Impact of a Lecture Evaluation System on Lecture Type and Quality: A 24-Month Analysis and Insights on Resident Learning Styles

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Purpose

With the recent change in the American Board of Radiology examination structure and the gradual change in resident learning style, classroom-based resident education has required adaptation.

We implemented a live lecture evaluation system to provide instant feedback from the residents to individual lecturers/division directors and to observe long-term trends in the ratings of different education methods.

Methods

A lecture evaluation system was created in 2016, which allowed anonymous feedback immediately after lecture completion.

Ratings (1-5 scale)	Lecture type
Lecture rating	Traditional case conference
Lecturer rating	Live audience response (RSNA Diagnosis Live or similar)
Overall content rating	Didactic*

*Additionally, residents reported if the lecture would be improved with an interactive component to account for lectures best presented in didactic-only format.

Responses were collected over 24 months.

Results

Over the 24 month timeframe, 524 lectures were performed and 1580 evaluations were received.

In year 1, 141 lectures (51%) included interactivity. Within the interactive year 1 subset, 115 lectures (82%) were case-based conference and 26 lectures (18%) utilized a web-based application.

Results (continued)

In year 2, interactive lectures increased to 61% (p=.03) with a significant increase in lecture rating (4.59 vs 4.48, p=.04). The number of didactic lectures that would improve with interactivity decreased in year 2 (38% vs 52%, p=.04).

