

Future of the Laboratory Workforce: Advanced Clinical Practice

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Outline

- Current status of the non-physician clinical laboratory workforce
 - Clinical doctorate in laboratory science
 - What is it?
 - What are the advantages?
 - Where did the idea come from?
 - Current status
 - Future challenges
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Current status of the laboratory workforce

- Annual need exceeds supply by approximately 2:1
 - Need about 10-12,000/year ¹
 - Producing ~ 4-5,000/year ²
 - Attrition of professionals in the first five years of practice is about 5% ³
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Current status cont.

- Most recent statistics point to a vacancy rate of approximately 6% overall for generalist professionals ⁴
 - Lower than 6 years ago when the rate was 10-15% but this is cyclical
 - When the economy turns down – health care careers look good
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Current status cont.

- This time things are different
 - Average age of laboratory professionals is in the upper 40s – anticipating substantial retirements in the next 10-15 years
 - Demographics – there just aren't enough young people to meet the demand in all areas of our economy
 - We are competing with other sectors for workers
 - We are competing with other health care professions for workers
 - Educational programs are still actively recruiting and **yet we have a shortage**
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Example: Recruiting tool

- Diagnostic Detectives CD was supported by a grant from the Centers for Disease Control and Prevention and the Michigan Department of Community Health, Bureau of Laboratories through cooperative agreement U90/CCU517018; Frances Pouch-Downes , DrPH, Laboratory Director and John Dyke, PhD, Program Advisor, Michigan Laboratory Systems
 - Producers: K. Doig, S. Tomlinson, M. Kluka; Copyright Michigan State University, 2004
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Diagnostic Detectives CD

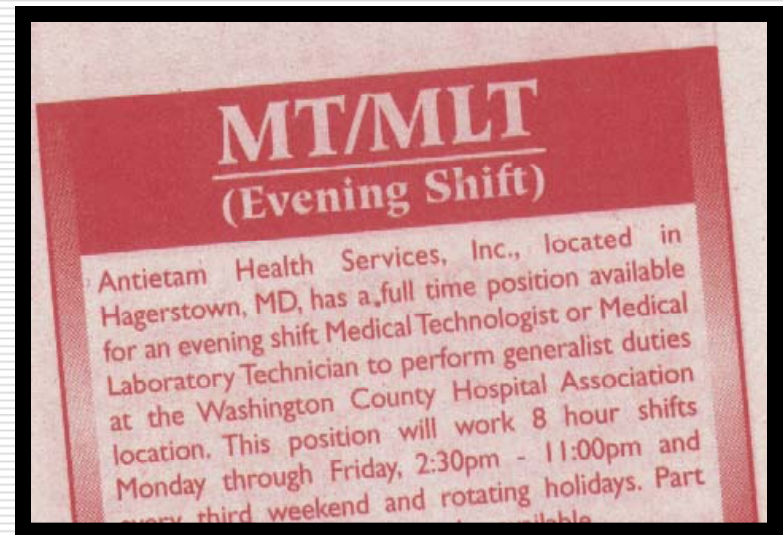
- Available on-line at www.medlabcareers.msu.edu, click on Diagnostic Detectives CD
- CDs available free by contacting medtech@msu.edu



Produced by Postworks,
Grand Rapids, MI

Current status cont.

- Chronic problems are exacerbated by the shortage
 - Lack of clear distinctions between levels of practice contribute to attrition – CLS/MT vs CLT/MLT
 - CLT/MLT staff believe they are doing the same job for less pay
 - CLS/MT staff feel their skills are under used



Current status cont.

