



AMERICAN SOCIETY OF CYTOPATHOLOGY

CYTOTECHNOLOGY TRAINING AT RISK:

Cytotechnology School Closures Could Lead to Critical Shortage

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OVERVIEW

- Many years ago, there was speculation that laboratory automation would drastically reduce the need for medical technologists
- We now face a critical shortage of medical technologists
- The situation regarding cytotechnology is alarmingly similar

THE PAP TEST IS ARGUABLY THE MOST EFFECTIVE CANCER SCREENING TEST EVER DEVELOPED

- 70% reduction in cervical cancer incidence
- 90% reduction in death rate
- Cytotechnologists have been the front-line soldiers in the battle against cervical cancer

Cervical Cancer Screening Innovations in the Past Two Decades

- Bethesda terminology (2 revisions)
- Consensus, evidence-based clinical management algorithms, i.e. ASCCP (1 major revision, multiple minor variations from other organizations)
- Increasingly stringent quality management

Cervical Cancer Screening Technical Innovations

- Liquid-based preparations
- HPV DNA testing
- Image analysis
- HPV vaccine(s)

Impact Of New Technology On Cervical Cancer Screening

- Will HPV testing and HPV vaccines make cytotechnology obsolete?
- Currently ~60,000,000 Pap tests annually
- Current vaccination protocols still require cervical cancer screening
 - All oncogenic subtypes are not protected against

Long-term impact of HPV vaccine is uncertain

- Will require decades to fully evaluate
- Current generation of women are either not eligible or receive less protection from vaccine than girls vaccinated prior to first sexual exposure
- \$300 cost

HPV testing

- Many but not all studies show higher sensitivity with HPV testing
- Overwhelming majority of women with HPV infection will never develop cancer
 - Will be told they have a STD (HPV may be dormant for years)
 - Lower specificity of HPV testing; follow-up with cytology needed for efficient management
- Cytology quality management parameters usually not discussed
 - Only one study with 100% biopsy follow-up (Belinson et al)
- Few studies comparing HPV test performance (sensitivity, specificity) with computerized image analysis: one study suggests comparable sensitivity with better specificity

Demand for screening

50% reduction in demand....

Leaves 30,000,000 Paps to
be screened!

Other cytotechnologist responsibilities

- Non-GYN cytology
- May include routine specimen preparation
- Immediate adequacy assessment of fine needle aspiration specimens

Other cytotechnologist responsibilities (cont'd)

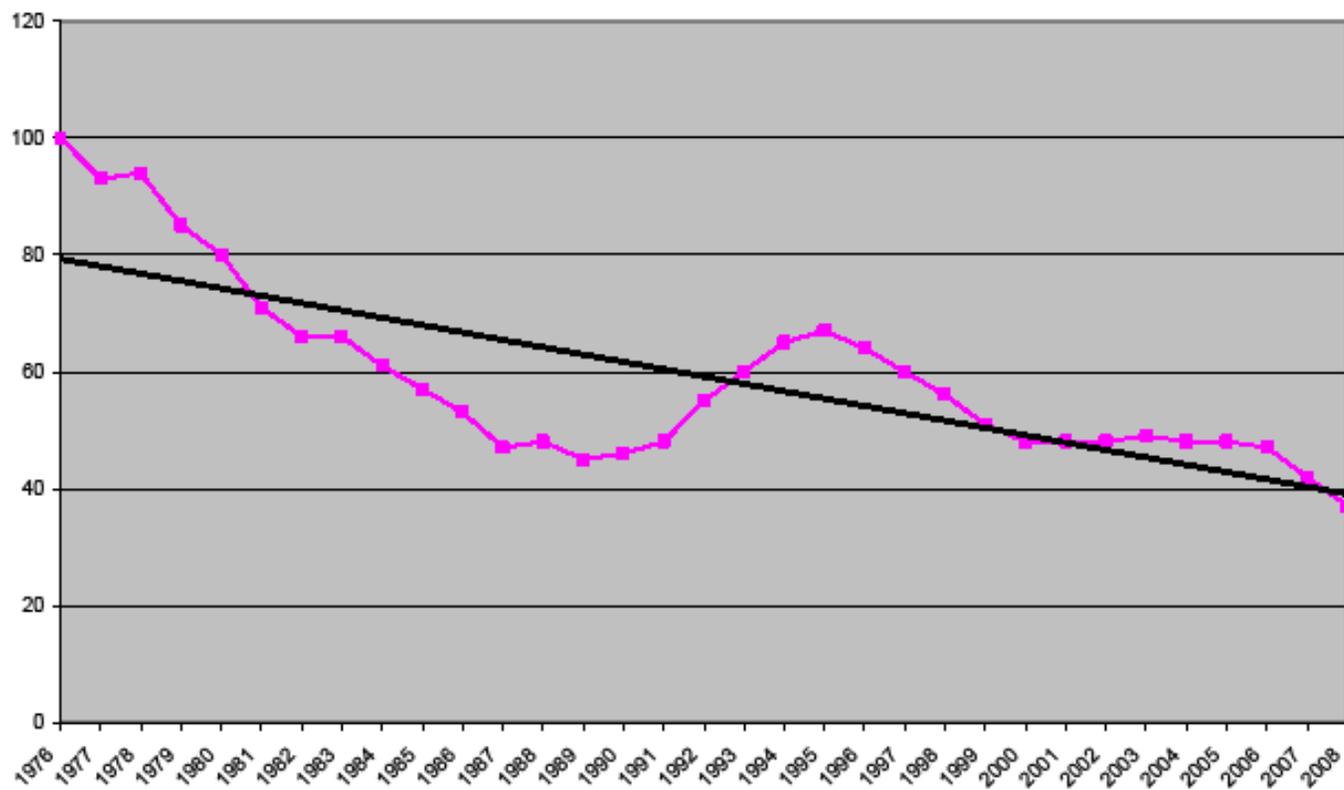
- Immunohistochemistry
- Nucleic acid testing
- Education
- Administration

