6118	4.9882
Freestanding clinic	195	3.9333	2.14444	.15357	3.6305	4.2362
University medical center	50	7.5600	1.44505	.20436	7.1493	7.9707
Other or unstated	45	5.8000	2.33160	.34757	5.0995	6.5005
Total	575	4.8243	2.10577	.08782	4.6519	4.9968

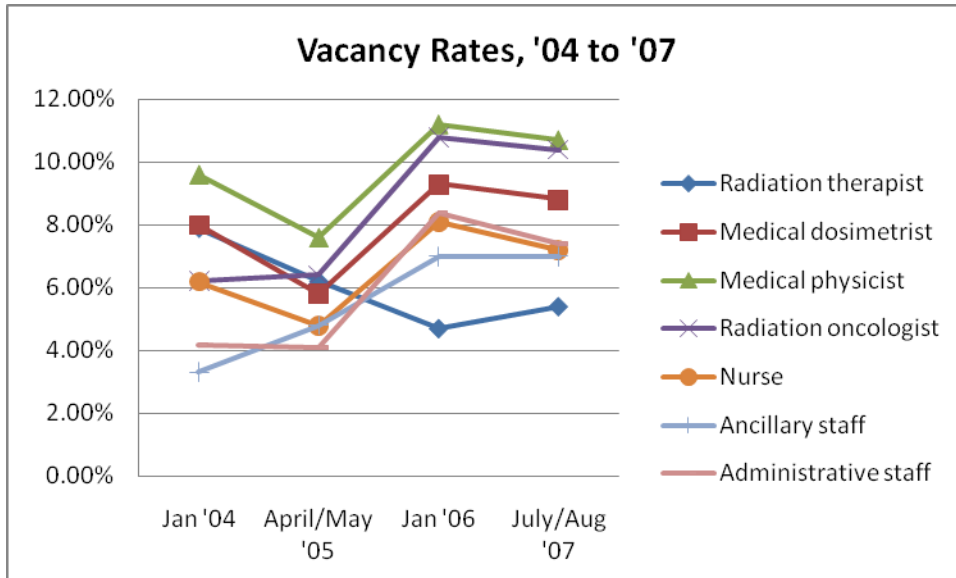
University medical centers provide significantly more services than do community hospitals and freestanding clinics,

$t_{571} = 11.54, p < .001$ .

## STAFFING OF THE FACILITY

### Percent Vacant and Recruiting, 2006 and 2007

- For each of the following specialists needed to provide radiation therapy, please provide the budgeted and vacant FTEs for your organization in January of 2006 and today. (Leave blank the rows for any specialists who do not work in your facility's radiation therapy suite.)



Note: RTTs were the only specialty for which the '04/'05 average vacancy rate was higher than the '06/'07 rate.

#### Radiation Therapist:

	Budgeted FTEs <sup>b</sup> 2006	FTEs vacant and recruiting 2006	Percent vacant and recruiting 2006	Budgeted FTEs 2007	FTEs vacant and recruiting 2007	Percent vacant and recruiting 2007
N	Valid 522	522	517	549	549	546
	Missing 53	53	58	26	26	29
Mean	6.7662	.3148	5.8%	7.1124	.3851	6.1%
Median <sup>a</sup>	5.1490	.0472	0.7%	5.2000	.0605	1%
Mode	3	.00	0	4	.00	0
Std. Deviation	5.57992	.96122	19.62%	6.19150	1.10538	17.15%
Minimum	.00	.00	0.0%	.00	.00	0.0%
Maximum	46	11	200%	53	15.00	100%
Percent zeroes	1.0	80.8	80.7	.5	76.7	76.7
Vacancy rate		2006: 4.7%		2007:	5.4%	

<sup>a</sup> Calculated from grouped data.

<sup>b</sup> Based on facilities that also reported vacant-and-recruiting FTEs. There were 16 facilities that reported budgeted FTEs but did not have data on number of open positions in January of 2006. Including them changes the mean budgeted FTEs for any given specialist by less than a tenth of an FTE.

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**Medical Dosimetrist:**

		Budgeted FTEs 2006	FTEs vacant and recruiting 2006	Percent vacant and recruiting 2006	Budgeted FTEs 2007	FTEs vacant and recruiting 2007	Percent vacant and recruiting 2007
N	Valid	522	522	476	549	549	491
	Missing	53	53	99	26	26	84
Mean		1.9192	.1793	8.0%	2.0103	.1814	8.5%
Median <sup>a</sup>		1.4412	.0528	1.6%	1.5043	.0622	1.4%
Mode		1.00	.00	0	1.00	.00	0
Std. Deviation		1.66628	.63321	24.57%	1.87454	.57837	24.48%
Minimum		.00	.00	0.0%	.00	.00	0.0%
Maximum		17.00	6.00	100%	19.00	6.00	100.0%
Percent zeroes		8.8	88.3	87.6	10.6	86.5	85.3
Vacancy rate		2006:	9.3%		2007:	8.8%	

**Medical Physicist:**

		Budgeted FTEs 2006	FTEs vacant and recruiting 2006	Percent vacant and recruiting 2006	Budgeted FTEs 2007	FTEs vacant and recruiting 2007	Percent vacant and recruiting 2007
N	Valid	522	522	480	549	549	491
	Missing	53	53	95	26	26	84
Mean		1.9072	.2128	9.7%	1.9597	.2100	9.8%
Median <sup>a</sup>		1.0834	.0618	1.7%	1.0835	.0760	1.4%
Mode		1	.00	0	1	.00	0
Std. Deviation		1.88061	.68298	27.18%	2.00780	.61930	25.78%
Minimum		.00	.00	0.0%	.00	.00	0.0%
Maximum		15	7	150%	16	8	100%
Percent zeroes		8	86.6	85.6	10.6	84	82.1
Vacancy rate		2006:	11.2%		2007:	10.7%	

**Radiation Oncologist:**

		Budgeted FTEs 2006	FTEs vacant and recruiting 2006	Percent vacant and recruiting 2006	Budgeted FTEs 2007	FTEs vacant and recruiting 2007	Percent vacant and recruiting 2007
N	Valid	522	522	462	549	549	467
	Missing	53	53	113	26	26	108
Mean		2.4050	.2586	11.5%	2.4791	.2577	10.6%
Median <sup>a</sup>		1.9022	.0930	1.1%	1.8895	.0397	1.5%
Mode		2	.00	0	2.00	.00	0
Std. Deviation		2.45180	.87904	29.70%	2.75044	.82824	26.02%
Minimum		.00	.00	0.0%	.00	.00	0.0%
Maximum		22	12	200%	23.50	12	100.0%
Percent zeroes		11.5	84.3	82.3	14.9	83.4	80.5
Vacancy rate		2006:	10.8%		2007:	10.4%	

<sup>a</sup> Calculated from grouped data.

Radiation Therapy Staffing Survey

**Physician Assistant:**

		Budgeted FTEs 2006	FTEs vacant and recruiting 2006	Percent vacant and recruiting 2006	Budgeted FTEs 2007	FTEs vacant and recruiting 2007	Percent vacant and recruiting 2007
N	Valid	522	522	38	549	549	48
	Missing	53	53	537	26	26	527
Mean		.1025	.0010	2.6%	.1362	.0182	12.8%
Median <sup>a</sup>		.0390	.0010	2.6%	.0478	.0164	3.8%
Mode		.00	.00	0	.00	.00	0
Std. Deviation		.48245	.02188	16.22%	.57867	.14685	31.32%
Minimum		.00	.00	0.0%	.00	.00	0.0%
Maximum		7	.50	100%	7	2	100%
Percent zeroes		92.7	99.8	97.4	91.3	98.4	81.3
Vacancy rate		2006:	0.9%		2007:	13.4%	

Note: The vacancy rate data for PAs are not included in the figure at the beginning of this section because so few facilities reported non-zero budgeted FTEs for PAs, leading to very unstable estimates of vacancy rate.

**Nurse (including RN, LPN, nurse practitioner):**

		Budgeted FTEs 2006	FTEs vacant and recruiting 2006	Percent vacant and recruiting 2006	Budgeted FTEs 2007	FTEs vacant and recruiting 2007	Percent vacant and recruiting 2007
N	Valid	522	522	472	549	549	494
	Missing	53	53	103	26	26	81
Mean		2.2754	.1835	8.1%	2.2561	.1632	7.8%
Median <sup>a</sup>		1.9298	.0259	0.9%	1.9350	.0639	0.4%
Mode		1.00	.00	0	1.00	.00	0
Std. Deviation		2.98864	.62642	24.72%	2.09302	.57901	25.69%
Minimum		.00	.00	0.0%	.00	.00	0.0%
Maximum		55.00	5.00	112.5%	17.00	7.00	187.5%
Percent zeroes		9.6	88.5	87.5	10.0	88.5	87.4
Vacancy rate		2006:	8.1%		2007:	7.2%	

**Ancillary staff (e.g., Dietitian, Social Worker):**

		Budgeted FTEs 2006	FTEs vacant and recruiting 2006	Percent vacant and recruiting 2006	Budgeted FTEs 2007	FTEs vacant and recruiting 2007	Percent vacant and recruiting 2007
N	Valid	522	522	218	549	549	241
	Missing	53	53	357	26	26	334
Mean		.6707	.0467	7.2%	.7100	.0494	7.7%
Median <sup>a</sup>		.0715	.0080	2.5%	.0780	.0079	1.1%
Mode		.00	.00	0	.00	.00	0
Std. Deviation		1.18082	.27049	24.22%	1.18557	.28500	26.10%
Minimum		.00	.00	0.0%	.00	.00	0.0%
Maximum		14	3	100%	14	3	100%
Percent zeroes		58.2	96.2	90.8	56.1	96.2	91.3
Vacancy rate		2006:	7%		2007:	7%	

<sup>a</sup> Calculated from grouped data.

## Radiation Therapy Staffing Survey

### Administrative staff (e.g., clerical and billing staff):

		Budgeted FTEs 2006	FTEs vacant and recruiting 2006	Percent vacant and recruiting 2006	Budgeted FTEs 2007	FTEs vacant and recruiting 2007	Percent vacant and recruiting 2007
N	Valid	522	522	454	549	549	473
	Missing	53	53	121	26	26	102
Mean		3.2260	.2697	8.1%	3.3161	.2445	7.3%
Median <sup>a</sup>		2.4278	.0696	0.7%	2.4158	.0423	0.3%
Mode		2	.00	0	1	.00	0
Std. Deviation		3.87049	.96051	24.94%	4.30737	.89087	23.32%
Minimum		.00	.00	0.0%	.00	.00	0.0%
Maximum		47	10	113.6%	49	10	100%
Percent zeroes		13.0	87.7	85.9	13.8	87.6	85.8
Vacancy rate		2006:	8.4%		2007:	7.4%	

Considering facilities with nonzero budgeted FTEs for a given specialist in both 2006 and 2007, the change in individual facility vacancy rate was statistically nonsignificant (at the .05 level) for all eight listed specialists. I.e., the data are insufficient to tell us whether in the population of all radiation therapy facilities the mean individual facility vacancy rate increased or decreased from 2006 to 2007 for any of these specialist positions.

### Other Specialties for Which FTEs Were Reported:

See Appendix A.

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<sup>a</sup> Calculated from grouped data.

### Staffing Differences Among Facility Types

#### Current (2007) FTEs for Eight Listed Specialists

Specialist	Type of Facility	N	Mean	Std. Deviation	95% Confidence Interval for Mean		<i>P</i> value for	
					Lower Bound	Upper Bound	UMC vs. Hosp. Clinic	Hosp vs. Clinic
Radiation Therapist	Community hospital	276	6.11	3.80	5.66	6.56	< .001	.521
	Freestanding clinic	184	6.47	6.42	5.53	7.40		
	University medical center	48	12.51	8.74	9.97	15.04		
	Other or unstated	41	10.44	9.62	7.40	13.47		
Medical Dosimetrist	Community hospital	276	1.72	1.20	1.58	1.87	< .001	.757
	Freestanding clinic	184	1.78	1.89	1.50	2.05		
	University medical center	48	3.77	3.00	2.90	4.64		
	Other or unstated	41	2.93	2.42	2.17	3.70		
Medical Physicist	Community hospital	276	1.63	1.24	1.48	1.77	< .001	.547
	Freestanding clinic	184	1.52	1.62	1.29	1.76		
	University medical center	48	4.18	3.08	3.28	5.07		
	Other or unstated	41	3.57	3.36	2.51	4.63		
Radiation Oncologist	Community hospital	276	2.09	2.27	1.83	2.36	< .001	.949
	Freestanding clinic	184	2.08	2.34	1.74	2.42		
	University medical center	48	4.90	4.17	3.69	6.11		
	Other or unstated	41	4.03	3.40	2.95	5.10		
Physician Assistant	Community hospital	276	.07	.34	.03	.11	.740	.107
	Freestanding clinic	184	.16	.49	.09	.23		
	University medical center	48	.15	.62	-.03	.33		
	Other or unstated	41	.44	1.47	-.02	.90		
Nurse	Community hospital	276	2.04	1.28	1.89	2.19	< .001	.469
	Freestanding clinic	184	1.90	2.48	1.54	2.26		
	University medical center	48	3.93	2.67	3.15	4.70		
	Other or unstated	41	3.34	2.62	2.51	4.16		
Ancillary Staff	Community hospital	276	.80	1.12	.67	.93	.445 <sup>b</sup>	.008 <sup>b</sup>
	Freestanding clinic	184	.50	1.28	.32	.69		
	University medical center	48	.79	.99	.50	1.08		
	Other or unstated	41	.93	1.30	.52	1.34		
Administrative Staff	Community hospital	276	2.72	1.97	2.49	2.95	< .001	.049
	Freestanding clinic	184	3.51	5.90	2.65	4.37		
	University medical center	48	6.06	6.00	4.32	7.80		
	Other or unstated	41	3.24	3.78	2.05	4.44		



## Radiation Therapy Staffing Survey

On average, university medical centers have more FTEs of the eight specialists, except for physician assistants and ancillary staff, than community hospitals and freestanding clinics. And the difference is statistically significant at the .001 level for those six specialists. Mean FTEs for physician assistants did not differ significantly among community hospitals, freestanding clinics and university medical centers. Mean ancillary staff FTEs, on the other hand, was significantly lower for freestanding clinics than for community hospitals or university medical centers ( $P = .021$ ).

To separate the tendency to simply have more staff overall from the relative dependence on various specialties within that staff, the *proportion of total FTEs* across all eight specialties that is accounted for by each separate specialty was examined separately from differences in total FTEs.

Type of Facility		Total FTEs, Eight listed specialties						
		N	Mean	Std. Deviation	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Community hospital	276	17.19	10.19	.61	15.98	18.40	17.19	
Freestanding clinic	184	17.92	18.35	1.35	15.25	20.59	17.92	
University medical center	48	36.28	24.06	3.47	29.29	43.26	36.28	
Other or unstated	41	28.91	21.11	3.30	22.25	35.58	28.91	
Total	549	19.98	16.77	.72	18.57	21.39	19.98	

The difference between the university medical centers' (UMCs') mean of 36.3 FTEs of the eight specialists and the 17.5 mean FTEs for community hospitals and freestanding clinics indeed was statistically significant,  $F_{1,545} = 61.152$ ,  $p < .001$ , and accounted for 80% of the variation among the four means.

