

The Doctorate in Clinical Laboratory Science: A Projection of Professional Outcomes

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ABBREVIATIONS: ASCLS = American Society for Clinical Laboratory Science; BOD = Board of Directors; CLS = clinical laboratory science; DRC = doctorate review committee; DCLS = doctorate in clinical laboratory science; GTF = graduate task force; PD = professional doctorate; PDTF = Professional Doctorate Task Force

INDEX TERMS: clinical doctorate; clinical laboratory science; evidence-based practice; professional doctorate.

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At the meeting in conjunction with the 2007 ASCLS in San Diego, California, the Board of Directors (BOD) approved a recommendation from the Professional Doctorate Task Force (PDTF) as follows:

“That the ASCLS Board of Directors establish a transition committee during 2007-2008 to include members from the Professional Doctorate Task Force to oversee the continuing development of DCLS programs and practice, as well as the creation of guidelines defining a formal, statutory body to assume responsibility for the permanent oversight of advanced laboratory practice, certification, and recognition.”

The Dialogue and Discussion Section is a forum for editorials, short articles, commentaries, and letters to the editor on clinical laboratory science topics and professional issues of general interest to readers including ASCLS activities and position papers. For more information about submissions to the Dialogue and Discussion section contact: Margaret LeMay-Lewis, Managing Editor, Clinical Laboratory Science Editorial Office, IC Ink, 858 Saint Anne's Drive, Iowa City, IA 52245. (319) 354-3861. ic.ink@mchsi.com

This single step by the governing body of ASCLS has firmly set the direction of clinical laboratory science for the foreseeable future. This direction has placed the responsibility of leadership of the profession with the doctorate, the keystone clinical laboratory science (CLS) practitioner.¹ The purpose of this article is to discuss the projected professional ramifications of this direction. The professional doctorate cycle below serves as a useful organizing construct for this discussion.

As defined elsewhere, progress in the development of the steps in this professional doctorate (PD) cycle process, though displayed as linear, will occur concurrently, at different rates of development, and with a changing focus depending on (sometimes unforeseen) environmental influences, e.g., CMS regulations interpretations, competitive bidding development, changes in the scopes of practice of other healthcare professions.²

The ASCLS PDTF and the NAACLS Graduate Task Force (GTF) began the PD cycle developmental process during the years 2005-2007. A national debate was entertained that resulted in the conceptualization of the professional doctorate, the doctorate in clinical laboratory science (DCLS), as the keystone practitioner of the profession and, as such, responsible for leading in professional issues strategy development related to research, education, and practice. Collaboratively, the two task forces addressed different aspects of PD educational program development. The PDTF developed competencies and curriculum while the GTF developed educational program standards. Educational program standards for the DCLS are available from NAACLS. In addition, a NAACLS Doctorate Review Committee (DRC) has been established to review accreditation applications. The curriculum materials have been distributed for external (non-CLS review) and feedback has been received from a majority of reviewers. Internal reviewers (representatives from each ASCLS scientific assembly section) have been identified, but material distribution to these individuals, as well as consideration of revisions suggested by the external reviewers, await appointment of the professional doctorate transition committee as approved by the ASCLS BOD in July 2007. Included for your preview, however, is Table 1 which contains the curriculum content areas for which course descriptions and instructional/learning

objectives have been developed. Crowning the collaboration of the profession and the accrediting body is the development and public distribution of the Educational Statement Regarding Doctoral Level Clinical Laboratory Science Professionals. This concise statement summarizes the vision for the DCLS and will be circulated within clinical laboratory professional organizations and to the public at large. These advances represent the initiation of Steps 1 and 2 in the PD cycle.

