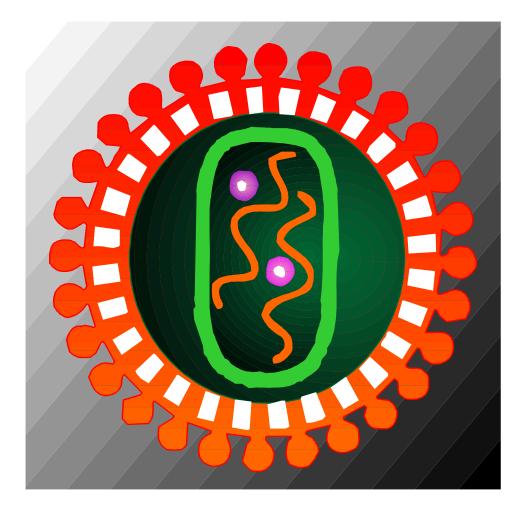
Results of the 1995 Retroviral Testing Survey Questionnaire Sent to Laboratories Participating In the Model Performance Evaluation Program





U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES Public Health Service Centers for Disease Control and Prevention



| Results of a 1995 Retroviral (human immunodeficiency virus type 1 and human T-lymphotropic virus types I and II) laboratory questionnaire survey mailed to laboratories participating in the Model Performance Evaluation Program, Centers for Disease Control and Prevention (CDC). |
|---|
| The production of this report was coordinated in CDC by: Public Health Practice Program OfficeEdward L. Baker, M.D., M.P.H. |
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| Chief The material in this report was developed and prepared by: Model Performance Evaluation Program (MPEP)William O. Schalla, M.S. Chief |
| MPEP Retroviral Performance EvaluationSharon O. Blumer, M.S. MPEP Retroviral Project Coordinator |

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Information about this report should be addressed to the Model Performance Evaluation Program by calling (770) 488-4147 or (770) 488-4366.

Introductory Comments on the Model Performance Evaluation Program 1995 Retroviral Questionnaire Survey Results

Of the 987 laboratories receiving the Model Performance Evaluation (MPEP) retroviral questionnaire survey mailed September 25, 1995, 770 (81.3%) responded. Aggregate data from selected questions believed to be of most interest to participating laboratories are presented in the following graphs and tables. The "N -" and numbers appearing on each graph or table are the total number of laboratories responding to specific questions. For questions permitting multiple responses, the total number of responses may exceed the number of laboratories reporting.

On pages 1 and 2, the number of laboratories enrolled in the MPEP, by country and in the United States and Territories, reflects the enrollment as of April 28, 1996 and does not necessarily reflect the MPEP enrollment at the time this survey was mailed.

Please note that all parts of questions 6 and 7 were worded differently than in previous questionnaire surveys to reflect current regulatory requirements related to the Clinical Laboratory Improvement Amendments of 1988 (CLIA-88) as published in CFR 42 Part 493. These changes were primarily related to the education and certification requirements of the laboratory director and supervisor.

In question 6b, the academic discipline of Microbiology was inadvertently omitted as a response selection in the questionnaire. Nearly 50% of the responses in the "Other" category were specified as "Microbiology"; therefore, this response was subtracted from the "Other" category and presented as a unique response in the graphic. Similarly, in question 6c, the American Board of Pathology was inadvertently omitted from the questionnaire as a response selection for an organization awarding board certification. More than 50% of the responses in the "Other" category were specified as "American Board of Pathology"; therefore, this response was subtracted from the "Other" category and presented as a unique response in the graphic.

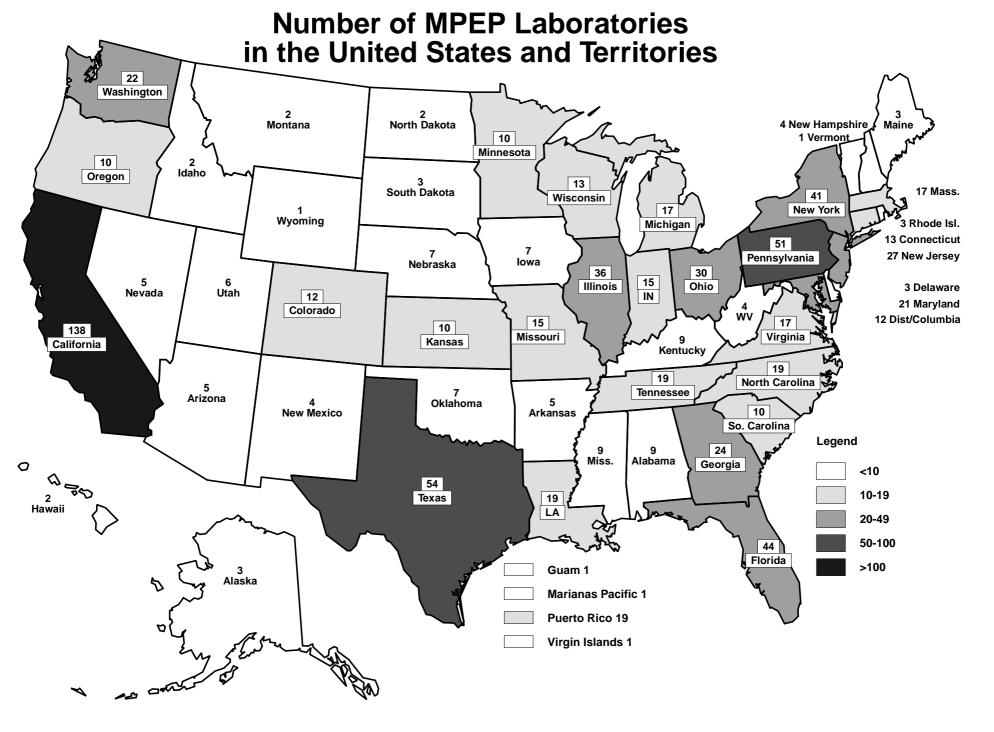
For questions 15a, 15b, and 24 responses reflecting routine testing combinations associated with algorithms are reported in a table format. Although many laboratories (approximately 60%) described common algorithms, many laboratories continue to have unique testing combinations for detecting HIV and HTLV antibody. These various testing combinations are grouped as "Other Algorithms" in the tables reporting the responses to questions 15a, 15b, and 24.