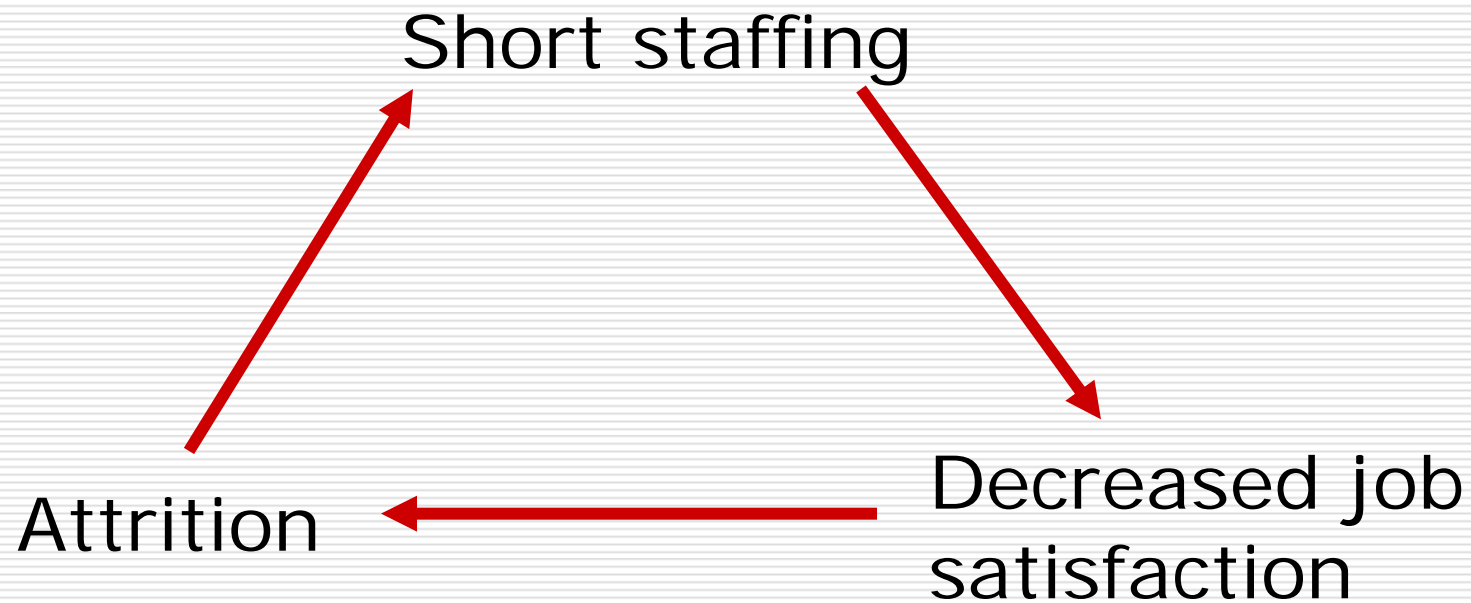
- Chronic problems are exacerbated by the shortage
 - Employers in non-licensed states can hire anyone – and they do out of desperation
 - Diminishes morale
 - Undermines the value of professional education
 - Salaries that lag behind comparable health professions lead to dissatisfaction and contribute to attrition ⁵
 - CLS/CLT salaries have just kept pace with inflation since the 1970s
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Salary Comparisons (BLS, 2003)

Other Health Professions	Mean
Physical Therapist	\$61,240
Dental Hygienist	\$58,730
Occupational Therapist	\$54,890
Registered Nurse	\$52,610
CLS/MT	\$45,380
Radiologic Technologist	\$43,410
Respiratory Therapist	\$42,930
CLT/MLT	\$31,420

