DEVELOPMENT OF A CAREER LADDER IN A LOCAL PUBLIC HEALTH LAB

DEBORAH K. SEVERSON, BS MT(ASCP)
DIRECTOR, LABORATORY SERVICES
FAIRFAX COUNTY HEALTH DEPARTMENT LABORATORY
703-246-3218
DEBORAH.SEVERSON@FAIRFAXCOUNTY.GOV
OBJECTIVES

- Provide an overview of Fairfax County Health Department Laboratory
- Review current LPHL structure
- Review difficulties in recruitment and retention of qualified individuals
- Review benefits and challenges faced in creation of Career Ladder
- Provide examples of resources and tools used by FCHDL to create a Career Ladder for Public Health Scientists in a local public health laboratory setting
FCHD lab is LPH performing over 200,000 clinical and environmental tests annually

- Clinical
  - STD, TB, foodborne illness (enteric pathogens & parasites), HIV, Hepatitis B, QFT
- Drugs of Abuse Screening
- Environmental Drinking Water
- Rabies
- Molecular testing for WNV, ZikaV in mosquito pools and Borrelia burgdorferi in ticks

- Multiple regulatory bodies; CLIA, EPA, VaDEQ
Overview of Fairfax County Health Department Laboratory

Population served*

- Population – 1.14 million
- Area – 390.97 sq. miles
- Median Age – 35.7
- Foreign born population – 31.5%
- Persons 5+ who speak a language other than English at home – 39.5%

*Information from 2015 census estimates
INTERNAL CLIENTS

✓ Five Health Department Clinics
✓ Eight Fairfax County Agencies

EXTERNAL CLIENTS

✓ Three Neighboring jurisdictions
✓ Hospitals
✓ Local, Regional, State, and National Parks
✓ Washington Dulles Airport
✓ Universities
✓ Private Companies- Clarke (Mosquito Testing)
✓ Private Water System Operators
✓ Private homeowners
Professional Staff

• Public Health Technologists
  Full-Time – 9
  Part-Time – 3
• Public Health Laboratory
  Supervisor – 2
• LIS Administrator – 1
• Laboratory Director – 1

Support Staff

• Administrative Assistants – 3
  Admin IV – 1
  Admin III – 2
• Courier
  Full-time – 1
  Part-time – 2

Total Staff = 22
CURRENT STRUCTURE

Fairfax County Health Department
Laboratory – Proposed Org Chart

- LABORATORY DIRECTOR
- LIS MANAGER
- PUBLIC HEALTH LABORATORY SUPERVISOR (PHLS)
- PUBLIC HEALTH LABORATORY TECHNOLOGIST (PHLT)
CHALLENGES OF CURRENT STRUCTURE

★ One level of PHLT
★ Multiple disciplines requiring different levels of expertise
  ★ Clinical
  ★ Molecular
  ★ Environmental
★ No room for advancement
★ No incentive/compensation for certification (ASCP, AMT, etc.) or advanced degrees
★ PHLT at same classification as Administrative Assistant V
★ Compensation rates not competitive with private sector
Challenges

Low Morale

Loss of personnel through attrition; retirement, relocation, and higher salary offers

- 56% FTE technologist
- 50% FTE Management
- 44% FTE eligible for retirement
CHALLENGES

Difficulty in recruitment and retention of qualified personnel

Qualified candidates declined interviews due to salary

2017- three technologist left for higher paying jobs
1 PhD Chemist
2 CLS
How Do We...

- Attract and retain high quality employees who are motivated to advance their careers?
- Prepare for retirement and turnover?
- Meet technical development needs?
- Improve technical knowledge and skills?
- Maintain critical competencies?
Creation of Career Ladder

- Education
- Training
- Experience

Review and Access Current Hiring Standards

- Education
- Training
- Experience requirements
- Level of Responsibility

Reviewed Career Ladders in Private Sector and Other Public Health Laboratories

- Increasing levels of responsibility
- Encourages professional development
- Recognition of professional growth

Establish Career Ladder
CREATION OF A CAREER LADDER BASED ON COMPETENCIES

APHL Career Ladder/Position Description Tool

✓ Identify “Steps” in Career Ladder
**Creation of a Career Ladder**

- **Identify Domains for each level**

<table>
<thead>
<tr>
<th>Domains</th>
<th>Level I Scientist</th>
<th>Level II Scientist</th>
<th>Supervisor Level III</th>
<th>Quality Manager</th>
<th>TOTAL</th>
<th>Set Value Points Total for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality Management System</td>
<td>6</td>
<td>7</td>
<td>10</td>
<td>10</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Ethics</td>
<td>8</td>
<td>8</td>
<td>9</td>
<td>9</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>Management and Leadership</td>
<td>6</td>
<td>10</td>
<td>8</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>8</td>
<td>8</td>
<td>9</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td></td>
<td>7</td>
<td>7</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Management and Response</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workforce Training</td>
<td>7</td>
<td>9</td>
<td>8</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Laboratory Practice</td>
<td>10</td>
<td>9</td>
<td>8</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td>9</td>
<td>9</td>
<td>8</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surveillance</td>
<td>6</td>
<td>9</td>
<td>8</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informatics</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microbiology</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td>10</td>
<td>9</td>
<td>8</td>
<td>37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bioinformatics</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CREATION OF A CAREER LADDER

