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The American College of Radiology will periodically define new practice parameters and technical standards for radiologic practice to help advance the science of radiology and to improve the quality of service to patients throughout the United States. Existing practice parameters and technical standards will be reviewed for revision or renewal, as appropriate, on their fifth anniversary or sooner, if indicated.

Each practice parameter and technical standard, representing a policy statement by the College, has undergone a thorough consensus process in which it has been subjected to extensive review and approval. The practice parameters and technical standards recognize that the safe and effective use of diagnostic and therapeutic radiology requires specific training, skills, and techniques, as described in each document. Reproduction or modification of the published practice parameter and technical standard by those entities not providing these services is not authorized.

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## **ACR PRACTICE PARAMETER FOR COMMUNICATION OF DIAGNOSTIC IMAGING FINDINGS**

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### **PREAMBLE**

This document is an educational tool designed to assist practitioners in providing appropriate radiologic care for patients. Practice Parameters and Technical Standards are not inflexible rules or requirements of practice and are not intended, nor should they be used, to establish a legal standard of care<sup>1</sup>. For these reasons and those set forth below, the American College of Radiology and our collaborating medical specialty societies caution against the use of these documents in litigation in which the clinical decisions of a practitioner are called into question.

The ultimate judgment regarding the propriety of any specific procedure or course of action must be made by the practitioner in light of all the circumstances presented. Thus, an approach that differs from the guidance in this document, standing alone, does not necessarily imply that the approach was below the standard of care. To the contrary, a conscientious practitioner may responsibly adopt a course of action different from that set forth in this document when, in the reasonable judgment of the practitioner, such course of action is indicated by the condition of the patient, limitations of available resources, or advances in knowledge or technology subsequent to publication of this document. However, a practitioner who employs an approach substantially different from the guidance in this document is advised to document in the patient record information sufficient to explain the approach taken.

The practice of medicine involves not only the science, but also the art of dealing with the prevention, diagnosis, alleviation, and treatment of disease. The variety and complexity of human conditions make it impossible to always reach the most appropriate diagnosis or to predict with certainty a particular response to treatment. Therefore, it should be recognized that adherence to the guidance in this document will not assure an accurate diagnosis or a successful outcome. All that should be expected is that the practitioner will follow a reasonable course of action based on current knowledge, available resources, and the needs of the patient to deliver effective and safe medical care. The sole purpose of this document is to assist practitioners in achieving this objective.

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<sup>1</sup> Iowa Medical Society and Iowa Society of Anesthesiologists v. Iowa Board of Nursing, \_\_\_ N.W.2d \_\_\_ (Iowa 2013) Iowa Supreme Court refuses to find that the ACR *Technical Standard for Management of the Use of Radiation in Fluoroscopic Procedures* (Revised 2008) sets a national standard for who may perform fluoroscopic procedures in light of the standard's stated purpose that ACR standards are educational tools and not intended to establish a legal standard of care. See also, Stanley v. McCarver, 63 P.3d 1076 (Ariz. App. 2003) where in a concurring opinion the Court stated that "published standards or guidelines of specialty medical organizations are useful in determining the duty owed or the standard of care applicable in a given situation" even though ACR standards themselves do not establish the standard of care.

## I. INTRODUCTION

Effective communication is a critical component of diagnostic imaging. Quality patient care can only be achieved when study results are conveyed in a timely fashion to those responsible for treatment decisions. An effective method of communication should: a) promote optimal patient care and support the ordering physician/health care provider in this endeavor; b) be tailored to satisfy the need for timeliness; and c) minimize the risk of communication errors.

Various factors and circumstances unique to a clinical scenario may influence the methods of communication between interpreting physicians and ordering physicians/health care providers. Timely receipt of the report is more important than the method of delivery.

Communication of information is only as effective as the system that conveys the information. There is a reciprocal duty of information exchange. The ordering physician or other relevant health care provider also shares in the responsibility for obtaining results of imaging studies he or she has ordered. Formulating an imaging interpretation requires the commitment and cooperation of administrators, clinicians, and interpreting physicians. Whenever possible, previous reports and images should be available for review and comparison with the current study. A request for imaging should include relevant clinical information, a working diagnosis, and/or pertinent clinical signs and symptoms. In addition, including a specific question to be answered can be helpful. Such information helps tailor the most appropriate imaging study to the clinical scenario and enhances the clinical relevance of the report, thus promoting optimal patient care.

