

performed under procedural sedation and/or analgesia. Unexpected extreme sensitivity to the drugs used for procedural sedation and/or analgesia which may result in unintentional loss of consciousness, respiratory or cardiovascular depression.

- Over-sedation, airway obstruction, respiratory or cardiovascular complications may occur at any time. Therefore, to ensure high standards of patient care, the following guidelines are recommended.
- Demonstrates knowledge and application of the training site's protocols to manage adverse events due to complications from administration of sedation and/or analgesia.
- Demonstrates the ability to manage complications from administration of sedation and/or analgesia.
- Demonstrates knowledge and application of the current Australian and New Zealand College of Anaesthetists (ANZCA) Guidelines on Sedation and/or Analgesia for Diagnostic and Interventional Medical or Surgical Procedures – specifically sections 5.4 and 5.7.
- <http://www.anzca.edu.au/resources/professional-documents/professional-standards/ps9.html>
- Holds current CPR certification to provide basic life support

## References Used in the Development of the Patient Safety Cycle

- RANZCR QR3.i Project – Review of Diagnostic Imaging Requests
- Board of the Faculty of Clinical Radiology The Royal College of Radiologists (2006) Standards for the reporting and interpretation of imaging investigations Royal College of Radiologists, London
- Board of the Faculty of Clinical Radiology The Royal College of Radiologists (2005) Standards for patient consent particular to radiology Royal College of Radiologists, London
- Curriculum in Radiology Reporting developed by Doctors Linda Lanier, Chris Siström and Richard Rathe from the University of Florida
- The Royal Australian and New Zealand College of Radiologists Radiology Curriculum Advisory Committee
- The Royal Australian and New Zealand College of

Radiologists Patient Safety Working Group

- The Royal Australian and New Zealand College of Radiologists®
- Standards of Practice for Diagnostic and Interventional Radiology Version 9.0
- Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting; Endorsed by the Communicable Diseases Network Australia, the National Public Health Partnership and the Australian Health Ministers' Advisory Council January 2004
- The Royal Australian and New Zealand College of Radiologists Radiology Adverse Events Register (RAER)
- How can doctors communicate information about risk more effectively?; Andy Alaszewski, Tom Horlick-Jones; BMJ VOLUME 327 27 SEPTEMBER 2003
- National Patient Safety Education Framework, the Australian Commission on Safety and Quality in Healthcare (ACSQHC), formerly the Australian Council for Safety and Quality in Health Care – July 2005
- Australian Curriculum Framework for Junior Doctors, Confederation of Postgraduate Medical Education Councils
- National Health and Medical Research Council (NHMRC), Communicating with Patients, Advice for medical practitioners, 2004

## Report Writing Module

A formal interpretive report is the diagnostic radiologist's work product. This module defines the essential steps in writing imaging reports and communicating the findings.

### Learning Objectives

The trainee:

- Completes the University of Florida's Curriculum in Radiology Reporting (CCR). The Curriculum in Radiology Reporting can be accessed at: <http://crr.medinfo.ufl.edu/>
- Explains the purpose of an imaging report in patient care
- Identifies the core concepts of report writing
- Demonstrates knowledge and application of the essential steps in writing imaging reports and