Although differences among community hospitals, freestanding clinics and university medical centers in the *proportion* of their total currently budgeted FTEs for the specialties were generally small, three specialties had mean proportional FTEs that differed significantly among the three workplace settings:

Specialist	Type of Facility	N	Mean	Std. Deviation	95% Confidence Interval for Mean		Statistically Significant Differences
					Lower Bound	Upper Bound	
Medical Physicist	Community hospital	276	.091	.050	.003	.085	UMC > Frst, CH ( $P = .006$ )
	Freestanding clinic	184	.089	.056	.004	.080	
	University medical center	48	.113	.058	.008	.096	
	Other or unstated	41	.119	.066	.010	.098	
	Total	549	.094	.055	.002	.090	
Physician Assistant	Community hospital	276	.003	.017	.001	.001	Frst > CH, UMC ( $P = .007$ )
	Freestanding clinic	184	.009	.027	.002	.005	
	University medical center	48	.003	.009	.001	.000	
	Other or unstated	41	.011	.032	.005	.001	
	Total	549	.006	.022	.001	.004	
Nurse	Community hospital	276	.123	.048	.003	.118	CH > Frst, UMC ( $P = .003$ )
	Freestanding clinic	184	.102	.064	.005	.092	
	University medical center	48	.112	.054	.008	.096	
	Other or unstated	41	.120	.057	.009	.102	

Radiation Therapy Staffing Survey

	Total	549	.115	.056	.002	.110	
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## RECRUITMENT AND RETENTION

**2. Describe how the recruitment effort for each specialty so far in 2007 compares to the effort expended during the fiscal year that included January 2006.**

		Radiation Therapist			Medical Dosimetrist		
		Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
Valid	Less difficult	159	27.7	39.4	41	7.1	14.5
	Same	197	34.3	48.8	155	27.0	55.0
	More difficult	48	8.3	11.9	86	15.0	30.5
Missing	Don't Know	113	19.7		198	34.4	
	System	58	10.1		95	16.5	
<b>Total</b>		<b>575</b>	<b>100.0</b>	<b>100.0</b>	<b>575</b>	<b>100.0</b>	<b>100.0</b>

		Medical Physicist			Radiation Oncologist		
		Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
Valid	Less difficult	30	5.2	10.5	37	6.4	15.2
	Same	155	27.0	54.0	134	23.3	55.1
	More difficult	102	17.7	35.5	72	12.5	29.6
Missing	Don't Know	204	35.5		240	41.7	
	System	84	14.6		92	16.0	
<b>Total</b>		<b>575</b>	<b>100.0</b>	<b>100.0</b>	<b>575</b>	<b>100.0</b>	<b>100.0</b>

		Physician Assistant			Nurse		
		Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
Valid	Less difficult	7	1.2	10.3	63	11.0	23.6
	Same	58	10.1	85.3	154	26.8	57.7
	More difficult	3	.5	4.4	50	8.7	18.7
Missing	Don't Know	345	60.0		209	36.3	
	System	162	28.2		99	17.2	
<b>Total</b>		<b>575</b>	<b>100.0</b>	<b>100.0</b>	<b>575</b>	<b>100.0</b>	<b>100.0</b>

		Ancillary Staff			Administrative Staff		
		Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
Valid	Less difficult	40	7.0	23.0	64	11.1	24.2
	Same	124	21.6	71.3	174	30.3	65.7
	More difficult	10	1.7	5.7	27	4.7	10.2
Missing	Don't Know	274	47.7		214	37.2	
	System	127	22.1		96	16.7	
<b>Total</b>		<b>575</b>	<b>100.0</b>	<b>100.0</b>	<b>575</b>	<b>100.0</b>	<b>100.0</b>

		Other Specialty		
		Frequency	Percent	Valid Percent
Valid	More Difficult	5	.9	10.4
	Same	37	6.4	77.1
	Less Difficult	6	1.0	12.5
Missing	Don't Know	180	31.3	
	System	347	60.3	
<b>Total</b>		<b>575</b>	<b>100.0</b>	<b>100.0</b>

No statistically significant differences exist among facility types in a perceived change in recruiting effort for any specialist or for the average across all specialties.

**3. If budgeted FTEs in any of these specialties have decreased over the past year, what do you believe is the reason for this decrease?**

First, what proportion of the facilities showed decreases in budgeted FTEs for each specialty, and what proportion of the facilities showed a decrease in budgeted FTEs for one or more specialties from 2006 to 2007?

	N	Sum	Proportion "Yes"
Did FTEs for any specialty decrease?	524	319	60.88%
Did radiation therapist FTEs decrease?	524	38	7.25%
Did CMD FTEs decrease?	524	18	3.44%
Did physicist FTEs decrease?	524	21	14.31%
Did radiation oncologist FTEs decrease?	524	24	4.58%
Did physician assistant FTEs decrease?	524	1	0.19%
Did nurse FTEs decrease?	524	27	5.15%
Did ancillary staff FTEs decrease?	524	11	2.10%
Did administrative staff FTEs decrease?	524	26	4.96%
Did FTEs for another specialty decrease?	524	8	1.53%

Many respondents checked one or more reasons for a decline in budgeted FTEs, even though the FTEs they reported did not indicate a decrease had occurred for any specialty or they had not reported any FTEs for one or both of January 2006 or March/April 2007. These managers and directors probably interpreted the question as a more general one of what they perceived would cause decreases in FTEs, when and if such decreases occur. The percentage of respondents mentioning different reasons is therefore reported separately for each subgroup in the following table. .

Reason for Decrease in Budgeted FTEs	Did FTEs for any specialty decrease?			Total
	No FTEs reported	No	Yes	
No reason given.	37	173	227	437
	72.5%	84.3%	71.2%	
Patient demand declined.	2	11	34	47
	14.3%	34.4%	37.0%	
Overall department or facility budget declined, forcing downsizing.	3	14	32	49
	21.4%	43.8%	34.8%	
Formerly budgeted FTEs were so difficult to fill they were dropped from the budget.	1	1	7	9
	7.1%	3.1%	7.6%	
Number of patients that can be processed hourly on each treatment machine increased.	0	2	9	11
	.0%	6.3%	9.8%	
Number of staff assigned to each treatment machine decreased, so number of FTEs required to handle the workload declined.	0	2	5	7
	.0%	6.3%	5.4%	
Average number of hours worked per week by radiation therapy staff increased, so number of specialists required to handle the workload declined	3	1	7	11
	21.4%	3.1%	7.6%	
Other	6	7	25	38
	42.9%	21.9%	27.2%	
Total respondents give one or more reasons	14	32	92	138

There were no statistically significant differences among facility types in the percentage of respondents giving various reasons for that decrease among facilities that experienced a decrease in budgeted FTEs for one or more specialties..

See Appendix A for "Other" reasons given.

**4. If budgeted FTEs for any of these specialties have increased since January 2006, what do you believe is the reason for this increase? (Check all that apply.)**

First, what proportion of the facilities showed increases in budgeted FTEs for each specialty, and what proportion of the facilities showed an increase in budgeted FTEs for one or more specialties from 2006 to 2007?

	N	Sum	Proportion "Yes"
Did FTEs for any specialty increase?	524	308	58.78%
Did radiation therapist FTEs increase?	524	142	27.10%
Did CMD FTEs increase?	524	75	14.31%
Did physicist FTEs increase?	524	76	14.50%
Did radiation oncologist FTEs increase?	524	66	12.60%
Did physician assistant FTEs increase?	524	15	2.86%
Did nurse FTEs increase?	524	83	15.84%
Did ancillary staff FTEs increase?	524	31	5.92%
Did administrative staff FTEs increase?	524	56	10.69%
Did FTEs for another specialty increase?	524	12	2.29%

As with reasons for decreases, reasons for increases in FTEs were given by substantial numbers of respondents whose facilities had experienced no increase in FTEs or for whom whether an increase or a decrease in FTEs had occurred could not be determined.

Reasons for increase in budgeted FTEs(a)	Did FTEs for any specialty increase?			Total
	No FTEs reported	No	Yes	
No reason given.	27	177	101	305
	52.9%	81.9%	32.8%	
Patient demand increased.	15	24	132	171
	62.5%	61.5%	63.8%	
Overall department or facility budget increased, making it possible to add FTEs.	10	4	70	84
Recruitment within these specialties became easier, making adding FTEs feasible.	2	1	14	17
Number of patients that can be processed hourly on each treatment machine decreased.	3	9	47	59
	12.5%	23.1%	22.7%	
Number of staff assigned to each treatment machine increased.	5	3	48	56
	20.8%	7.7%	23.2%	
Average number of hours worked per week by radiation therapy staff decreased, so number of specialists required to handle the workload increased.	0	1	11	12
	.0%	2.6%	5.3%	
Ancillary staff (e.g., dietitian, social worker) were added to free up therapist /dosimetrist/physicist time and thereby increase patient throughput and/or quality care.	1	1	16	18
	4.2%	2.6%	7.7%	
Administrative staff (e.g., clerical and billing) were added to free up therapist /dosimetrist/physicist time and thereby increase patient throughput and/or quality care.	1	1	24	26
	4.2%	2.6%	11.6%	
Other	5	7	40	52
	20.8%	17.9%	19.3%	
Total respondents giving one or more reasons	24	39	207	270

Among respondents whose facilities had experienced an increase in budgeted FTEs for one or more specialties, only one statistically significant difference existed among FSTs, CHs and UMCs in the percentage of respondents giving various reasons for that increase. UMCs had a higher likelihood (15.6%) than did FSTs and CHs (3.3%) of giving "Recruitment within these specialties became easier..." as a reason for the increase,  $\chi^2(1) = 9.725, P = .002$ .

## Radiation Therapy Staffing Survey

See Appendix A for "Other" reasons given.

### 5. For each specialty role, how have the following staffing indicators changed since January 2006? (-2=Much lower...2=Much higher)

	Radiation Therapist: average length of employment at your facility	Radiation Therapist: Turnover rate	Medical Dosimetrist: average length of employment at your facility	Medical Dosimetrist: Turnover rate	Medical Physicist: average length of employment at your facility	Medical Physicist: Turnover rate	Radiation Oncologist: average length of employment at your facility	Radiation Oncologist: Turnover Rate
Valid	462	416	414	359	418	368	395	462
Missing	113	159	161	216	157	207	180	113
Mean	.33	-.39	.29	-.36	.17	-.15	.26	.33
Median	.31	-.33	.25	-.28	.14	-.07	.23	.31
Std. Deviation	.771	.966	.748	.888	.792	.945	.804	.771
% Much Lower	1.3	18.0	1.2	16.4	1.7	12.8	2.3	14.4
% Lower	6.5	16.8	5.3	12.8	12.0	11.7	5.6	8.0
% Same	58.2	53.8	65.7	62.1	62.0	56.0	65.8	66.6
% Higher	25.8	8.7	19.1	7.2	17.0	16.6	16.2	8.3
% Much Higher	8.2	2.6	8.7	1.4	7.4	3.0	10.1	2.8

None of the differences among FSTs, CHs and UMCs in mean perceived change in these indicators were statistically significant.

### 6. Were you paying sign-on bonuses for radiation therapy staff in January 2006? Are you paying them currently? If yes, please indicate amount typically paid.

Measure	Proportion paying bonus or mean bonus	N	Std. Deviation	Statistical Significance of Difference		
				t(N-2)	p	
Pair 1: Radiation Therapist	In January 2006	.27	501	.444	4.918	<.001
	Currently (2007)	.20	501	.400		
Pair 2: Radiation Therapist	Amount of bonus (2006)	3064.1026	78	1694.83358	1.182	.241
	Amount of bonus (2007)	2862.8205	78	2063.35428		
Pair 3: Medical Dosimetrist	In January 2006	.14	466	.349	1.882	.060
	Currently (2007)	.12	466	.328		
Pair 4: Medical Dosimetrist	Amount of bonus (2006)	3476.7442	43	2370.33624	.612	.544
	Amount of bonus (2007)	3325.5814	43	2382.68486		
Pair 5: Medical Physicist	In January 2006	.10	452	.303	1.812	.071
	Currently (2007)	.09	452	.281		
Pair 6: Medical Physicist	Amount of bonus (2006)	5375.0000	24	3366.23257	-1.366	.185
	Amount of bonus (2007)	5687.5000	24	3738.20609		
Pair 7: Radiation Oncologist	In January 2006	.02	415	.154	-2.247	.025
	Currently (2007)	.04	415	.187		
Pair 8: Radiation Oncologist	Amount of bonus (2006)	48571.4286	7	79671.94643	0	.999
	Amount of bonus (2007)	48571.4286	7	79671.94643		

There were no statistically significant differences among facility types in the percentage that pay sign-on bonuses or in the amount of a sign-on bonus if one was paid for any of the four specialties. Moreover, the seven facilities of any kind that reported paying sign-on bonuses for radiation oncologists in 2006 and 2007 paid the same amount both years.

Radiation Therapy Staffing Survey

**7. If your facility is experiencing a work force shortage, check all of the consequences of the shortage for your facility.**

	Responses		Percent of Cases
	N	Percent	N
Curtailed plans for facility expansion	13	5.6%	12.7%
Curtailed plans for acquiring new technology	26	11.3%	25.5%
Reduced number of staffed treatment units	10	4.3%	9.8%
Reduced number of staff assigned to each treatment unit	36	15.6%	35.3%
Discontinued radiation therapy education program	7	3.0%	6.9%
Increased patient wait times for procedures	43	18.6%	42.2%
Cancelled procedures	19	8.2%	18.6%
Decreased patient satisfaction	24	10.4%	23.5%
Increased patient complaints	29	12.6%	28.4%
Other	24	10.4%	23.5%
<b>Total</b>	<b>231</b>	<b>100.0%</b>	<b>226.4%</b>

294 (56.0%) of the respondents chose "Not applicable. My facility is not experiencing a work force shortage."  
 181 (31.5%) of the respondents left the question blank.

## CT TREATMENT SIMULATION

### 8a. Does your facility have a CT device used for treatment simulation?

	Frequency	Percent	Valid Percent	Cumulative Percent
No	34	5.9	6.2	6.2
Yes	513	89.2	93.8	100.0
Total	547	95.1	100.0	
Missing	28	4.9		
Total	575	100.0		

### 8b. If you answered "Yes" to Question 8a, where is the CT simulator located?

	Responses		Percent of Cases
	N	Percent	N
Radiation therapy department	403	76.9%	79.5%
Radiology department	99	18.9%	19.5%
Imaging center	13	2.5%	2.6%
Mobile CT service	1	.2%	.2%
Other	8	1.5%	1.6%
Total	524	100.0%	103.4%

### 8c. Who typically operates the CT device to produce treatment simulations?

	Responses		Percent of Cases
	N	Percent	N
Radiation therapist	419	70.8%	81.7%
CT technologist	123	20.8%	24.0%
Radiographer	19	3.2%	3.7%
Physicist	3	.5%	.6%
Radiation oncologist	5	.8%	1.0%
Other	23	3.9%	4.5%
Total	592	100.0%	115.4%

### 9b. If you entered comments in Question 9a, please check any of the following to which your comments apply:

	Responses		Percent of Cases
	N	Percent	N
Comments related to facility demographics	37	14.7%	19.6%
Comments related to a clarification of responses to one or more of questions 1-8	31	12.3%	16.4%
Comments related to a shortage of radiation therapy professionals	59	23.4%	31.2%
Comments related to a surplus of radiation therapy professionals	89	35.3%	47.1%
Comments related to CT simulations and the staff who perform them	22	8.7%	11.6%
Other	14	5.6%	7.4%
Total	252	100.0%	133.3%



