Practice Guidelines for Autopsy Pathology

Autopsy Reporting

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• The Autopsy Committee of the College of American Pathologists has prepared this revised guideline to reflect changes that have occurred in the reporting of autopsies since the original guideline was published in February 1995. It is intended to be an instrument to assist pathologists in the reporting of autopsies. The guideline is to be regarded as being primarily an educational tool. Application of these recommendations on autopsy reporting is to be made on the basis of the judgment of the pathologist engaged in a specific case.

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The Autopsy Committee of the College of American Pathologists (CAP) has the responsibility to develop, assess, and revise practice guidelines for autopsy pathology within the framework established by the American Medical Association.[1] The first practice guideline developed by the Autopsy Committee concerned autopsy performance and addressed the definition of autopsy pathology, the development and review of practice guidelines for autopsy pathology, indications for performing autopsies, autopsy permission, funeral considerations, and some aspects of quality assurance and quality control.[2]

The CAP mandates a review of guidelines at 3-year intervals. The guideline on autopsy performance has been reviewed by the Autopsy Committee and was deemed not to need revision. The Autopsy Committee's second guideline was on autopsy reporting. The document was approved by the CAP House of Delegates on April 13, 1994, the CAP Board of Governors adopted it as official CAP policy on May 20, 1994, and it was published in February 1995.[3] Other guidelines produced by the Autopsy Committee have dealt with autopsy procedures for brain, spinal cord, and neuromuscular system, and the perinatal and pediatric autopsy.[4,5] In accordance with CAP policy, the guidelines were reviewed in 1997, and the Autopsy Committee determined that revision of the guideline on autopsy reporting would be appropriate. This article is an updated version of the prior publication.[3] It was approved by the CAP Board of Governors on November 20, 1998.

As a general principle, autopsy findings should be recorded in a form that will make them useful to the parties who read autopsy reports or to those who abstract information from autopsy reports. This includes pathologists, clinicians, family members, lawyers, risk management officers, researchers, epidemiologists, statisticians, and outcome analysts. Pathologists should be aware of the increasing effort to archive autopsy reports in an electronic format. Now and in the future, there will be initiatives to extract data contained within autopsy reports for inclusion into databases. Although the format of the autopsy protocols will vary among institutions, the inclusion of common components will permit wider use of autopsy data. Every autopsy report should include the autopsy face sheet (demographics and list of anatomic diagnoses and findings), a clinical summary, an objective description of the gross autopsy observations, a slide and block catalog, reports of ancillary studies, and a clinicopathologic interpretive summary.

The written report complements, but cannot substitute wholly for, cooperation and open lines of verbal communication among pathologists, clinicians, and all other interested parties.

It should be understood that adherence to guidelines does not guarantee a successful outcome. Rather, these guidelines are provided as an educational tool to assist physicians in providing quality care. If equally valid guidelines or views advanced by other groups are applicable, the physician is, of course, free to follow those authorities. Indeed, the ultimate judgment regarding the propriety of any specific procedure must be made by the physician in light of the individual circumstances presented by a specific patient or laboratory result.

As noted above, adherence to the guidelines is voluntary. However, physicians are urged to familiarize themselves with the document. A physician who chooses to deviate from applicable parameters based on the circumstance of a particular patient or laboratory result is well advised to make a contemporaneous written notation of the reason for the procedure followed.

