**NACCLS Accredited Clinical Laboratory Science Program Technology & Wellness Curriculum Assessment**

Dear Laboratory Program Director,

We invite you to participate in a brief survey about technology integration and wellness components in Clinical Laboratory Science programs. This survey includes 18 multiple-choice questions and one optional short response (50 words max). It takes just 2-4 minutes to complete.

Your responses will remain confidential and will help shape future curriculum recommendations for clinical laboratory science programs.

Thank you for your valuable time and participation.

**1. Demographics**

1. What is your program type? (Please select all applies)
   * ASS- MLT Program
   * BS-MLS Program
   * Post-Bachelorette Certificate
   * MS-MLS Program
   * DCLS (Doctorate in Clinical Lab Science)
   * Other (please specify): ……………………………………………………..
2. What is your program's typical annual cohort size?
   * Less than 10 students
   * 10-20 students
   * 21-30 students
   * More than 30 students
3. In which state is your program located? [Dropdown menu]

**2. Technology Integration Assessment**

Please rate the importance of the following technologies for future Clinical Laboratory Scientists on a scale of 1-5.

1. Next-Generation Sequencing (NGS) Technologies (e.g., whole-genome sequencing, RNA-sequencing, variant analysis, protein analysis).

1. □ Not Important,

2. □ Slightly Important

3. □ Moderately Important

4. □ Very Important

5. □ Essential

1. Basic Bioinformatics Tools (e.g., soft coding skills, data visualization tools, target specific pipeline development)

1. □ Not Important,

2. □ Slightly Important

3. □ Moderately Important

4. □ Very Important

5. □ Essential

1. Machine/Deep Learning Applications in Clinical Laboratory Medicine (e.g., improving routine laboratory procedures by automating laboratory processes)

1. □ Not Important,

2. □ Slightly Important

3. □ Moderately Important

4. □ Very Important

5. □ Essential

1. Digital Pathology/Image Analysis in Clinical Laboratory Medicine

1. □ Not Important,

2. □ Slightly Important

3. □ Moderately Important

4. □ Very Important

5. □ Essential

1. Artificial Intelligence (AI) in Clinical Decision Support

1. □ Not Important,

2. □ Slightly Important

3. □ Moderately Important

4. □ Very Important

5. □ Essential

**3. Current Program Status**

1. Which of these technologies does your program currently teach? (Select all that apply)

□ Bioinformatics

□ Machine Learning

□ Advanced Molecular Detection Methods (NGS Technologies)

□ Digital Pathology

□ AI Tools

□ None of the above

1. What is your biggest challenge in implementing new technologies? (Please select one)

□ Budget constraints

□ Lack of faculty expertise

□ Limited curriculum time

□ Infrastructure limitations

□ Other (please specify) …………………………………………………………………………..

**4. Wellness Component Assessment**

Please rate the importance of the following wellness components on a scale of 1-5.

1. Stress Management Training

1. □ Not Important,

2. □ Slightly Important

3. □ Moderately Important

4. □ Very Important

5. □ Essential

1. Work-Life Balance Education

1. □ Not Important,

2. □ Slightly Important

3. □ Moderately Important

4. □ Very Important

5. □ Essential

1. Burnout Prevention Strategies

1. □ Not Important,

2. □ Slightly Important

3. □ Moderately Important

4. □ Very Important

5. □ Essential

1. Professional Resilience Training

1. □ Not Important,

2. □ Slightly Important

3. □ Moderately Important

4. □ Very Important

5. □ Essential

**5. Implementation Timeline**

1. When do you plan to implement or expand these components?

□ Within 1 year

□ 1-2 years

□ 2-3 years

□ No current plans

□ Already implemented

1. What resources would most help your program implement these changes? (Please select the top two)

□ Additional funding

□ Faculty training

□ Curriculum guidelines

□ Technology partnerships

□ Wellness program templates

□ Other (please specify) ………………………………………………………………………………………….

**6. Professional Recognition and Challenges**

Please rate your agreement with the following statements on a scale of 1-5.

1. Clinical laboratory professionals receive adequate professional recognition compared to other allied health professionals.