## II. DIAGNOSTIC IMAGING REPORTS

An official interpretation (final report) by the interpreting physician must be generated and archived following any examination, procedure, or officially requested consultation regardless of the site of performance (hospital, imaging center, physician office, mobile unit, etc). It is not appropriate for nonphysicians to provide interpretations and/or generate diagnostic reports (final or preliminary).

### A. Components of the Report

The following is a suggested format for reporting:

#### 1. Demographics

- a. The facility or location where the study was performed
- b. Name of patient and another identifier
- c. Name(s) of ordering physician(s) or other health care provider(s). If the patient is self-referred (a patient who seeks medical care without referral from a physician/health care provider), that should be stated.
- d. Name or type of examination
- e. Date of the examination
- f. Time of the examination, if relevant (eg, for patients who are likely to have more than one of a given examination per day)
- g. Inclusion of the following additional items is encouraged:
  - i. Date of dictation
  - ii. Date and time of transcription
  - iii. Patient's date of birth or age
  - iv. Patient's gender

#### 2. Relevant clinical information

### 3. Body of the report

#### a. Procedures and materials

The report should include a description of the studies and/or procedures performed and any contrast media and/or radiopharmaceuticals (including specific administered activities, concentration, volume, and route of administration when applicable), medications, catheters, or devices used, if not recorded elsewhere. Any known significant patient reaction or complication should be recorded.

#### b. Findings

The report should use appropriate anatomic, pathologic, and radiologic terminology to describe the findings.

#### c. Potential limitations

The report should, when appropriate, identify factors that may compromise the sensitivity and specificity of the examination.

#### d. Clinical issues

The report should address or answer any specific clinical questions. If there are factors that prevent answering the clinical question, this should be stated explicitly.

#### e. Comparison studies and reports

Comparison with relevant examinations and reports should be part of the radiologic consultation and report when appropriate and available.

### 4. Impression (conclusion or diagnosis)

a. Unless the report is brief each report should contain an “impression” or “conclusion.”

b. A specific diagnosis should be given when possible.

c. A differential diagnosis should be rendered when appropriate.

d. Follow-up or additional diagnostic studies to clarify or confirm the impression should be suggested when appropriate.

e. Any significant patient reaction should be reported.

### 5. Standardized computer-generated template reports

Standardized computer-generated template reports should be designed to satisfy the above criteria.

## B. Principles of Reporting (Final Report)

1. The final report is the definitive documentation of the results of an imaging examination or procedure.

2. The final report should be proofread. Use of abbreviations or acronyms should be limited to avoid ambiguity.

3. The final report should be completed in accordance with appropriate state and federal requirements. Electronic or rubber-stamp signature devices, instead of a written signature, are acceptable unless contrary to state law, if access to such devices is secure.

4. The final report should be transmitted to the ordering physician or health care provider in accordance with the appropriate state and federal requirements. The ordering physician or other relevant health care provider also shares in the responsibility to obtain results of imaging studies he or she has ordered.

5. When feasible, a copy of the final report should accompany the transmittal of relevant images to other health care professionals, when such images are requested.

6. A copy of the final report should be archived by the imaging facility as part of the patient's medical record and be retrievable for future reference. Retention and distribution of these records must be in accordance with state and federal regulations and facility policies.

### C. Communications Other Than the Final Report

#### 1. Preliminary report

When needed, a preliminary report precedes the final report. It may be rendered for the purpose of directing immediate patient management or to meet the needs of a particular practice environment. It very likely will contain limited or incomplete information. It should not be expected to contain all the information subsequently found in the final report.

Preliminary reports may be communicated in writing, electronically, or verbally, and communication should be documented. These preliminary communications should be reproduced into a permanent format as soon as practical and appropriately labeled as a preliminary report, distinct from the final report, and archived since clinical decisions may have been based on the preliminary report.

As soon as possible, a significant variation in findings and/or conclusions between the preliminary and final interpretations should be reported in a manner that reliably ensures receipt by the ordering or treating physician/health care provider, particularly when such changes may impact patient care. Documentation of communication of any discrepancy should be incorporated into the final report.

#### 2. Nonroutine communications

Routine reporting of imaging findings is communicated through the usual channels established by the hospital or diagnostic imaging facility. However, in emergent or other nonroutine clinical situations, the interpreting physician should expedite the delivery of a diagnostic imaging report (preliminary or final) in a manner that reasonably ensures timely receipt of the findings. This communication will usually be to the ordering physician/health care provider or his/her designee. When the ordering physician/health care provider cannot be contacted expeditiously, it may be appropriate to convey results directly to the patient, depending upon the nature of the imaging findings.