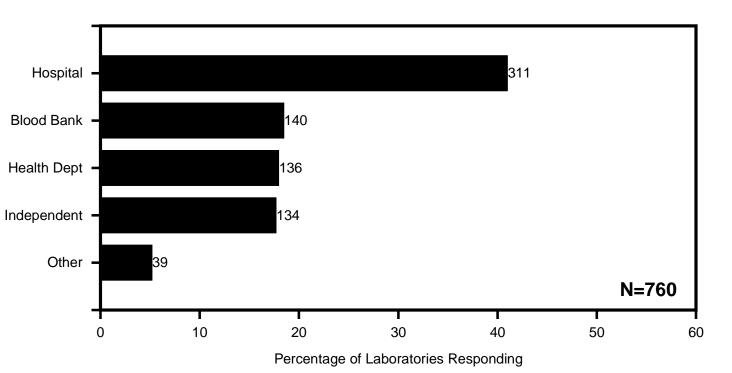
Please note that in questions 16 and 24 the first column reflects a range of months (or employees) while the remaining columns reflect the number of laboratories performing specific tests for the range of months, or with the number of employees, indicated in the first column. Similarly, in questions 22 and 31, the first column reflects ranges of the number of tests performed while the remaining columns reflect the number of laboratories performed and reactive tests within each range.

Questions 20 and 29 were revised from previous questionnaire surveys to reflect the frequency with which <u>external</u> quality control samples are used and is related to CLIA-88 regulations.

Number of MPEP laboratories by country

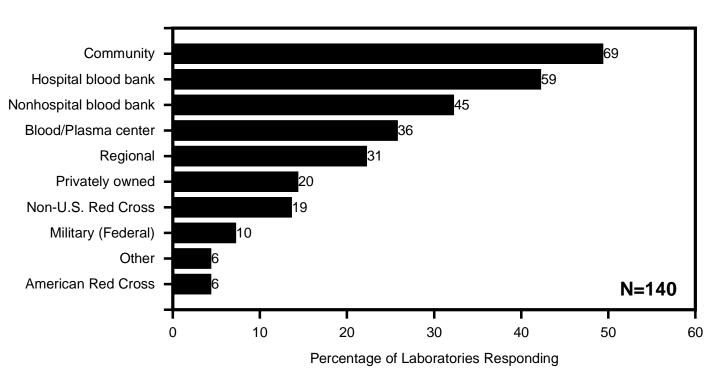
| N = 986 | Number | | Number | | Number |
|-------------------------|--------------------|--------------------------|--------------------|----------------------|--------------------|
| Country | of Laboratories | Country | of Laboratories | Country | of Laboratories |
| Argentina | 5 | Guatemala | 1 | Saudi Arabia | 2 |
| Australia | 6 | Honduras | 2 | Scotland | 1 |
| Austria | 2 | Hong Kong | 2 | South Africa | 3 |
| Bahamas | 1 | Hungary | 1 | Spain | 3 |
| Barbados | 1 | India | 1 | Sri Lanka | 1 |
| Belgium | 3 | Ireland | 1 | St. Kitts/ Nevis | 1 |
| Bolivia | 1 | Israel | 1 | Suriname | 1 |
| Brazil | 3 | Italy | 1 | Switzerland | 3 |
| Burkina Faso | 1 | Jamaica | 1 | Taiwan | 2 |
| Burma | 1 | Japan | 2 | Tanzania | 2 |
| Canada | 19 | Kenya | 1 | Thailand | 2 |
| Central African Rep. | 1 | Korea | 1 | The Netherlands | 1 |
| Chile | 2 | Malaysia | 2 | Trinidad/Tobago | 3 |
| Colombia | 1 | Mexico | 1 | Uganda (East Africa) | 1 |
| Costa Rica | 3 | Morocco | 1 | Ukraine | 1 |
| Cote d'Ivoire | 1 | New Zealand | 1 | United Arab Emirates | 3 |
| Croatia | 2 | Nicaragua | 1 | United States | 822 |
| Denmark | 3 | Nigeria | 1 | Uruguay | 1 |
| Dominican Republic | 3 | Norway | 1 | US Territory | 22 |
| Ecuador | 2 | Panama | 1 | Venezuela | 2 |
| Egypt | 1 | Paraguay | 1 | Western Samoa | 1 |
| El Salvador | 1 | Peru | 3 | Vietnam | 1 |
| England | 3 | Philippines | 2 | Western Samoa | 1 |
| Ethiopia | 1 | Portugal | 1 | Yugoslavia | 1 |
| Germany | 5 | Republic of Singapore | 1 | Zambia | 1 |



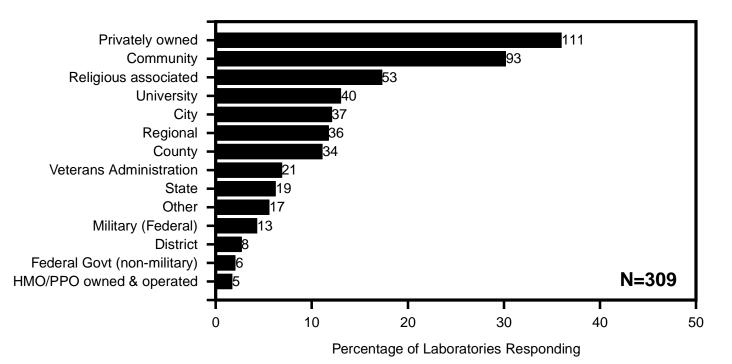


4.(a) Please use the following to describe the primary classification of your laboratory in regard to retroviral testing (Check only one.):

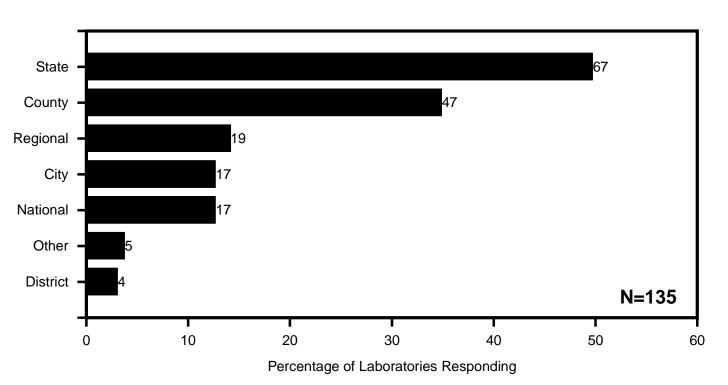
4.(b) If you selected BLOOD BANK in 4(a), please further describe your retroviral testing laboratory (Check all that apply within your Blood Bank laboratory classification):