✔ Identify Competencies

<table>
<thead>
<tr>
<th>Competency</th>
<th>Level I Scientist</th>
<th>Level II Scientist</th>
<th>Supervisor Level III Scientist</th>
<th>Quality Manager</th>
<th>Total for Advancement</th>
</tr>
</thead>
<tbody>
<tr>
<td>QMS 1.00 - Organization: ensures that the laboratory’s organizational structure is committed to achieving and maintaining quality</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>QMS 2.00 - Customer Focus: ensures that customer needs, expectations, and requirements are consistently met</td>
<td>9</td>
<td>9</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 3.00 - Facilities and Safety: ensures that the laboratory’s physical environment, maintenance, and safety programs meet applicable requirements</td>
<td>9</td>
<td>9</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 4.00 - Personnel: ensures recruitment and retention of a qualified, well-trained, and competent workforce</td>
<td>9</td>
<td>9</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 5.00 - Purchasing and Inventory: ensures that requirements for supplies and services are consistently met</td>
<td>9</td>
<td>9</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 6.00 - Laboratory Equipment: ensures that laboratory equipment selection, installation, use, maintenance, and troubleshooting meet performance standards</td>
<td>9</td>
<td>7</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 7.00 - Process Management: ensures that operational processes meet organizational requirements</td>
<td>9</td>
<td>8</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 8.00 - Records Management: ensures the confidentiality, security, and integrity of generated and disseminated information</td>
<td>9</td>
<td>9</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 9.00 - Nonconforming Event Management: ensures that processes are in place for detecting and managing nonconforming events</td>
<td>9</td>
<td>10</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 11.00 - Assesments: ensures that processes are in place to perform internal audits and external assessments</td>
<td>9</td>
<td>10</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 12.00 - Continual Improvement: ensures mechanisms for continuous quality improvement</td>
<td>9</td>
<td>10</td>
<td>19</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Competency</th>
<th>Level I Scientist</th>
<th>Level II Scientist</th>
<th>Supervisor Level III Scientist</th>
<th>Quality Manager</th>
<th>Total for Advancement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETH 1.00 - Profession of Conduct: adheres to policies and principles governing professional ethics and rules of conduct when working in a public health laboratory</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>ETH 2.00 - Scientific Code of Conduct: adheres to policies and principles governing scientific ethics and rules of conduct when working in a public health laboratory</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Management and Leadership</td>
<td>Level I Scientist</td>
<td>Level II Scientist</td>
<td>Supervisor Level III Scientist</td>
<td>Quality Manager</td>
<td>Total for Advancement</td>
</tr>
<tr>
<td>ETH 3.00 - Conduct Practices, compliance, and accountability of laboratory operations</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>
**Creation of a Career Ladder**

- Identify Sub-Competencies

<table>
<thead>
<tr>
<th>Subcompetency</th>
<th>Level I Scientist</th>
<th>Level II Scientist</th>
<th>Supervisor Level III Scientist</th>
<th>Quality Manager</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality Management System Domain</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 1.00 - Organization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 1.01 - Commitment to Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 1.02 - Organizational Structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 1.03 - Quality Culture</td>
<td>6</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>33</td>
</tr>
<tr>
<td>QMS 1.04 - Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 1.05 - Cost of Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Quality Management System Domain</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 2.00 - Customer Focus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 2.01 - Customer Satisfaction</td>
<td>6</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>33</td>
</tr>
<tr>
<td>QMS 2.02 - Customer Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Quality Management System Domain</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 3.00 - Facilities and Safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 3.01 - Workplace Safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 3.02 - Facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 3.03 - Waste Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 3.04 - Emergency Management and Response</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Quality Management System Domain</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 4.00 - Personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 4.01 - Staff Qualification Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 4.02 - Orientation and End-of-Employment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 4.03 - Training</td>
<td>6</td>
<td>9</td>
<td>9</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>QMS 4.04 - Competence Assessment Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 4.05 - Professional Development Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 4.06 - Performance Evaluation Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 4.07 - Recruitment, Retention and Succession Plans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Quality Management System Domain</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 5.00 - Purchasing and Inventory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 5.01 - Procurement Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS 5.02 - Inventory Processes</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>28</td>
</tr>
</tbody>
</table>
CREATION OF A CAREER LADDER