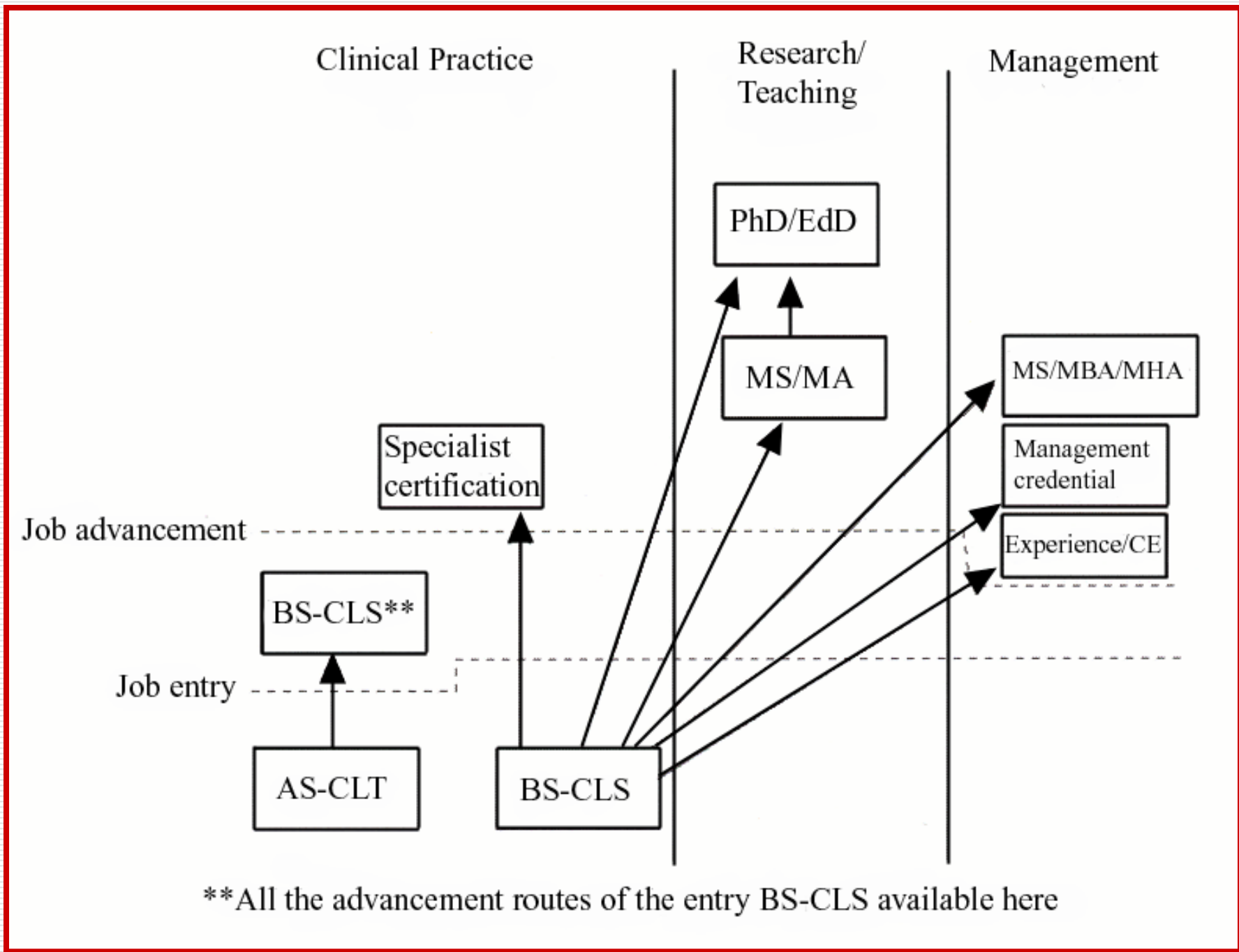
Current status cont.

- Short staffing initiates a cycle of attrition



Current status cont.

- ❑ Attrition is also fueled by feelings of not being appreciated by
 - Care providers
 - Hospital administrators ⁵
 - ❑ Lack of advancement opportunities also contributes to attrition ⁵
 - Recently stable cadre of supervisors/ managers was a contributor
 - Lack of opportunities for advancement in clinical practice
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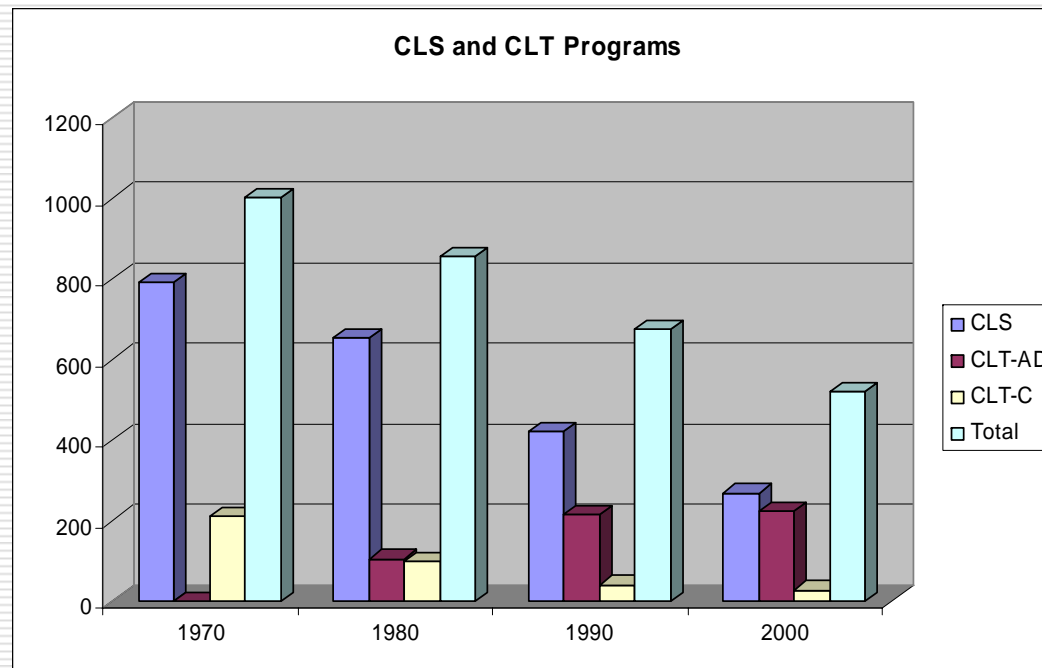