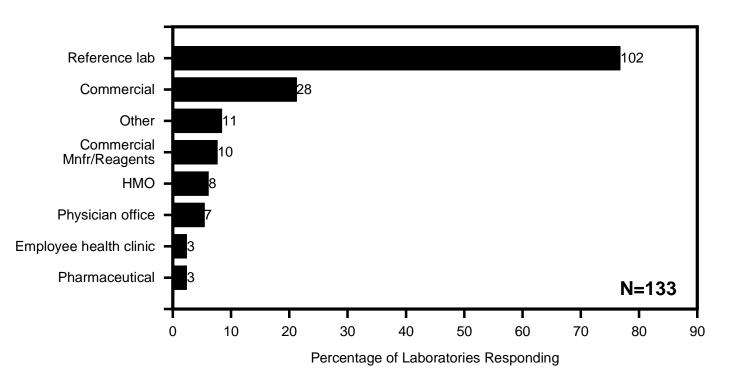
4.(c) If you selected HOSPITAL in 4(a), please further describe your retroviral testing laboratory (Check all that apply within your Hospital laboratory classification):



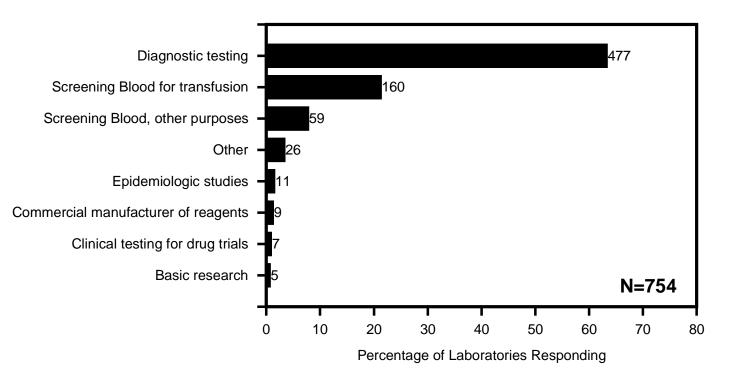
4.(d) If you selected HEALTH DEPARTMENT in 4(a), please further describe your retroviral testing laboratory (Check all that apply within your Health Department laboratory classification):



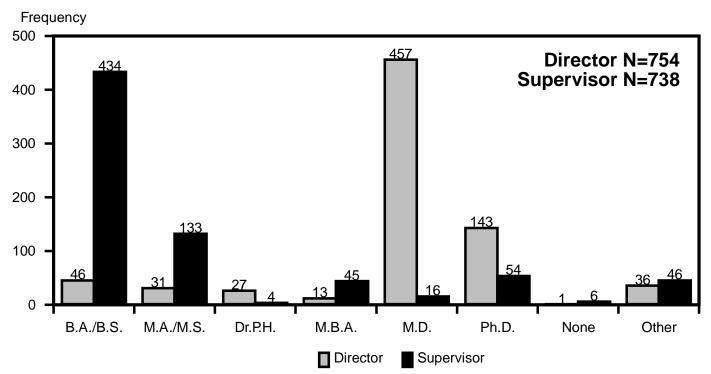
4.(e) If you selected INDEPENDENT in 4(a), please further describe your retroviral testing laboratory (Check all that apply within your Independent laboratory classification):



5. What is the primary purpose of your retroviral testing operation? (Check only one.)

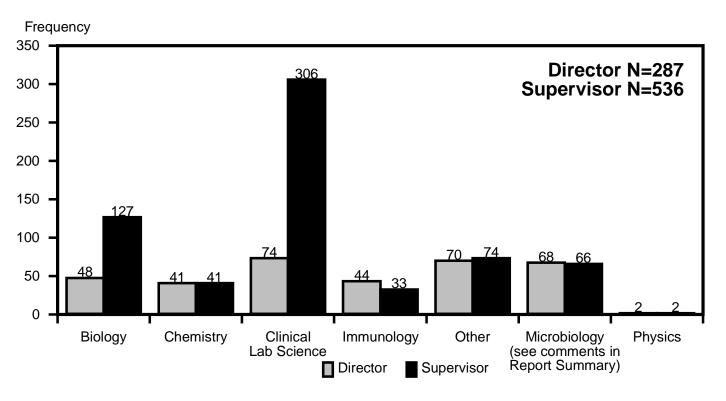


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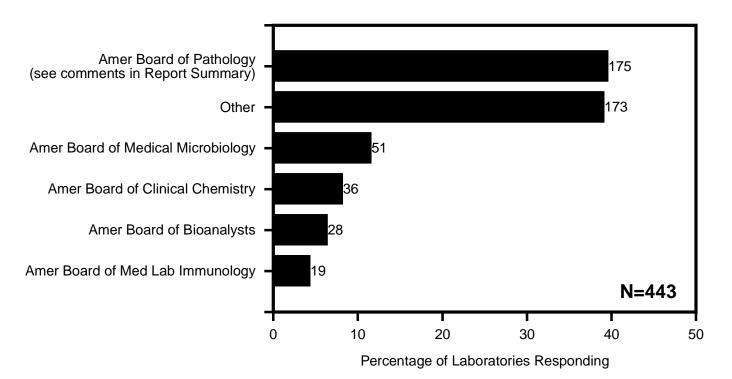


6.(a) Please indicate the highest degree that has been awarded to your Laboratory Director and Laboratory Supervisor (Check only one degree for each person.):

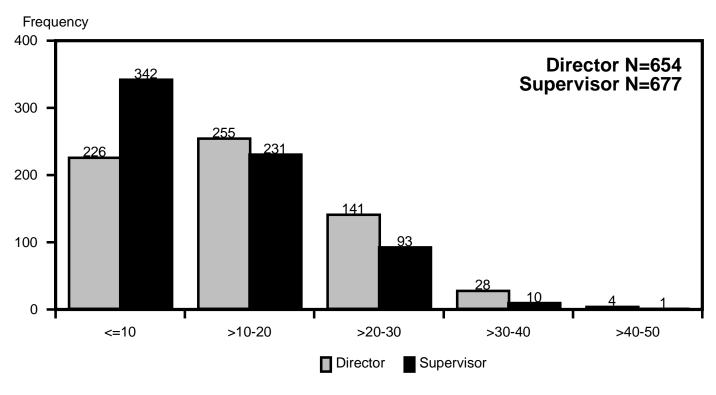
6.(b) If your Laboratory Director or Laboratory Supervisor has a degree other than M.D. or D.O., please indicate the academic discipline in which the degree was awarded (Check all that apply.):