The CAP recognizes that this document may be used by

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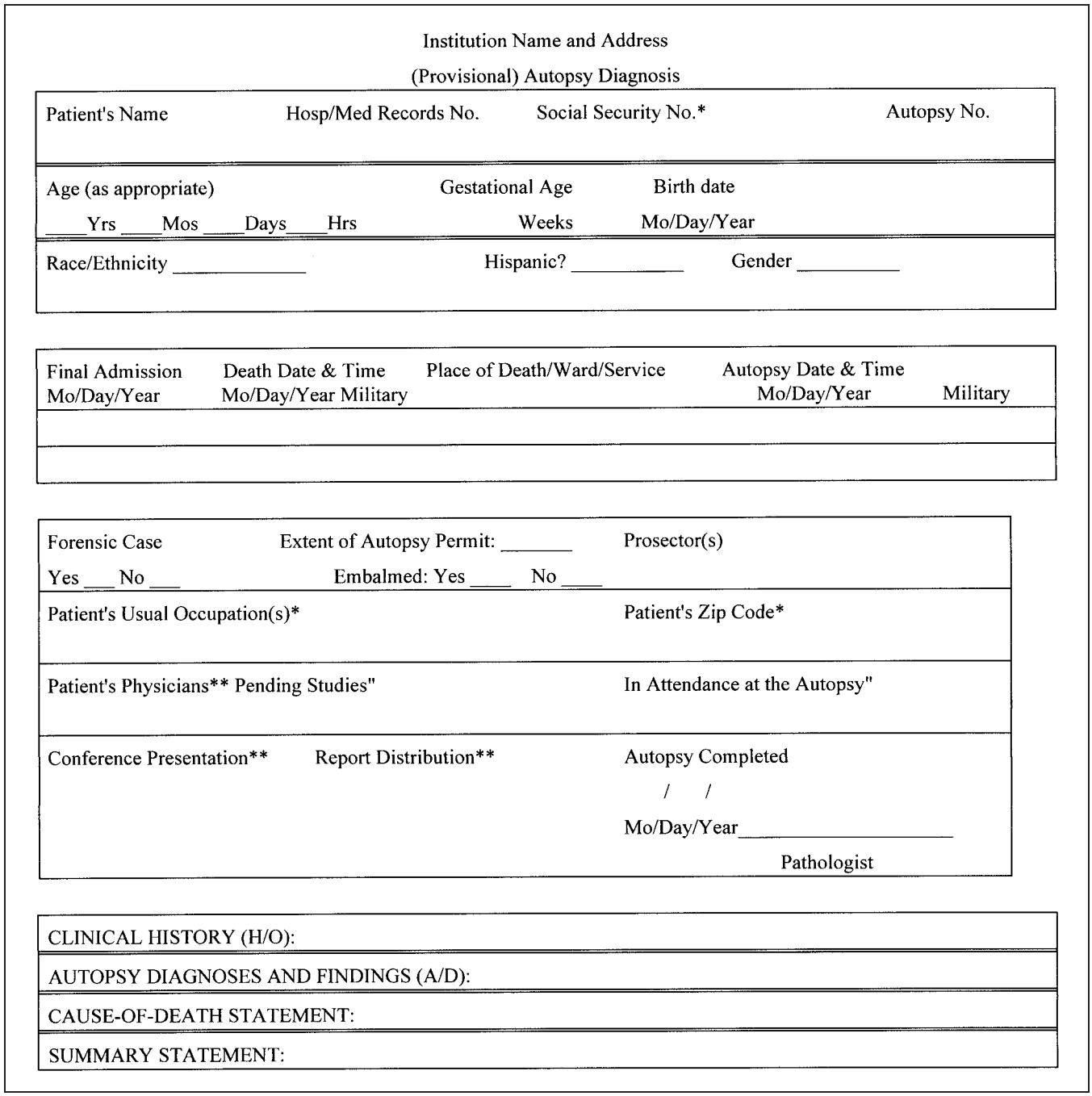

Figure 1. *Example of autopsy face sheet. Asterisks indicate optional but desirable information. Inclusion on the face sheet of items marked with a double asterisk may be useful but should be decided by the individual institution.*

hospitals and other institutions, managed care organizations, and insurance carriers and other payers. However, this document was not developed for reimbursement or credentialing use. The College cautions that all these uses involve considerations that are beyond the scope of this document.

THE AUTOPSY FACE SHEET

The autopsy face sheet is important for presentation of essential diagnoses and findings, and for computerized indexing and retrieval of the core information in an autopsy report. The suggested format for reporting the demographic and autopsy information on a face sheet is shown in Figure 1 and is described in the following section.

Demographic Data

Include the name and address of the institution on the autopsy report, since autopsy reports are frequently distributed outside the institution. Identify the patient by name, hospital number, and possibly Social Security number for verification of identity. Verify identifying markers carefully; if any are incorrect, it is extremely difficult to locate the correct hospital record. Assign a unique autopsy case number in order to have control over institutional record keeping.

Provide the patient's date of birth and date of death. In the case of neonatal death, the dates should include the

months, days, and hours as appropriate. Gestational age may be given for neonatal cases. Fetuses lacking a first name may be indicated by gender and last name (eg, male fetus Smith) as appropriate. Stillborns should be designated as such. The birth date can be a useful cross-check for correct patient identification.

If race/ethnicity is listed, it may be indicated according to the following guidelines. The category that most closely reflects the individual's concept of his or her own race/ethnicity should be used in cases of mixed ethnicity. In other words, a person's own declaration of race/ethnicity in the medical record should be regarded as definitive. If necessary, multirace designations may be used. For fetuses and infants, the race of the mother should be used.

I—American Indian or Alaskan Native
A—Asian or Pacific Islander
B—Black
W—White
U—Undetermined

Definitions are as follows:

I American Indian or Alaskan Native: A person having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition.
A Asian or Pacific Islander: A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes, for example, China, India, Japan, Korea, the Philippine Islands, and Samoa.
B Black: A person having origins in any of the black racial groups of Africa.
W White: A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.