Current status cont.

- Individuals who want to advance in scientific/medical aspects must leave the laboratory profession
 - They move to MD, PA, PharmD
 - If they go to PhD, they are often lost from the laboratory profession too
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Current status cont.

- Educational programs have declined ~50% since 1970s



Source:
NAACLS

Current status cont.

- Good news – anecdotally many programs report higher occupancy rates and higher application numbers than in recent years
- Bad news – the capacity for educating professionals is now reduced
 - **BUT having more programs will not solve the problem if young people are not interested in entering them**
 - We have had unused capacity in the last decade

That is a snapshot of the workforce issues currently

Discussed in detail: The Clinical Laboratory Workforce: The changing picture of supply, demand, education, and practice. Health Resources and Services Administration.

Available at <http://bhpr.hrsa.gov/healthworkforce/reports/clinical/default.htm>

Provides the backdrop to the future

Clinical laboratories will continue to need

- A workforce with diverse levels of skill
 - Pathologists
 - Doctoral scientists
 - Bachelor's level scientists
 - Associate level practitioners
 - Aides and phlebotomists
-

For non-physician professionals:

- The personnel mix may change
 - Increasing use of lesser skilled staff as technology advances
 - The specific scope of practice at each level may change
 - Clearer distinctions between CLS and CLT
 - E.g. eliminate microbiology and blood banking from CLT scope of practice ⁶
 - Better use of the interpretive, problem solving, managerial and educational skills of CLS
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For non-physician professionals:

- Emergence of a new professional
 - Advanced clinical practitioner (aka advanced practice laboratory professional; advanced practice clinician)
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Advanced Practice Laboratory Professional

□ What is it?

- Individual analogous to PharmD; a clinician
 - Complementary to pathologists, doctoral scientists
 - Consultant to physicians and care givers on test selection, results interpretation
 - Patient educator
 - Researcher on improvements to patient care and cost reduction derived from laboratory services
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Advanced Practice Laboratory Professional