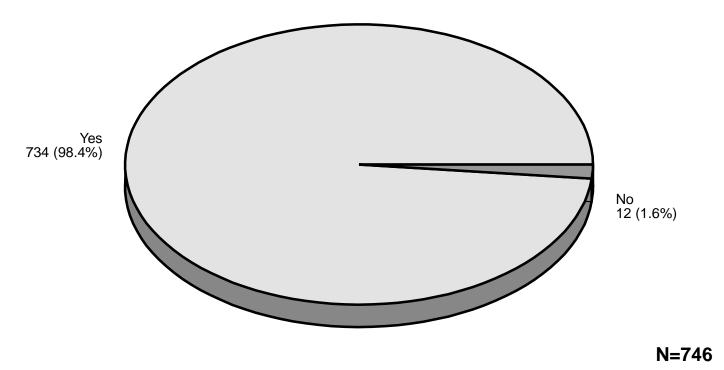
6.(c) What organization(s) have awarded board certification to your Laboratory Director ? (Check all that apply):



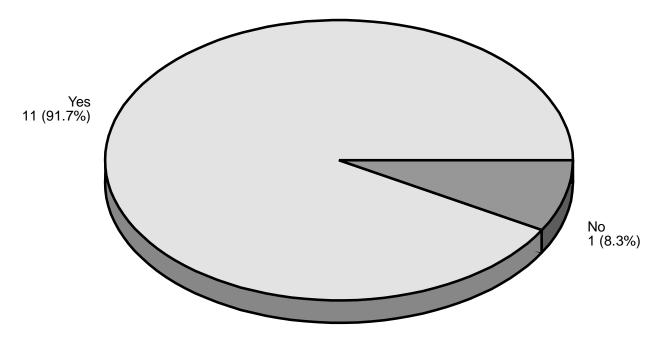
6.(d) Please indicate the years of experience your Laboratory Director or Laboratory Supevisor has in directing or supervising laboratory testing.



6.(e) Is your Laboratory Supervisor available to provide supervision on-site?

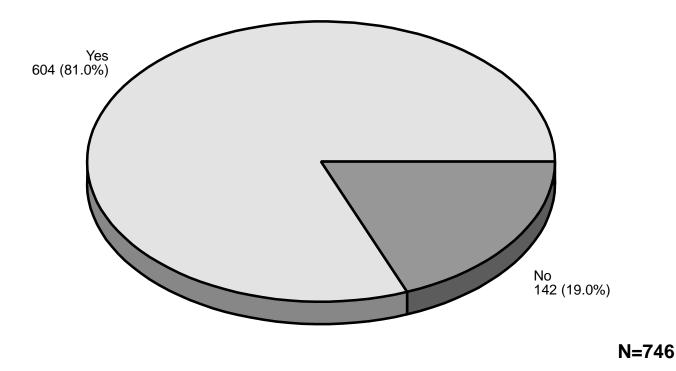


6.(f) If no, is there another person on-site that has been assigned to provide supervision?

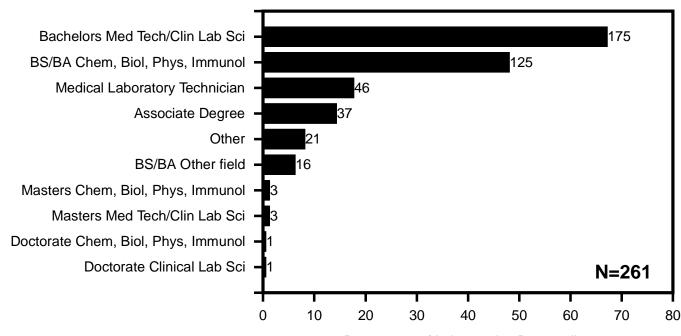


N=12

7.(a) Does your laboratory require that your retroviral testing personnel have a minimum degree?



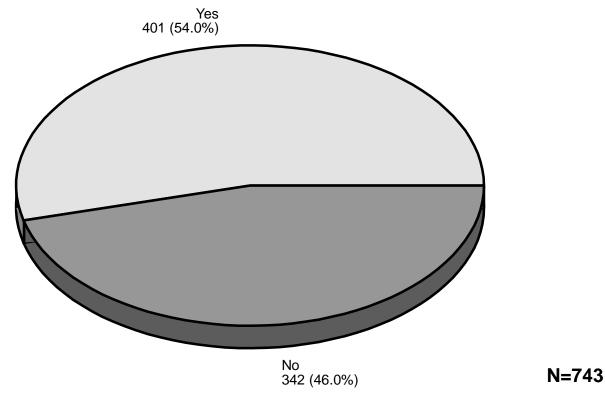
7.(b) What are the qualifications required of your retroviral testing personnel? (Check all that apply.)



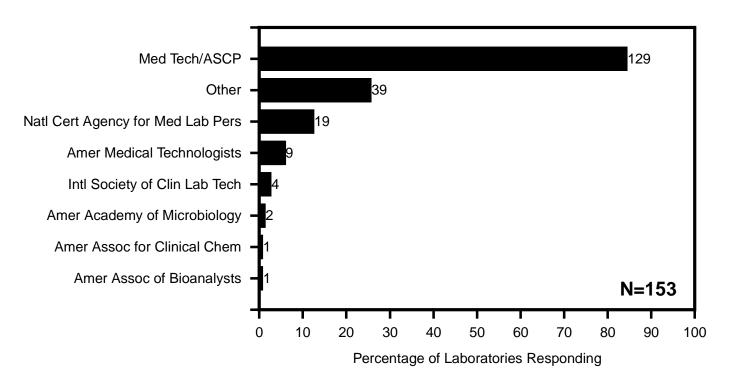
Percentage of Laboratories Responding

9

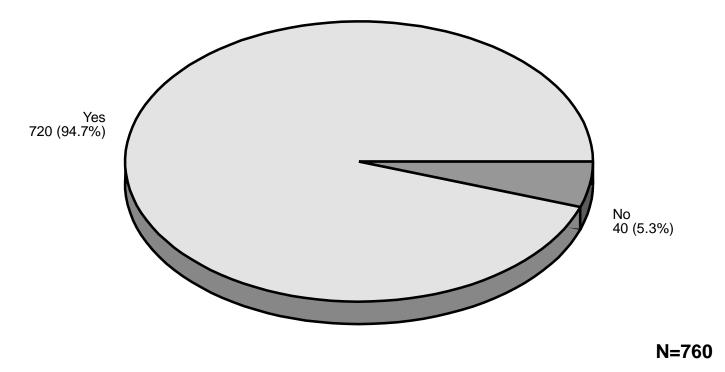
7.(c) Does your laboratory require that your retroviral testing personnel have professional certification?