Whether or not the decedent is Hispanic should be indicated separately from the race designator as a separate item of information (eg, Hispanic: yes, no).

Hispanic refers to a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

Indicate gender as follows: M, male; F, female; and U, undetermined.

The final admission date, obtained from hospital records, allows calculation of the duration of hospital stay. The date and time of death may be needed for correlation with state records, identification cross-checks, death certificate matching, and epidemiologic studies covering fixed ranges of time. State the place of death, ward, hospital service, or other source of the autopsy case, as appropriate. The date and time of autopsy establish the postmortem interval and provide quality assurance for timely performance of autopsies.

Forensic cases should be so designated. State the extent of autopsy, including restrictions. An unrestricted autopsy should be described as such. Permissions and restrictions given by the responsible party should be listed.

The prosector's name should be included. The prosector is defined as the person who dissects the organs. This individual may be the same person as the attending pathologist, in which case the name should be listed redundantly.

It is appropriate to include other information on the autopsy face sheet. The patient's address, including the zip code, as well as the patient's usual occupation can often be obtained from admission records and are useful items for epidemiologic studies. A listing of ancillary studies (eg, microbiology, toxicology, serology, photomicrography, and electron microscopy), and the patient's physicians of record may be included on the report. The uses made of the autopsy information, such as conference presentations, report distribution, and persons participating in departmental presentations of the autopsy, may be useful to append to the autopsy document.

Listing of Diagnoses

There are several methods of ordering the diagnoses and the findings on the autopsy face sheet to give narrative character to the document and to enhance readability. One method is to divide the diagnoses and findings into 2 parts, namely, clinical and anatomic. The first part is a list in telegraphic form and temporal sequence of all important clinical states, processes, diagnoses, and treatments. Separation of this component of the report from the pathologic diagnoses provides a useful brief clinical summary, a record of previous surgical or cytology specimens, and a list of important clinical information. The second part lists anatomic diagnoses and findings by importance, by pathogenetic relations, or by organ systems. If this approach is used, clinical information should be clearly delineated as such and should be separated from anatomic diagnoses.

Another approach lists diagnoses and findings in pathogenetic sequence, admixing relevant clinical information (listed as *history of* or *H/O*) as appropriate. It is important that some system be used. A random listing of anatomic diagnosis statements hinders the reader's ability to make sense of a case from the autopsy face sheet. The inclusion of clinical information greatly enhances the value of the report.

COMPLETING CAUSE-OF-DEATH STATEMENTS OF THE DEATH CERTIFICATE

The words entered into the cause-of-death section of the death certificate are used in developing epidemiologic information important for public health planning. Although pathologists may not necessarily be directly involved in filling out this information, it may be useful to the patient's physicians if an attempt is made to identify those autopsy findings that will assist in filling out the death certificate with accurate and meaningful cause-of-death statements.[6,7] Cause-of-death statements include the single disease (condition) that initiated the sequence of morbid events leading directly to death (ie, underlying cause of death); the most important diseases, conditions, or complications that occurred sometime between the underlying and immediate causes of death (ie, intermediate cause[s]); the final disease or complication directly causing death (ie, immediate cause of death); and other significant conditions (diseases/conditions/complications) that contributed to death but did not result in the underlying cause of death. The pathologist is encouraged to include a cause-of-death section or cause-of-death statement on the autopsy face sheet structured in the same fashion as that present on the death certificate in use in that particular jurisdiction. This addition to the face sheet may support efforts to derive vital statistics from autopsy databases.[8] The autopsy report may address whether the autopsy findings are consistent with the cause of death as stated on the death certificate. Alternatively, a cause-of-death statement can be offered in the