**APPENDIX A:**  
**VERBATIM RESPONSES**

## VERBATIM COMMENTS

### Other Title

	Frequency	Percent
Blank.	429	74.6
Administrative director of cancer program.	1	.2
Administrator.	4	.7
Also dosimetrist.	1	.2
Also dosimetrist.	1	.2
And manager.	1	.2
Assistant VP, radiation medicine.	1	.2
Assistant administrator/human resources.	1	.2
Assistant chief therapist.	1	.2
Cancer program director.	1	.2
Charge therapist, manager is at the main campus.	1	.2
Chief radiation therapist/manager.	1	.2
Chief dosimetrist/lead therapist/	1	.2
Chief medical physicist.	2	.3
Chief operating officer.	1	.2
Chief operating officer, radiation oncology division/	1	.2
Chief operations officer.	1	.2
Chief physicist.	1	.2
Chief physicist.	1	.2
Chief radiation therapist and CT coordinator.	1	.2
Chief radiation therapist/department manager.	1	.2
Chief therapist, but also clinical manager.	1	.2
Chief therapist/dosimetrist.	2	.3
Chief therapist/manager.	1	.2
Chief therapist/satellite coordinator.	1	.2
Clinical coordinator.	1	.2
Clinical leader. I do managing, dosimetry, simulations and therapy.	1	.2
Clinical leader.	1	.2
Clinical student supervisor.	1	.2
Clinical supervisor.	1	.2
Clinical supervisor.	2	.3
Department head.	1	.2
Department manager.	1	.2
Department manager.	1	.2
Department manager.	1	.2
Department manager/supervisor.	1	.2
Director of HR for 35-center cancer treatment firm.	24	4.2
Director.	3	.5
Director of cancer services. I have operational responsibility for radiation oncology, hematology oncology and the multidisciplinary breast clinic.	1	.2
Director of education, school of radiation therapy and staff education radiation therapy.	1	.2
Director of oncology.	1	.2
Director of operations.	1	.2
Director of radiation.	1	.2
Director of the cancer center.	1	.2
Director of two freestanding centers. Responsible for budget, personnel, HR and JCAHO.	1	.2
Director radiation oncology.	3	.5
Director, cancer center.	1	.2
Director, Shore Cancer Center.	1	.2
Dosimetrist (only one at facility).	1	.2
Facility director/treating chief therapist.	1	.2
Facility manager/R.T.(T).	1	.2
HR director.	1	.2
Human resources director.	1	.2
I am a radiation therapist plus manager.	1	.2

## Radiation Therapy Staffing Survey

I am a supervisor who also simulates and treats patients 90% of the time.	1	.2
I am also the dosimetrist for the center.	1	.2
I am in charge of nine radiation therapists at [Name] Hospital, , [City, State].	1	.2
I am the clinical manager. I am a radiation therapist.	1	.2
I am the manager for a corporation that includes three separate hospitals in a 30 mile radius. I will give my numbers in total between all three sites.	1	.2
I just had a promotion to a chief tech/supervisor position.	1	.2
Interim lead therapist.	1	.2
Lead.	1	.2
Lead therapist	3	.5
Lead therapist at a department satellite.	1	.2
Lead therapist/chief dosmetrist.	1	.2
Manage the department, occasionally treat on the machine and working toward my CMD certification.	1	.2
Manager.	1	.2
Manager and also dosimetrist.	1	.2
Manager of a hospital radiation department.	1	.2
Manager of radiation oncology.	1	.2
Manager of radiation oncology and diagnostic radiology. A combined freestanding facility.	1	.2
Manager of radiation oncology department.	1	.2
Manager of radiation oncology services.	1	.2
Manager of radiation oncology within the cancer center.	1	.2
Manager, radiation therapy department.	1	.2
Manager, cancer services.	1	.2
Manager/dosimetrist.	1	.2
Medical director.	1	.2
Medical director (radiation oncologist).	1	.2
Medical director cancer program, radiation oncologist.	1	.2
Medical dosimetrist.	1	.2
Medical dosimetrist in training.	1	.2
Medical physicist.	1	.2
Operations manager.	1	.2
Operations supervisor, radiation therapy.	1	.2
Physician radiation oncology.	1	.2
Practice administrator.	1	.2
Previously, department manager at [Name] Hospital of a radiation oncology unit; however, I am now transitioning into a higher-level responsibility with another organization where I will be more of a director/manager.	1	.2
Program director.	1	.2
Radiation oncologist, medical director.	1	.2
Radiation oncology.	1	.2
Radiation oncology department administrator.	1	.2
Radiation oncology manager.	1	.2
Radiation supervisor/dosimetrist.	1	.2
Radiation therapist.	1	.2
Regional controller.	1	.2
Regional director of operations, radiation oncology, Gamma Knife, breast centers, appearance center	1	.2
Registry therapist.	1	.2
Senior staff.	1	.2
Staff therapist.	2	.3
Supervisor, 50%, and chief radiation therapist, 50%.	1	.2
Supervisor.	4	.7
Supervisor, radiation therapy.	1	.2
Technical director.	1	.2
Technical supervisor.	1	.2
Vice president of patient services.	1	.2
VP operations/development.	1	.2
While my title is lead therapist, we do not have a manager or director, so I frequently take on those responsibilities.	1	.2
<b>Total</b>	<b>575</b>	<b>100.0</b>

Radiation Therapy Staffing Survey

**Other Facility**

	Frequency	Percent
Blank.	517	89.9
One of nine offices as part of a corporation.	1	.2
Two hospital-based facilities and one freestanding facility.	1	.2
Three separate centers.	1	.2
Four FSCs total.	1	.2
Eight freestanding clinics.	1	.2
Active duty Air Force base.	1	.2
Also an radiation therapy teaching facility.	1	.2
[Name] College of Science has a radiation therapy four-year program. We are connected to the hospital.	1	.2
Canadian	1	.2
Cancer center/hospital.	1	.2
[Name] Clinic Cancer Center at [Name] Hospital.	1	.2
Clinic-based teaching facility.	1	.2
Community-based hospital that is part of a large health system.	1	.2
Freestanding, independent, multidisciplinary cancer center with surgical, medical and radiation oncology services.	1	.2
Freestanding clinic associated with university hospital.	1	.2
Freestanding clinic that is a joint venture between two hospitals.	1	.2
Freestanding clinic, but part of the main hospital.	1	.2
Freestanding proton radiotherapy clinic.	1	.2
Freestanding satellite of teaching facility.	1	.2
[Name] Hospital, [Address].	1	.2
Hospital based, with two off sites.	1	.2
I also manage two freestanding sites, for a total of three. My information will represent the site tagged above.	1	.2
Both community and university medical center. One system.	1	.2
Large community hospital in [City, State].	1	.2
Large radiation therapy practice. Seven cancer centers throughout the Baltimore/Washington region. Supervise 29 therapists.	1	.2
Medical group providing professional services to hospital network, plus we have our own brachytherapy program.	1	.2
Medical physics consulting group not providing staff medical physics services to radiation therapy departments. Sorry, but I have none of this data.	1	.2
NCI facility. We are a freestanding cancer center associated with an NCI hospital.	1	.2
Network of eight freestanding clinics with one hospital-based staff as well. Responses are for the practice collectively.	1	.2
Non-profit community hospital, [Name] Hospital, [City,State].	1	.2
Non-profit freestanding clinic.	1	.2
Not for profit health care system.	1	.2
Off-site freestanding.	1	.2
One main facility and two satellite facilities, but for the sake of this survey I will only include the data from the main facility.	1	.2
OP facility owned by [Corporation]	1	.2
Outreach facility for large university medical center.	1	.2
Outpatient center at hospital.	1	.2
Outpatient clinic of community hospital.	1	.2
Palmetto General Hospital, a Tenet facility.	1	.2
Physician owned private clinic.	1	.2
Private, statewide oncology practice.	1	.2
Radiation oncology is located in the OP clinic facility.	1	.2
Research facility.	1	.2
Satellite facility owned by local hospital.	1	.2
See above explanation.	1	.2
[Name] Hospital, [Name] Cancer Center.	1	.2
Small clinic with nine employees.	1	.2
[Name] Oncology Associates, [City, State].	1	.2
[Name] Medical Center.	1	.2
[Name] Hospital City, State].	1	.2

## Radiation Therapy Staffing Survey

[Name] University Hospital.	1	.2
[Name]Hospital affiliated with [Name] University.	1	.2
Two large Catholic medical centers, each 450+ beds.	1	.2
University, freestanding, teaching and community.	1	.2
Veterinary specialty hospital.	1	.2
We are a freestanding clinic detached from the hospital, but are part of the [Name] Hospital System.	1	.2
We have five offices in three counties. All info is based on company as a whole.	1	.2
We opened in January 2007.	1	.2
<b>Total</b>	<b>575</b>	<b>100.0</b>

### Other Services

	Frequency	Percent
Blank.	440	76.5
Acculoc and BAT.	1	.2
BAT ultrasound and IGRT.	1	.2
Body radiosurgery, image guided radiation therapy.	1	.2
Brachytherapy includes LDR and HDR implants.	1	.2
Brachytherapy starting in two months.	1	.2
Brachytherapy to start in 2008. Stereotactic to start in 2010.	1	.2
Cone beam and kV match localization gating.	1	.2
Conventional simulation.	1	.2
Cyber Knife, IGRT, Xsoft and research.	1	.2
Cyber Knife	1	.2
Cyber Knife	2	.3
Cyber Knife	1	.2
Cyber Knife, radiopharmaceutical therapy (I-131,Sr 89, Zevelin) and prostate seed implants.	1	.2
Cyber Knife, interoperative therapy and partial breast.	1	.2
Dynamic conformal arc therapy.	1	.2
Extracranial body radiosurgery.	1	.2
Eye plaque and liver ablation.	1	.2
Gamma Knife.	1	.2
Gamma Knife.	1	.2
Gamma Knife and Cyber Knife.	1	.2
GYN HDR, Prostate LDR and MammoSite,	1	.2
HDR.	3	.5
HDR and IGRT.	1	.2
HDR, IORT, IGRT and Cyber Knife.	1	.2
HDR. Brachytherapy is planned at our facility and performed at an area hospital.	1	.2
Hyperthermia.	1	.2
Hyperthermia.	1	.2
I 131 pills for thyroid treatments.	1	.2
IGRT.	1	.2
IGRT.	35	6.1
IGRT. Gamma Knife done off site.	1	.2
IGRT and respiratory gating.	2	.3
IGRT and gated therapy.	1	.2
IGRT at all four sites.	1	.2
IGRT including cone beam CT and kV imaging and respiratory gating.	1	.2
IGRT, 4-D simulation and brachytherapy to start later in the year.	1	.2
IGRT, CBCT and gating.	1	.2
IGRT and gating.	1	.2
IGRT and HDR.	1	.2
IGRT and Mammosite.	1	.2
IGRT and respiratory gating.	2	.3
IGRT and cone beam CT.	1	.2
IGRT,cone beam CT and soon to have respiratory gating and radiosurgery.	1	.2
IGRT; ultrasound localization; respiratory gating	1	.2
Image guided radiation therapy (IGRT).	1	.2
Image guided radiation therapy.	2	.3
Imaged guided radiation therapy (IGRT).	1	.2
IMP(proton)T, IGRT and heavy particle.	1	.2

## Radiation Therapy Staffing Survey

IMRT.	1	.2
IMRT and 3-D treatments.	1	.2
In the process of installing a Varian Trilogy that will enable us to perform stereotactic.	1	.2
Intraop radiation therapy, IGRT and respiratory gating.	1	.2
Intraoperative radiotherapy.	1	.2
IORT.	2	.3
Isotope outpatient therapy.	1	.2
kV match and gated respiration.	1	.2
Mammosite.	1	.2
Mammosite therapy, hyperthermia, IGRT, administration of radioprotectants (Ethylol).	1	.2
Mammosite, MRI simulation, gating and Calypso.	1	.2
Mammosite, prostate seed implants.	1	.2
Megavoltage cone beam and IGRT with BAT ultrasound.	1	.2
OBI and CBCT.	1	.2
OBI and kV matching.	1	.2
OBI, CBCT SBRT and Scott protocol.	1	.2
PBI via hyperfractionation.	1	.2
PET.	1	.2
Prostate seed implants.	1	.2
Proton beam radiation therapy.	1	.2
Quadramet therapy.	1	.2
Radioimmunotherapy.	1	.2
Respiratory gating.	1	.2
Respiratory gating.	2	.3
Respiratory gating.	1	.2
Respiratory gating, prostate IMRT w/gold seeds and Acculock.	1	.2
Respiratory gating, cone beam, image guided radiotherapy, Cyber Knife (1/2008).	1	.2
Superficial [100 kV] radiation therapy.	1	.2
Superficial treatments.	1	.2
Superficial treatments.	2	.3
Thyroid ablation, hyperthyroid and LDR seed implants.	1	.2
TomoTherapy.	1	.2
TomoTherapy.	2	.3
TomoTherapy,	1	.2
TomoTherapy	1	.2
TomoTherapy IGRT.	1	.2
TomoTherapy, IGRT, hyperthermia and prostate seed implants.	1	.2
TomoTherapy, which is IMRT but uncommon equipment in most facilities.	1	.2
Total skin electron therapy (TSET) and image guided radiation therapy (IGRT).	1	.2
Total skin electrons: Cyber Knife stereotactic radiosurgery.	1	.2
Ultrasound.	1	.2
We are strictly a prostate IMRT facility.	1	.2
We do Mammosite, which is a type of brachytherapy.	1	.2
Total	575	100.0

### 1. Other Staff

	Frequency	Percent
Blank.	427	74.3
One clinical supervisor, one admin supervisor and one manager.	1	.2
One CNA FTE.	1	.2
One FTE certified medical assistant, one FTE clinical scheduler, two FTE cancer registrars. 2006 to Aug, 1 2007, outsourced transcription; Aug. 1, 2007, implemented electronic speech recognition for all dictation.	1	.2
One medical assistant and one brachytherapy tech.	1	.2
One person to do occasional block cutting and transport duties for 30 hours a week.	1	.2
One service engineer, one QR/radiation safety coordinator and one CT technologist. Note: two radiation oncologists not employed by hospital, therefore not budgeted. One dietitian and one social worker not budgeted in my budget. but available as needed.	1	.2
Two cancer registry, one IRB, two research and one pastoral.	1	.2
Two new positions in cancer care center, IMPAC project coordinator and cancer liaison.	1	.2
Two radiology assistants/transporters, .5 block cutter, one IS systems manager and .3 software	1	.2

## Radiation Therapy Staffing Survey

engineer.		
Aide.	2	.3
Cancer registrar.	1	.2
Cancer registrars.	1	.2
Certified cancer registrar one FTE budgeted for 2006 and 2007. No vacancy. Director of cancer program, one FTE budgeted for 2006 and 2007. No vacancy.	1	.2
Certified medical assistant/radiation therapy assistant.	1	.2
Certified tumor registrar.	1	.2
Chief radiation therapist biomedical engineer.	1	.2
Chief radiation therapist/department manager.	1	.2
Chief therapist.	1	.2
Clerical.	1	.2
Clinical research associate, one therapist, two IS project leaders, .5 van driver who transports patients, two managers and one director.	1	.2
Clinical assistant.	1	.2
Clinical research.	1	.2
Clinical research coordinators — difficult to recruit.	1	.2
Clinical supervisor.	1	.2
CNA.	1	.2
CT sim/diagnostic and x-ray technologists.	1	.2
CT tech.	1	.2
CT tech budgeted to radiation therapy.	1	.2
CT technologist (as other), director-budgeted one both years (0 vacancies) and radiation oncologists are contracted physicians (one covering per day).	1	.2
Currently: (Has not changed since January 2006) two hospital aides, one radiation treatment planning specialist (radiologist), one medical engineer. 16 research/scientist support staff (research associates, lab technicians, etc.) and one scientist.	1	.2
Data manager/protocol trials.	1	.2
Department director.	1	.2
Department manager.	1	.2
Dietary and social work is provided by the hospital on an as-needed basis.	1	.2
Dietitian and counselor on staff, but not in our cost center.	1	.2
Dietitian is in department for seven hours each week.	1	.2
Dietitian, social worker and chaplain are not department budgeted, but allocated to rad onc as needed within the hospital budget.	1	.2
Director.	3	.5
Director of cancer services.	1	.2
Dosimetry and physics staff are contracted employees not actual hospital staff.	1	.2
Dosimetry student.	1	.2
Dosimetry will also be out-sourced if needed. Physics is not in-house, they come in several days a week and provide services.	1	.2
Engineers.	1	.2
Front desk help.	1	.2
Full-time onsite transcriptionist.	1	.2
Information systems specialist, one purchasing associate, one physics assistant. one Linac engineer and three machinists.	1	.2
Lead R.T.(T)s.	1	.2
Manager — not sure if this number should be included in other — I added it. I also included the lead therapist in the total for radiation therapists.	1	.2
Manager.	1	.2
Manager and community outreach liaison have a portion of their FTEs allocated to this cost center as well as the others: one direct. We have four radiation oncologists, one administrative director, one manager, three physicists and one outreach liaison who rotates to all three radiation oncology sites.	1	.2
Manager/director.	1	.2
Manager/radiation therapist.	1	.2
Medical assistant instead of a nurse in our office and we have one FTE current.	1	.2
Medical Assistance	1	.2
medical assistant	2	.3
Medical assistant.	3	.5
Medical assistant who works up front as well as provides patient care. Assisting Drs is priority.	1	.2
Medical office assistant.	1	.2