Change in Lecture Types from Year 1 to Year 2

Improvement in Interactive Lecture Ratings
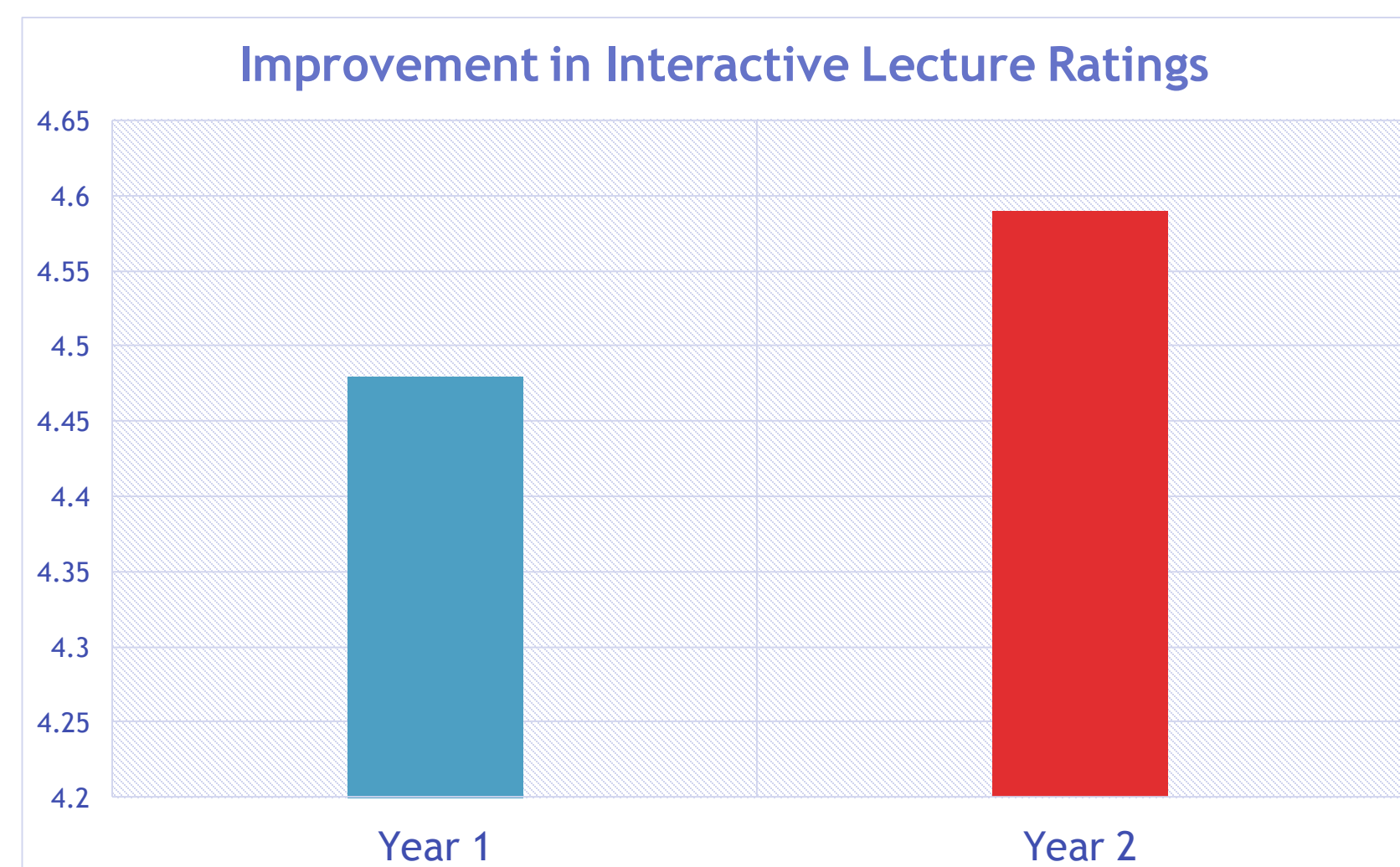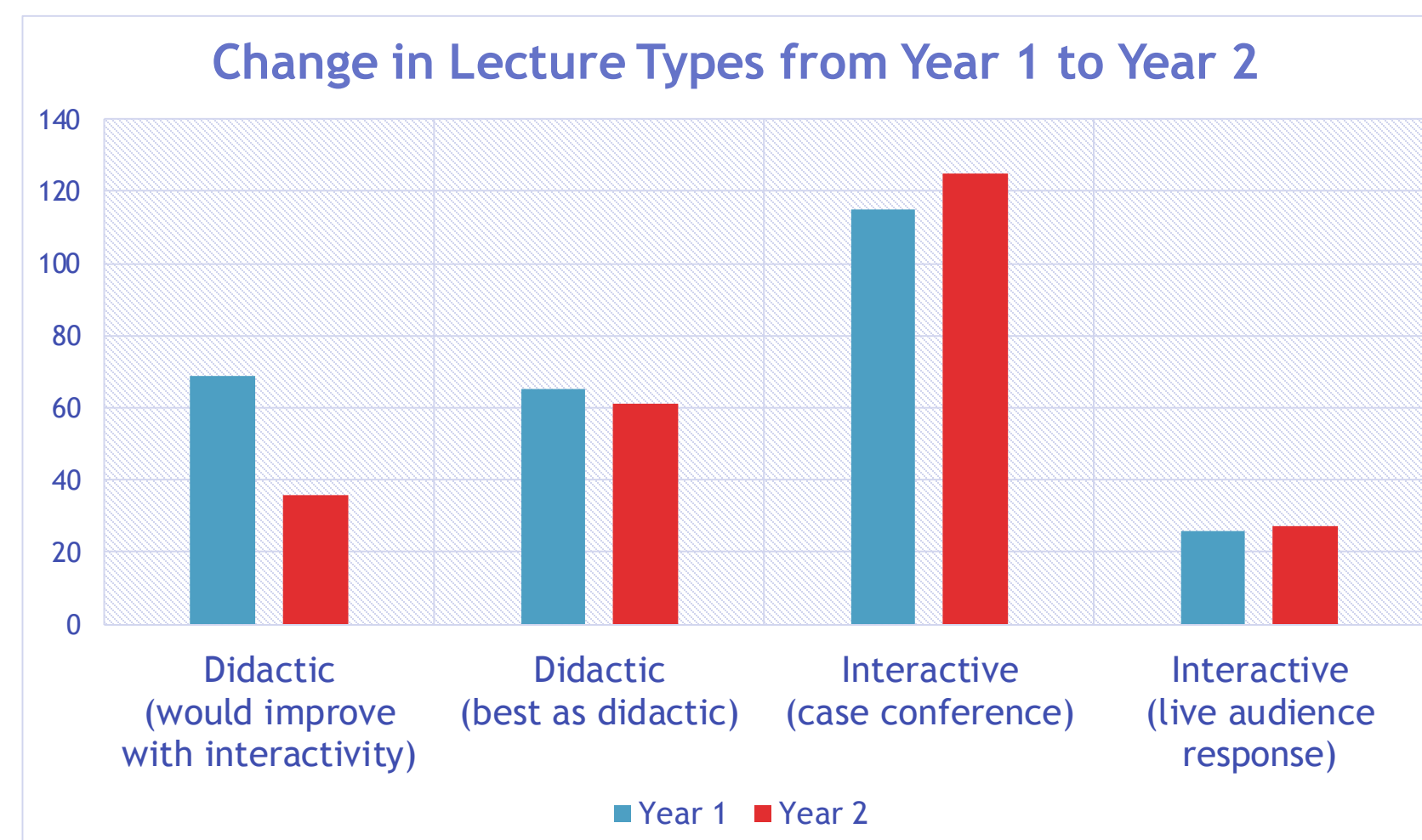
Combining both years, the mean lecture rating for the interactive subset was 4.57, significantly higher than mean lecture rating for the non-interactive subset (mean 4.18, p=0.02).

Within the interactive group, the web-based/live audience response lectures were rated significantly higher than the oral case-based lectures (4.7 and 4.53, respectively; p=0.02).