##### a. Situations that may warrant nonroutine communication include the following:

##### i. Findings that suggest a need for immediate or urgent intervention:

Generally, these cases may occur in the emergency and surgical departments or critical care units and may include such findings of pneumothorax, pneumoperitoneum, or a significantly misplaced line or tube. Other urgent conditions typically included in "critical values" categories in most health care institutions would also be included in this group.

##### ii. Findings that are discrepant with a preceding interpretation of the same examination and where failure to act may adversely affect patient health:

These cases may occur when the final interpretation is discrepant with a preliminary report or when significant discrepancies are encountered upon subsequent review of a study after a final report has been submitted.

##### iii. Findings that the interpreting physician reasonably believes may be seriously adverse to the patient's health and may not require immediate attention but, if not acted on, may worsen over time and possibly result in an adverse patient outcome:

For example, acute infectious processes, possible malignant lesions, or other unexpected findings that may impact patient care if not treated in a timely fashion would fall into this category. This may be particularly applicable when there is a potential break in the continuity of care (such as can occur in emergency department encounters or the outpatient setting) that is unexpected by the treating or referring physician.

b. Documentation of non-routine communications

Interpreting physicians should document all nonroutine communications. Documentation is best placed in the radiology report or the patient's medical record but may be entered in a department log and/or personal journal. Documentation preserves a history for the purpose of substantiating certain findings or events. Inclusion of the time, method of communication, and the name of the person to whom the communication was delivered is an example of such documentation.

c. Methods of nonroutine communication

Communication methods are dynamic and varied. It is important, however, that nonroutine communications be handled in a manner most likely to reach the attention of the treating or ordering physician/health care provider in time to provide the most benefit to the patient. Communication by telephone or in person to the treating or ordering physician or his/her representative is appropriate and assures receipt of the findings. This may be accomplished directly by the interpreting physician or, when judged appropriate, by the interpreting physician's designee. There are other forms of communication that provide documentation of receipt that may also suffice to demonstrate that the communication has been delivered and acknowledged.

Although other methods of communication may be considered, including texting, facsimile, voice messaging, instant messaging, e-mail, and other nontraditional approaches, these methods may not guarantee receipt of the communication. Such communications must be in compliance with the privacy requirements of the Health Insurance Portability and Accountability Act (HIPAA) or state laws if more restrictive. Therefore, in these instances, the interpreting physician may consider initiating a system that explicitly requests confirmation of receipt of the report by the clinician. If confirmation or other response is not received within a time appropriate to the diagnosis after the initial communication, a staff person should notify the clinician to document follow-up. Regardless of the method selected, it must be in compliance with state and federal law.

3. Informal communications

Occasionally, an interpreting physician may be asked to provide an interpretation that does not result in a "formal" report but is used to make treatment decisions. Such communications may take the form of a "curbside consult," a "wet reading," or an "informal opinion" that may occur during clinical conferences, interpretations while involved in other activities, or review of an outside study. These circumstances may preclude immediate documentation and may occur in suboptimal viewing conditions without comparison studies and their accompanying reports or adequate patient history.

Informal communications carry inherent risk, and frequently the ordering physician's/health care provider's documentation of the informal consultation may be the only written record of the communication. Interpreting physicians who provide consultations of this nature in the spirit of improving patient care are encouraged to document those interpretations. A system for reporting outside studies is encouraged.

### III. SELF-REFERRED AND THIRD-PARTY REFERRED PATIENTS

Most patients having imaging procedures are referred by physicians or other health care professionals. Some patients, however, are self-referred, such as for mammography, or are referred by a third party, such as an insurer or employer.

#### A. Self-Referred Patients

Interpreting physicians should recognize that performing imaging studies on self-referred patients establishes a doctor-patient relationship that includes responsibility for communicating the results of imaging studies directly to the patient and arranging for appropriate follow-up.

#### B. Third-Party Referred Patients

It is not unusual for patients to be referred for imaging studies by insurance companies, employers, federal benefits programs, and, in some instances, lawyers. In such cases the reports of the studies are frequently communicated through the requesting entity to a clinician or directly to the third-party-designated clinician. The results of the examinations are then communicated to the patient either directly by the third party or by its designated clinician. Regardless of the source of the referral, the interpreting physician has an ethical responsibility to ensure communication of unexpected or serious findings to the patient. Therefore, in certain situations the interpreting physician may feel it is appropriate to communicate the findings directly to the patient.

