

Pathology Informatics Training and Education Workshop

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Pathology Informatics

- Mission of pathology is to provide information necessary for patient care decisions
- Pathology information is generated, delivered, and analyzed through use of electronic information systems
- Effective information management is crucial to success of pathologists and laboratories

Outline

- Global goals and objectives of pathology informatics training and education
- Components of pathology informatics curriculum
- Other issues in implementing a training program

Global Goals and Objectives of Pathology Informatics Curriculum

- Enable knowledge and competence in the information management and system elements *tailored to professional roles* in pathology and laboratory medicine
- Convey relevance and crucial roles of informatics in pathology and laboratory medicine
- Develop proficiency with information technologies in support of professional roles and development
- Provide a knowledge foundation to users that will help them make informed decisions about information technology and management

Benefits of Pathology Informatics Training

- Better information management decisions for lab
- Better understanding how IT decisions impact operations and patient care
- More informed interactions with vendors
- Greater contribution to enterprise-wide information system initiatives and strategy

Informatics as Crucial to Success of Laboratories and Pathology Departments

- Growth opportunities
 - Multiple facility integration
 - Outreach testing program development
- Collaborative opportunities
 - Outcomes analysis
 - Practice guidelines and test utilization assessment
 - Tissue banking
- Opportunities provided by emerging technologies
 - Digital pathology
 - Genomics and proteomics testing

Informatics as Crucial Element in Professional Development in Healthcare

- Electronic access to scientific literature and other resources
- Electronic tools for education, training, CME
- Digital imaging
- Ability to organize electronic information sources
- Use of electronic tools for effective communication

Informatics Curriculum Components

- Learning/knowledge objectives
- Proficiencies/skill sets
- Evaluation
- Teachers/trainers
- Computing infrastructure
- Source material and references

Pathology Informatics Learning Objectives

- Technical
- Administrative
- Regulatory/compliance

Pathology Informatics Learning Objectives – Technical

- General computing
 - Digital basics
 - Hardware and software
 - Networks and Internet
- Laboratory information systems
 - Components and functions
 - Interfaces
 - Data standards
- Database fundamentals
- Digital imaging and telepathology
- Electronic medical records systems and implications

Pathology Informatics Learning Objectives – Administrative

- System evaluation and procurement
- Systems management
- Data security
- Financial considerations – justification, budgets, licensing
- Vendor relationships
- Healthcare institution IT environment

Pathology Informatics Learning Objectives – Regulatory/Compliance

- Oversight agencies relevant to healthcare and lab IT
- Information management requirements of CLIA and accreditation programs
- HIPAA

Pathology Informatics Proficiency/Skill Set Objectives

- Laboratory information systems – CP, AP
- Personal productivity software
- Literature searching and bibliographic management
- Database basics
- Digital imaging

Assessment of Pathology Informatics Training and Education

- Written examination
- Observation of competencies
- Subjective assessment

Potential Teachers/Trainers for Pathology Informatics

- Pathologists and Ph.D. clinical scientists
- Laboratory administrators
- System managers
- Lab or lab IT personnel who perform in LIS database maintenance
- General IT staff (e.g. hardware, networking, security)
- Hospital administrators

Infrastructure for Pathology Informatics Training

- Individual PCs with network accounts
- Departmental server data storage space
- Personal productivity software
- Printers and scanners
- Digital imaging tools

Resources for Pathology Informatics Training Design

- Books – Sinard, Cowan, Aller, Berman
- Articles – curriculum, surveys
- Meetings, web sites, teleconferences – LITS, APIII, CAP, ASCP

- See handout

Issues in Pathology Informatics Training

- How much “basic” IT to include?
 - Baseline for fluency
 - Direct relevance to labs’ decisions – capital budgets, data storage, speed
 - But, limited time in curriculum with a lot to cover
 - People now more familiar with technology generally
 - Is this an opportunity for independent study?

Issues in Pathology Informatics Training (cont.)

- How much of the basics do trainees now know?
- But, be careful of assumptions
 - Not everyone at same level
 - Need to accommodate lowest level of knowledge – how far? Independent study opportunities or definition of prerequisites?
 - Example of GUI knowledge in lab techs at time of LIS upgrade
- How much training done as separate course vs. integrated into other experiences like rotations?