Activities supporting Step 3 began with construction of the DCLS program implementation resources questionnaire, a comprehensive national survey for identification of resources available for DCLS program implementation.³ The DCLS program resources questionnaire may be completed and submitted online. The link to the online survey was distributed through the CLS educators' listserv, and to institutional representatives attending the First and/or Second Professional Doctorate Implementation Forum(s) August 26, 2007 with a response requested by September 30, 2007. If you would like to receive the link and complete the survey

for your institution (one response per institution), contact Dr. Elizabeth Kenimer Leibach at ekenimer@mcg.edu. The hope is that through analysis of survey responses, resources can be located nationally to provide a pool for collaborative DCLS program delivery.

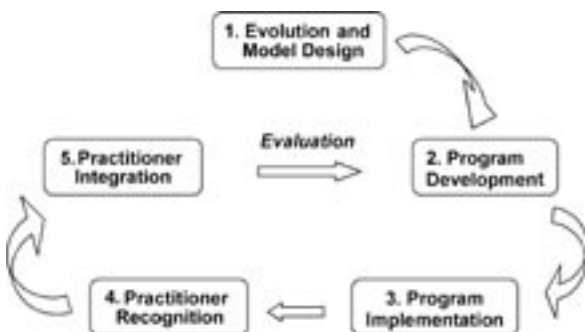
During the Second Professional Doctorate Implementation Forum held in conjunction with the 2007 ASCLS in San Diego, four possible models for national collaboration were discussed and are summarized in Table 2. These program delivery options represent a continuum from total institutional independence in delivery and degree-granting (first option) to complete sharing of program resources and degree-granting (last option). Considerations as to which model best fits a particular institution interested in program implementation should include not only complexities related to program proposal and implementation in that institution, but also politics and cost assessments involved in partnering with separately governed and accredited institutions. For example, Table 3 is a matrix of relative costs associated with each collaborative model, considering proposal development (to include external accreditation issues), institution and system review, available academic resources, student support, and instructional delivery strategies. This matrix suggests (but individual assessments can differ) that the most cost-effective way to deliver collaborative DCLS instruction among different, partnering institutions may be through shared course content development with independent institutional delivery (the lowest relative costs per institution).

Steps 4 and 5 of the PD cycle have not formally begun and their timely commencements are crucial to the establishment, validation, and acceptance of the DCLS. "Practitioner Recognition" includes not only the graduation of DCLS practitioners but also data collection to support evaluation of DCLS contributions to and impact on healthcare delivery and to support job analyses for credentialing. With "Practitioner Integration" will come generation of evidence to be utilized in practice, analyzed to improve educational programs, and communicated throughout the profession and the entire healthcare delivery system. Integration of the DCLS in healthcare delivery will potentially coalesce disparate aspects of the profession (e.g., education, research, practice, administration, manufacturing, regulatory) into one voice for quality for the profession based on evidence of increased positive patient outcomes, cost-effectiveness, and safety. However, there is still concern among some specialties within the profession that the DCLS is not a professional "solution"

Table 1. DCLS curriculum content areas

Group I	Advanced basic sciences
Group II	Patient interactions
Group III	Clinical laboratory diagnosis and therapies
Group IV	Applied statistics, research methods, evidence-based practice
Group V	Education, ethics, policy, and clinical services delivery

Figure 1. The professional doctorate (PD) cycle



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but in fact a potential professional “problem” even though the gap in healthcare delivery that the DCLS will

address has been defined,⁴ interviews with CLS advanced practitioners to collect data describing functions of

the DCLS are underway, and many potential DCLS program applicants have self-identified. Among CLS clinical administrators particularly, there is fear that introduction of the DCLS will negatively impact an already dwindling baccalaureate-level workforce. Responses range from actively opposing existing and proposed state licensing and certification requirements to beginning hospital-based certificate programs in competition with established degree-based programs. The counterpoint to those responses is to begin Steps 4 and 5 by forging partnerships among educational institutions, professional organizations, clinical providers, and industry stakeholders for the purpose of solidifying support for the DCLS. Supporting the DCLS industry-wide will signal to all of healthcare that the CLS profession is unified in the intention of managing quality of laboratory information for the benefit of the public good, and as a profession, is willing to define education, research, and practice (at all career levels) to support that intention. Together representatives from all quarters of the CLS industry can begin crafting strategies for the collection, evaluation, and publication of evidence of the impact of clinical laboratory information and begin designing processes to document the outcomes of this information that the DCLS will, in professional practice, continue to develop, refine, and report.