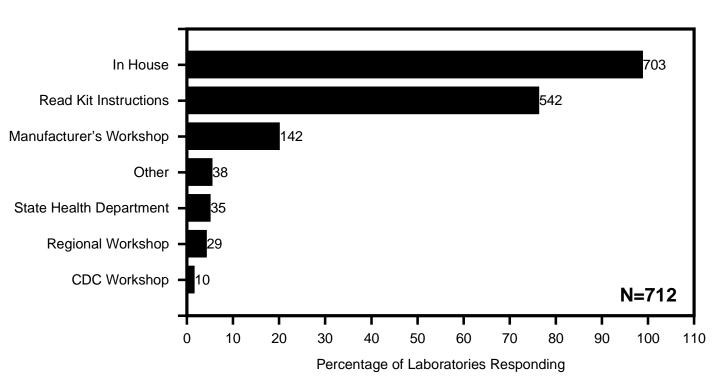
7.(d) If YES, please check the professional organizations that have awarded the required certification to your retroviral testing personnel (Check all that apply.):



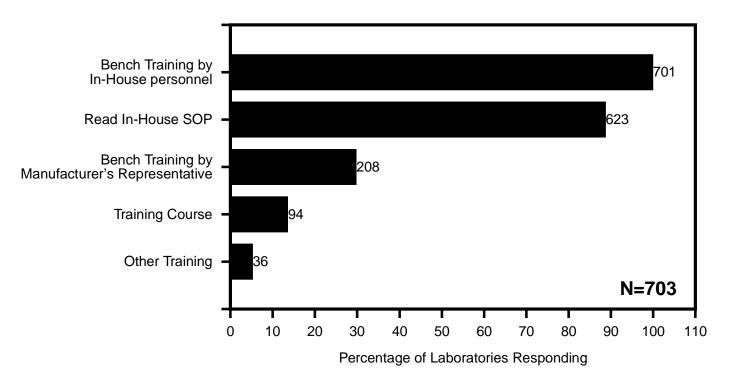
10 CDC Model Performance Evaluation Program September 1995 Retroviral Survey 8.(a) Does your laboratory require testing personnel to have retroviral-specific training before they are considered qualified to perform tests?



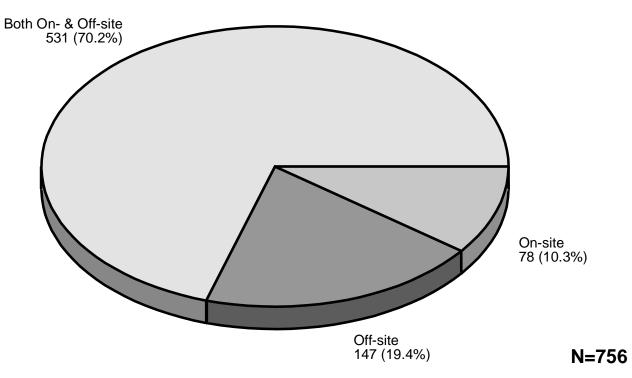
8.(b) If YES, what training must your personnel complete before they are considered qualified to perform retroviral testing? (Check all that apply.)



8.(c) If your personnel must complete in-house training before they are considered qualified to perform retroviral testing, indicate the type of in-house training (Check all that apply.):



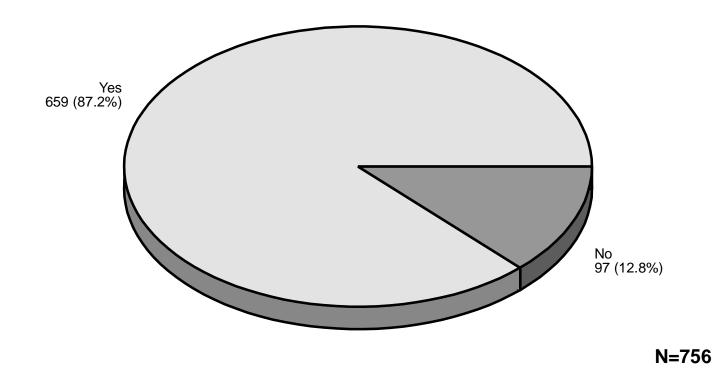
9.(a) Where are the specimens collected for retroviral testing? Please include all specimens tested (e.g., blood donor, diagnostic, serosurvey, neonatal dried blood spots, child-bearing women surveys). (Check only one.)



| 9.(b) | Are written instructions provided for collecting, labeling, and transporting |
|-------|--|
| | specimens? |

| Written Instructions | Collecting | Labeling | Transporting | |
|----------------------|--------------|--------------|--------------|--|
| No | 16 (2.2%) | 13 (1.8%) | 40 (5.4%) | |
| Yes | 723 (97.8%) | 727 (98.2%) | 695 (94.6%) | |
| Totals | 739 (100.0%) | 740 (100.0%) | 735 (100.0%) | |

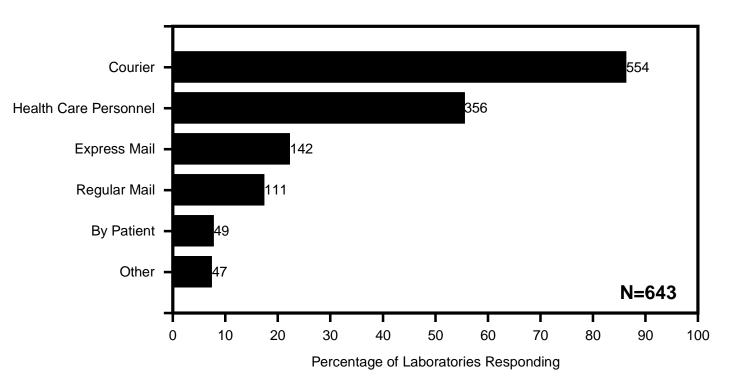
10.(a) Does your laboratory test specimens collected off-site?



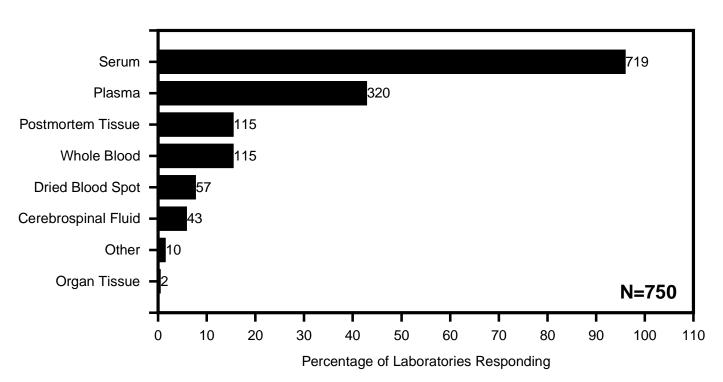
10.(b) If you test specimens collected off-site, please indicate where they are collected (Check all that apply.):