Cytotechnology Training Endangered

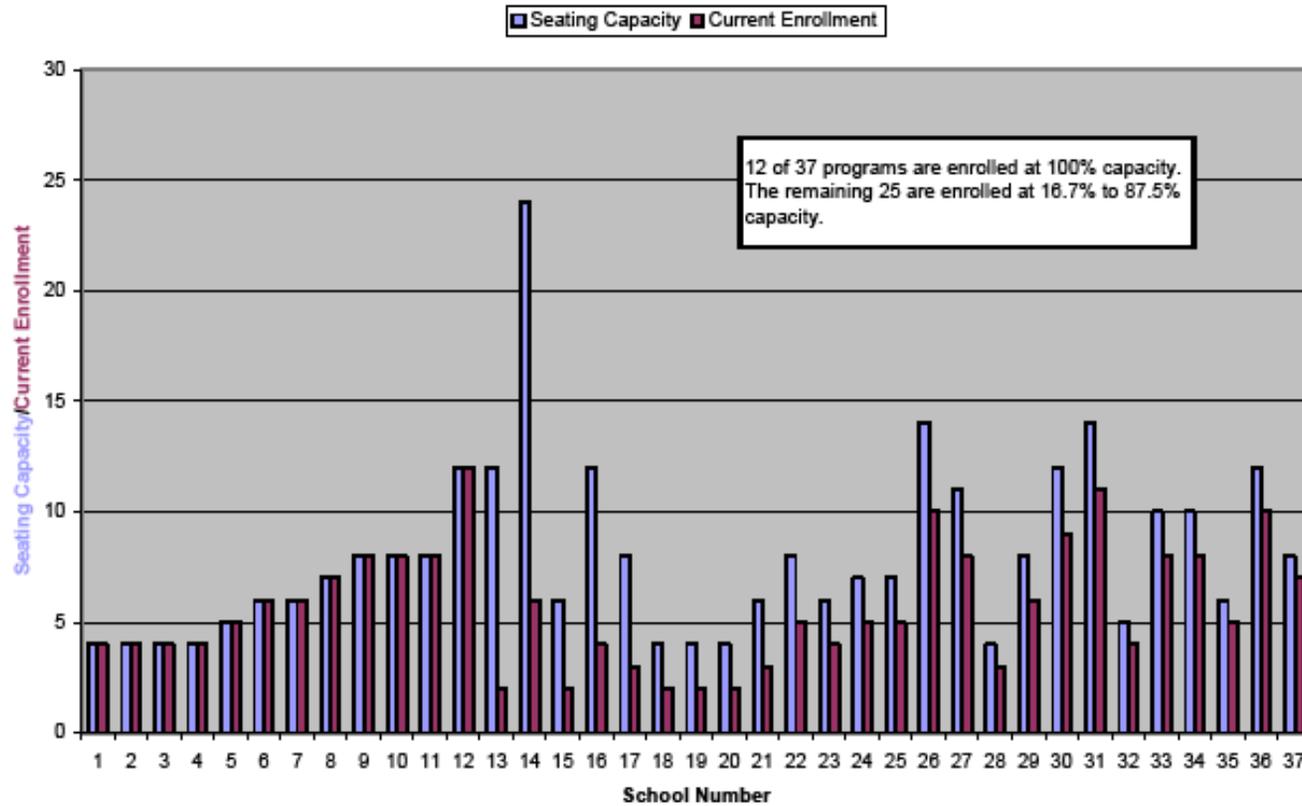
- Budgetary/administrative constraints
- Difficultly recruiting students
- Closure of Cytotechnology Schools