Results (continued)

Mean Lecture Rating by Lecture Type
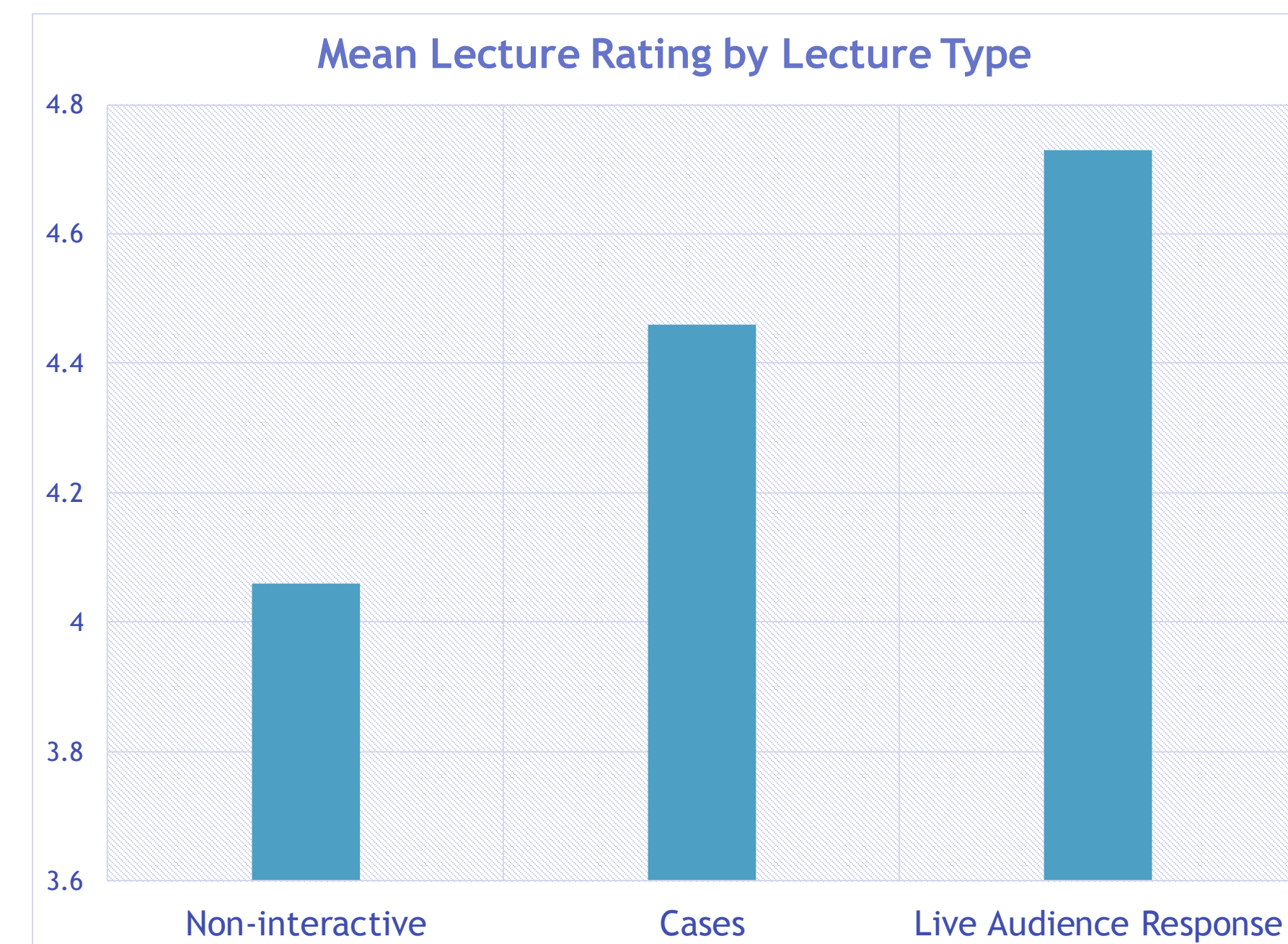
Conclusion & Significance

Based on resident feedback over the course of 24 months, interactive lectures are better received than non-interactive lectures, with web-based lectures (Diagnosis Live) as the format of choice.

The results of this study suggest a change in the preferred style of resident learning from didactic and hot seat case conference to more modern, interactive web-based approaches.
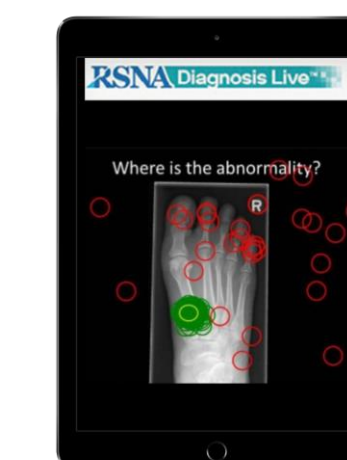
Additionally, this study demonstrates the importance of a live lecture feedback system in identifying strengths and weaknesses in resident education. Implementation of the lecture evaluation system had a significant impact on lecture type and lecture quality after just one year.

Adapting the curriculum based on lecture evaluations and resident learning style is crucial for promoting better resident education.