✓ Identify Tier Statements for Each Domain
LEVEL 1
General Laboratory Practice

GEN 1.00 - General technical and laboratory practice knowledge; demonstrates fundamental knowledge of laboratory and specific work (B)

LEVEL 2
General Laboratory Practice

GEN 1.00 - General technical and laboratory practice knowledge; demonstrates foundational knowledge of laboratory and specific work (C)

LEVEL 3
General Laboratory Practice

GEN 1.00 - General technical and laboratory practice knowledge; demonstrates general knowledge and skills related to the scientific and technical components of laboratory testing

- Ensures that accepted concepts and theories are applied to laboratory testing (P)

- Ensures appropriate utilization of mathematical and statistical concepts and practices (P)

- Integrates scientific and technical advances into laboratory operations (P)
General Laboratory Practice

GEN 1.00 - General technical and laboratory practice knowledge: demonstrates general knowledge and skills related to the scientific and technical components of laboratory testing

- Applies basic scientific and laboratory concepts and theories related to the specific testing that is conducted in work area (B)

- Instructs others in concepts and theories related to the specific testing that is conducted in work area (C)

- Ensures that accepted concepts and theories are applied to laboratory testing (P)

- Applies fundamental mathematical and statistical concepts and practices in work area (B)

- Instructs others in fundamental mathematical and statistical concepts and practices (C)

- Ensures appropriate utilization of mathematical and statistical concepts and practices (P)

- Reads scientific and technical literature relevant to own work (B)

- Discusses scientific and technical advances relevant to own work (C)

- Integrates scientific and technical advances into laboratory operations (P)

- Critiques scientific and technological advances to evaluate possible impact for the laboratory (E)
OVERVIEW STATEMENT OF POSITION DUTIES: Meets all expectations of the PHLS Scientist I position. In addition, serves as lead scientist and subject matter expert to internal and external clients, participates in the training and mentoring of new laboratory personnel, and participates in the annual competency assessment of staff in their assigned work areas. Under minimal supervision, performs full performance public health laboratory work; performs progressively more difficult and complex laboratory analyses and/or lead professional duties in one or more specialty areas: microbiology, molecular biology, immunology, toxicology, clinical chemistry, parasitology, environmental microbiology, environmental chemistry and others. Applies critical decision-making skills to reach conclusions about diagnostic testing needs. Evaluates laboratory testing requests for appropriateness. Works independently and uses evidence-based criteria to interpret laboratory testing data. In collaboration with the PHLS III, writes and enters validation and validation studies, investigations of nonconforming events, and documentation of corrective actions. Collects essential data for the diagnostic, treatment and prevention of communicable diseases and for the identification and verification of environmental health hazards. Performs, evaluates, and interprets test results for medical providers and environmental health specialists. Reviews and verifies test results, QC, and log sheets performed by PHLS Lab Scientist I for accuracy and completeness and performs related work as required. This position serves as a technical resource for PHLS I position. This position requires active participation in one of the laboratory’s informal committees. Quality Assurance, Safety, or Web Page. Participation on agency-wide or county-wide committees is highly recommended.

Professional Code of Conduct:
- Adheres to policies and principles governing professional ethics and rules of conduct when working in a public health laboratory.
- Applies ethical principles and professional rules of conduct to the workplace.
- Exhibits integrity in all interactions and activities.
- Serves as a role model of ethical behavior by consistently conforming to the highest ethical standards and practices.
- Adheres to policies and principles governing professional ethics and rules of conduct when working in a public health laboratory.
- Applies ethical principles and professional rules of conduct to the workplace.
- Displays professional demeanor in all situations with customers and stakeholders.
- Monitors interactions with customers and stakeholders to ensure they are conducted professionally.
- Seeks and develops information to share.

Scientific Code of Conduct:
- Instructs others in policies and procedures regarding scientific integrity of test results and findings.
- Serves as a role model of scientific ethical behavior and rules of conduct by consistently conforming to the highest scientific standards and practices.
- Verifies scientific integrity of test results and findings.
- Applies scientific ethics and rules of conduct to the workplace.
Opportunity for career advancement is essential in attracting and retaining qualified individuals in laboratory science.

- Provide a high level of technical expertise
- Career ladder based on competencies assures quality results
- Motivate individuals to continue education and advance career
- Provides a basis for mentoring and developing employees
- Succession planning – preparing for turnover
- Increase earning potential
REFERENCES

★ APHL Career Ladder Tools and Resources

★ Competency Guidelines for Public Health Laboratory Professionals, MMWR / May 15, 2015 / Vol. 64 / No. 1,
   http://www.cdc.gov/mmwr/pdf/other/su6401.pdf