| N=653 Collection Location | Number of Laboratories | Percentage of Laboratories | Collection Location | Number of Laboratories | Percentage of Laboratories |
|------------------------------|------------------------------|----------------------------------|---------------------------------------|------------------------------|----------------------------------|
| Private Physician | 405 | 62.0 | Medical Examiner/ Coroner's Office | 148 | 22.7 |
| Hospital | 392 | 60.0 | HMO | 127 | 19.4 |
| Outpatient Health Clinic | 375 | 57.4 | Out of State | 112 | 17.2 |
| Correctional Facility | 219 | 33.5 | Organ Donation Center | 106 | 16.2 |
| Counseling and Testing Site | 215 | 32.9 | Tuberculosis (TB) clinic | 103 | 15.8 |
| STD Clinic | 215 | 32.9 | Military Installation | 97 | 14.9 |
| Family Planning Center | 189 | 28.9 | Other Collection Sites | 93 | 14.2 |
| Drug Abuse Treatment Center | 188 | 28.8 | Uncertain/Unknown | 46 | 7.0 |
| Blood/Plasma Center | 183 | 28.0 | | | |

14 CDC Model Performance Evaluation Program September 1995 Retroviral Survey 10.(c) How are the specimens collected off-site delivered to your laboratory? (Check all that apply.):



11. What types of specimens does your laboratory test for retroviral antibody? Please include all specimens tested (e.g., blood donor, diagnostic, serosurvey, neonatal dried blood spots, child-bearing women surveys). (Check all that apply.)

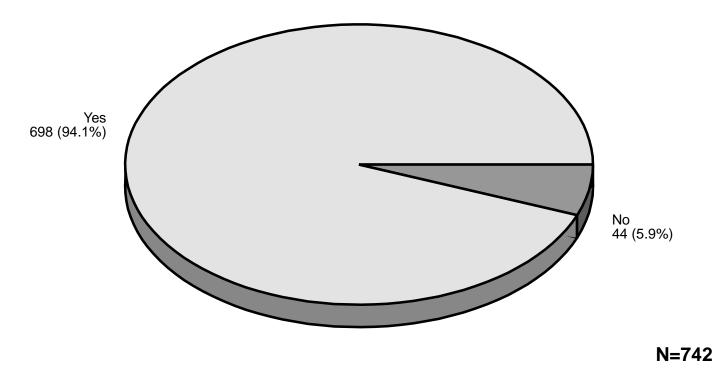


CDC Model Performance Evaluation Program September 1995 Retroviral Survey 15

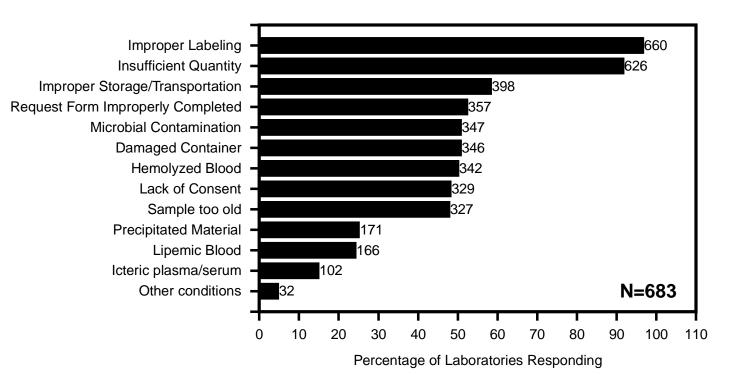
12 Please indicate which of the following procedures your laboratory routinely performs on a specimen before performing retroviral tests (Check all that apply.):

| N=742 Type of Specimen | Heat Inactivation | Clarification by Centrifugation or filtration | No Pretreatment |
|------------------------------|----------------------|--|--------------------|
| Whole Blood | 2 | 156 | 46 |
| Plasma | 11 | 127 | 216 |
| Serum | 17 | 254 | 465 |
| Post Mortem | 3 | 62 | 53 |
| Dried Blood Spots | 3 | 6 | 50 |
| Organ Tissue | 0 | 1 | 15 |
| Cerebrospinal Fluid | 3 | 9 | 37 |
| Other | 0 | 3 | 15 |

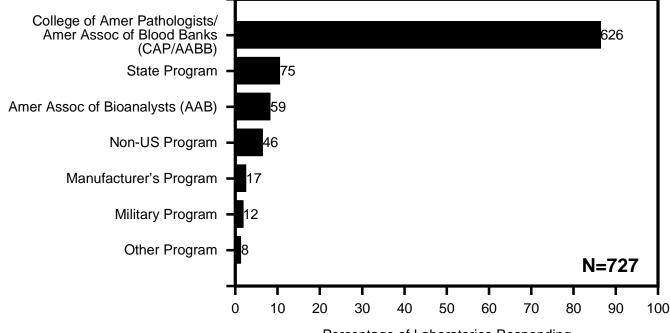
13.(a) Does your laboratory have written pre-test criteria for identifying specimens that are unsatisfactory for retroviral testing?



13.(b) Based upon your written pre-test criteria, please indicate which of the following conditions would exclude a specimen from retroviral testing in your laboratory (Check all that apply.):



CDC Model Performance Evaluation Program 17 September 1995 Retroviral Survey 14. If your laboratory participates in an external proficiency testing program for retroviral testing, please identify that program. Please exclude the CDC Model Performance Evaluation Program, which is not designed for proficiency testing (Check all that apply.):



Percentage of Laboratories Responding

15.(a) Indicate (1) the types of HIV-1 tests routinely performed in your labotatory,
(2) the order in which they are performed (1st step, 2nd step, etc.),
(3) whether an enzyme immunoassay (EIA) is performed singly or in duplicate, and (4) whether the EIA method used is manual or nonmanual:

| N=458 | Step 1 | Step 2 | Step 3 | Step 4 | Step 5 | Number of Laboratories | Percentage of Laboratories |
|---------------------|-----------|-----------|-----------|-----------|-----------|------------------------|-------------------------------|
| Algorithm* | EIA-S** | EIA-D** | A | | | 124 | 27.1 |
| | EIA-S | EIA-D | WB | | | 94 | 20.5 |
| | EIA-S | EIA-D | WB | Α | | 30 | 6.6 |
| | EIA-S | EIA-D | | | | 22 | 4.8 |
| | EIA-S | А | | | | 11 | 2.4 |
| | EIA-S | EIA-S | A | | | 10 | 2.2 |
| | EIA-S | EIA-D | IIF | Α | | 8 | 1.7 |
| | EIA-S | EIA-S | WB | | | 8 | 1.7 |
| | EIA-S | EIA-D | WB | 0 | | 7 | 1.5 |
| | EIA-D | WB | | | | 6 | 1.3 |
| | EIA-S | EIA-D | WB | lif | | 5 | 1.1 |
| | EIA-S | EIA-D | IIF | WB | А | 5 | 1.1 |
| Other Algorithms | | | | | | 128 | 27.9 |

| Labels |
|--|
| Test |
| EIA-S = HIV-1 Enzyme Immunoassay (EIA) singly |
| EIA-D = HIV-1 EIA in duplicate |
| WB = HIV-1 Western blot (WB) |
| IIF = HIV-1 Indirect immunofluorescence (IIF) |
| O = test Other than HIV-1 EIA, IIF or WB |
| A = refer for Additional testing |
| Footnotes |
| * A total of 107 unique algorithms were reported |
| ** EIA data in this table includes both manual and non-manual procedures |