1. □ Strongly disagreed

2. □ Disagreed

3. □ Somewhat agreed

4. □ Agreed

5. □ Strongly agreed

1. Clinical laboratory professionals receive competitive compensation compared to other allied health professionals with similar education levels.

1. □ Strongly disagreed

2. □ Disagreed

3. □ Somewhat agreed

4. □ Agreed

5. □ Strongly agreed

1. What are the biggest two challenges facing clinical laboratory professionals in current healthcare environments? (Please select two)

□ Lack of professional recognition

□ Inadequate compensation

□ High workload/staffing shortages

□ Limited advancement opportunities

□ Rapid technological changes

□ Other (please specify) ………………………………………………………………………………………

1. How do you think the role of clinical laboratory professionals will evolve in the next 5 years? (Please select two)

□ More emphasis on data analysis/interpretation

□ Increased automation management and/or AI-driven workforce

□ Greater involvement in healthcare teams

□ Higher focus on molecular techniques

□ Expanded leadership roles

□ Other (please specify) ………………………………………………………………………………

**6. Optional 2 - Short Response**

1. What emerging technologies or wellness components do you believe will be crucial for Clinical Laboratory Scientists in the next 5 years? (50 words max)

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18. What would be your ONE key recommendation to increase recognition for the CLS profession? (50 words max)

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Thank you for your participation. Your answers are confidential, and insights will help shape the future of Clinical Laboratory Science education.

Here's a comprehensive search strategy for both aspects of your research:

1. **Primary Databases for Both Topics:**

* PubMed/MEDLINE (primary medical literature)
* CINAHL (allied health focus)
* ERIC (education database)
* Web of Science
* Scopus
* ProQuest Health & Medical Collection

1. **For NAACLS Programs' Technology & Wellness Curriculum:**

MeSH Terms/Keywords for PubMed:

* "Clinical Laboratory Services/education"[Mesh]
* "Medical Laboratory Science/education"[Mesh]
* "Clinical Laboratory Personnel/education"[Mesh]
* "Curriculum"[Mesh]
* "Educational Technology"[Mesh]
* "Artificial Intelligence"[Mesh]
* "Machine Learning"[Mesh]
* "Digital Pathology"[Mesh]
* "Bioinformatics"[Mesh]
* "Mental Health"[Mesh]
* "Burnout, Professional/prevention and control"[Mesh]

***Sample Search String:***

("Clinical Laboratory Services/education"[Mesh] OR "Medical Laboratory Science/education"[Mesh])

AND

("Curriculum"[Mesh] OR "Educational Technology"[Mesh])

AND

("Artificial Intelligence"[Mesh] OR "Machine Learning"[Mesh] OR "Digital Pathology"[Mesh] OR "Bioinformatics"[Mesh] OR "Mental Health"[Mesh])

1. **For Professional Recognition and Challenges:**

MeSH Terms/Keywords for PubMed:

* "Clinical Laboratory Personnel/psychology"[Mesh]
* "Job Satisfaction"[Mesh]
* "Professional Recognition"
* "Salaries and Fringe Benefits"[Mesh]
* "Career Mobility"[Mesh]
* "Workplace"[Mesh]
* "Personnel Staffing and Scheduling"[Mesh]
* "Health Occupations/manpower"[Mesh]
* "Allied Health Personnel/psychology"[Mesh]

***Sample Search String:***

("Clinical Laboratory Personnel"[Mesh] OR "Medical Laboratory Science"[Mesh])

AND

("Job Satisfaction"[Mesh] OR "Salaries and Fringe Benefits"[Mesh] OR "Career Mobility"[Mesh] OR "Workplace"[Mesh])

1. **Additional Keywords to Consider:** 
   * "NAACLS"
   * "Laboratory Science Education"
   * "Medical Technology Education"
   * "Clinical Laboratory Technology"
   * "Workforce Development"
   * "Professional Identity"
   * "Career Advancement"
   * "Laboratory Professional"
   * "Healthcare Workforce"
2. **Specialty Journals to Focus On:** 
   * Clinical Laboratory Science
   * Journal of Medical Laboratory Science
   * Laboratory Medicine
   * American Journal of Clinical Pathology
   * Journal of Allied Health
   * Journal of Healthcare Management