Public Law 100-578
100th Congress

An Act

To amend the Public Health Service Act to revise the authority for the regulation of clinical laboratories.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.
This Act may be cited as the "Clinical Laboratory Improvement Amendments of 1988".

SEC. 2. REVISION OF AUTHORITY.
Section 353 of the Public Health Service Act (42 U.S.C. 263a) is amended to read as follows:

"CERTIFICATION OF LABORATORIES

"Sec. 353. (a) Definition.—As used in this section, the term 'laboratory' or 'clinical laboratory' means a facility for the biological, microbiological, serological, chemical, immuno-hematological, hematological, biophysical, cytological, pathological, or other examination of materials derived from the human body for the purpose of providing information for the diagnosis, prevention, or treatment of any disease or impairment of, or the assessment of the health of, human beings.

"(b) Certificate Requirement.—No person may solicit or accept materials derived from the human body for laboratory examination or other procedure unless there is in effect for the laboratory a certificate issued by the Secretary under this section applicable to the category of examinations or procedures which includes such examination or procedure.

"(c) Issuance and Renewal of Certificates.—
"(1) In General.—The Secretary may issue or renew a certificate for a laboratory only if the laboratory meets the requirements of subsection (d).

"(2) Term.—A certificate issued under this section shall be valid for a period of 2 years or such shorter period as the Secretary may establish.

"(d) Requirements for Certificates.—
"(1) In General.—A laboratory may be issued a certificate or have its certificate renewed if—

"(A) the laboratory submits (or if the laboratory is accredited under subsection (e), the accreditation body which accredited the laboratory submits), an application—

"(i) in such form and manner as the Secretary shall prescribe,

"(ii) that describes the characteristics of the laboratory examinations and other procedures performed by the laboratory including—
"(I) the number and types of laboratory examinations and other procedures performed,

"(II) the methodologies for laboratory examinations and other procedures employed, and

"(III) the qualifications (educational background, training, and experience) of the personnel directing and supervising the laboratory and performing the laboratory examinations and other procedures, and

"(iii) that contains such other information as the Secretary may require to determine compliance with this section, and

the laboratory agrees to provide to the Secretary (or if the laboratory is accredited, to the accreditation body which accredited it) a description of any change in the information submitted under clause (ii) not later than 6 months after the change was put into effect,

"(B) the laboratory provides the Secretary—

"(i) with satisfactory assurances that the laboratory will be operated in accordance with standards issued by the Secretary under subsection (f), or

"(ii) with proof of accreditation under subsection (e),

"(C) the laboratory agrees to permit inspections by the Secretary under subsection (g),

"(D) the laboratory agrees to make records available and submit reports to the Secretary as the Secretary may reasonably require, and

"(E) the laboratory agrees to treat proficiency testing samples in the same manner as it treats materials derived from the human body referred to it for laboratory examinations or other procedures in the ordinary course of business.

"(2) REQUIREMENTS FOR CERTIFICATES OF WAIVER.—

"(A) IN GENERAL.—A laboratory which only performs laboratory examinations and procedures described in paragraph (3) shall be issued a certificate of waiver or have its certificate of waiver renewed if—

"(i) the laboratory submits an application—

"(I) in such form and manner as the Secretary shall prescribe,

"(II) that describes the characteristics of the laboratory examinations and other procedures performed by the laboratory, including the number and types of laboratory examinations and other procedures performed, the methodologies for laboratory examinations and other procedures employed, and the qualifications (educational background, training, and experience) of the personnel directing and supervising the laboratory and performing the laboratory examinations and other procedures, and

"(III) that contains such other information as the Secretary may reasonably require to determine compliance with this section, and

"(ii) the laboratory agrees to make records available and submit reports to the Secretary as the Secretary may require.