### IV. COMMUNICATION POLICIES

An imaging department's policy on communication can be an effective tool to promote patient care. The policy can provide guidance on the types of communications that are most critical, the individuals responsible for delivering and receiving communications, and the methods of communication that are most appropriate. To be effective, however, any written policy must be followed and shared with others within the institution where the interpreting physicians provide their services.

As technology changes and new methods of communication evolve, interpreting physicians may wish to modify their actions to accommodate these changes, but they must also remain in compliance with federal, state and local statutes and developing legal requirements. HIPAA states that patients have a right to access their personal health information <http://www.hhs.gov/ocr/privacy/hipaa/understanding/special/healthit/eaccess.pdf>. In recognition of this legal obligation, and in the interest of added value and personalized medicine, the ACR recommends that all imaging reports be made readily available to the patient. This may be achieved in numerous ways. One such technique is the posting of patient imaging reports through the use of a Web-based portal. Any method used should consider the best interests of the patient and the professional relationship between the patient and the ordering physician/health care provider.

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**Suggested Reading** (Additional articles that are not cited in the document but that the committee recommends for further reading on this topic)

1. Berlin L. Mock trial at 2009 RSNA annual meeting: jury exonerates radiologist for failure to communicate abnormal finding- - but...*Radiology* 2010;257:836-845.
2. Berlin L. Communicating results of all radiologic examinations directly to patients: has the time come? *AJR* 2007;189:1275-1282.
3. Berlin L. Communicating results of all outpatient radiologic examinations directly to patients: the time has come. *AJR* 2009;192:571-573.
4. Berlin L. Communicating findings of radiological examinations: whither goest the radiologist's duty? *AJR* 2002;178:809-815.
5. Berlin L. Comparing new radiographs with those obtained previously. *AJR* 1999;172:3-6.
6. Berlin L. Duty to directly communicate radiologic abnormalities: has the pendulum swung too far? *AJR* 2003;181:375-381.
7. Berlin L. Failure of radiologic communication: an increasing cause of malpractice litigation and harm to patients. *Applied Radiology* 2010; Vol. 39, Number 1-2.
8. Berlin L. Pitfalls of the vague radiology report. *AJR* 2000;174:1511-1518.
9. Berlin L. Standards, guidelines, and roses. *AJR* 2003;181:945-950.
10. Department of Health and Human Services, Food and Drug Administration. *Mammography Quality Standards: Final Rule*. Federal Register Oct 28, 1997;68:55852-55994.
11. Kushner DC, Lucey LL. Diagnostic radiology reporting and communication: the ACR practice parameter. *JACR* 2005;2:15-21.
12. Lucey LL, Kushner DC. The ACR practice parameter on communication: to be or not to be, that is the question. *JACR* 2010;7:109-114.
13. Physician Insurers Association of America and The American College of Radiology. *Practice Standards Claims Survey*. Rockville, Md: PIAA; 1997.

#### **Pertinent Legal Cases Involving Communication:**

Estate of Jeffrey Scott v. Jefferson Regional Medical Center, et al, Case no. 09-006268, Allegheny County, PA, January 2, 2011.

Williams v Le, 662 S.E. 2d 73 (Va 2008)

Stanley v. McCarver, 92 P.2d 849 (Ariz. 2004)

Diaz v. New York Downtown Hospital, 784 N.E.2d 68 (N.Y. 2002)

Karpinsky v. Gavich, et al, 23 N.J. Jury Verdict Review & Anal., Vol. 23, Issue 5 (2002)

Reed v. Bojarski, 764 A.2d 433 (N.J. 2001)

Duckworth v. Lutheran Medical Center, 1995 WL 33070 (Ohio App. 1995)

Caracci v. McChesney, 601 N.Y.S.2d 169 (N.Y. App. Div. 1993)

Daly v. United States, 946 F.2d 1467 (9<sup>th</sup> Cir. 1991)

Courteau v. Dodd, 773 S.W.2d 436 (Ark. 1989)

Jenoff v. Gleason, 521 A.2d 1323 (N.J. App. 1987)

Phillips v. Good Samaritan Hospital, 416 N.E.2d 646 (Ohio App. 1979)

Merriman v. Toothaker, 515 P.2d 509 (Wash. App. 1973)

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\*Practice parameters and technical standards are published annually with an effective date of October 1 in the year in which amended, revised, or approved by the ACR Council. For practice parameters and technical standards published before 1999, the effective date was January 1 following the year in which the practice parameter or technical standard was amended, revised, or approved by the ACR Council.

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