## Radiation Therapy Staffing Survey

Medical transcriptionist.	2	.3
Minister.	1	.2
Minister two times per week.	1	.2
Mold room technician.	1	.2
Mostly provided by hospital.	1	.2
MSA (medical assistant).	1	.2
New facility. We start treating patients 8/15/07.	1	.2
New patient/insurance coordinator.	1	.2
No billing staff as we do not bill – Canadian.	1	.2
Nuclear med tech for prostate seed implants at extension site surgery center.	1	.2
Nurse assistant.	1	.2
Nurse scheduler.	1	.2
Office staff is backed up by HQ staff.	1	.2
Oncologist is private practice.	1	.2
One radiation oncologist is contracted. Physics staff are contracted for eight hours per week on site. Available by phone and by computer planning and connection.	1	.2
Other: manager.	1	.2
Other includes medical assistants.	1	.2
Other: lab technician for in-house lab.	1	.2
Our physician, medical physicist and dosimetrist are all contracted out through another organization, not part of our hospital staff. Also, since our hospital numbers have been down the last six months, they have cut our therapists to two full time and one part time, even though our specific department shows only minimal decrease in patient numbers. This downsizing has negatively affected us.	1	.2
Patient care assistant/CNA, assists with front office duties and patient care duties.	1	.2
Patient care tech.	1	.2
Patient transporter who also does phlebotomy.	1	.2
Physicist and radiation oncologist are consulted, not part of FTE staff. Radiation oncologist is contracted for.6 FTE hours and physicist is contracted for.4 FTE.	1	.2
Physicist trainee.	1	.2
Program director outpatient cancer services.	1	.2
Provide transportation for patients/one van driver. Rad tech does CT and sim.	1	.2
PTC.	1	.2
Radiation oncologist and PA are not facility employees.	1	.2
Radiation oncologists are not employees; i.e., they bill separately. Started with two part time each, and now have one full time.	1	.2
Radiation therapy aide.	1	.2
Radiation therapy assistant.	2	.3
Radiation therapy program director (school).	1	.2
Recently hired three employees for pool positions: two therapists and one nurse. These positions are to assist in covering vacations and FMLA.	1	.2
Research nurse.	1	.2
Three RNs and five medical assistants.	1	.2
Radiation therapy assistant,	4	.7
Radiation therapy assistants.	1	.2
Radiation therapy ward clerk.	1	.2
Service engineer.	1	.2
Simulation technologist (radiologic technologist/CT).	1	.2
Specialty program coordinator.	1	.2
Supervisor.	1	.2
System admin and machinist project coordinator.	1	.2
Tech aide.	1	.2
Technical assistant scheduler.	1	.2
Technical care assistant (clinical assistant to support nursing) and certified tumor registrars.	1	.2
Technical supervisor.	1	.2
The categories asked for are very broad- not sure what you wanted. I filled in only for RT and direct patient services. Medical Physicists and nursing are large and diverse groups that provide a variety of services. In total our facility has over 600 staff performing a variety of services so the chart above is very unrealistic to complete. We do not have a shortage of RT/dosimetrists as of today but it remains a challenge to staff for physics and ROs. Currently we are not experiencing a shortage.	1	.2
The radiation oncologist is provided by a physician's group. That group is actively recruiting another radiation oncologist.	1	.2



## Radiation Therapy Staffing Survey

Therapist assistant.	1	.2
One therapist assistant.	1	.2
Therapy assistant.	1	.2
This center offers many services that are designed to aid the patient and family member in dealing with the stress of this disease. We offer massage, acupuncture, tai chi and journaling. We have one of the only full spas for the patient and caregiver complete with a quiet meditation area.	1	.2
This data will be of no real value. Each site is staffed differently and is budgeted differently, as well.	1	.2
This information is for all three hospitals within our system.	1	.2
This information is not available at this time.	1	.2
Transporting. Medical physicist is housed in another location and not on my budget. Average one in my center. Dietitian we resource out from a hospital. Our doctors and their secretaries are independent of us.	1	.2
Transportation Aides	1	.2
Transporter and block cutter.	1	.2
Transporter.	1	.2
Tumor registrar.	2	.3
Tumor registrar.	1	.2
Tumor registrar who also helps a bit with clerical.	1	.2
Tumor registrars, genetic counselor and research manager.	1	.2
Van driver.	1	.2
Van driver, we provide free transportation to ambulatory patients who have no other means of transportation.	1	.2
Van drivers.	1	.2
Volume levels have gone down due to competing sites. We did not have the patient load to justify filling one radiation therapist position and one RN position open due to attrition.	1	.2
We added additional ancillary staff that was not budgeted because a medical oncology practice was brought into our clinic. So we increased our dietician from .6 to 1.0 and added a second full-time social worker — neither were in the 2007 budget. We've held off hiring the nurse at administration's request, but we'd like to also fill that position.	1	.2
We also have a 1.0 FTE for chief tech in 2006, but now I'm the department manager and four FTEs for the ultrasound tech/block cutter. We lost a physician, physicist and dosimetrist. However, we are currently recruiting a new physician with hopes of rebuilding our practice/team.	1	.2
We are able to consult any ancillary service at this facility, but have no on-staff personnel to carry out these duties in this area.	1	.2
We are part of a larger corporation so each position is covered among offices.	1	.2
We contract for physics. We do not employ physicians.	1	.2
We currently still have a therapist position open that we are recruiting to fill. We soon, with the addition of SRS, hope to recruit for another physicist. Our radiation oncology vacancy was filled in the fall of 2006 with two physicians on staff. The management position was filled fall of 2006, replacing the retiring individual.	1	.2
We have a large number of radiation therapists unable to find a job. Currently there are over a dozen unable to find employment in radiation therapy. All the therapists in my area have a bachelor's degree in therapy.	1	.2
We have a radiation therapist who does the simulations and checks charts and charges.	1	.2
We share a dietician with the rest of the facility. The social worker is available as needed.	1	.2
We utilize four medical assistants that are trained by the therapy staff to assist in patient setups, room prep, patient assistance, etc.	1	.2
Total	575	100.0

## 2. Other Specialty Recruitment

	Frequency	Percent
Blank.	510	88.7
All positions are staffed fully	1	.2
At this time dosimetrists (CMD) seem to be the hardest to attract.	1	.2
Because we provide training in most areas, we can control the supply — it is harder to recruit and retain RO and med physicists as supplied there are much tighter. RT Schools in Canada have expanded to meet the needs and the pressure has subsided	1	.2
Clinical research coordinators.	1	.2
CNA.	1	.2
Did not do any recruiting during the past three years.	1	.2
Did not do recruiting.	1	.2
Did not have any needs at that time.	1	.2

## Radiation Therapy Staffing Survey

Did not have to recruit anyone in that time period.	1	.2
Did not need to recruit.	1	.2
Did not need to recruit.	1	.2
Engineering position open for 10 months.	1	.2
For the don't know responses, either no vacancies or our department does not recruit.	1	.2
Fully staffed in all areas. Trying to add a physicist.	1	.2
Have been fully staffed since February 2005. No turnover yet	1	.2
Have not had the need to recruit staff.	1	.2
Have not sought recruitment for past two years.	1	.2
Have only recruited one clerical person in last year, no one else.	1	.2
Haven't had an opening for five years. When an opening occurs, there is never a problem filling the job.	1	.2
Haven't had any turnover in therapists for three years.	1	.2
Haven't had to recruit, so haven't really had any problems.	1	.2
I had two openings for a short time for the nursing positions. It is hard to find the right person who can fit into a rad onc department.	1	.2
In this area we have a surplus of therapists at present, making it not difficult to fill vacancies.	1	.2
It's harder to get experienced therapists at the salary my facility is offering.	1	.2
It is difficult to find staff with experience to fulfill a radiation therapy department need.	1	.2
Lead R.T.(T).	1	.2
Medical assistant.	1	.2
Medical assistant.	1	.2
Never had to recruit.	1	.2
No change for last three years.	1	.2
No recruiting done.	1	.2
No recruitment needed.	1	.2
No staffing and/or recruitment issues, stable staffing for the past several years.	1	.2
No turnover, current staff for at least two years.	1	.2
Our main campus had a radiation therapy school and several therapists were hired from the classes.	1	.2
Our physics and dosimetry are done on-line, although we do have a physicist once a week on-site for physics checks.	1	.2
Poor question, we did not do any recruiting.	1	.2
Radiation therapists and radiation oncologist: Not a shortage of applicants, just poor work history, bad references and just not a good fit for departments.	1	.2
Recruiting a physicist and RN is extremely difficult.	1	.2
Remarkably, I have been surprised by the number of applicants we received during our recent listing on the Job Bank website thru ASRT. I actually had a dosimetrist come to me regarding employment. I'm optimistic with the equipment we have (Trilogy) that perhaps it may be easier to recruit a physicist. We are currently looking for a part-time nurse for our practice. I understand from the clinic that social workers are very difficult to obtain.	1	.2
Technical care asst.	1	.2
The Internet programs have made an over abundance of therapists. I have over a dozen to pick from, two working in this small hospital in x-ray currently.	1	.2
There are no openings for any position and haven't been since the opening of our clinic in 2003.	1	.2
There has been no recruitment efforts.	1	.2
There is now a radiation therapy school in town that has graduated many local students.	1	.2
This is our first year. Dosimetrist, physicist would be very difficult in this area. Therapists have not been a problem.	1	.2
Transportation.	1	.2
Tumor registrar.	1	.2
Very difficult recruiting therapists and dosimetrists.	1	.2
We are a new Center that opened in May 2007. We filled all positions easily.	1	.2
We are not looking for any staff.	1	.2
We didn't have to recruit here.	1	.2
We have done no recruiting in the past 12 months.	1	.2
We have had a number of new graduates apply for our current open position, but prefer to get someone with more experience. We have had a few responses from experienced staff. Two years ago I was desperate for anyone, even if just out of a graduate school.	1	.2
We have had no turnover.	1	.2
We have had no turnover of staff, only a reduction in FTEs.	1	.2
We have no problem with staffing. We have a full staff and absolutely no turnover except for once a	1	.2

## Radiation Therapy Staffing Survey

week physics coverage.		
We have not had to recruit for any specialty, other than adding another radiation oncologist.	1	.2
We haven't had any turnover; however, I don't believe that finding LPNs would be very hard as we have a school here in town and we work M-F, 8 a.m. to 4:30 p.m., with no weekends or holidays, so that entices people.	1	.2
We haven't had to recruit any personnel in the last two years.	1	.2
We haven't recruited for any positions.	1	.2
We lost three therapists, but quickly replaced them with two former students and a new graduate from our local radiation therapy program. Otherwise, we have not experienced any turnover.	1	.2
We participate in clinical training programs for therapists, dosimetrists and physics grad students, which assists our recruiting efforts.	1	.2
We really have not tried to recruit as we seem to have inquiries come to us when we are not even looking. As far as clerical staff, that hiring duty lies within another department manager's responsibilities, but we seem to have no trouble in finding employees to fill those roles.	1	.2
We recently had an opening for an R.T.(T) and had seven applicants. We have not had any other openings.	1	.2
<b>Total</b>	<b>575</b>	<b>100.0</b>

### 3. Other Reasons for FTEs Decreasing

	Frequency	Percent
Blank.	498	86.6
Two FTEs were split 50/50 between different freestanding clinics.	1	.2
Advanced technology has changed how radiation treatments are now done — daily imaging of internal markers and anatomy, fewer blocks to cut, less paperwork, quicker alignment of patients for accurate treatments, record and verify software, less need to wait for physician OKs, more confidence in treatment accuracy. Few mistakes are allowed by the equipment for even inexperienced staff!	1	.2
all budgeted FTE have increased	1	.2
Being a new facility, if our patient load increases or stays at approximately 30 to 35 patients, we would add another therapist.	1	.2
Budget levels at our facility for staff have remained the same so far; however, the hospital is downsizing in other areas.	1	.2
Budget remained the same.	1	.2
Budgeted FTEs have increased for us.	1	.2
Budgeted FTEs have increased, not decreased.	1	.2
Budgeted FTEs have not changed.	1	.2
Competition caused lower patient census.	1	.2
Competitor moved into the Austin area, which forced downsizing due to decreased patient load.	1	.2
Complexity of IMRT directly impacted therapists who have to spend more time treating patients as compared to that of conformal therapy, which increases the length of a normal treatment day's schedule of activities. As a result, staggered shifts for staff to cover the complexity and hours.	1	.2
Cost-cutting initiatives system wide, not specific to department.	1	.2
Cross-training allowed for downsizing.	1	.2
Decrease in one FTE admin staff due to more automation.	1	.2
Did not have any budgeted decreases.	1	.2
Difficulty in recruiting rad oncology has decreased number of patient load.	1	.2
Doesn't apply.	1	.2
Efficiency of staff increased with new employees hired.	1	.2
FTEs have not decreased.	1	.2
FTEs remained the same.	1	.2
Greedy physicians.	1	.2
Have not decreased FTEs.	1	.2
Have not decreased.	1	.2
Hospital budget.	1	.2
It was decided by administration that a single RN could see all the patients in the clinic instead of hiring an additional RN.	1	.2
Medical oncology practice moved and added radiation therapy to its services.	1	.2
N/A.	3	.5
N/A.	3	.5
N/A.	2	.3
New facility.	1	.2

## Radiation Therapy Staffing Survey

No change.	3	.5
No decrease.	1	.2
No decrease.	8	1.4
No decrease.	1	.2
No decrease in budgeted FTEs.	1	.2
No decrease in staff.	1	.2
No decrease.	1	.2
Not applicable.	1	.2
Not decreased.	1	.2
Office closed.	1	.2
One of my therapists will be going out on maternity leave and has requested to come back as a part-time employee. This caused me to split the one FTE into 2 .5 FTEs to accommodate the workload.	1	.2
One radiation oncologist left the group practice. They are still looking to replace that position.	1	.2
Our department downsizing, due to declining volumes, occurred in 2005. We held a vacant position for 1.5 years.	1	.2
Positions not filled through attrition.	1	.2
Restructured.	1	.2
Same.	1	.2
Same number of FTEs.	1	.2
Shared services with another site that has since closed.	1	.2
Stayed status quo.	1	.2
The number of oncology offices opening has increased significantly. Some urologists are opening rad onc facilities skirting around the CON.	1	.2
The organization brought in an outside benchmarking organization to review institutional FTEs.	1	.2
They have not decreased.	1	.2
Too many cancer treatment centers opening within a few miles of each other, which waters down the patient referrals per clinic.	1	.2
Turnover of doctors caused problems.	1	.2
We do not treat many patients, so there is not a need for any additional staff.	1	.2
We flex to ensure our productivity is met, so currently we have an R.T.(T) position 0.6 FTE open. When volume consistently increases, I will fill the position. We use per diem staff and if our volume is low, we send the per diem home.	1	.2
We have just what is needed and no more!!! Off time is covered by PRN/ bare-bones staffing.	1	.2
We haven't had any turnover for a long time.	1	.2
We opened and were budgeted for one FTE therapist approx for July and we had to recruit a therapist starting in March 2007.	1	.2
When US Oncology came into town, they took many of our potential patients to their facilities. And this company also employs our physics support and physician.	1	.2
Workload shifted from therapists to dosimetrists.	1	.2
X-ray tech position eliminated. No longer use that machine.	1	.2
Total	575	100.0

