

Radiology Reporting Preferences of Non-Radiologist Ordering Clinicians: Prose? Do you even List?

T Al-Abbadi; D Van Tassel; A Roh; G Carotenuto; D G Gridley, MD
Maricopa Medical Center, Phoenix, Arizona

Abstract

- Internal research and debate over the ideal report style.
- The purpose of this survey was to expand the limited knowledge regarding non-radiologist physician preferences in radiology report styles and content.
- We administered a 17-question survey utilizing a survey-based comparison of two of the most widely accepted reporting styles used today: List and Prose style dictations.
- 79.8% respondents most commonly receive prose style reports while 19.2% receive list style dictations (P<0.0001). In contrast, 31.3% prefer prose, while 68.7% prefer list style reports (P<0.0001).

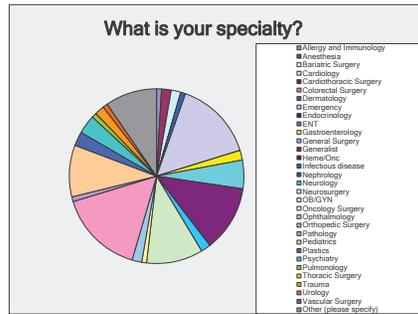


Figure 1: The respondents represented a wide range of non-radiology specialties.

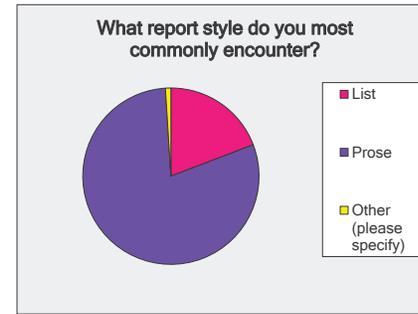


Figure 2: Most non-radiologist clinicians encountered a (79.8%) prose-style of report versus list style (19.2%).

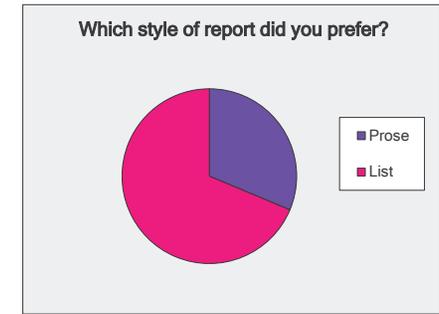


Figure 3: Although 79.8% of respondents received prose-style of reporting, 68.7% preferred list style of reports instead.

Introduction

- Young radiologist's development of his/her own personal style of reporting varies.
- This survey's purpose is to expand the limited knowledge regarding non-radiologist physician preferences in radiology report styles and content, comparing List and Prose style dictations; this is done by using information gathered from hundreds of physicians around the nation.
- Information is anonymous: including physician age, specialty, realm of practice, and utilization of radiologic testing among other variables.

Methods

- Our IRB approved 17-question survey is distributed nationally via email, from 2012-2016, to physicians around the nation utilizing a survey-based comparison of two of the most widely accepted reporting styles used today: List and Prose style dictations. (Figure 4 and Figure 5)
- Analysis of the collected data is performed using chi-squared and t-test statistics and basic data graphics.
- None of the collected data is excluded. However, exclusion criteria include incomplete surveys or surveys completed by radiologists.

Example of List Dictation

EXAM: CT abdomen and Pelvis with IV contrast

TECHNIQUE: Axial images of the abdomen and pelvis were obtained with the use of intravenous contrast. Reformatted images were viewed in the sagittal and coronal planes.

REASON FOR EXAM: RLQ pain

COMPARISON: None

FINDINGS:

LUNGS: There are moderate sized bilateral pleural effusions without evidence of consolidation or atelectasis.
LIVER: Nodular with a cirrhotic morphology. There is an irregular 2.2 cm area of heterogeneous contrast enhancement within the anterosuperior right hepatic lobe (Couinaud segment 8/Series 4, Image 48). The portal vein is patent.
GALLBLADDER: Normal in size and morphology with two calcified 4mm gall stones within the fundus.
SPLEEN: The splenic vein is patent.
ADRENAL: Within Normal Limits
PANCREAS: Within Normal Limits
KIDNEYS: There is a 9 mm rounded, well circumscribed hypodensity within the superior pole of the left kidney, measuring simple fluid density and most likely representing simple cyst. There is a 3 mm rounded, well circumscribed hypodensity adjacent to the hilum of the left kidney, too small to adequately characterize. The right kidney is absent.
STOMACH: Within Normal Limits
SMALL BOWEL: Within Normal Limits
LARGE BOWEL: Within Normal Limits
APPENDIX: The appendix is retrocecal and contains a 4mm appendicolith within the proximal portion of the lumen. The appendiceal lumen is enlarged with each appendiceal wall measuring approximately 6 mm. There is adjacent periappendiceal fat stranding and inflammatory changes.
BLADDER: Distended with no evidence of luminal filling defect.
UTERUS: Within normal limits with a 1.8 cm fibroid with central calcification at the fundus.
OVARIES: Within Normal Limits
SPACES: There is a moderate amount of intraperitoneal ascites with no evidence of free air.
BONES: There is diffuse anterolateral osteophytosis of the imaged thoracolumbar spine. There is diffuse degenerative disc disease, most prominent at the L5-S1 level with moderate disc space narrowing.

IMPRESSION:

Findings consistent with acute appendicitis. There is a 2.2 cm heterogeneously contrast enhancing lesion within the liver. Given associated findings of ascites and liver cirrhosis, further evaluation with dedicated three phase liver CT or MRI is recommended. Moderate bilateral pleural effusions. Cholelithiasis without evidence of cholecystitis. Additional findings as above.

Figure 4, Example of List Dictation

Example of Prose Dictation

EXAM: CT abdomen and Pelvis with IV contrast

TECHNIQUE: Axial images of the abdomen and pelvis were obtained with the use of intravenous contrast. Reformatted images were viewed in the sagittal and coronal planes.

REASON FOR EXAM: RLQ pain

COMPARISON: None

FINDINGS:

There are moderate sized bilateral pleural effusions without evidence of consolidation or atelectasis. There is a moderate amount of intraperitoneal ascites with no evidence of free air. The liver appears nodular with a cirrhotic morphology. There is an irregular 2.2 cm area of heterogeneous contrast enhancement within the anterosuperior right hepatic lobe (Couinaud segment 8/Series 4, Image 48). The gallbladder is normal in size and morphology with two calcified 4mm gall stones visualized within the gallbladder fundus. The portal vein and splenic vein are patent. The pancreas, adrenal glands and spleen are within normal limits. There is a 9 mm rounded, well circumscribed hypodensity within the superior pole of the left kidney, measuring simple fluid density and most likely representing simple cyst. There is a 3 mm rounded, well circumscribed hypodensity adjacent to the hilum of the left kidney, too small to adequately characterize. The right kidney is absent. The stomach, duodenum, small and large bowel are unremarkable without evidence of wall thickening or inflammation. The appendix is retrocecal and contains a 4mm appendicolith within the proximal portion of the lumen. The appendiceal lumen is enlarged with each appendiceal wall measuring approximately 6 mm. There is adjacent periappendiceal fat stranding and inflammatory changes. The bladder is distended and there is no evidence of luminal filling defect. The uterus is within normal limits with a 1.8 cm uterine fibroid with central calcification within the fundus. The bilateral ovaries are unremarkable. There is diffuse anterolateral osteophytosis of the imaged thoracolumbar spine. There is diffuse degenerative disc disease, most prominent at the L5-S1 level with moderate disc space narrowing.

IMPRESSION:

Findings consistent with acute appendicitis. There is a 2.2 cm heterogeneously contrast enhancing lesion within the liver. Given associated findings of ascites and liver cirrhosis, further evaluation with dedicated three phase liver CT or MRI is recommended. Moderate bilateral pleural effusions. Cholelithiasis without evidence of cholecystitis. Additional findings as above.

Figure 5, Example of Prose Dictation

Results

- 114 responses
- Gender, age, years working in practice, location of institution, patient care involvement
- The number of radiological studies ordered per week varies significantly from <10 to >50
- Interestingly, 79 of 99 (79.8%) respondents most commonly receive prose style reports while 19 of 99 (19.2%) receive list style dictations (P<0.0001). In contrast, 31 of 99 (31.3%) prefer prose, while 68 of 99 (68.7%) prefer list style reports (P<0.0001) (Figures 2 and 3)

Discussion and Conclusions

- Non-radiologist physicians most often receive prose style reports from radiologists; however, a statistically-significant majority of clinicians from all over the country prefer list style dictations.

Acknowledgements

I would like to thank the Radiology Department at Maricopa Medical Center, Dr. Dane Van Tassel, Dr. Albert Roh, and Dr. Daniel Gridley, for serving as research mentors and providing me the opportunity to do my scholarly project with them.