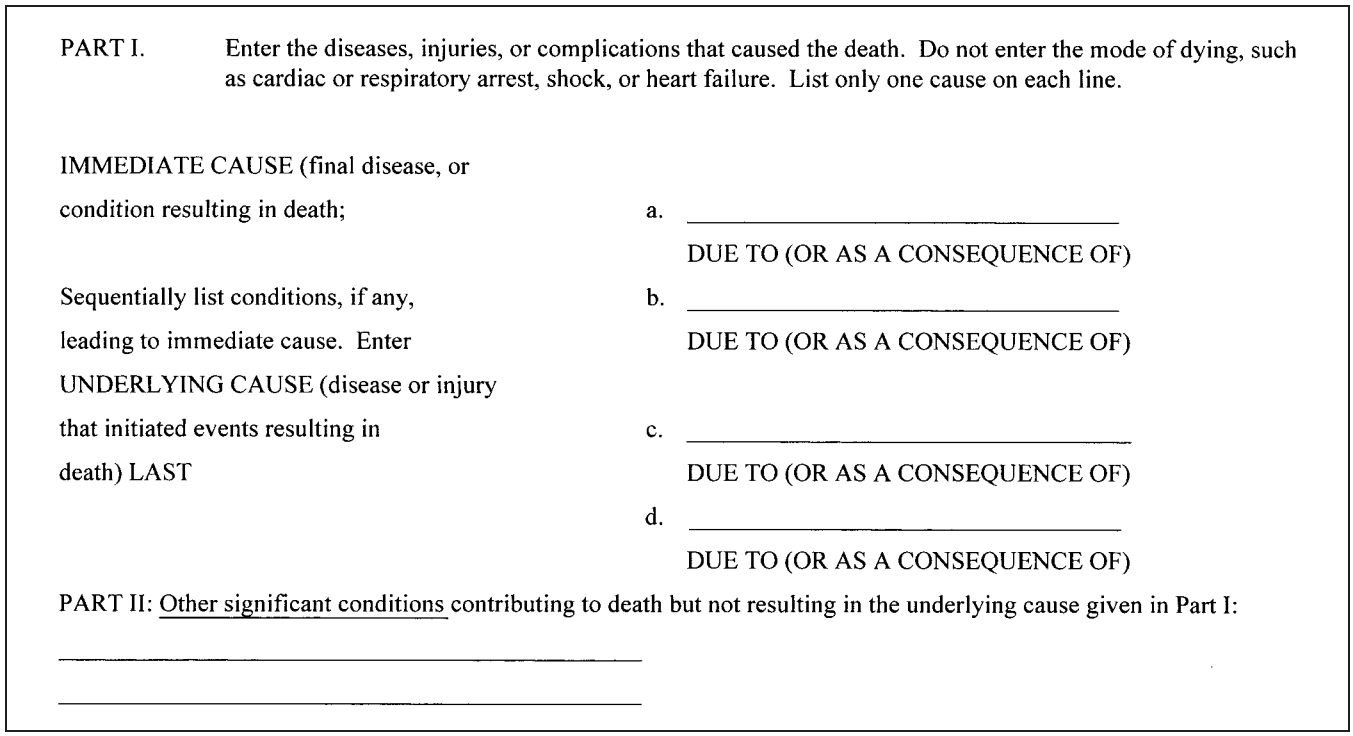

Figure 2. *Parts I and II of the cause-of-death section of the death certificate.*

autopsy report with a suggestion that the death certificate be amended.

Preferably, the death certificate should be completed after a cause of death is determined at autopsy. Most states require that the death certificate be filed within a few days of death. Although most states allow a certificate to be filed as pending, the certificate must be completed within a specified time.

Definitions

The underlying or primary cause of death is defined as the disease or injury that initiated the morbid events leading directly to death, or the circumstances or violence that produced a fatal injury.[7] The underlying cause should be as etiologically specific as possible and antecedent to all other causes with respect to time and pathologic relationship.[9,10] Without the underlying cause, death would not have occurred.

The immediate cause of death is defined as the disease, injury, or complication that directly precedes death. Thus, the immediate cause is the ultimate consequence of the underlying cause. The interval between onsets of conditions and death should be reported and may be long (years) or short (seconds). In establishing the sequence of events preceding death, other conditions, designated *intermediate causes,* are pathophysiologically sequenced between the underlying and immediate causes. Intermediate causes, if present, may number one or several, depending primarily on the length of time and complexity of events leading up to death.

Older literature has referred to the underlying cause of death as the *proximate cause* and to the intermediate cause of death as the *intervening cause.* However, the terms *proximate* and *intervening* may have specific legal meaning that differs from the lay or medical usage, and it is recommended that the terms be avoided when discussing medical cause-of-death statements. The preferred terms are *underlying cause of death, intermediate cause of death,* and *immediate cause of death.*

A mechanistic terminal event, because of its incompatibility with life, is the means by which cause exerts its lethal effect. Examples of mechanistic terminal events are cardiorespiratory arrest, asystole, and respiratory arrest. Mechanistic terminal events lack etiologic specificity and are unacceptable substitutes for cause of death; in general, they are not to be included in cause-of-death statements.[11]

The manner of death explains the circumstances of how the cause arose. The manner of death is either natural or unnatural.[7] Natural deaths are due solely to disease, the aging process, or both, whereas unnatural deaths are due to external causes (injury or poisoning) and include deaths due to intentional injury, such as homicide and suicide, and deaths due to unintentional injury, which are of an accidental manner of death. Deaths for which a manner has not, or cannot, be determined are classified as *undetermined in manner.*

The death certificates in use in the 50 states vary, but each is based on the US Standard Death Certificate, which traditionally places responsibility for indicating the immediate, intermediate, and underlying causes of death on the attending physician, not the pathologist. As currently constructed, the death certificate instructions require the physician to select just 1 underlying cause of death.