### 4. Other Reasons for FTEs Increasing

	Frequency	Percent
BLANK	484	84.2
Added a new accelerator, expanded specialty procedures.	1	.2
Added an RN coordinator for lung cancer program.	1	.2
Added billing office staff to improve processing efficiency and effectiveness.	1	.2
Added IMRT requiring extended day for treatment.	1	.2
Added new physician, which increased number of patients per day. This therapist does more than just treat patients.	1	.2
Addition of a CT machine increased number of therapists. Physician decided to hire a nurse to help him provide better patient care.	1	.2
Addition of satellite facility. Also, six therapists relocated due to drastic cost of living increase.	1	.2
Additional treatment machine added (IGRT).	1	.2
Ancillary staff — dietician, social work, etc. — were added as part of the growth of the Comprehensive Cancer Center.	1	.2
Budget remained the same.	1	.2
Budgeted positions have remained the same in rad onc.	1	.2
Changed the block cutter position into a R.T.(T).	1	.2
Complexity of treatment.	1	.2

## Radiation Therapy Staffing Survey

Complexity of treatment setups have increased; practice has grown; new treatment modalities have been added.	1	.2
Department became busier.	1	.2
Did not change.	1	.2
Doesn't apply.	1	.2
Expanded services.	1	.2
Growth in business due to creating a system network.	1	.2
I manage two rad onc centers. One of the centers had a three year history of high volume and administration finally agreed to the addition of staff.	1	.2
Increased complexity of treatment planning and addition of HDR necessitated second physicist.	1	.2
Increased complexity of treatment planning and treatments due to IMRT, IGRT, CBCT, KV-KV imaging, etc. More hours to treat the same number of patients in a safe and timely manner.	1	.2
Increased complexity with IMRT and IGRT.	1	.2
Increased number of FTEs for the increased number of treatment machines or special procedures offered by facility.	1	.2
Increasing complexity of treatments required adding dosimetry staff.	1	.2
Increase for dosimetry support. More difficult plans due to IMRT.	1	.2
Installed another LINAC.	1	.2
MOA was added to free up time of RNs and to provide coverage during vacation.	1	.2
More complicated, technically challenging, treatment machines.	1	.2
More computer requirements, electronic medical record, more technical responsibilities on machines.	1	.2
More specialized complex treatments.	1	.2
N/A.	3	.5
N/A.	1	.2
N/A.	1	.2
Needing more ancillary staff to accommodate other equipment in the department such as MRI/PET.	1	.2
New equipment added.	1	.2
New equipment and additional services.	1	.2
New facility.	1	.2
New facility. All staff are new.	1	.2
New machine.	1	.2
New service added, diagnostic CT. Moved to a new larger facility with new technology.	1	.2
New technologies added.	1	.2
New technology more time-consuming.	1	.2
No change.	3	.5
No change in budget.	1	.2
No changes from 2006.	1	.2
No decrease.	1	.2
No increase.	2	.3
No increase.	2	.3
No increase at this time.	1	.2
No increase in staff.	1	.2
N/A.	1	.2
Nursing staff increased due to increased demand in special procedures and increased morbidity of patients.	1	.2
One therapist was trained to work in dosimetry on a part-time basis. Her time helping in dosimetry depends on adequate staffing at the treatment machine and CT sim.	1	.2
One therapist went to dosimetry, vacancy available for additional radiation therapist.	1	.2
Our facility has added HDR and found we need more staff to accommodate this added service.	1	.2
Our processes are more complicated, so more physics is needed	1	.2
Our patient load is down and has not increased since the opening. The most patients we have had is 15/day and that only lasted about a month.	1	.2
Patient demand isn't exactly the right answer, so much as patient need. More patients have greater social service needs due to no insurance or under insurance and need assistance with those issues, and are receiving more aggressive treatments and dose escalations so their dietary issues are greater as well. Patients have greater expectations as well that these additional services will be available as part of a comprehensive cancer program.	1	.2
Patient load would increase the need to have rotational shifts and additional therapists, so "burnout" did not become an issue.	1	.2
Physicist demand has increased due to the number of facilities, as well as the increase in technology.	1	.2
Plan to extended treatment day from 10 hours to 15 in October 2007.	1	.2

## Radiation Therapy Staffing Survey

Remained the same.	1	.2
Same.	1	.2
Same number of FTEs.	1	.2
Shift of responsibilities, full-time therapist moved to part-time after her baby was born.	1	.2
Staff needed to provide new technology (SRS/IGRT) programs: nursing, clerical, physicists.	1	.2
Starting IMRT, so need more physics coverage.	1	.2
Technology evolved, which increased each patient's treatment time, thereby increasing the number of staff needed to cover the extended hours of operation.	1	.2
They have not increased.	1	.2
Tomotherapy unit off-site required additional volume of patients to be treated, therefore number of staff increased to handle an extended work day with coverages, etc.	1	.2
Total patient care is more complex requiring more staffing.	1	.2
Treatment time on the machine increased, amount of paperwork increased, so radiation therapist FTEs increased.	1	.2
We added a medical oncology practice that also required more support services. Our part-time physicist was also interning with us half days. So the work she did during her internship still needed doing, so we hired her full time when she completed her training.	1	.2
We added on a satellite site. So we needed one more physicist.	1	.2
We anticipate increasing FTEs for dosimetry by 1.0 in the next 12 months. This is due to the complexity of treatment plans and the time necessary to generate them.	1	.2
We are adding an off-site treatment machine.	1	.2
We are going through downsizing at this point.	1	.2
We are going to be adding more modalities to our center.	1	.2
We increased our R.T.(T) staffing needs by sending two currently licensed R.T.s to a one-year therapy school.	1	.2
We recently filled an R.T.(T) vacancy that occurred in 2005 due to a voluntary leave.	1	.2
We should experience an increase within the next year due to changing technology.	1	.2
With the addition of each treatment unit we usually add five R.T.(T) positions to support the patient load.	1	.2
Working on a joint venture with other center in town.	1	.2
Workload shifted from therapists to dosimetrists.	1	.2
Total	575	100.0

### 7. Other Reason(s) facility is experiencing a work force shortage

	Frequency	Percent
BLANK	527	91.7
Although we are fully staffed, there are new technologies we would like to expand into. We maintain a waiting list; however, it is mainly an administrative need to track patient flow, particularly for patients requiring surgery/chemo/radiation therapy in conjunction	1	.2
By working together, we did not allow negative effects to occur.	1	.2
Changes are due to restructuring of department.	1	.2
Chief technologist and therapist/dosimetrist pulled to work on the machine resulting in administrative work being put off and sims available only during full staffed days. Increased workload for all.	1	.2
CT simulation went from two FTEs to one FTE.	1	.2
Decreased staff and faculty satisfaction, low morale, increased use of locum R.T.s, which causes \$ equity issues among R.T.s who have to oversee locum R.T.s.	1	.2
Government contract employment not appealing to most people	1	.2
Had to hire locum dosimetrist so that there would be no interruption in services	1	.2
Have had dosimetrist turnover. Remaining dosimetrists and physicist staff have worked harder to keep up with workload until position can be filled.	1	.2
Having trouble recruiting therapists to northern Minnesota. The last two therapists hired worked for less than one year and were recruited to facilities in MPLS that was more appealing of an area for young and single therapists. The two therapists also trained in MPLS.	1	.2
I answered not applicable to many of the above because we have not had any turnover in those positions since long before 2006. We have a stable force and lots of longevity within our organization. Average length of employment is currently 10 years.	1	.2
I would suppose that we would offer a sign-on bonus if we had an opening. However, we don't have an opening and haven't had one for several years.	1	.2
Impact on budget due to having to hire travelers.	1	.2
In 2006 our staffing shortage was due to old equipment and salaries.	1	.2
Increased salaries.	1	.2

## Radiation Therapy Staffing Survey

Increased staff sick call due to stress. Each therapy unit treats average of 55 patients in a ten hour treatment day.	1	.2
Longer hours for staff and increased workload for remaining employees.	1	.2
N/A.	1	.2
New machine, no new staff. Never replaced people leaving from 05.	1	.2
No patient complaints, cancelled appointments, etc. However, the staff in all areas is doing double-duty for ~one year due to one physician leaving last August plus new equipment added. So far, no burn out, but I do have to watch that everyone is able to share the load.	1	.2
No shortage.	2	.3
No shortage.	1	.2
No work force shortage.	1	.2
None.	1	.2
One staff member is difficult to work with, has a reputation and people in positions working directly with that person do not want to work here.	1	.2
Our department is demanding increased hours of operation for the clinic to meet the needs of our patients. We are also acquiring new technology that will force us to treat the same number of patients on fewer machines. Currently, management doesn't expect to decrease clinic hours when the new technology is installed.	1	.2
Overtime has increased.	1	.2
Pay.	1	.2
Paying for locums to cover during shortage in order to have time to recruit.	1	.2
Physician change.	1	.2
Physics staff is working longer hours and using locums.	1	.2
Recruitment for dosimetry and physics have been extensive, but we were able to use locums in the interim.	1	.2
Staffing is fairly consistent and we only staff to R.T.(T)s per unit. There are times when one R.T.(T) operates the CT simulator alone because with our volume the average CTs/day is 2 to 5 patients.	1	.2
Supply is greater than demand. Washburn students from 06 and 07 have not found full-time employment as R.T.(T)s. Some are working as PRN staff with our facility.	1	.2
The greatest shortage is in board-certified physicists. There are many locums available, but they are very expensive. Hiring a locum is necessary and we have done that to fill the vacancy while recruiting. Locums blow up the staffing budget, leaving less money for other projects.	1	.2
Using agency.	1	.2
Using locums therapists, dosimetrist, physicists to achieve satisfactory staffing levels for patient volume.	1	.2
Very stable center. Not the norm from all my travels nationwide.	1	.2
We're in a rural area, low salaries, and differences in opinion.	1	.2
We are short on attending physicians, which makes it difficult to plan patients, get plan approvals, etc.	1	.2
We do not have a shortage.	1	.2
We have a work force shortage due to management declining to increase to the needed staffing levels.	1	.2
We have accommodated any necessary needs so that none of the above apply.	1	.2
We have needed to flex our hours a little when demanded.	1	.2
Work force shortage could cause increase in errors due to less double checking, and working alone.	1	.2
Work force shortage in finding qualified employees for jobs available.	1	.2
Working with locum drs until perm dr can be found.	1	.2
<b>Total</b>	<b>575</b>	<b>100.0</b>

### 8b. Other location of CT simulator

	Frequency	Percent
BLANK	556	96.7
AcQu Sim.	1	.2
All our centers are physically attached to a hospital. Treatment planning CTs are done in the hospital radiology department. Our staff attends and provides immobilization devices.	1	.2
CT scanner is operated by radiology but located adjacent to radiation oncology department.	1	.2
Currently installing a wide bore Philips CT simulator within the department.	1	.2
Freestanding radiation oncology center with full service diagnostic center combined.	1	.2
Located in the hospital next door to our facility.	1	.2
Our patients are sent to the main hospital for their CT IMRT sims. Others (non-IMRT) are sent to the smaller hospital close by in the radiology department.	1	.2

## Radiation Therapy Staffing Survey

Our whole organization is made up of freestanding clinics and we have our own Philips CT unit for simulation.	1	.2
PET CT in radiology	1	.2
Philips wide bore CT scanner.	1	.2
Shared with specials radiology: Philips big bore with therapy software, including gating.	1	.2
Treatment planning center.	1	.2
We are a freestanding clinic. It is in our clinic.	1	.2
We have installed a Philips wide bore at the moment.	1	.2
We still do simulations, but CT for many treatment plannings.	1	.2
We use the CT unit in radiology, but it is not a CT simulator.	1	.2
When it breaks, we walk patients across the street to the hospital radiology department and CT there.	1	.2
Within clinic.	1	.2
Within our clinic suite.	1	.2
Total	575	100.0

### 8c. Other(s) who typically operates the CT simulator

	Frequency	Percent
BLANK	523	91.0
Three units, two are staffed by R.T.(T)s, one staffed by an R.T.(R).	1	.2
A radiation therapist goes to the CT department to position the patient, the CT tech does the scan.	1	.2
A radiation therapist who is also a licensed CT technologist.	1	.2
A radiographer and a rad therapist.	1	.2
A therapist goes to the imaging center or hospital to align and guide CT tech where to scan.	1	.2
Also the dosimetrists.	1	.2
Completed at an imaging center across our parking lot. Imaging center is not part of our health system.	1	.2
CT in department is operated by therapist. CT in radiology operated by CT tech.	1	.2
CT Tech runs the equipment. Sim Tech actually sets the patients up for their simulation and makes all the positioning devices.	1	.2
CT tech/radiation therapy assistant.		.2
CT technologist and the dosimetrist.	1	.2
CT techs operate the equipment. The therapist is responsible for accurate set up.	1	.2
Dosimetrist or manager both certified radiation therapy.	1	.2
Dosimetrist/	3	.5
Dosimetrist.	6	1.0
Dosimetrist assists.	1	.2
Dosimetrist/radiation therapist.	1	.2
Dosimetrists and radiation therapists assist with CT scans that are performed after a conventional simulation has been performed for isocenter placement and creation of immobilization devices.	1	.2
Housed in our budget.	1	.2
Joint effort of radiation therapist and CT technologist.	1	.2
Ohio Department of Health requires that only a licensed radiation therapist operates a CT scanner for radiation therapy simulations.	1	.2
PET CT, staff R.T.	1	.2
Radiation therapist at main hospital, CT tech at smaller hospital in radiology department.	1	.2
Radiation therapist is there to set up patient.	1	.2
Radiation therapist sets patient in treatment position and makes all immobilization devices, also works with radiation oncologist. CT tech only does the scanning.	1	.2
Radiation therapist there to set up patients. CT tech runs the scanner only and does not help with patient setup at all.	1	.2
R.T.(R)(T)(CT) holds triple certifications.	1	.2
R.T.(T) +/- dosimetrist sets patient up and tells the CT technologist what needs to be scanned, slice thicknesses, etc., while CT technologist performs the scanning.	1	.2
R.T.(T) and R.T.(R) work together to get best imaging results combined with radiation therapy experience.	1	.2
R.T.(T) operates for all XBRT CTs. Physicist and radiation oncologist perform CTs for all other procedures (HDR, Mammosites, etc.).	1	.2
R.T.(T) sets up patient and specifies area needing scanned. CT tech runs scanner.	1	.2
Sometimes dosimetrist.	1	.2
The chief therapist usually does the sim, but one of dosimetrists can assist, if needed.	1	.2
The CT tech does the procedure assisted by a therapist who positions the patient and puts CT	1	.2



## Radiation Therapy Staffing Survey

markers where needed.		
The CT tech is most generally in the control area during CT sims.	1	.2
The CT techs operate the scanner machine and the radiation therapist operates the CT Tx table and positions patients on the CT scanner tabletop.	1	.2
The medical dosimetrist, along with therapist, if possible.	1	.2
The radiation therapist positions the patient and immobilization devices, and the CT tech obtains the CT/simulation scan (runs the CT scanner).	1	.2
The tech from the imaging department operates the CT, but a therapist is there to position the patient and make sure the whole operation goes as it should.	1	.2
Two dedicated CT radiation therapists.	1	.2
We do a virtual simulation in the facility (marking, device, etc.), followed by CT in the hospital medical imaging department. CT technologist was trained by us.	1	.2
We have two CT technologists and one radiation therapist in simulator at all times. We also perform about 85 Diagnostic CTs a week on our CT.	1	.2
We have a simulation tech who is an R.T., however, the therapists can run it, too.	1	.2
We have a simulation therapist that has been trained in CT.	1	.2
with assist of RTT	1	.2
<b>Total</b>	<b>575</b>	<b>100.0</b>