15.(b) Indicate (1) the type(s) of HIV-1/HIV-2 tests routinely performed in your laboratory, (2) the order in which they are performed (1st step, 2nd step, etc.) (3) whether an enzyme immunoassay (EIA) is performed singly or in duplicate, and (4) whether the EIA method used is manual or nonmanual:

| N=413 | Step 1 | Step 2 | Step 3 | Step 4 | Step 5 | Number of Laboratories | Percentage of Laboratories |
|---------------------|-------------|-------------|-----------|-----------|-----------|------------------------|-------------------------------|
| Algorithm* | EIA 1/2-S** | EIA 1/2-D** | A | | | 161 | 39.0 |
| | EIA 1/2-S | EIA 1/2-D | WB-1 | | | 63 | 15.3 |
| | EIA 1/2-S | EIA 1/2-D | | | | 34 | 8.2 |
| | EIA 1/2-S | EIA 1/2-D | WB-1 | EIA2-S | EIA2-D | 9 | 2.2 |
| | EIA 1/2-S | EIA 1/2-D | lIF | | | 8 | 1.9 |
| | EIA 1/2-S | EIA 1/2-D | WB-1 | WB-2 | | 7 | 1.7 |
| | EIA 1/2-S | EIA 1/2-D | A | | | 6 | 1.5 |
| | EIA 1/2-S | EIA 1/2-D | WB-1 | А | | 6 | 1.5 |
| | EIA 1/2-S | EIA 1/2-S | А | | | 5 | 1.2 |
| Other Algorithms | | | | | | 114 | 27.6 |

| Lal | pels |
|-----|--|
| | Test |
| | EIA 1/2-S = HIV-1/HIV-2 Enzyme Immunoassay (EIA) singly |
| | EIA 1/2-D = HIV-1/HIV-2 EIA in duplicate |
| | EIA 2-S = HIV-2 EIA singly (2) |
| | EIA 2-D = HIV-2 EIA in duplicate (2) |
| | WB-1 = HIV-1 Western blot (WB) |
| | WB-2 = HIV-2 WB |
| | IIF = HIV-1 Indirect Immunofluorescence |
| | O = test Other than HIV-1/HIV-2 EIA, IIF or WB |
| | A = refer for Additional HIV-1/HIV-2 testing |
| Fo | otnotes |
| | * A total of 98 unique algorithms were reported |
| | ** EIA data in this table includes both manual and non-manual procedures |

16. Please indicate the number of months your laboratory has been performing these specific HIV tests:

| N=703 Number of Months | EIA | WB | lif | PCR | PA | HIV-1 Antigen | Viral Culture | Other |
|---------------------------|-----|----|-----|-----|----|------------------|------------------|-------|
| <=12 | 104 | 46 | 10 | 20 | 6 | 16 | 9 | 11 |
| >12-24 | 26 | 15 | 8 | 14 | 3 | 11 | 3 | 4 |
| >24-36 | 30 | 13 | 8 | 7 | 1 | 6 | 2 | 4 |
| >36-48 | 24 | 7 | 1 | 7 | 1 | 6 | 1 | 2 |
| >48-60 | 44 | 17 | 1 | 3 | 0 | 11 | 2 | 1 |
| >60-72 | 29 | 7 | 3 | 1 | 0 | 5 | 2 | 0 |
| >72-84 | 33 | 20 | 3 | 1 | 2 | 9 | 3 | 3 |
| >84-96 | 50 | 31 | 5 | 1 | 2 | 12 | 5 | 0 |
| >96-108 | 47 | 19 | 6 | 2 | 0 | 8 | 3 | 1 |
| >108-120 | 115 | 36 | 11 | 0 | 1 | 6 | 4 | 2 |
| >120-132 | 116 | 15 | 2 | 0 | 0 | 0 | 0 | 0 |
| >132 | 74 | 7 | 0 | 0 | 1 | 1 | 1 | 3 |

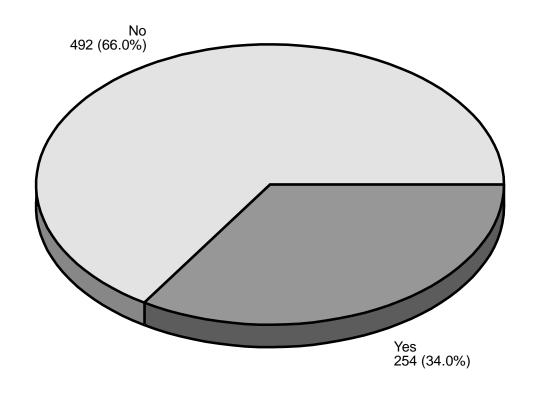
16. Please indicate the number of different employees in your laboratory that perform these specific HIV tests:

| N=727 Number of Employees | EIA | WB | IIF | PCR | PA | HIV-1 Antigen | Viral Culture | Other |
|------------------------------|-----|-----|-----|-----|----|------------------|------------------|-------|
| 1 | 17 | 15 | 7 | 10 | 3 | 9 | 3 | 6 |
| >1-4 | 293 | 143 | 32 | 42 | 8 | 51 | 23 | 16 |
| >4-10 | 314 | 60 | 18 | 7 | 8 | 29 | 8 | 9 |
| >10 | 91 | 18 | 1 | 0 | 1 | 8 | 1 | 2 |

17. Please identify the source of written procedure(s) your laboratory follows for performing the following HIV tests? (Check all that apply only for the procedures performed in your laboratory.)

| N=751 | | | | |
|-------------------------------------|-----|-----|-----|-------|
| Type of procedure | EIA | WB | IIF | Other |
| No written procedures | 1 | 4 | 4 | 1 |
| In-house written protocol | 602 | 197 | 45 | 41 |
| Manufacturers insert | 651 | 213 | 39 | 45 |
| Provided by State Health Department | 50 | 13 | 8 | 1 |
| Other sources | 25 | 5 | 1 | 3 |