The physician's primary responsibility in death registration is the completion of the medical certification or cause-of-death section. This portion of the death certificate consists of 2 parts (Figure 2). In part I, the certifying physician is required to state a single condition or a pathologically and etiologically related sequence of conditions (causes) that resulted in death. The condition temporally closest to death is stated on the first (top) line. Then one uses the

causal concept of ''due to or as a consequence of'' to specify other antecedent conditions on progressively lower lines. These are listed one cause per line, with the underlying cause of death listed last. Depending on the state, on rare occasions it may be necessary to add additional lines to part I so that all conditions are entered with only 1 cause per line.[9]

A single entry can be made in part I if only 1 condition was present at death and was both the underlying and the immediate cause.[10] Some examples include electrocution, anencephaly, ruptured cerebral arterial berry aneurysm, and drowning.

Part II of the medical certification section of the death certificate is titled ''Other Significant Conditions.'' To be reported here are pre-existing or coexisting conditions that contributed to death but did not result in the underlying cause of death listed in part I. More than 1 ''other significant condition'' can be specified.

For decedents with long and complicated medical histories, selection of the underlying cause of death can be difficult. To accomplish this accurately, the medical history, clinical status, circumstances of death, and autopsy findings must be considered.

In general, death certificates for persons who die of unnatural manners of death will be completed by the local medical examiner or coroner, or under their authority. One should be familiar with local death investigation laws, the death certificate form, and related policies and procedures. Even if the pathologist does not complete the cause-of-death section of the death certificate, it is useful to include a cause-of-death section on the autopsy face sheet. With the advent of electronic recovery of information from an autopsy database, it will become possible to compare cause-of-death statements prepared by clinicians with those prepared by pathologists on the same patients.[8]

Detailed background information and instructions for completing cause-of-death statements are contained in the manuals published by the CAP and in other sources.[6,7,9,11–13]

THE AUTOPSY PROTOCOL AND THE CLINICOPATHOLOGIC SUMMARY

Gross Autopsy Findings

On completion of the autopsy record, there should be an objective description of the observations in an appropriate format. The ordering of the description is of less importance than the need for consistency and completeness. Most often this component of the protocol follows the following sequence: external examination, internal or in situ examination of the body cavities, and descriptions of the individual organs and tissues. Include weights and measurements as appropriate. Detailed descriptions of normal organs are of little value.[2] It may be of value to include diagrams in the protocol. If a diagram is included, it is useful to completely describe the diagram's content in words, since some copying methods may not reproduce pictures well. Organs that are examined after a period of fixation, such as the brain, may be described in a separate note. A template of suggested headings for autopsy reporting are contained in Table 1.

Microscopy Findings

The extent of description of the histologic findings to be included in the protocol may vary. Make a record of the organs and tissues examined histologically. As in the case of the gross autopsy findings, confine microscopic notes to an objective record of observations. Detailed histologic descriptions are probably of little value. A key or summary noting block and slide designations is a requirement of the CAP.

Table 1. Suggested Headings for Autopsy Reporting*

Basic demographic information
Reasons for performing an examination
Historical summary
Examination type, date, time, place, assistants, attenders
Presentation of the body, clothing, personal effects, and associated items
Diagnostic and therapeutic devices and markings
Features of identification
Postmortem changes
Postmortem imaging studies
External examination
Internal examination
Summary of injuries
Preliminary findings and diagnoses
Ancillary procedures
Description of histologic findings
Results of ancillary procedures
Findings and diagnoses
Summary and comments
Cause-of-death statement
Amendments

*The headings are organized so findings may be dictated as the various phases of the investigation are performed. Each heading should be included in each autopsy report, and ''none,'' ''not applicable,'' or other wording, such as ''see medical record,'' should be stated if specific information is not included under the heading. It is not necessary that the headings always appear in the order listed above.

Ancillary Studies

Include any reports of microbiologic, chemical, histochemical, toxicologic, and immunologic analyses; electron microscopy; cytogenetic studies; or of any other studies performed on materials from the autopsy. If copies of photographs or radiographs are available but are not included in the protocol, make a note of their existence, location, and content.