"(B) CHANGES.—If a laboratory makes changes in the examinations and other procedures performed by it only
with respect to examinations and procedures which are described in paragraph (3), the laboratory shall report such changes to the Secretary not later than 6 months after the change has been put into effect. If a laboratory proposes to make changes in the examinations and procedures performed by it such that the laboratory will perform an examination or procedure not described in paragraph (3), the laboratory shall report such change to the Secretary before the change takes effect.

"(C) Effect.—Subsections (f) and (g) shall not apply to a laboratory to which has been issued a certificate of waiver.

"(3) Examinations and Procedures.—The examinations and procedures identified in paragraph (2) are simple laboratory examinations and procedures which, as determined by the Secretary, have an insignificant risk of an erroneous result, including those which—

"(A) have been approved by the Food and Drug Administration for home use,

"(B) employ methodologies that are so simple and accurate as to render the likelihood of erroneous results negligible, or

"(C) the Secretary has determined pose no reasonable risk of harm to the patient if performed incorrectly.

"(4) Definition.—As used in this section, the term 'certificate' includes a certificate of waiver issued under paragraph (2).

"(e) Accreditation.—

"(1) In General.—A laboratory may be accredited for purposes of obtaining a certificate if the laboratory—

"(A) meets the standards of an approved accreditation body, and

"(B) authorizes the accreditation body to submit to the Secretary (or such State agency as the Secretary may designate) such records or other information as the Secretary may require.

"(2) Approval of Accreditation Bodies.—

"(A) In General.—The Secretary may approve a private nonprofit organization to be an accreditation body for the accreditation of laboratories if—

"(i) using inspectors qualified to evaluate the methodologies used by the laboratories in performing laboratory examinations and other procedures, the accreditation body agrees to inspect a laboratory for purposes of accreditation with such frequency as determined by Secretary,

"(ii) the standards applied by the body in determining whether or not to accredit a laboratory are equal to or more stringent than the standards issued by the Secretary under subsection (f),

"(iii) there is adequate provision for assuring that the standards of the accreditation body continue to be met by the laboratory,

"(iv) in the case of any laboratory accredited by the body which has had its accreditation denied, suspended, withdrawn, or revoked or which has had any other action taken against it by the accrediting body, the accrediting body agrees to submit to the Secretary the
name of such laboratory within 30 days of the action taken,
“(v) the accreditation body agrees to notify the Secretary at least 30 days before it changes its standards, and
“(vi) if the accreditation body has its approval withdrawn by the Secretary, the body agrees to notify each laboratory accredited by the body of the withdrawal within 10 days of the withdrawal.
“(B) CRITERIA AND PROCEDURES.—The Secretary shall promulgate criteria and procedures for approving an accreditation body and for withdrawing such approval if the Secretary determines that the accreditation body does not meet the requirements of subparagraph (A).
“(C) EFFECT OF WITHDRAWAL OF APPROVAL.—If the Secretary withdraws the approval of an accreditation body under subparagraph (B), the certificate of any laboratory accredited by the body shall continue in effect for 60 days after the laboratory receives notification of the withdrawal of the approval, except that the Secretary may extend such period for a laboratory if it determines that the laboratory submitted an application for accreditation or a certificate in a timely manner after receipt of the notification of the withdrawal of approval. If an accreditation body withdraws or revokes the accreditation of a laboratory, the certificate of the laboratory shall continue in effect—
“(i) for 45 days after the laboratory receives notice of the withdrawal or revocation of the accreditation, or
“(ii) until the effective date of any action taken by the Secretary under subsection (i).
“(D) EVALUATIONS.—The Secretary shall evaluate annually the performance of each approved accreditation body by—
“(i) inspecting under subsection (g) a sufficient number of the laboratories accredited by such body to allow a reasonable estimate of the performance of such body, and
“(ii) such other means as the Secretary determines appropriate.
“(3) REPORT.—The Secretary shall annually prepare and submit, to the Committee on Energy and Commerce of the House of Representatives and the Committee on Labor and Human Resources of the Senate, a report that describes the results of the evaluation conducted under paragraph (2)(D).
“(f) STANDARDS.—
“(1) IN GENERAL.—The Secretary shall issue standards to assure consistent performance by laboratories issued a certificate under this section of valid and reliable laboratory examinations and other procedures. Such standards shall require each laboratory issued a certificate under this section—
“(A) to maintain a quality assurance and quality control program adequate and appropriate for the validity and reliability of the laboratory examinations and other procedures of the laboratory and to meet requirements relating to the proper collection, transportation, and storage of specimens and the reporting of results,
“(B) to maintain records, equipment, and facilities necessary for the proper and effective operation of the laboratory,