communicating the findings

- Clinical information:
  - Information provided by the referrer, specialist background of the referrer, medical signs/symptoms pointing to a particular diagnosis, a range of diagnoses, or possible diagnoses under consideration.
- Technical knowledge:
  - Ability of the radiologist to evaluate the quality of images and their suitability to the diagnosis of the condition(s) under consideration.
- Observation:
  - Cross checking of patient identification, confirmation that the type and date of the examination are correct, normal findings, unequivocal abnormal findings, both anticipated and unanticipated, abnormal findings, normal variants.
- Analysis:
  - Further evaluation of definitive or equivocal abnormalities for relevant imaging characteristics (e.g. shape, contour, density, enhancement pattern, signal intensity, and echogenicity) to formulate an opinion – whether there is an active pathological process present or whether the findings can be encompassed within the range of normal appearances.
- Medical Interpretation:
  - Correlation of the image analysis with other factors to interpret the radiographic findings and their relevance to the patient. A wide medical knowledge is required in order to reach a specific diagnosis or appropriately ranked differential diagnosis sufficient to allow clinical decisions to be made.
- Essential knowledge:
  - Age, sex, ethnicity, demographic characteristics/clinical state of the patient including signs, symptoms, results of other tests (e.g. previous imaging studies should be sought, pathological, laboratory and clinical tests).
- Advice:
  - Awareness of the accuracy of the examination in the particular patient related to the published accuracy of the technique, and its applicability to this particular examination. Level of certainty or doubt needs to be clearly indicated in the report. If a definitive diagnosis is given assume that this will be used for patient management/if a definitive diagnosis is not able to be provided advice on further investigations should be given if necessary taking into account the relative accuracy and applicability of the suggested investigations and patient safety (e.g. radiation exposure).
- Communication with the referrer:
  - needs to be clear and written to match the referrer's expected level of knowledge and familiarity with the issues raised. (e.g. the wording of a report pertaining to a rare condition that is provided to a general practitioner is likely to differ compared to a report on the same rare condition that is provided to a specialist in that particular field). Processes must be in place that enables the referring doctor to discuss the imaging findings with the radiologists in complex cases.
- Taking Appropriate Action:
  - Processes must be in place to allow direct communication from the radiologist to the referrer in cases that have urgent clinical priority. Examples include medical conditions requiring emergency treatment, findings of malignancy requiring treatment, diagnosis of tuberculosis which has the potential to harm others.
- Communication with the patient:
  - Patients must always be treated with respect and honesty. A thorough assessment of the investigation must be completed prior to speaking to the patient/if bad news needs to be conveyed the radiologist conveying the bad news should have undergone some form of training. Radiologists must ensure that they follow up with the primary care doctor who will be involved in the future care of the patient.
- Recognises when the findings constitute a medical emergency and implements local protocols to alert referrers in urgent cases.
- Distinguishes between synoptic reporting and regular reporting.
- Identifies the advantages of synoptic reporting.
- Participates in or conducts an audit of reporting discrepancies within the Radiology Department in the first three years of training.
- Recognises the need to proofread and correct errors in spelling, measurements, and L/R reference.
- Recognises that further investigations should only be suggested if they are medically indicated and will contribute to patient management.
- Utilises cross checking and diagnostic timeout when there are any doubts as to the efficacy of the report findings.



## Examples

Specific examples have not been provided as there is great variation in individual institutional and practitioner style in reporting. Also, report style and type will depend on the exact type of examination being performed, and the referring clinical discipline. For example, the report for an emergency physician searching for abdominal bleeding, an orthopaedic surgeon enquiring about a subtle ligamentous injury or oncologist evaluating the outcome of the latest round of chemotherapy can differ in style and structure greatly.

## Key Elements of a Radiology Reporting Template

Referring Doctor	
Radiologist	
Location	
Examination Date	
Patient Name	
Patient Address	
Patient's Age	
Patient File Number	
Gender	
Date of Exam	
Procedure(s) Performed	
<b>Introduction</b> Detail discussions with the patient regarding the procedure(s) and possible complications, risks – e.g. interventional procedures, contrast reactions must be discussed with the patient and the patient needs to give informed consent before the procedure can be undertaken	
Technical Adequacy	
Regional Normal Anatomy	
Regional Normal Pathology	
Associated Findings	
Appropriate Progress	
Incidental Findings including Normal Variants	
Date of Report	
Conclusion (answer the question)	
Level of Urgency	
Dispatch (method of delivery of report)	
<b>Synoptic Reporting:</b>	
The aim of synoptic reports is to provide a clinically relevant format for the particular type of exam (e.g. mammography, breast ultrasound, oncology imaging ), with constrained descriptive terms and consistent formatting for a report so that the reading clinician is better able to read the outcome and the reporting doctor is more consistent with the approach. In a sense synoptic reports are templated but the templates are more restrictive than the standardised templates for say, CT scan of the abdomen.	