CYTOTECHNOLOGY PROGRAMS

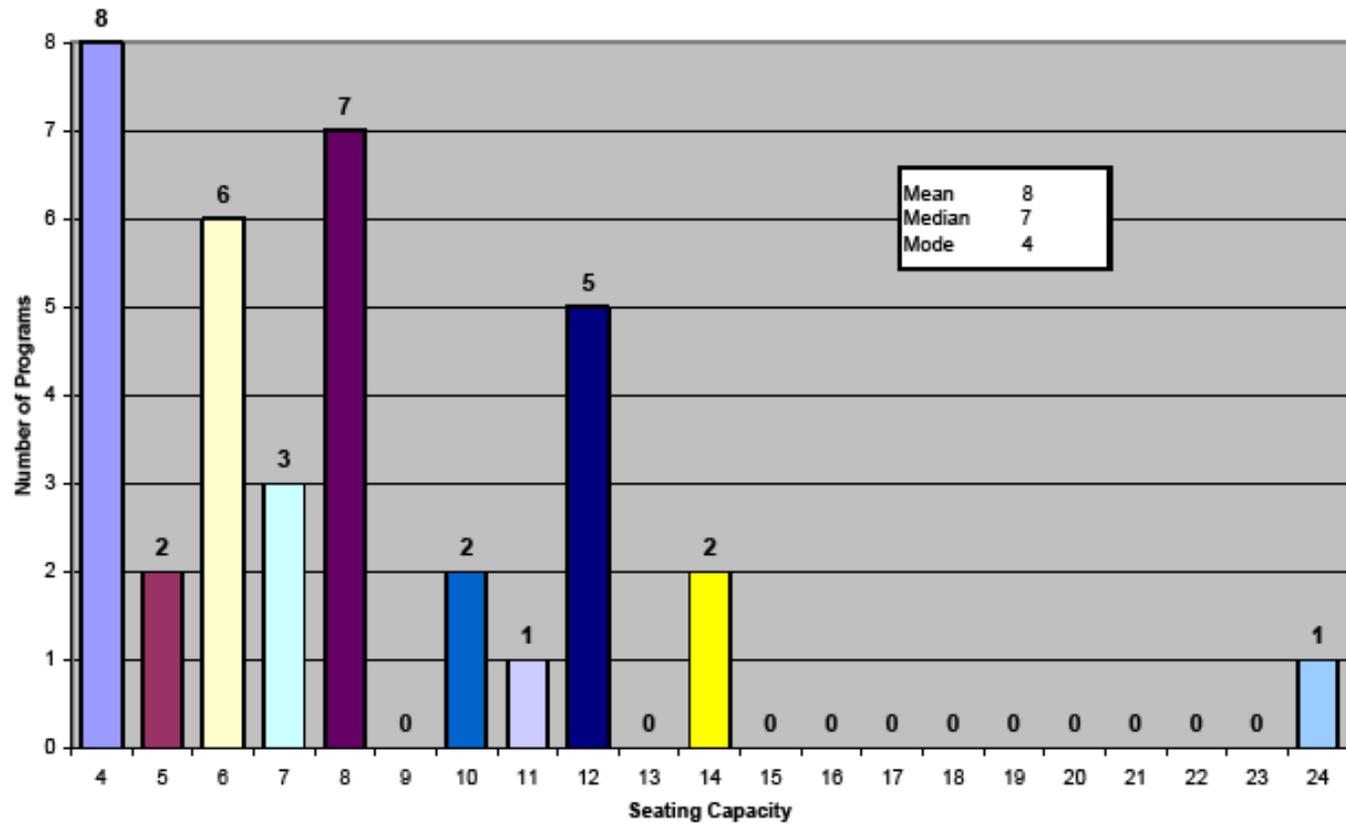
~ 1976 thru 2008 ~



CYTOTECHNOLOGY PROGRAM ENROLLMENT FOR 2008



CYTOTECHNOLOGY PROGRAM ENROLLMENT CAPACITY
~ 2007 thru 2008 ~



CURRENT CYTOTECHNOLOGY TRAINING/WORKFORCE ISSUES

- TRAINING
 - 37 schools currently accredited
 - 4 dormant
 - 6 at risk of closing in near term
- WORKFORCE
 - Average age of CTs currently: 50
- **PUBLIC OFFICIALS & ADMINISTRATORS NEED TO ADDRESS THIS ISSUE**
- The ASC has written a letter to Educators and Laboratory Administrators to inform them of this
 - Co-signed by 10 other professional organizations
 - Available as an addendum to this presentation