“(C) in performing and carrying out its laboratory examinations and other procedures, to use only personnel meeting such qualifications as the Secretary may establish for the direction, supervision, and performance of examinations and procedures within the laboratory, which qualifications shall take into consideration competency, training, experience, job performance, and education and which qualifications shall, as appropriate, be different on the basis of the type of examinations and procedures being performed by the laboratory and the risks and consequences of erroneous results associated with such examinations and procedures,

“(D) to qualify under a proficiency testing program meeting the standards established by the Secretary under paragraph (3), and

“(E) to meet such other requirements as the Secretary determines necessary to assure consistent performance by such laboratories of accurate and reliable laboratory examinations and procedures.

“(2) CONSIDERATIONS.—In developing the standards to be issued under paragraph (1), the Secretary shall, within the flexibility provided under subparagraphs (A) through (E) of paragraph (1), take into consideration—

“(A) the examinations and procedures performed and the methodologies employed,

“(B) the degree of independent judgment involved,

“(C) the amount of interpretation involved,

“(D) the difficulty of the calculations involved,

“(E) the calibration and quality control requirements of the instruments used,

“(F) the type of training required to operate the instruments used in the methodology, and

“(G) such other factors as the Secretary considers relevant.

“(3) PROFICIENCY TESTING PROGRAM.—

“(A) IN GENERAL.—The Secretary shall establish standards for the proficiency testing programs for laboratories issued a certificate under this section which are conducted by the Secretary, conducted by an organization approved under subparagraph (C), or conducted by an approved accrediting body. The standards shall require that a laboratory issued a certificate under this section be tested for each examination and procedure conducted within a category of examinations or procedures for which it has received a certificate, except for examinations and procedures for which the Secretary has determined that a proficiency test cannot reasonably be developed. The testing shall be conducted on a quarterly basis, except where the Secretary determines for technical and scientific reasons that a particular examination or procedure may be tested less frequently (but not less often than twice per year).

“(B) CRITERIA.—The standards established under subparagraph (A) shall include uniform criteria for acceptable performance under a proficiency testing program,
based on the available technology and the clinical relevance of the laboratory examination or other procedure subject to such program. The criteria shall be established for all examinations and procedures and shall be uniform for each examination and procedure. The standards shall also include a system for grading proficiency testing performance to determine whether a laboratory has performed acceptably for a particular quarter and acceptably for a particular examination or procedure or category of examination or procedure over a period of successive quarters.

"(C) APPROVED PROFICIENCY TESTING PROGRAMS.—For the purpose of administering proficiency testing programs which meet the standards established under subparagraph (A), the Secretary shall approve a proficiency testing program offered by a private nonprofit organization or a State if the program meets the standards established under subparagraph (A) and the organization or State provides technical assistance to laboratories seeking to qualify under the program. The Secretary shall evaluate each program approved under this subparagraph annually to determine if the program continues to meet the standards established under subparagraph (A) and shall withdraw the approval of any program that no longer meets such standards.

"(D) ON-SITE TESTING.—The Secretary shall perform, or shall direct a program approved under subparagraph (C) to perform, onsite proficiency testing to assure compliance with the requirements of subsection (d)(5). The Secretary shall perform, on an onsite or other basis, proficiency testing to evaluate the performance of a proficiency testing program approved under subparagraph (C) and to assure quality performance by a laboratory.