### 8c. Other(s) who typically operates the CT simulator

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A radiation therapist who is also a LICENSED CT technologist.	1	.2
A radiographer and a rad therapist.	1	.2
A therapist goes to the imaging center or hospital to align and guide CT tech where to scan.	1	.2
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Completed at an imaging center across our parking lot. Imaging center is not part of our health system.	1	.2
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CT technologist and the dosimetrist.	1	.2
CT techs operate the equipment. The therapist is responsible for accurate setup.	1	.2
Dosimetrist or manager, both certified in radiation therapy.	1	.2
Dosimetrist.	3	.5
Dosimetrist.	6	1.0
Dosimetrist assists.	1	.2
Dosimetrist/radiation therapist.	1	.2
Dosimetrists and radiation therapists assist with CT scans that are performed after a conventional simulation is performed for isocenter placement and creation of immobilization devices.	1	.2
Housed in our budget.	1	.2
Joint effort of radiation therapist and CT technologist.	1	.2
Ohio Department of Health requires that only a licensed radiation therapist operates a CT scanner for radiation therapy simulations.	1	.2
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## Radiation Therapy Staffing Survey

R.T.(T) sets up patient and specifies area needing scan. CT tech runs scanner.	1	.2
Sometimes dosimetrist	1	.2
The chief therapist usually does the SIM, but one of dosimetrist can assist if needed.	1	.2
The CT tech does the procedure assisted by a therapist who positions the patient and puts CT markers where needed.	1	.2
The CT tech is most generally in the control area during CT sims.	1	.2
The CT techs operate the scanner machine and the radiation therapist operates the CT Tx table and positions the patients on the CT scanner tabletop.	1	.2
The medical dosimetrist, along with therapist, if possible	1	.2
The radiation therapist positions the patient and immobilization devices, and the CT tech actually obtains the CT/simulation scan (runs the CT scanner).	1	.2
The tech from the imaging department operates the CT, but a therapist is there to position the patient and make sure the whole operation goes as it should.	1	.2
Two dedicated CT radiation therapists	1	.2
We do a virtual simulation in the facility (marking, device, etc), followed by CT in the hospital medical imaging department. CT technologist was trained by us.	1	.2
We have two CT technologists and one radiation therapist in simulator at all times. We also perform about 85 Diagnostic CTs a week on our CT.	1	.2
We have a simulation tech that is an R.T. However, the therapists can run a simulation, too.	1	.2
We have a simulation therapist who has been trained in CT.	1	.2
With assistance of R.T.(T).	1	.2
<b>Total</b>	<b>575</b>	<b>100.0</b>

### 9a. Use the box below to clarify any of your previous responses or add comments regarding your perception of the potential supply of radiation therapy professionals.

	Frequency	Percent
BLANK	385	67.0
There appears to be an over-supply of therapists in our area due to more schools graduating more students. Some are having difficulty finding employment.	1	.2
Adequate to the current demand.	1	.2
After many years of shortage, the number of R.T.(T)s seems to be much closer to sufficient. The shortage of CMD dosimetrists is also slightly less acute. The shortage of board-certified physicists is the largest problem at this time. The inability for ABR certified physicists to be automatically qualified for AMP status for radioisotope use is also a major problem.	1	.2
Most all of our patients have at least one treatment planning CT during their course of therapy. The patients are simulated in radiation oncology and immobilization device(s) made, and then taken to CT suite for treatment planning CT. Results are ether-netted directly into treatment planning system.	1	.2
Applications for R.T.(R)s are definitely on the rise. We have many more applications than available jobs.	1	.2
At our site, we are currently adequately staffed and share r/ts, dosimetrists, RNs, physicists and clerical staff with two other centers. We have a labor pool R.T.(T) who helps out for vacations and high volume and at present are not experiencing shortages. In the pas, before 2006, we had shortages and problems recruiting, but at present not. In fact, our labor pool R.T.(T) would like at f/t position but does not want to move from the area. Between four centers, three R/T and one stereotactic/gamma knife center, we need another physicist and they are proving hard to recruit.	1	.2
At the moment, supply outweighs demand in NYC area. The surplus is about 50%.	1	.2
At times there appears to be a glut of new students. It appears that each year these radiation therapy schools continue to exceed the demand. I'm not sure that we are doing the new grad a favor, or the industry, for that matter, by turning out more therapists than there are jobs. We hired a therapist last fall who indicated that there were more new therapists looking for work than there were jobs (out West). He took a job with us, which required him to move across two states.	1	.2
Attrition and burnout with the increase in technological complexity of today's treatment, along with the volumes of patients going upward. Hard to keep satisfied staff therapists who are the professionals in the everyday trenches. Senior therapists are wearing many hats in most smaller centers so that centers can cut corners on additional normal staffing levels...which is how many errors can occur too. But that is being overlooked for the sake of the revenues, etc. I am about safety and maintaining standards, which is why I am all for the national standard CARE bill passing to enforce and make it applicable in all states nationwide. Most nursing staff seem to be readily available due to the view of rad onc centers being desirable departments to work from their perspective. Many front desk staff are lacking the necessary skills to deal with multitasking and computer applications, registrations and	1	.2

## Radiation Therapy Staffing Survey

insurance with CPT and diagnostic codes.		
Certain areas R.T.(T)s are needed. Surplus in other areas (south).	1	.2
Charlotte area is moderately saturated.	1	.2
Comment: two radiation therapy schools located in tri-county SE Michigan area, leading to a glut of therapists on the market. New grads having difficulty securing immediate positions.	1	.2
Concerned about projected aging of baby boomers and no increase in training of M.D.s.	1	.2
CT device is a diagnostic CT scanner operated by radiology. Radiation oncology patients are scheduled on this scanner for treatment planning CTs. A CT simulator will be installed in radiation oncology within next six months and will be operated by radiation therapists. Extremely difficult to find medical physicists and medical dosimetrists. We have elected to contract with a physics group in order to eliminate the need to recruit physicists. (Dosimetrists continue to be employed by the hospital.) There needs to be an increase in programs to train medical dosimetrists—not only to meet the demand, but to get salaries down to a reasonable level. Radiation oncologists are private practice physicians (contracted to provide services within our hospital). It has been very difficult to find and recruit an additional (third) radiation oncologist.	1	.2
Current supply of radiation therapists in this area meets demand. We are experiencing slower throughput on the linear accelerators due to IGRT and have requested one additional therapist to support the advanced technology. Would recommend 2.5 therapists per IGRT capable machine.	1	.2
Currently in the metro area where we work, the market is flooded with radiation therapists. Two local schools are putting out more students than can be utilized locally and most of the students coming out of school want to stay local.	1	.2
Currently, our school has an over abundance of R.T.(T)s. We have a waiting list of R.T.(T)s who would like to have a position. However, we've had virtually no turnover since opening in January 2005.	1	.2
Daily treatment volumes have decreased at our facility. Focus on special procedures, i.e., cyberknife, gammaknife, HDR.	1	.2
Difficulty filling positions due to decline in skilled applicants. Certain programs have a noted decline in well qualified applicants, therefore a decrease in quality graduates.	1	.2
Don't know physicist and physician bonus amounts.	1	.2
Due to a local community college radiation therapy program, our supply over the past five years has been very good. The program is well respected and we have a choice on who to hire, due to their clinical rotations through our department.	1	.2
Five years ago we were experiencing a 20% to 25% R.T.(T) vacancy rate covered by locums. We affiliated with a re-established therapy training program and became the clinical training site for three to four students per year and offered scholarships. Each year, through attrition, increased workloads and dosimetry advancement, we have been able to hire a minimum of two students a year. In 2007, we implemented an in-house two-year training program for medical dosimetry to provide future dosimetrists and advancement for our therapists.	1	.2
For No. 6, I do not have access to information to answer all of this question.	1	.2
Has increased.	1	.2
Here in the Pensacola area, the supply is greater than the demand	1	.2
Holds a B.S. in radiologic sciences, which included training in education.	1	.2
I've noticed the supply of new grads is available, however, they are from out of state. To get new grads to move to the Bay Area is hard to do because of the cost of living here.	1	.2
I am a chief therapist in two locations, so I combined both in my answers. There seems to be available therapists for hire, but the level of experience is minimal. I have also had a problem with finding quality personnel. Therapists operate the CT at one site and a CT tech at the other site.	1	.2
I believe that the supply of new graduates is beginning to lessen the shortfall of therapists that we all experienced several years ago. New graduate therapists are more abundant and easy to recruit. Still, there seems to be less of an abundance of experienced applicants for staff therapist positions. Overall, I think that the market is starting to stabilize. However, newer technology is demanding an evermore attentive therapist and we seem to be increasing our staffing levels as we add newer technology to our practice.	1	.2
I believe the schools are taking too many students. When I went to school they only accepted three students. I believe the radiation therapist should have x- ray experience.	1	.2
I believe the supply of radiation therapists has increased over the last several years, however, the quality of the newer therapists has declined. The recent graduates I have encountered in the N.Y. area are extremely lacking in basic concepts and skills that were once a required component of becoming a radiation therapist.	1	.2
I believe there is a new horizon with a new generation of radiation therapists becoming available. Unfortunately, facilities still look for seasoned therapists. However, the seasoned therapists are coming upon retirement, so facilities will have no choice but to choose the new generation and give them seasoning.	1	.2

## Radiation Therapy Staffing Survey

I believe with the complexity of treatments there is a need for three therapists per machine, with two in the simulator.	1	.2
I do not perceive a shortage at this time.	1	.2
I don't believe we have a shortage in the Kansas City area at this time for radiation therapists.	1	.2
I don't think there is a shortage of radiation therapy professionals in the Southwest.	1	.2
I feel market is being flooded with R.T.(T) graduates. Our area has surplus of new grads and no openings to fill. Schools need to take smaller classes in order to keep in check with job demands.	1	.2
I feel that there is a large increase in the number of radiation therapists looking for jobs, especially new graduates considering the influx of schools offering radiation therapy programs.	1	.2
I feel the shortage is a payscale issue. Not enough facilities are offering high enough wages for the job.	1	.2
I get a lot of applicants for therapy positions, four in the last month.	1	.2
I have come across many centers where they are cross-training therapists to do CTs. I think this is fine if they are part of a hospital and have quick access to emergency care. Though there are many outpatient facilities doing the same and I feel that this provides potential problems both to the patient and the facility if the therapist and the facility are not prepared to handle potential problems due to the lack of knowledge and training on the therapist's part.	1	.2
I have not experienced a shortage of radiation therapists or radiation therapy professionals in our recruiting efforts. On the contrary, we have experienced therapists desperate for jobs in the area to avoid moving to a new area. Class sizes in radiation therapy programs do not seem to reflect the decreasing demand for therapists in our area. They remain very large in comparison to the need for therapists.	1	.2
I have received many CVs and inquiries on radiation therapist positions. I do not presently have an opening and I have three CVs I could pull from. The market here has changed that more therapists are available for positions.	1	.2
I have very long-term employees and therefore have not had recruitment issues. However, I am looking to staff a new center the first quarter of next year. I am very concerned regarding recruitment.	1	.2
I haven't had any issues with the supply of professionals in my department. We have very happy workers here and no one has left in a long time.	1	.2
I think currently we have plenty of therapists available to us who would like to work for us. We take students from two programs, one in-state and one out of state. They like their experiences here and would like to stay if we had jobs to offer. Most of my staff has been here 2+ years with no intention of leaving. They own homes or have family here and choose to stay in this area. We've made it a place they want to stay and work. Five and a half years ago we had a reputation in the state for being the worst radiation oncology department to work in and I had an entire temp staff. I'm proud that I've turned that around completely with the great staff I have today!	1	.2
I think schools truly need to take note of the diverse role of today's radiation therapist. Because of the fast evolution of technology, we are performing much more than radiation treatments. CT and ultrasound imaging, in particular, and in my opinion should be a vital part of the radiation therapy technology curriculum.	1	.2
I think that qualified radiation physicists are getting harder to hire. I know that qualified, board certified dosimetrists are extremely hard to find so we started our own dosimetry school.	1	.2
In east Tennessee, I feel that the turnover rate for radiation therapists is very low. There are no vacant positions for new students to fill. The field is somewhat flooded in this region. I believe this is partly caused by Chattanooga State Technical Community College and their increase in the number of students accepted into their radiation therapy program. There are around nine cancer centers within one hour of each other in this region. About four sponsor students from CSTCC. Each facility usually takes two students per year for clinical training. With this process continuing year after year, the radiation therapy field is flooded and graduates from radiation therapy usually go back to radiography, travel as R.T.(T), or are forced to move to another state/location until they find a job.	1	.2
In Michigan, the poor economy coupled with four radiation therapy programs has increased the number of therapists looking for full-time positions and decreased the number of jobs available.	1	.2
in my opinion, many hospital-based radiation therapy schools became alarmed at the prospect of possibly having to deliver a degree-level program, and in these cost-conscious times, hospital administrators availed themselves of the opportunity to shut programs down and save cash, not realizing the effect this would have on recruitment.	1	.2
In my opinion, there is no need for a radiation therapist to have a bachelor's degree upon completion of the radiation therapy program. The emphasis should be on patient positioning and treatment modalities. The upswing of R.T.(T) salaries has made it more difficult for centers financially. With the cutbacks from Medicare and reimbursements being reduced, we are seeing less profit in our department. Technology is becoming more expensive in order to provide the best up-to-date equipment/treatment options for the patients in radiation therapy. It is not only the therapist salaries, but the physics/dosimetry salary levels as well.	1	.2

## Radiation Therapy Staffing Survey

In our area (Western Pa), there are too many therapists for the number of jobs available. Several years ago, when there was a huge shortage of therapists, the Community College in Pittsburgh increased the number of radiation therapy students in its two programs (one program was for R.T.s, the other was a degree program—no prior x-ray experience). Too many therapists were placed in the local market. I am fairly certain the school closed one of the programs this year because of the surplus of therapists. One side note: Almost all radiation therapy facilities in Western PA are part of the same health system. The wages are below national averages. Little choice for therapists.	1	.2
In our area right now we have an abundance of new therapists graduating with no jobs. Well, approximately 10 to 15.	1	.2
In our area, 99% of radiation therapy students already have jobs months before leaving school. If you don't get the opportunity to see them, or if you are not a high profile center or not right in the city, you are often out of luck. Also, young therapists often don't have as much loyalty to places and jump around to the better salary or are drawn to locum work.	1	.2
In our area, there are more therapists available than jobs. Supply is greater than demand.	1	.2
In the Bay area, the supply of radiation therapists goes up and down quite often. There are two local programs: City College of SF and Foothill College in Los Altos. The Foothill program opens and closes as the need for therapists changes. This year I believe they will close the program again as we will have too many graduating R.T.(T)s in the area. This is to say nothing about the quality of the graduates, which changes year to year also as it is individual and personality based.	1	.2
In the Louisville/Southern Indiana area, there are no shortages. The Brown Cancer Center has had a lot of students graduate, and this year they are not finding any jobs.	1	.2
In the Northwest a group of facilities got together to support a RT school at a Community College and as such a shortage really does not last long, if we have one, and generally there are 3-4 applicants for every first year position.	1	.2
In the past two years, we have not experienced any turnover in staffing. Our patient volume has decreased due to new freestanding competition (we are hospital-based), which we addressed by making one FT therapist position PT.	1	.2
In the Pittsburgh area, CCAC has a radiation therapy program. UPMC has opened numerous sites in western Pa. as well. To date, I believe we have had ample supply. There is also D3, a rad company that is hiring physicists and dosimetrists. CCAC is having no graduating class in 08. I believe the Pittsburgh area will feel this lack of student availability at that time.	1	.2
In the St. Louis region some recent grads cannot find jobs. Two years ago all grads were hired before the end of the school year.	1	.2
In the VA system the entry level for therapist is very low compared with the private/state-run hospitals. Many times \$10,000 less. Many therapists will not come to VA facilities for this amount of money.	1	.2
In this area there are more therapists than jobs. As soon as an opening comes up, someone is readily available for hire. Turnover is low here including therapists, dosimetrists, physicists, M.D.s.	1	.2
It is difficult to find experienced R.T.(T)s.	1	.2
It is hard for smaller, outlying facilities to compete with the salaries of large/government-funded medical centers.	1	.2
Learned and understood the CT sim concept. CT sim has evolved as work flow has changed	1	.2
Lots of new graduates. Finding seasoned therapists who do not have a reputation is hard to do.	1	.2
Many FTE positions above work for the entire cancer center...not just rad onc. We are part of a full-service cancer center (med oncology, rad oncology, research, inpatient unit) plus three satellite facilities in the region. Radiation oncology at two of the three. Plus we provide physics, dosimetry, physician and RN services at another site in the area one day a week. I think this "travelling staff" concept is very common. Very few radiation oncology departments are just one or two machines in one place. It's too expensive to have the needed professionals (physics, dosimetry, etc). Also, radiation oncologists (physicians) are not employed, but are on contract w/ hospital. I do not perceive a shortage of R.T.(T) professionals. We routinely have students-in-training. However, some of those applying from the outside are not keeping good work histories, have bad references, not acceptable for hiring. This needs to be communicated to physicists, R.T.s, etc. to work and act in professional manner for entire work life.	1	.2
Many of our decisions are made at a corporate level by a management board.	1	.2
Market is flooded with radiation therapists.	1	.2
Medical dosimetrist position is new! Medical physicist left for Ph.D. school!	1	.2
More difficult to recruit because of short supply.	1	.2
My perception of radiation therapist supply is the market is somewhat flooded yet again. A number of the students from last year's graduating class do not yet have F/T jobs and another class just graduated last week. I have several calls a month from therapists looking for permanent F/T, P/T or PRN work.	1	.2
Need more therapists who are willing to work in rural areas.	1	.2