Professional doctorate

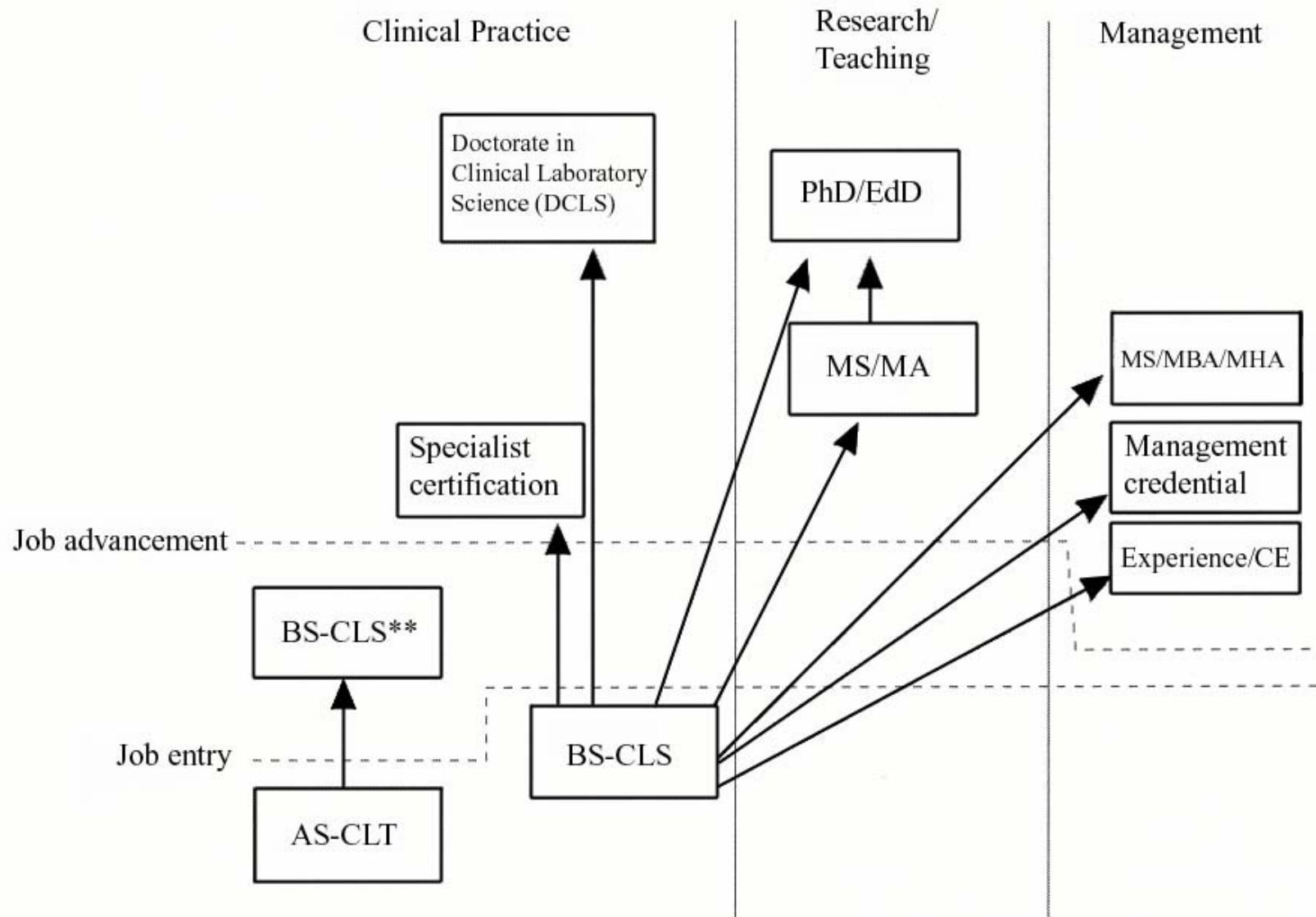
- e.g. Doctor of Clinical Laboratory Science
 - Like the difference between EdD and PhD
 - Curriculum would include:
 - Advanced science – like being a specialist in all areas
 - Consulting and communication skills
 - Basic patient assessment skills
 - Clinical research skills
 - Healthcare economics
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Advanced Practice Laboratory Professional

- Instructional modes
 - Didactic using all modern modes of delivery
 - Clinical rotations that include clinical rounds and the opportunity to practice the assessment and consultation skills
 - Capstone project
 - Fast-track to CLS/MT for non-certified people
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Advantages of advanced practice?

- ❑ Improved patient outcomes
 - ❑ Reduced patient care costs
 - ❑ Improved visibility/respect for the laboratory professions among health personnel, public, and policy makers
 - ❑ Clear advanced career path to attract and retain talented people within the laboratory profession
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**All the advancement routes of the entry BS-CLS available from here

Judging interest in the DCLS

- ❑ Beck and Doig (unpublished) surveyed 972 early career CLSs in 2005 – 299 responses
 - ❑ Described advanced practice professional
 - ❑ Asked the question: **What is your impression of this proposed career option, assuming the salary is commensurate with the required doctoral degree?**
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Judging interest in the DCLS