"(E) TRAINING, TECHNICAL ASSISTANCE, AND ENHANCED PROFICIENCY TESTING.—The Secretary may, in lieu of or in addition to actions authorized under subsection (h), (i), or (j), require any laboratory which fails to perform acceptably on an individual examination and procedure or a category of examination and procedures—

"(i) to undertake training and to obtain the necessary technical assistance to meet the requirements of the proficiency testing program,

"(ii) to enroll in a program of enhanced proficiency testing, or

"(iii) to undertake any combination of the training, technical assistance, or testing described in clauses (i) and (ii).

"(F) TESTING RESULTS.—The Secretary shall establish a system to make the results of the proficiency testing programs subject to the standards established by the Secretary under subparagraph (A) available, on a reasonable basis, upon request of any person. The Secretary shall include with results made available under this subparagraph such explanatory information as may be appropriate to assist in the interpretation of such results.

"(4) NATIONAL STANDARDS FOR QUALITY ASSURANCE IN CYTOLOGY SERVICES.—

(A) ESTABLISHMENT.—The Secretary shall establish national standards for quality assurance in cytology services
designed to assure consistent performance by laboratories of valid and reliable cytological services.

"(B) STANDARDS.—The standards established under subparagraph (A) shall include—

"(i) the maximum number of cytology slides that any individual may screen in a 24-hour period,

"(ii) requirements that a clinical laboratory maintain a record of (I) the number of cytology slides screened during each 24-hour period by each individual who examines cytology slides for the laboratory, and (II) the number of hours devoted during each 24-hour period to screening cytology slides by such individual,

"(iii) criteria for requiring rescreening of cytological preparations, such as (I) random rescreening of cytology specimens determined to be in the benign category, (II) focused rescreening of such preparations in high risk groups, and (III) for each abnormal cytological result, rescreening of all prior cytological specimens for the patient, if available,

"(iv) periodic confirmation and evaluation of the proficiency of individuals involved in screening or interpreting cytological preparations, including announced and unannounced on-site proficiency testing of such individuals, with such testing to take place, to the extent practicable, under normal working conditions,

"(v) procedures for detecting inadequately prepared slides, for assuring that no cytological diagnosis is rendered on such slides, and for notifying referring physicians of such slides,

"(vi) requirements that all cytological screening be done on the premises of a laboratory that is certified under this section,

"(vii) requirements for the retention of cytology slides by laboratories for such periods of time as the Secretary considers appropriate, and

"(viii) standards requiring periodic inspection of cytology services by persons capable of evaluating the quality of cytology services.

"(g) INSPECTIONS.—

"(1) IN GENERAL.—The Secretary may, on an announced or unannounced basis, enter and inspect, during regular hours of operation, laboratories which have been issued a certificate under this section. In conducting such inspections the Secretary shall have access to all facilities, equipment, materials, records, and information that the Secretary determines have a bearing on whether the laboratory is being operated in accordance with this section. As part of such an inspection the Secretary may copy any such material or require it to be submitted to the Secretary. An inspection under this paragraph may be made only upon presenting identification to the owner, operator, or agent in charge of the laboratory being inspected.

"(2) COMPLIANCE WITH REQUIREMENTS AND STANDARDS.—The Secretary shall conduct inspections of laboratories under paragraph (1) to determine their compliance with the requirements of subsection (d) and the standards issued under subsection (f). Inspections of laboratories not accredited under subsection (e) shall be conducted on a biennial basis or with such other
frequency as the Secretary determines to be necessary to assure compliance with such requirements and standards. Inspections of laboratories accredited under subsection (e) shall be conducted on such basis as the Secretary determines is necessary to assure compliance with such requirements and standards.

"(h) INTERMEDIATE SANCTIONS.—

"(1) IN GENERAL.—If the Secretary determines that a laboratory which has been issued a certificate under this section no longer substantially meets the requirements for the issuance of a certificate, the Secretary may impose intermediate sanctions in lieu of the actions authorized by subsection (i).