Clinical History

Clinical history may be a part of the autopsy report, but it should be no more than a summary of factual material contained in the patient chart. Review of the chart and discussions with the attending physicians should be done prior to beginning the autopsy. Writing a clinical history summary enables the pathologist to address specific concerns and questions of the clinical staff regarding a patient's disease processes. Items to be considered include the following: age, gender, ethnic origin, occupation, established medical conditions and diagnoses, risk factors or characteristics pertinent to the disease processes identified, hospitalizations, surgeries, medications, and pertinent laboratory data.

Alternatively, the pertinent historical items can be incorporated into the clinicopathologic correlative summary and comments (see following section), rather than being written as a separate part of the autopsy protocol. In this case, general statements about the patient's clinical history can be used to introduce the clinicopathologic summary. Then, as each major disease process is discussed in greater detail, relevant medical history (including symptoms,

physical findings, laboratory and other diagnostic studies, and therapy) may be incorporated.

Clinicopathologic Correlative Summary and Comments

A clinicopathologic summary can be described as an objective correlation of clinical findings with gross and microscopic findings and the results of other studies performed at autopsy to describe the death and to elucidate the sequence of events leading to death. A discussion or listing of the underlying cause or causes of death and the immediate cause should be included in this summary.

Controversy has arisen over the desirability of including a clinicopathologic summary in the autopsy protocol. However, interpretation or explanation of autopsy findings may be crucial for educational and quality improvement purposes and to further explain the cause and manner of the patient's death. Anyone reading an autopsy report hopes to learn the cause and manner of the patient's death. It is our opinion that a clinicopathologic summary built around objective documentation is an appropriate and important endeavor for the pathologist. Unfounded speculations and judgments, especially those regarding the abilities or actions of caregivers, should be omitted from the clinicopathologic correlation.

INDEXING AND RETRIEVAL OF AUTOPSY REPORTS

Autopsy reports should be prepared in such a manner that they can be indexed and retrieved both by the patient's name and by diagnosis, using computer software. The autopsy face sheet should contain the essential information required for indexing by diagnosis. For this reason, the autopsy face sheet, and preferably the entire autopsy report, should be prepared on a word processor or laboratory information system. The computer-readable autopsy report should be available as single reports or as a collection of all reports, as appropriate, and should be stored in perpetuity. Commercial vendors may offer either natural-language or code-based indexing and retrieval capabilities as a part of their laboratory information systems.

In addition to institutional needs for case indexing and retrieval, the autopsy face sheet should be prepared in such a way that a summary of demographics and major diagnoses can be extracted from the face sheet for extrainstitutional clinicopathologic, epidemiologic, and health policy research, while protecting patient, caregiver, and institutional confidentiality. To accomplish this, autopsy face sheets should be downloadable as ASCII (American Standard Code for Information Interchange) files. ASCII is a coding system in which all the alphabetic, numeric, punctuation, and common formatting characters are expressed as values between 0 and 127. Many commercial word processors and laboratory information systems employ idiosyncratic or proprietary formatting of text, but these systems usually have an option for downloading this text as ASCII files. Pathology departments should have the capability to transfer cases to off-line personal computers for conducting outcome studies.

An example of an autopsy database that is available to the public at large is the Johns Hopkins Autopsy Resource, a collection of more than 50 000 autopsy face sheets contributed by The Johns Hopkins Medical Institutions.[8,14] This autopsy database is entirely in the public domain and is readily distributed. The Johns Hopkins Autopsy Resource is available on the Internet World Wide Web at the following Universal Resource Locator (URL): http://www.med.jhu.edu/pathology/jhar.html.

The demographics section of the autopsy face sheet should contain 2 subsections: public demographics and private demographics. Public demographics should contain as much information as can be published reasonably for medical investigations, balanced against the need to protect patient confidentiality. The following demographics may be published: an encrypted patient identifier; the patient's age in years, with optional greater precision for pediatric autopsies; race/ethnicity; sex; year of autopsy; location; and occupation. It is possible to include these demographics, abstracted from face sheet records, in public databases without sacrificing patient confidentiality. As an example, in the Johns Hopkins Autopsy Resource the patient's public identifiers are encrypted by a brokered encryption system that requires several persons or entities to decrypt, namely, the medical researcher requesting the patient's identity, the database administrator, the originating institution's Institutional Review Board, and a document attesting to informed consent by the next of kin.[14]

The nondemographic portion of the autopsy face sheet should consist of 4 sections, all written in medical English. These 4 sections are clinical history, autopsy diagnoses and findings, cause of death, and summary statement. The following guidelines conform to published methods for preparing computerized surgical pathology reports.[15] By following these guidelines, face sheets can be automatically (via computer) indexed and merged into a database.[15,16]

1. The autopsy face sheet should consist entirely of terms, short phrases, or sentences in correctly spelled English, to allow for computer encoding of diagnoses. Long sentences, sentences with dependent clauses, run-on sentences, and sentences with ambiguous negatives tend to confuse some computer encoders.