## Radiation Therapy Staffing Survey

New patients/yr ~ 500/yr, but ~1,000/yr seen in consultation only. Many patients come here for second opinions and return to a more geographically desirable location for their XRT.	1	.2
No problem recruiting.	1	.2
No shortage in Boston area.	1	.2
Northern Indiana is experiencing a "glut" of new therapists coming out of three programs in the state. With few new oncology centers opening up in Northern Indiana, jobs are difficult to find for these candidates.	1	.2
Nursing extremely short. Mostly new grad therapists available.	1	.2
Obviously, I have not had any turnover or had to recruit, the average length of service of the technical staff is ~14 years.	1	.2
Older staff are entering the radiation therapy school. They do not realize how labor intensive and stressful this job is, and quit during the schooling.	1	.2
Our area has a surplus right now.	1	.2
Our center is affiliated with a radiation therapy educational program. Most of our new hires come directly from this program.	1	.2
Our centers have been fully staffed for three years. It is my opinion that there are too many therapists graduating from programs that do not graduate students who illustrate the caliber of quality we saw five to 10 years previous. Many programs have lowered the admission standards for students and this reflects negatively on the overall perception of quality in radiation therapy	1	.2
Our clinic is located close to an academic center that has a radiation therapy school and we are a training center for the students. This allows us to fill vacant positions very easily.	1	.2
Our department trains R.T.(T)s and has for 15 years or more in a certified program. Our needs are met by the program. Currently the market overall in this area is saturated, with no jobs available.	1	.2
Our local community technical college started a radiation therapy training program in 2003 and received accreditation in 2005. The program graduates nine to 12 students each year. This has made the manpower supply greater than the demand in our geographic area. Now graduates are having to relocate to other states. There is currently still a shortage of physicists and dosimetrists in the Southeast.	1	.2
Our main hospital was told they were overstaffed, everyone was cut back to the original hours they were hired to work, no overtime was allowed. The therapy school has since closed, and we are not looking for any therapists at this time. Our off site has increased in patient numbers and a third therapist was added in 2006 to help.	1	.2
Our need for R.T.(T)s decreased due to a center closing.	1	.2
Our region, south central U.S., has more radiation therapists than positions due to new schools turning out too many students.	1	.2
Physicist is contract. Radiation oncologists are not employed by hospital.	1	.2
Physicists are still hard to come by. And even if there is one, they will be discouraged by the cost of living here in the Bay Area	1	.2
Physics and dosimetry positions will continue to be difficult to fill.	1	.2
Previously we looked for two years for a registered radiation therapist. Now that we are a clinical site for a radiation therapy program, we have a student graduating who is looking for a job.	1	.2
Properly trained R.T.(T)s are difficult to find. We would like to replace two of our people, but haven't been able to find anyone better. We would consider paying a bonus after 90 days if employee proves to be satisfactory.	1	.2
Radiation therapy professionals are seeking leadership. Currently the "managers" are people who have accepted the position without formal training and leadership skills necessary to lead a multigenerational workforce. Many therapists are earning degrees in other fields of interest and moving on with their lives.	1	.2
Radiation therapist performs conventional simulation in Radiation Oncology department. Dosimetrist accompanies patient to the CT department to reproduce set-up and ensure exact alignment of scout, with adequate anatomy and slices for planning.	1	.2
Radiation therapists are still in short supply. In my rural area, salary is a big factor in the shortage, But this is improving.	1	.2
Radiation therapists wanting to locate to our area are having a difficult time finding a job.	1	.2
Radiation therapy is far more complex than even a few years ago. Technology has increased, requiring smarter and better trained staffing with good critical thinking skills, We have divided our therapists into "leads" and therapists based on ability to be accurate and think well. Also, patients require an increasingly significant amount of ancillary services due to chemotherapy and co-morbidities. We have had to increase staff for that as well.	1	.2
Right now there are more therapists available for positions than there are jobs. It's nice to have some choices. Ten years ago positions remained open for months because there were more positions open than there were therapists. Unfortunately, it often meant that therapists were hired simply because they were the only applicant.	1	.2

## Radiation Therapy Staffing Survey

R.T.(T)s appear to be easier to recruit. Perhaps because of the number of schools that are now offering this training.	1	.2
School on premises has kept shortage situation less prominent here.	1	.2
Several months ago, I had 1.0 FTE available to hire. I had at least 15 applicants for the position (plus at least as many recruiting agencies calling to help).	1	.2
Short supply.	1	.2
Shortage of qualified dosimetrists with skills to perform complex treatment planning and shortage of clinical physicists with treatment planning and new technology experience. We have a greater supply of therapists in the area than jobs because of our college training program.	1	.2
Sign-on bonus given only to those who move a large distance, toward moving expenses. Salaries have barely increased in our department in last four years.	1	.2
Since ~ 2000 we have maintained an equilibrium between R.T.(T) staffing needs and graduates/candidates. There are several new centers opening this year, others to come over in the next three to five years based on DPH cancer projections. Also, existing programs will attempt to expand to meet demand. This combination of factors will create a fresh and more serious shortage over the next three to five years.	1	.2
Since we have our own school, we have not experienced a shortage..	1	.2
South Florida has experienced high demands on staffing needs due to the number of facilities opened. This is due to physicians opening freestanding facilities as well as other specialties opening radiation centers (urologists, neurosurgeons, medical oncologists).	1	.2
The hospital froze positions, so currently carrying two temps. But the hospital will not unfreeze positions to hire new staff. No sign-on bonus will attract staff with experience. All new hires for past three years have been new grads.	1	.2
The Internet programs are producing certificate degree radiation therapists in the hundreds each year. This is flooding the market, making it difficult to get a job in our field. We now have to tell each clinical student that their only hope of getting a job is relocating out of state. We have several therapists working in x-ray praying for an opening, and our students interviewing around the country (graduating 8-3-07) have yet to find positions.	1	.2
The New Orleans area is flooded with therapists who were displaced after Hurricane Katrina. A number of facilities are planning to remain closed due to the loss of populations.	1	.2
The opportunity to train our own therapists through clinical affiliation allows us a steady supply of personnel.	1	.2
The quantity is up, but the quality is not as good. Simulation skills are very poor. Many therapists I talk to believe that they can name their price and do a lousy job as a therapist and get by just fine. It's hard to find a well rounded therapist who wants to work 40 hours a week and show up on time, be flexible with schedule and can do more than just the easy patients.	1	.2
The responses to the length of stay and turnover rate in questions above for each position was answered the same because we haven't suffered turnover rate. The same people are in these positions. I answered these questions to the best of my understanding of what the question was trying to ask.	1	.2
The R.T.(T) manpower shortage is a cyclical problem, and I think we are nearing the end of the recent shortage cycle and are now swinging over to adequate supply. There are more graduates from the various programs entering the labor market.	1	.2
The stand the ARRT took by blocking the transition to the baccalaureate level for radiation therapists is one of the factors that has caused the current shortage. Hospital based diploma programs only admit radiographers, which could exacerbate shortage of radiographers. High school counselors direct students into college based degree programs. Parents also tend to direct their children to collegiate based programs. If there were more BS programs, there would most likely be waiting lists for highly qualified students attempting to gain acceptance similar to PA, RN, PT and OT programs.	1	.2
The supply and demand for R.T.(T)s seems to be on an eight year cycle. This is year seven. Next year you will see an increase for the demand of R.T.(T)s. Then it will slowly over the next two to three years improve.	1	.2
The supply is not adequate. If we were to lose any of our staff, it would be difficult to replace quickly.	1	.2
The two R.T.s who are participating in a R.T.(T) distance learning program will graduate in about four weeks. They will sit for their boards and, hopefully, pass them. This will satisfy our needs for additional R.T.(T)s for the next two years since that was the agreement for the company to pay for their schooling.	1	.2
Therapists are pretty plentiful if you leave or recruit in the city. However, if you are in the rural setting it is much more difficult. I just came off a stint a year ago of having locums on and off, mostly on for five years.	1	.2
There are several candidates out there but they seem to be less qualified.	1	.2
There are three radiation therapy schools in the area with another one opening soon. I do hire the students. Unfortunately, they do not have years of experience to rely on to position various types of	1	.2

## Radiation Therapy Staffing Survey

patients for Sim/CT treatment planning. They are trained well to operate the Sim/CT units.		
There does not appear to be the critical shortage for R.T.(T)s; however, the shortage/demand for dosimetrists/physicists continues.	1	.2
There doesn't seem to be a shortage of R.T.(T)s in the area. Medical dosimetrists and physicists take a little bit longer, but it doesn't seem to be a problem at this time.	1	.2
There is a surplus of radiation therapy students, so we have not had to look long for a therapist. We have had trouble finding medical dosimetrists and physicists recently at our sister facilities in metro Atlanta.	1	.2
There are ample numbers in the Phoenix area, but the quality of radiation therapists is lower than 10 to 15 years ago. One year programs do not give enough training! CT techs are not radiation therapists and should not be performing simulations unless they are also registered in radiation therapy!	1	.2
There is an abundance of R.T.(T)s in our area as we have two educational programs in this area. It seems that the job market here is tight.	1	.2
There seems to be a current market "flood" of radiation therapists. In years past, we were fortunate to receive two or three applicants when recruiting. For the current position we are recruiting for, we have received over a dozen applicants and 90% are new grads. This is great when you are hiring, due to a wide selection of candidates. But as a radiation therapist, I know my salary will stagnate due to the flood, unlike the past five to seven years of market adjustments to my salary. And if I am interested in leaving my current facility, there will be fewer choices of open positions.	1	.2
There will be a flood of radiation therapists. The local community college just began a program.	1	.2
This area is adequately served.	1	.2
Too many out there. Two to three years ago I could not get a student coming out of school to come to rural Kentucky for a sign-on bonus and very competitive salary. Now the market has so many therapists and no jobs for them that I know of therapists going back to x-ray just to work. And I have been sent resumes, which has not happened for many years here.	1	.2
Too many schools are sprouting up, which are only there to be a "drive-thru" (university based and private ventures).	1	.2
Too many therapists being trained.	1	.2
Use locums if there is a shortage for R.T.(T)s.	1	.2
We've been very fortunate to have students from three programs do internships with us - two radiation therapist programs and one medical physicists program that have allowed us to work with potential future employees. This has given them the opportunity to work with us and the chance for us to give our best in educating them and "growing" our own staff. It has worked well for us and we have hired at least one therapist, one casual therapist and one physicist because of this. We wish we had two more therapist positions right now as we have two students who just completed programs we would have loved to hire. They were superb therapists! My staff likes to be clinical instructors and mentors for these students as well. It keeps them current and thinking about what they do daily and why they are doing it. As for 8d, I'd say the more ways we can assist departments with training materials for therapists who are out in the field but need to learn these skills would be quite useful.	1	.2
We've had no changes in our staffing the past three years. On the CT question, we do not have a dedicated CT simulator, but instead use the hospital's CT scanner that is run by a CT tech with our dosimetrist overseeing the CT. And finally, in budget year 2008 we will be increasing our medical physics coverage to full time as we start up our IMRT/IGRT program.	1	.2
We are a new facility that opened in September 2006. Many of the questions could not be answered.	1	.2
We are a clinical affiliation site for Washburn University and have hired the majority of radiation therapists that have trained here. Hurricane Katrina has produced a shortage of nurses in Louisiana and we get very few responses to recruitment ads. This is the experience of a majority of health care providers in this state.	1	.2
We are a clinical site for a radiation therapy program, and I have the BEST group of therapists that I have ever managed, so I have no trouble filling any positions that may come open.	1	.2
We are a new facility that opened in May 2007 operating in Ontario, Canada. We cannot bill, etc. We have not experienced difficulty in recruiting any staff. In fact, we had far more applicants than available positions. Ontario has more radiation oncologists than available positions, so oncologists are looking overseas to Australia, New Zealand and England being preferred options.	1	.2
We are a small Cancer Center that is considered a community hospital department, although physically detached. Small volumes and one accelerator. I am a radiation therapist and I'm in charge of rad and chemo. I have two rad therapists on staff in addition to myself. Our rad onc docs are contracted and come twice a week. Our dosimetry is done off-site. We send CT images electronically to the off-site dosimetry base.	1	.2
We are affiliated with two radiation therapist programs, which helps in recruiting staff. We also have a low turnover rate: lots of longevity. Focus on CT/simulation much different than diagnostic.	1	.2
We are affiliated with Spartanburg Technical College and have two students each year. We have hired four of eight of the students we trained. My perception is that North Carolina has a surplus of	1	.2