"(2) TYPES OF SANCTIONS.—The intermediate sanctions which may be imposed under paragraph (1) shall consist of—

"(A) directed plans of correction, 

"(B) civil money penalties in an amount not to exceed $10,000 for each violation listed in subsection (i)(1) or for each day of substantial noncompliance with the requirements of this section, 

"(C) payment for the costs of onsite monitoring, or 

"(D) any combination of the actions described in subparagaphs (A), (B), and (C). 

"(3) PROCEDURES.—The Secretary shall develop and implement procedures with respect to when and how each of the intermediate sanctions is to be imposed under paragraph (1). Such procedures shall provide for notice to the laboratory and a reasonable opportunity to respond to the proposed sanction and appropriate procedures for appealing determinations relating to the imposition of intermediate sanctions.

"(i) SUSPENSION, REVOCATION, AND LIMITATION.—

"(1) IN GENERAL.—Except as provided in paragraph (2), the certificate of a laboratory issued under this section may be suspended, revoked, or limited if the Secretary finds, after reasonable notice and opportunity for hearing to the owner or operator of the laboratory, that such owner or operator or any employee of the laboratory—

"(A) has been guilty of misrepresentation in obtaining the certificate, 

"(B) has performed or represented the laboratory as entitled to perform a laboratory examination or other procedure which is not within a category of laboratory examinations or other procedures authorized in the certificate, 

"(C) has failed to comply with the requirements of subsection (d) or the standards prescribed by the Secretary under subsection (f), 

"(D) has failed to comply with reasonable requests of the Secretary for—

"(i) any information or materials, or 

"(ii) work on materials, 

that the Secretary concludes is necessary to determine the laboratory's continued eligibility for its certificate or continued compliance with the Secretary's standards under subsection (f), 

"(E) has refused a reasonable request of the Secretary, or any Federal officer or employee duly designated by the Secretary, for permission to inspect the laboratory and its
operations and pertinent records during the hours the laboratory is in operation,

"(F) has violated or aided and abetted in the violation of any provisions of this section or of any regulation promulgated thereunder, or

"(G) has not complied with an intermediate sanction imposed under subsection (h).

"(2) Action before a hearing.—If the Secretary determines that—

"(A) the failure of a laboratory to comply with the standards of the Secretary under subsection (f) presents an imminent and serious risk to human health, or

"(B) a laboratory has engaged in an action described in subparagraph (D) or (E) of paragraph (1), the Secretary may suspend or limit the certificate of the laboratory before holding a hearing under paragraph (1) regarding such failure or refusal. The opportunity for a hearing shall be provided no later than 60 days from the effective date of the suspension or limitation. A suspension or limitation under this paragraph shall stay in effect until the decision of the Secretary made after the hearing under paragraph (1).

"(3) Ineligibility to own or operate laboratories after revocation.—No person who has owned or operated a laboratory which has had its certificate revoked may, within 2 years of the revocation of the certificate, own or operate a laboratory for which a certificate has been issued under this section. The certificate of a laboratory which has been excluded from participation under the medicare program under title XVIII of the Social Security Act because of actions relating to the quality of the laboratory shall be suspended for the period the laboratory is so excluded.

"(4) Improper referrals.—Any laboratory that the Secretary determines intentionally refers its proficiency testing samples to another laboratory for analysis shall have its certificate revoked for at least one year and shall be subject to appropriate fines and penalties as provided for in subsection (h).

"(j) Injunctions.—Whenever the Secretary has reason to believe that continuation of any activity by a laboratory would constitute a significant hazard to the public health the Secretary may bring suit in the district court of the United States for the district in which such laboratory is situated to enjoin continuation of such activity. Upon proper showing, a temporary injunction or restraining order against continuation of such activity pending issuance of a final order under this subsection shall be granted without bond by such court.