2. Every sentence should have an unambiguous sentence terminator, a seemingly trivial requirement with great practical importance. A computer encoder reads through a text file, dividing the text into groups of related words, ie, sentences or phrases that convey a complete statement. The encoder then performs grammatical operations that put words and phrases into a standard terminology, such as SNOMED (Standardized Nomenclature of Medicine) International. If this were not done, there would be no way of relating terms logically. For example, consider the following face sheet listing:

Ischemic heart disease. Adenocarcinoma of colon, 12.5 cm in diameter. P.I.N. of prostate.

The encoder must be able to separate each of the included phrases to ensure that heart (topography) is associated with ischemia (morphology) and not with adenocarcinoma (morphology) or with colon (topography). The encoder must determine that there are 3 complete diagnostic phrases included in the text. In this example, the period alone is not a suitable separator, because its use is ambiguous, serving as a sentence-terminator in the first and second lines, as a decimal point in the first line, and as an abbreviation marker in the second line. For autopsy face sheets, all diagnostic phrases should terminate with a period followed by a new line, and abbreviations such as P.I.N. should be fully expanded. In the above example, an adequate face sheet text would read as follows:

Ischemic heart disease.
Adenocarcinoma of colon, 12.5 cm diameter.
Prostatic intraepithelial neoplasia of prostate.

The encoder then separates diagnostic phrases based on the combined occurrence of a period (.) followed by a new line. This is our recommendation for any department preparing autopsy face sheets for inclusion in a database; this format would require face sheets to consist of lists of diagnostic phrases.

3. All medically significant concepts in an autopsy face sheet should be translatable into a standardized nomenclature, such as SNOMED. It is not necessary to write the autopsy face sheet with SNOMED nomenclature or SNOMED codes. It is preferable to write each autopsy face sheet in ordinary medical English, so that the autopsy face sheet can be re-coded whenever SNOMED (or other standardized coding nomenclatures) undergo revision.

4. Each anatomic diagnosis must include an anatomic site (topography) and a morphology or disease. (The clinical history section may contain symptoms not referable to a particular anatomic site, eg, cachexia, malaise, or fever.) The body site must be determinable by the computer-encoder from words within the same sentence. For example,

ACCEPTABLE:	REFERS TO:
Cholecystitis.	Gallbladder.
Colovesical fistula.	Colon, urinary bladder.
UNACCEPTABLE:	REFERS TO:
Bladder calculus.	Urinary bladder? Gallbladder?
Ventricular hemorrhage.	Heart? Brain?
Cervical mass.	Uterus? Neck?

COMMUNICATION: COMPLETION AND DISTRIBUTION OF REPORTS

Communication of provisional autopsy findings should be prompt.[17,18] Ideally, attending physicians, residents, and medical students responsible for the patient's care will be present at the time of autopsy to observe the findings firsthand and discuss them with the pathologist. Busy schedules often preclude the presence of attending physicians at the autopsy. In this situation, a telephone call from the pathologist to the clinician immediately following the autopsy is highly recommended as an alternative method for rapidly communicating the results. Specifically address questions raised by the clinicians prior to the autopsy. Physicians appreciate being informed of the provisional autopsy findings before they talk with the family. Since family members might contact the physician within a short time following the autopsy, prompt communication of autopsy findings is important. Posting results on the institutional information system is an acceptable method of communication.

According to current guidelines from the CAP, the written provisional report is to be submitted within 2 working days. The final report is to be submitted within 30 working days for routine cases and within 90 working days for complicated cases.[19] If the autopsy diagnoses and findings are provisional, that fact should be indicated on the face sheet.

Several key dates should be included in reports, including the date that the provisional list of autopsy diagnoses is released, the date that the final listing of autopsy diagnoses is released, and the date that the body of the autopsy (containing all the described components of the autopsy report) is released. The autopsy release date, also called the autopsy completion date, should be included. It is important that every institution that performs autopsies has a clearly defined concept of an autopsy release date, as there are legal, administrative, and medical consequences for any method by which the date is assigned. Pathologists who believe that the autopsy is not complete until every ordered test and study is completed, every clinical and pathologic consultation is collected, and every interpretive disagreement is resolved are likely to have protracted autopsy turnaround times. It is easy to argue that autopsies are never complete, as additional diagnostic opportunities may arise that will cause cases to be re-examined years after the autopsy was begun. Despite the open-ended nature of autopsies, the CAP requires a 30-working-day turnaround time for routine autopsies. Institutions may have their own standards that are shorter than CAP requirements. A more accurate and practical term than the autopsy completion date is the autopsy release date. The autopsy release date is the date that the pathologist releases all the completed autopsy findings, including the so-called Final Autopsy Diagnoses, into the medical record. Once the autopsy is released, supplementary reports may be added to the autopsy report, but the text of the released autopsy report should not be changed.