## Radiation Therapy Staffing Survey

therapists.		
We are currently fully staffed with R.T.(T)s. However, there is a shortage of R.T.(T)s in the area in general.	1	.2
We are fortunate in Jacksonville to have a school for radiation therapy technologists at the local community college.	1	.2
We are hoping to add one radiation therapist in 2007, but do not have approval yet. We want to hire the student we have hosted here for a year.	1	.2
We are in a very rural area and there is a community college nearby that has an x-ray program. Many of these students go on for therapy. We actually have not had a therapist leave here in 16 years - we have a lot of therapists that would like to work here but we do not have the position open. We're very lucky and I don't think we would have difficulty finding a therapist if we needed one.	1	.2
We are located in a rural community within 90 miles of a very popular and major metropolitan city so it's difficult to offer salaries and other benefits to make it competitive. We've also limited our recruitment to radiation therapists who have a minimum of three years of experience. No new graduates are being considered. This has also made recruitment more difficult.	1	.2
We are not experiencing a shortage in our area at this time.	1	.2
We are producing more radiation therapists than we have jobs for in the Chicago-land area due to the increase in programs.	1	.2
We are very fortunate to be fully staffed and hope to remain that way.	1	.2
We currently have a GVSU university in town that puts out nine to 13 students a year. This floods our local area with too many therapists. About 90% of these new grads are forced to find work outside the state.	1	.2
We currently have all positions filled, but will be looking for additional staff as we open new facilities.	1	.2
We currently do not have a shortage of R.T.(T)s. New grads need to leave the state to find employment. We have found it difficult to hire experienced dosimetrists	1	.2
We did lose two therapists in 2006. One in May and the other in August. (One returned home to Ohio so she could pursue med school, and the other therapist and her husband changed jobs to out-of-state.) The May opening was filled by that July and the August opening was filled by November of that year. It was harder recruiting for the second position-we historically have been able to hire "experienced" therapist but did hire a new grad for the second position.	1	.2
We did not have any openings in 2006 or 2007 for Physicists, Dosimetrists or Oncologists and that is why I put there was no sign-on bonus for question 6.	1	.2
We do not have a workforce shortage. In fact, we have therapists waiting to get their foot into the door.	1	.2
We do not have our own CT sim. We are connected to the hospital and we use their CT scanner. If we did have our own scanner, we would staff one more therapist.	1	.2
We have a college in the area so the need for therapist are usually not great due to the # in our area	1	.2
We have a college in town for radiation therapy. We do not have a shortage of radiation therapists.	1	.2
We have a local community college that graduates on average 12 radiation therapists a year. This keeps us fully staffed.	1	.2
We have a need for more radiation therapists in our facility. It takes over six months for approval. The rest of our positions are filled.	1	.2
We have a radiation therapy school from which to draw staff. This has proved to be extremely helpful at times.	1	.2
We have access to students for clinical rotations. I believe this contributes to us not having issues recruiting new staff. I do believe there should be formal image guidance courses in the curriculum offered in the radiation therapy schools as it relates to performing simulation and treatment delivery with image guidance and understanding anatomy. I think there should be a certification program offered for CT simulation for the radiation therapist.	1	.2
We have an abundance of therapists locally due to large number of graduates from programs.	1	.2
We have been very fortunate to have had full staffing of radiation therapists for quite some time.	1	.2
We have had one position come available in the past year. That position was filled without advertising simply by word of mouth by local therapists looking to make a change. We have been receiving an increasing amount of job applications over the past couple of years.	1	.2
We have had two junior colleges start radiation therapy programs since 2006 and the demand for therapists has reduced significantly. We feel there has been a flood of therapists in the last year, and the students at our facilities are not finding jobs as easily.	1	.2
We have multiple applicants for open positions I had six applicants for a .6 position and later in the year I had several again for a full-time role. Therapists are in abundance in this immediate area and we have had four dosimetrists apply for a full-time role as well	1	.2
We have no problems recruiting. I have a waiting list for employment.	1	.2
We have no shortage of radiation therapists, dosimetrists, radiation oncologists, physicists or other	1	.2

## Radiation Therapy Staffing Survey

ancillary staff. Rather, students from the Southern California region are leaving in order to obtain jobs. Longtime residents looking to change jobs are unable to find work at the current time. Local schools (CSULB, City of Hope, Loma Linda) should be informing potential students of the job shortages locally AND they should be cutting their enrollment.		
We have no trouble recruiting R.T.(T)s at this time. A program was just added at a local community college and currently there are no jobs in this area for those graduates.	1	.2
We have not experienced any supply issues. There is a therapy school in town and we had two candidates apply for the opening. We replaced a physicist after five months. We used a recruiter and had several good candidates.	1	.2
We have not hired any new employees since 2005. Most of the employees have been here for five to seven years. We have received numerous resumes and phone calls from graduating R.T.(T)s who are looking for employment.	1	.2
We have noticed an increase in the number of small community departments. These departments sometimes cause a temporary staffing shortage and a decrease in patient volume. I believe insurance contracts also play a big role in how our staffing and patient volumes may change from year to year.	1	.2
We have our competition about 1/2 mile down the road from us and that is why we are not that busy at our facility. It is also a small town that in reality could have just needed one radiation center.	1	.2
We have several in our area and surrounding that can't find a job at this time.	1	.2
We have two people in our area who would love to come work for us. I haven't experienced a shortage for at least four years.	1	.2
We hired one therapist this year from over a dozen very good to excellent candidates, including soon to be grads, recent grads and veterans. In the past we would have a much smaller and less qualified group of candidates. No bonus was necessary.	1	.2
We have a school in the area therefore staffing is not an issue.	1	.2
we need a third therapist we have 2 therapist for the treatment machine but when one is out the other has to work alone and we work thru lunch most of the time	1	.2
We simulate our patients on a conventional simulator, tattoo, then take them to the radiology department for CT on a diagnostic CT machine. The axial cuts obtained are used for treatment planning in the form of DRRs. The CT technologist performs the actual scan at the direction of the radiation therapist.	1	.2
We very rarely have staff turnover. One of our therapists left this spring because her husband's job took them out of state. We hired our student therapist.	1	.2
When we were recruiting this past spring to fill our vacant position I received several resumes from R.T.(T)s both experienced and new grads.	1	.2
While the number of available therapists is increasing, it is very difficult to find therapists to work in southern California due to the high cost of living. I am confident that our pay is competitive with other centers in my area, but it is still a challenge to find therapists to stay here.	1	.2
With close monitoring and support of educational programs, the supply of R.T.s can be maintained. When we had our most severe shortage (almost 30% vacancies), we accepted 25% more students. The school and staff knew we had to overcome the problem ourselves. Our salaries increased by almost 30% to assist in retaining and recruiting staff (seven from South Africa alone). This worked for R.T., it may not be the same solution for others. Also the Canadian system is different and a smaller community enables us to work collaboratively to address such issues.	1	.2
With the Weber State Radiation Therapy program we have interned several students from that program and feel that learning radiation therapy in that situation is not ideal.	1	.2
<b>Total</b>	<b>575</b>	<b>100.0</b>

**APPENDIX B:**

**COVER NOTE AND ONLINE QUESTIONNAIRE**

## Radiation Therapy Staffing Survey

Dear Radiation Therapy Facility Manager,

The ASRT requests your help with evaluating the current unmet demand for radiation therapists and other specialists needed to provide radiation therapy. Few matters could be more important for the profession — radiation therapy specialists, their facility managers and educators alike — than an accurate assessment of the current supply and demand for radiation therapy personnel.

In 2005, as you may already know, the ASRT conducted the first of what is planned to be a biennial series of surveys of the staffing and vacancy rates for the various specialties involved in radiation therapy. (See [www.asrt.org/media/pdf/research/rttstaffingreport.pdf](http://www.asrt.org/media/pdf/research/rttstaffingreport.pdf).) The Radiation Therapy Staffing Survey 2007 is designed to provide similar detailed information about radiation therapy professionals and about what directors and managers believe to be the reasons behind unfilled vacancies. It also will provide the first opportunity to examine changes over several years in vacancy rates in radiation therapy facilities. This information will be shared with the radiation therapy community via a report posted on the ASRT Web site. The report's accuracy will depend on your willingness to share your facility's staffing data and your views on staffing issues.

With the cooperation and consent of the American Registry of Radiologic Technologists, the Society for Radiation Oncology Administrators and the American Society for Therapeutic Radiation and Oncology, this invitation is being sent to SROA, ASTRO and ASRT members, as well as other ARRT registrants, who hold managerial titles and designate radiation therapy as their primary sphere of employment. We've attempted to eliminate duplications among these four postal and e-mail address lists. Please accept our apology if you receive more than one invitation to participate in the survey, and please submit only one response for the department or facility you manage.

To participate in this survey, go to [\[URL for the online questionnaire\]](#). Enter the survey code "**RTStaffingARRT**" as your response to the second question on the online form. You will be asked for your facility's current and January 2006 budgeted FTEs and the number of those budgeted FTEs that are currently vacant. Please have those figures on hand or fresh in memory before starting the questionnaire. If you have any questions about the procedure or the questionnaire itself, please contact ASRT Research Manager John Culbertson at [jculbertson@asrt.org](mailto:jculbertson@asrt.org).

Thanks for your help with this important survey,

Sal Martino  
Executive Vice President and Chief Academic Officer

## Radiation Therapy Staffing Survey, 2007

Did you receive an invitation (either by e-mail or letter) asking you to take this survey?

- Yes
- No

If so, please type in the survey code provided in the letter.

### FACILITY DEMOGRAPHICS

**Your Title:**

- Department/facility manager or director
- Chief therapist
- Chief dosimetrist
- Other (Please specify below.)

Please specify:

**Type of Facility:**

- Community hospital
- Government hospital
- University medical center
- Freestanding clinic
- Teaching facility
- Other (Please specify below.)

Please specify:

# Radiation Therapy Staffing Survey

**Radiation therapy services provided by your facility. (Check all that apply.)**

- CT simulation
- Brachytherapy
- IMRT
- Whole-body irradiation
- Pediatric therapy
- Stereotactic/gamma knife/MammoSite
- Fractionated stereotactic therapy
- Conformal radiation therapy delivery
- Other (Please specify below.)

Please specify:

**New patients per year:**

**Patients treated per day:**

**Therapists per treatment machine during a given treatment session:**

**Reliability of treatment machines:**

- Excellent
- Good
- Fair
- Poor

**Location:**

- Urban
- Suburban
- Rural

Radiation Therapy Staffing Survey

State (Two-letter abbreviation):

**STAFFING**

**1. For each of the following specialists needed to provide radiation therapy services, please provide the budgeted and vacant FTEs for your organization in January 2006 and today. (Leave blank the rows for any specialists who do not work in your facility's radiation therapy suite. Use decimals for fractional FTEs.)**

	Data Not Available	As of 1/1/2006 budgeted FTEs	As of 1/1/2006 vacant and recruiting	2007 (current) budgeted FTEs	2007 (current) vacant and recruiting
Radiation therapist	<input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Medical dosimetrist	<input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Medical physicist	<input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Radiation oncologist	<input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Physician assistant	<input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Nurse (e.g., RN, LPN, nurse practitioner)	<input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Ancillary staff (e.g., Dietitian, Social Worker)	<input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Administrative staff (e.g., clerical and billing staff)	<input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other (Please specify below.)	<input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Please specify:

Radiation Therapy Staffing Survey

**2. Describe how the recruitment effort for each specialty in the past six months compares with the effort expended during the fiscal year that included January 2006.**

	More difficult	Same	Less difficult	Don't know
Radiation therapist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medical dosimetrist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medical physicist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Radiation oncologist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physician assistant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nurse (e.g., RN, LPN, nurse practitioner)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ancillary staff (e.g., dietitian, social worker)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administrative staff (e.g., clerical and billing staff)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (Please specify below.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please specify:

**3. If budgeted FTEs in any of these specialties have decreased since January 2006, what do you believe is the reason for this decrease? (Check all that apply.)**

- Patient demand declined
- Overall department or facility budget declined, forcing downsizing
- Formerly budgeted FTEs were so difficult to fill they were dropped from the budget
- Number of patients that can be processed hourly on each treatment machine increased
- Number of staff assigned to each treatment machine decreased, so number of FTEs required to handle the workload declined.
- Average number of hours worked per week by radiation therapy staff increased, so number of specialists required to handle the workload declined
- Other (Please specify below.)



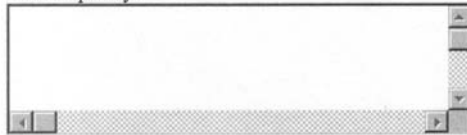
Please specify:



**4. If budgeted FTEs for any of these specialties have increased since January 2006, what do you believe is the reason for this increase? (Check all that apply.)**

- Patient demand increased
- Overall department or facility budget increased, making it possible to add FTEs
- Recruitment within these specialties became easier, making adding FTEs feasible
- Number of patients that can be processed hourly on each treatment machine decreased
- Number of staff assigned to each treatment machine increased, so number of FTEs required to handle the workload increased
- Average number of hours worked per week by radiation therapy staff decreased, so number of specialists required to handle the workload increased
- Ancillary staff (e.g., dietitian, social worker) were added to free up therapist/dosimetrist/physicist time and thereby increase patient throughput or quality care
- Administrative staff (e.g., clerical and billing) were added to free up therapist/dosimetrist/physicist time and thereby increase patient throughput or quality of care
- Other (Please specify below.)

Please specify:



**RECRUITMENT AND RETENTION**

5. For each specialty role, how have the following staffing indicators changed since January 2006?

*Radiation Therapist*

	Much lower	Lower	Same	Higher	Much higher	Not applicable
Employees' average length of employment at your facility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Turnover rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Medical Dosimetrist*

	Much lower	Lower	Same	Higher	Much higher	Not applicable
Employees' average length of employment at your facility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Turnover rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Medical Physicist*

	Much lower	Lower	Same	Higher	Much higher	Not applicable
Employees' average length of employment at your facility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Turnover rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Radiation Oncologist*

	Much lower	Lower	Same	Higher	Much higher	Not applicable
Average length of affiliation with your facility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Turnover rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Were you paying sign-on bonuses for radiation therapy staff in January 2006? Are you paying them currently? If yes, please indicate amount typically paid. (Amount of bonus to nearest \$500.)

Radiation Therapy Staffing Survey

***Radiation Therapist***

	Y	N	
In January 2006	<input type="radio"/>	<input type="radio"/>	Amount of bonus \$ <input type="text"/>
Currently (2007)	<input type="radio"/>	<input type="radio"/>	Amount of bonus \$ <input type="text"/>

***Medical Dosimetrist***

	Y	N	
In January 2006	<input type="radio"/>	<input type="radio"/>	Amount of bonus \$ <input type="text"/>
Currently (2007)	<input type="radio"/>	<input type="radio"/>	Amount of bonus \$ <input type="text"/>

***Medical Physicist***

	Y	N	
In January 2006	<input type="radio"/>	<input type="radio"/>	Amount of bonus \$ <input type="text"/>
Currently (2007)	<input type="radio"/>	<input type="radio"/>	Amount of bonus \$ <input type="text"/>

***Radiation Oncologist***

	Y	N	
In January 2006	<input type="radio"/>	<input type="radio"/>	Amount of bonus \$ <input type="text"/>
Currently (2007)	<input type="radio"/>	<input type="radio"/>	Amount of bonus \$ <input type="text"/>

**7. If your facility is experiencing a work force shortage, check all of the consequences of the shortage for your facility.**

- Curtailed plans for facility expansion
- Curtailed plans for acquiring new technology
- Reduced number of staffed treatment units
- Reduced number of staff assigned to each treatment unit
- Discontinued radiation therapy education program
- Increased patient wait times for procedures

## Radiation Therapy Staffing Survey

- Cancelled procedures
- Decreased patient satisfaction
- Increased patient complaints
- Other (Please specify below.)
  
- Not applicable. My facility is not experiencing a work force shortage

Please specify:

**8a. Does your facility have a CT device used for treatment simulation?**

- No (Please skip to Question 9.)
- Yes

**8b. If you answered "Yes" to Question 8a, where is the CT simulator located?**

- Radiation therapy department
- Radiology department
- Imaging center
- Mobile CT service
- Other (Please specify below.)

Please specify:

**8c. Who typically operates the CT device to produce treatment simulations?**

- Radiation therapist
- CT technologist
- Radiographer
- Physicist

Radiation Therapy Staffing Survey

- Radiation oncologist
- Other (Please specify below.)

Please specify:

**8d. How was the person(s) specified in Question 8c trained to perform treatment simulations?**

**9a. Use the box below to clarify any of your previous responses or add comments regarding your perception of the potential supply of radiation therapy professionals.**

**9b. If you entered comments in Question 9a, please check any of the following to which your comments apply:**

- Comments related to facility demographics
- Comments related to a clarification of responses to one or more of questions 1-8
- Comments related to a shortage of radiation therapy professionals
- Comments related to a surplus of radiation therapy professionals
- Comments related to CT simulations and the staff who perform them
- Other

**Thank you for completing this important survey. Please return the completed questionnaire or respond online within the next two weeks. Call or e-mail John Culbertson, ASRT Research manager ([jculbertson@asrt.org](mailto:jculbertson@asrt.org), 800-444-2778, Ext. 1297) if you have questions about the survey. All responses will be kept strictly confidential.**