

The impact of using LI-RADS structured templates on ordering physicians' perception of the radiology report quality

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Purpose

To assess the impact of using LI-RADS structured report on the ordering physician's perception of the comprehensiveness, clarity, conciseness, consistency and overall quality of radiology reports.

Methods

- LI-RADS based structured templates were implemented in our institution in January 2018
- 16 physicians who participate in the multidisciplinary liver conference were initially surveyed on the quality of the radiology reports for patients at risk of hepatocellular carcinoma

Methods

- Survey questions related to comprehensiveness, clarity, consistency, conciseness, and overall quality of report and ease of finding pertinent information
- Each question was answered on a scale of 1 to 10, with 10 being the best score
- Three months after structured report implementation, a follow-up survey was administered

Methods

Question Type	Example
Comprehensiveness (6 questions)	<i>Does the report answer the primary findings and clinical question? Are appropriate recommendations for follow up, additional imaging, or multidisciplinary discussion included?</i>
Clarity (5 questions)	<i>Ease and speed of comprehension of report and comparison to prior; extent of pathology with terminology</i>
Consistency and Conciseness (3 questions)	<i>Ease and speed of identifying relevant findings, overall consistency and conciseness between reports</i>
Overall rating of current liver reports	<i>Subjective overall rating of current reports</i>
Opinion: would structured LI-RADS reporting improve overall quality?	<i>Subjective rating initial survey</i>

Results

9 physicians completed the 2 surveys (5 hepatologist, 3 interventional radiologists, 1 radiation oncologist). 2 physicians completed only 1 of the 2 surveys and were excluded.

The average comprehensiveness score was 7.9 initially and 8.3 on follow-up ($p=0.3$).

The average clarity score was 7.4 initially and 8 on follow-up ($p=0.089$).

The average overall quality score was 7.8 before and 8.3 after ($p=0.2$).

Results

Question Type (15 total)	Comprehensiveness	Clarity	Consistency and Conciseness	Overall rating of current liver reports
Initial Survey Mean Score	7.9	7.4	7.1	7.8
Follow-up Survey Mean Score	8.3	8.0	7.7	8.3
p value	0.3	0.09	0.2	0.2

Results

None of the questions showed a statistically significant difference in scores between the 2 surveys, but **13 of 15 questions had higher scores on the follow-up survey.**

Two of the clarity questions had higher follow-up scores that approached statistical significance, specifically the question about the clarity of comparison to prior exams (initial=6.2, follow-up=7.3, $p=0.079$) and the question on the clarity of the location of the pathology (initial=7.7, follow-up=8.6, $p=0.059$).

Conclusion

In our institution, the implementation of structured LI-RADS templates *only showed a trend toward an improved perception of the clarity of radiology reports, which was not statistically significant.* The small sample size and high initial scores may have contributed to the lack of statistical significance.

Conclusion

As the implementation of LI-RADS and its updated version becomes more commonplace, as well as institutional usage of template format in multidisciplinary discussions, more studies and larger sample size may guide the trend of radiology reporting in patients at risk for hepatocellular carcinoma.

Conclusion

It would be worthwhile to evaluate responses to structured LI-RADS templates over a longer period of time, such as one year interval, as the departments become more comfortable with structure, interpretation, and recommendations as a group practice.