Supplemental reports added to a released autopsy may consist of neuropathology findings, microbiology findings, discussions of issues raised at quality assurance conferences that refer to the autopsy, electron micrographs, and amended diagnoses. All supplemental reports should be dated.

There will be occasions when the pathologist determines that an autopsy should not be released until further information is received, even when this lengthens the turnaround time of the autopsy. For example, the pathologist may decide that the cause of death cannot be determined without a full evaluation of neuropathology and special studies of brain slides. The pathologist might decide that it would be pointless and misleading to release the autopsy while these studies are still pending. In such cases, the pathologist should not feel obligated to release the autopsy. On the other hand, if the cause of death is apparent, the pathologist might release the autopsy report rapidly and add the results of pending studies as supplemental reports as they become available.

Occasions will arise when the pathologist wishes to modify an autopsy report. Once an autopsy is released, any modification should be added in a manner that ensures that anyone reading the modified autopsy report understands that a modification has occurred and also understands how the modified autopsy report differs from the original report. In the absence of such documentation, multiple and substantially different autopsy reports may exist for the same patient, issued by the same department, leading to regrettable legal and emotional consequences. The easiest way to deal with modifications of an autopsy report is with attached supplemental reports that leave the original released autopsy report intact. The pathologist responsible for the autopsy should sign the autopsy report. When a supplemental report is produced, it should become a part of the original report, along with all other supplemental reports issued for the case. The supplemental report(s) should be signed and dated by the responsible pathologist. The signature may take the form of an

Table 2. Suggested Letter to Next of Kin or Responsible Family Member

Dear (name of individual who authorized the autopsy):

This letter is an expression of our sympathy at the recent death of your (relationship of the deceased to the letter recipient). We want to thank you for allowing the physicians of (name of health care institution) to perform an autopsy.

The autopsy examination is performed under the direction of the pathologists in (name of health care institution). This examination is designed to enable us to make a detailed analysis of the cause of death, the nature of the disease(s), and the effect of treatment. The information that this examination provides may be important in providing the patient's family and physicians with a better understanding of the cause of death and medical condition, and may aid in the advancement of medical science.

A preliminary report of the autopsy findings will be sent to your physician, (physician's name), in (physician's city, physician's office phone number) within a few days. The final detailed report, however, must await the results of microscopic examinations, a review of your (relationship of deceased to the letter recipient) illness or condition, and special studies when indicated. This final report will also be sent to your physician upon completion. The results of the autopsy may be discussed with your physician or, if you desire, with us.

Sincerely,

electronic signature (unique personal code), and this electronic signature should not be delegated to any other individual. Departments should develop a reliable method to ensure the authenticity of all dates and signatures.

Attending physicians responsible for the patient's care, as well as other physicians, consultants, and referring physicians, receive autopsy results. In teaching institutions, residents involved in the patient's care also receive a report. Physicians who request autopsy reports but who were not directly involved in the patient's care may be directed to contact the patient's representative for proper authorization. To readily identify physicians who are to receive a copy of the autopsy report, a line for listing the names of these physicians may be included on the autopsy permission form.

A request from the family is a special case. Routine submission of intact autopsy reports to the family is often not very helpful, since these medical documents contain technical language that may be misunderstood or misinterpreted. It is important, however, for the family to receive timely useful information concerning the autopsy. The pathologist may wish to send a letter, such as the one shown in Table 2, to the next of kin or other responsible family member if this seems appropriate for the overall circumstances. In this case, the pathologist should also provide a copy of the letter to the attending physician. Alternatively, the pathologist may draft a letter for the family, to be cosigned with the attending physician.

Distribution of the autopsy report is determined by local practice and applicable statutes within the jurisdiction. Many institutions regard the autopsy report as a component of the patient's medical record and, therefore, subject to the usual confidentiality considerations. Issues surrounding the confidentiality of human immunodeficiency virus status on autopsy reports has been addressed by the Council on Ethical and Judicial Affairs of the American Medical Association, and its report should be consulted regarding questions in this area.[20] In brief, the council recommends that physicians maintain the confidentiality of human immunodeficiency virus status on autopsy reports to the greatest extent possible, since this information is part of the medical record. However, pathologists must be aware of their reporting obligations to public health authorities and other parties at risk, as mandated under local law.

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