Considering the venue in which representative professional stakeholders will discuss practitioner recognition and integration will complete discussion of the purpose of this article:

...to consider the professional ramifications of ASCLS BOD approval of a ‘transition committee to oversee the continuing development of DCLS

Table 2. DCLS program delivery models

1. Independent institutional development and delivery
2. Shared course content development with independent delivery
3. Shared course development and delivery with independent degree granted
4. Shared curriculum and consortium degree granted

Table 3. Cost considerations of DCLS program delivery models

RELATIVE COSTS PER INSTITUTION ASSOCIATED WITH:	Individual delivery ¹	Shared courses ²	Common delivery ³	Consortium degree ⁴
PROGRAM PROPOSAL				
Prescribed institutional format	\$\$\$	\$\$	\$\$	\$\$\$\$
Institutional review	\$\$	\$\$	\$\$\$	\$\$\$\$
System review	\$\$	\$\$	\$\$\$	\$\$\$\$
PROGRAM IMPLEMENTATION				
Academic resources	\$\$\$\$	\$\$\$	\$\$	\$\$\$\$
Student support	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
Instructional delivery	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
TOTAL \$	19	17	18	24

1. Independent institutional development and delivery; 2. Shared course content development with independent delivery; 3. Shared course development and delivery with independent degree granted; 4. Shared curriculum and consortium degree granted

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programs and practice, as well as the creation of guidelines defining a formal, statutory body to assume responsibility for the permanent oversight of advanced laboratory practice, certification, and recognition.”

PDTF and GTF prescience in planning foresaw the need for permanent oversight of all doctoral-level activities, i.e., leadership of the profession through direction in education, research, and practice.² The ASCLS transition committee is responsible for developing guidelines to establish the formal statutory body that will oversee these aspects of our advancing practice. The clinical laboratory, by every cost, revenue, and quality measure, is a huge force in healthcare and, ergo, the divisive elements struggling for control of that force are formidable. The mission before the CLS profession is to unify the direction of the industry by focusing on quality in the generation and utilization of laboratory information – and evaluating, documenting, and communicating the impact of education, licensure and certification, workforce, technology, and reimbursement in facilitating the attainment of these goals. With the understanding that DCLS development and practice will define the career ladder and practice for the entire profession, the academy will serve also as the venue for professional dialogue among industry partners

regarding coalescing of support and a unity that will move the profession forward.

Continue to monitor our professional literature and the ASCLS website (www.ascls.org) for progress updates on the structure, function, and membership of the academy and for the latest developments in implementation of the professional doctorate. Please post general comments to the ASCLS forums. (You can find the forums from the “About” link on the title bar of the ASCLS homepage). Your opinions, interest, and support are vital!

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LETTER FROM THE EDITOR

Transitions

SUSAN J LECLAIR

It is with great pleasure that I introduce the incoming editor-in-chief of *Clinical Laboratory Science*, David Fowler PhD CLS(NCA). Most of you already know David from his many and varied activities with ASCLS. A past president of ASCLS, David provided the creative thrust behind the doctorate in clinical laboratory science (DCLS) discussions and planning. Most recently he has served as editor for Research and Reports section. His term will begin with the January 2008 issue.

On a personal note, I wish to thank everyone with whom I worked for the past two terms as editor-in-chief. To work for an award-winning journal is an honored activity; to work with individuals who live the ideal of professionalism is a joy. Thank you all.

Susan J Leclair PhD has served as editor-in-chief of Clinical Laboratory Science since 2000.