"(k) Judicial review.—

"(1) Petition.—Any laboratory which has had an intermediate sanction imposed under subsection (h) or has had its certificate suspended, revoked, or limited under subsection (i) may, at any time within 60 days after the date the action of the Secretary under subsection (i) or (h) becomes final, file a petition with the United States court of appeals for the circuit wherein the laboratory has its principal place of business for judicial review of such action. As soon as practicable after receipt of the petition, the clerk of the court shall transmit a copy of the petition to the Secretary or other officer designated by the Secretary for that purpose. As soon as practicable after receipt

---

Safety.

Records.
of the copy, the Secretary shall file in the court the record on
which the action of the Secretary is based, as provided in section
2112 of title 28, United States Code.

"(2) ADDITIONAL EVIDENCE.—If the petitioner applies to the
court for leave to adduce additional evidence, and shows to the
satisfaction of the court that such additional evidence is mate-
rial and that there were reasonable grounds for the failure to
adduce such evidence in the proceeding before the Secretary,
the court may order such additional evidence (and evidence in
rebuttal of such additional evidence) to be taken before the
Secretary, and to be adduced upon the hearing in such manner
and upon such terms and conditions as the court may deem
proper. The Secretary may modify the findings of the Secretary
as to the facts, or make new findings, by reason of the additional
evidence so taken, and the Secretary shall file such modified or
new findings, and the recommendations of the Secretary, if any,
for the modification or setting aside of his original action, with
the return of such additional evidence.

"(3) JUDGMENT OF COURT.—Upon
the filing of the petition
referred to in paragraph (1), the court shall have jurisdiction to
affirm the action, or to set it aside in whole or in part, tempo-
rarily or permanently. The findings of the Secretary as to the
facts, if supported by substantial evidence, shall be conclusive.

"(4) FINALITY OF JUDGMENT.—The
judgment of the court
affirming or setting aside, in whole or in part, any such action
of the Secretary shall be final, subject to review by the Supreme
Court of the United States upon certiorari or certification as
provided in section 1254 of title 28, United States Code.

"(l) SANCTIONS.—Any person who intentionally violates any
requirement of this section or any regulation promulgated there-
under shall be imprisoned for not more than one year or fined under
title 18, United States Code or both, except that if the conviction is
for a second or subsequent violation of such a requirement such
person shall be imprisoned for not more than 3 years or fined in
accordance with title 18, United States Code or both.

"(m) FEES.—

"(1) CERTIFICATE FEES.—The
Secretary shall require payment
of fees for the issuance and renewal of certificates, except that
the Secretary shall only require a nominal fee for the issuance
and renewal of certificates of waiver.

"(2) ADDITIONAL FEES.—The Secretary shall require the pay-
ment of fees for inspections of laboratories which are not
accredited and for the cost of performing proficiency testing on
laboratories which do not participate in proficiency testing
programs approved under subsection (f)(3)(C).

"(3) CRITERIA.—

"(A) FEES UNDER PARAGRAPH (1).—Fees imposed under
paragraph (1) shall be sufficient to cover the general costs
of administering this section, including evaluating and
monitoring proficiency testing programs approved under
subsection (f) and accrediting bodies and implementing and
monitoring compliance with the requirements of this
section.

"(B) FEES UNDER PARAGRAPH (2).—Fees imposed under
paragraph (2) shall be sufficient to cover the cost of the
Secretary in carrying out the inspections and proficiency
testing described in paragraph (2).
“(C) Fees imposed under paragraphs (1) and (2).—Fees imposed under paragraphs (1) and (2) shall vary by group or classification of laboratory, based on such considerations as the Secretary determines are relevant, which may include the dollar volume and scope of the testing being performed by the laboratories.