- I'd be interested in pursuing this option - 65.2%
 - This would be a good option for people who currently choose to become MDs, PAs etc. - 28.0%
 - Not of interest to me; I prefer remaining in the laboratory - 10.2%
 - Not of interest to me; I wouldn't want to make the time or financial investment in a doctoral degree - 9.2%
 - Not of interest to me because - 5.8%
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Judging interest in the DCLS

- Open-ended responses
 - Good idea/sign me up! – 104
 - Great advancement without having to leave the lab – 22
 - Could improve acceptance of the value of the lab - 19
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Judging interest in the DCLS

- "...Not only would one still be able to stay connected to the lab, but there would be interaction with individuals (drs, nurses, patients) outside of the lab."
 - "I think the position would be helpful for clinicians – especially those in training. Working at a teaching facility, we see many unnecessary tests ordered. It think it would help reduce some costs of the laboratory."
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Judging interest in the DCLS

- "I think that a practitioner of this kind is sorely needed and a very good idea. MDs sometimes aren't sure what to order to accomplish the best use of specimen and greatest informative value to help their patients."
 - "It's an excellent idea. There is not much room for career growth in the medical technology field right now...I think this would encourage CLS's to stay in the profession rather than going back to school for another program."
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Judging interest in the DCLS

- "I think that this type of program will finally bring recognition to the laboratory professional!"

 - "I think that's great & perhaps if it was available, I may have chosen it over PA school."
-

Where did the idea come from?

- The idea of a clinical consultant has been discussed through 1990s ^{7,8,9}
 - Clinical Laboratory Educators Conference – New Orleans, 2003
 - Discussion favored advanced practice as a route to advance the profession ¹⁰
 - Fowler presented a draft curriculum ^{11,12}
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Where did the idea come from?

- American Society for Clinical Laboratory Science (ASCLS)
 - Futures Task Force Report endorsed the advanced practice model in 2004 ¹³
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Where did this idea come from?

- National Accrediting Agency for Clinical Laboratory Science (NAACLS) task force examined the need for entry-level Master's personnel¹⁴
 - No interest expressed by students or professionals or employers¹⁵
- NAACLS Futures Conference – Chicago, 2004
 - Montoya presented revised Fowler curriculum¹⁶
 - Discussion favored advanced practice; discouraged entry-level master's degree
 - NAACLS Task Force proceeded to examine the need for accreditation of doctoral programs¹⁷

Where did the idea come from?

- Credibility of the concept enhanced by some institutions that are already experimenting with the use of non-physician consultants on rounds
 - Ron Brown – Evergreen Healthcare, Kirkland, WA
-

Where did the idea come from?

□ ASCLS

- Discussion papers in CLS journal, summer 2005 ^{18,19}
 - Position paper endorsing the DCLS approved 2005 ²⁰
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Current status

- ASCLS Professional Doctorate Task Force – charged to facilitate implementation - has worked closely with the NAACLS Task Force
 - Curriculum details and delivery/ implementation of doctoral programs
 - “Proof of concept” research – identifying possible funding sources
 - Licensing/certification/reimbursement
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Current status

- NAACLS draft standards for doctoral educational programs are available:

DRAFT: Standards of Accredited Educational Programs for the Clinical Doctorate in Clinical Laboratory Sciences

www.NAACLS.org

Comment period closed 9/15/06

Next steps

- ASCLS task force seeking funding for a “proof of concept” demonstration project to validate:
 - Improved patient outcomes
 - Cost savings
 - Some educational programs are moving toward implementation
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Challenges for the future

- Gain acceptance for the role
 - Other laboratory professionals
 - Hospital administrators
 - Care providers
 - Insure salaries are commensurate with education
 - Gain reimbursement coverage for services
 - Implement board certification
 - Gain licensing in all states
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The promise of the DCLS

- ❑ Improved patient care
 - ❑ Decreased health care costs
 - Directly with decreased length of stay, etc
 - Indirectly by increasing retention of laboratory staff or improving recruiting
 - ❑ Retain to the benefit of the laboratory, talented laboratorians who currently leave for MD, PA, nursing, etc
 - ❑ A complete career advancement path will attract young people, not all of whom will advance to DCLS, but as a result will increase recruitment at all levels
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“...the clinical doctorate attracts proponents readily. Perhaps it is because so many practicing laboratorians and educators would aspire to such degrees and positions themselves. **I know I would.**” 18

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