“(n) Information.—On April 1, 1990 and annually thereafter, the Secretary shall compile and make available to physicians and the general public information, based on the previous calendar year, which the Secretary determines is useful in evaluating the performance of a laboratory, including—

“(1) a list of laboratories which have been convicted under Federal or State laws relating to fraud and abuse, false billings, or kickbacks,

“(2) a list of laboratories—

“(A) which have had their certificates revoked, suspended, or limited under subsection (i), or

“(B) which have been the subject of a sanction under subsection (l),

“(3) a list of laboratories subject to intermediate sanctions under subsection (h) together with a statement of the reasons for the sanctions,

“(4) a list of laboratories whose accreditation has been withdrawn or revoked together with a statement of the reasons for the withdrawal or revocation,

“(5) a list of laboratories against which the Secretary has taken action under subsection (j) together with a statement of the reasons for such action, and

“(6) a list of laboratories which have been excluded from participation under title XVIII or XIX of the Social Security Act.

The information to be compiled under paragraphs (1) through (6) shall be information for the calendar year preceding the date the information is to be made available to the public and shall be accompanied by such explanatory information as may be appropriate to assist in the interpretation of the information compiled under such paragraphs.

“(o) Delegation.—In carrying out this section, the Secretary may, pursuant to agreement, use the services or facilities of any Federal or State or local public agency or nonprofit private organization, and may pay therefor in advance or by way of reimbursement, and in such installments, as the Secretary may determine.

“(p) State Laws.—

“(1) Except as provided in paragraph (2), nothing in this section shall be construed as affecting the power of any State to enact and enforce laws relating to the matters covered by this section to the extent that such laws are not inconsistent with this section or with the regulations issued under this section.

“(2) If a State enacts laws relating to matters covered by this section which provide for requirements equal to or more stringent than the requirements of this section or than the regulations issued under this section, the Secretary may exempt clinical laboratories in that State from compliance with this section.
"(q) Consultations.—In carrying out this section, the Secretary
shall consult with appropriate private organizations and public
agencies."

SEC. 3. EFFECTIVE DATE.

Subsections (g)(1), (h), (i), (j), (k), (l), and (m) of section 353 of the
Public Health Service Act, as amended by section 101, shall take
effect January 1, 1989, except that any reference in such subsections
to the standards established under subsection (f) shall be considered
a reference to the standards established under subsection (d) of such
section 353, as in effect on December 31, 1988. During the period
beginning January 1, 1989, and ending December 31, 1989, subsections
(a) through (d) and subsections (i) through (l) of such section 353
as in effect on December 31, 1988, shall continue to apply to clinical
laboratories. The remaining subsections of such section 353, as so
amended, shall take effect January 1, 1990, except that subsections
(f)(1)(C) and (g)(2) shall take effect July 1, 1991, with respect to
laboratories which were not subject to the requirements of such
section 353 as in effect on December 31, 1988.

SEC. 4. STUDIES.

(a) Studies.—The Secretary of Health and Human Services, acting
through the Public Health Service, shall conduct studies of—

(1) the validity, reliability, and accuracy of proficiency testing
of clinical laboratories under section 353 of the Public Health
Service Act (as amended by section 2 of this Act),

(2) the correlation between established standards for person­
nel employed in clinical laboratories and the accuracy and
reliability of the results of the tests performed by the labora­
tories which are subject to such standards,

(3) the correlation between internal quality assurance and
quality control programs for clinical laboratories and the
accuracy and reliability of the results of the tests performed by
the laboratories,

(4) the extent and nature of problems in the diagnosis and

treatment of patients caused by inaccurate laboratory test
results, and

(5) the effect on laboratory test accuracy of errors in each of
the components of the clinical testing process, including the
communication between the attending physician and the clini­
cal laboratory which is to conduct the tests, the selection of the
tests to be performed, the limits applicable to the tests selected,
the acquisition of the material to be tested, the transportation
of the material to the laboratory, the storage of the material by
the laboratory, the analysis of the material by the laboratory,
and the reporting of the results by the laboratory.
(b) REPORT.—Not later than May 1, 1990, the Secretary shall report to the Congress the results of the studies conducted under subsection (a).