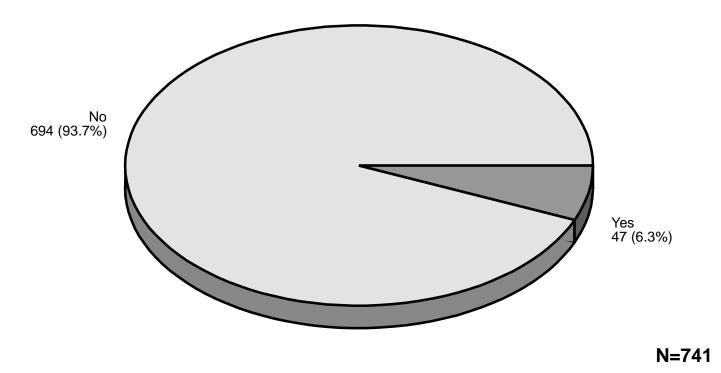
18.(b) Which of the following WB band patterns does your laboratory routinely use to classify a specimen as HIV-1 antibody reactive? (Check only one.)

| N=251 Band Patterns | Number of Laboratories | Percentage of Laboratories |
|---|------------------------------|----------------------------------|
| Any two of p24, gp41, gp120/gp160 | 215 | 85.7 |
| Other | 13 | 5.2 |
| One protein from each: gag(p17/18, p24, p55), and env (gp41, gp120, gp160), and pol (p31, p51, p65/66) | 8 | 3.2 |
| p24 or p31, and gp41 or gp120/gp160 | 7 | 2.8 |
| Two env bands w/ or w/o gag or pol bands | 6 | 2.4 |
| p24 plus p31, & (gp41 or gp120/gp160) | 2 | 0.8 |

18.(c) Which of the following is required for your laboratory to interpret an HIV-1 WB result as negative? (Check only one.)

| N=249 | Number of | Percentage of |
|---------------------------------|--------------|------------------|
| Band Patterns | Laboratories | Laboratories |
| No bands present | 175 | 70.3 |
| No HIV-1 specific protein bands | 71 | 28.5 |
| Other | 3 | 1.2 |

19.(a) Do you perform an HIV antibody test other than EIA, WB, IIF, or HIV antigen detection?



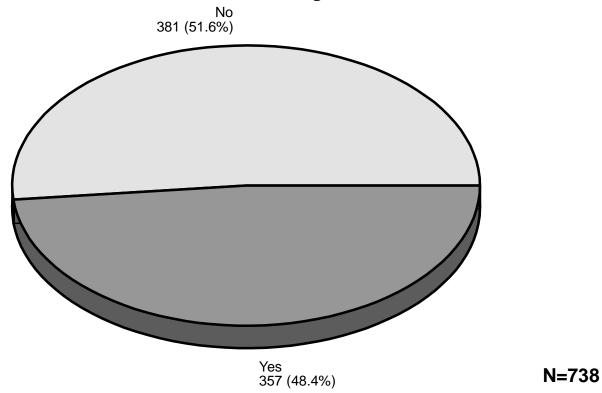
20. Please indicate the frequency with which your laboratory uses HIV control sera (other than kit manufacturer controls) for each of the test methods below (Check all that apply.):

| N=453 | | | Two | |
|-------------|---------------------------|--------------------------|-------------|--------------------|
| Test Method | Each Test ^ª | Each Set [♭] | Each Day | Other Frequency |
| EIA | 187 | 165 | 52 | 79 |
| WB | 7 | 121 | 9 | 25 |
| lif | 10 | 25 | 3 | 3 |
| Other | 15 | 12 | 3 | 4 |

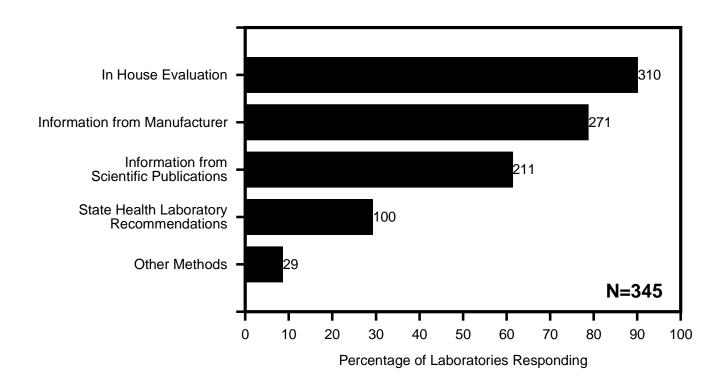
^a An EIA plate, Western blot strip or IIF slide

^b A set of EIA plates, Western blot strips or IIF slides

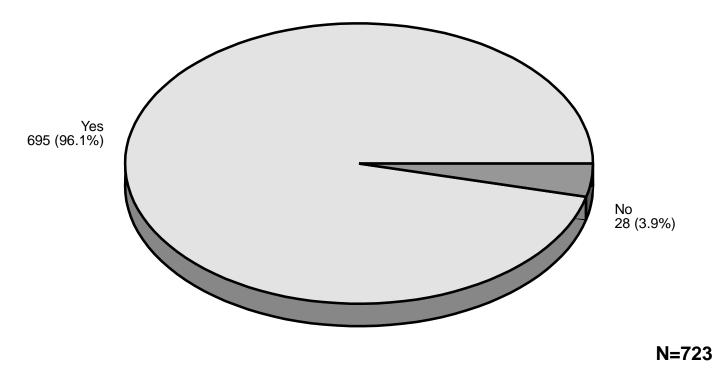
21.(a) Does your laboratory have written criteria for adopting a new test or a different manufacturer's test for HIV testing?



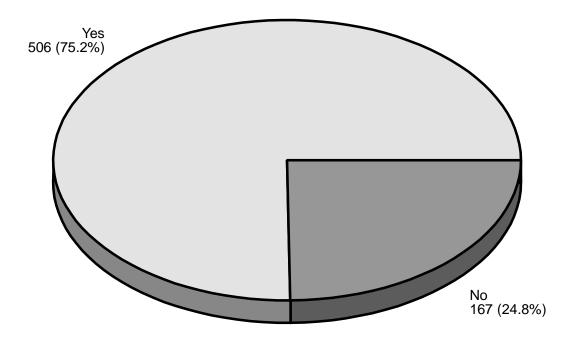
21.(b) If YES, please identify the methods used for establishing these written criteria (Check all that apply.):



21.(c) Does your laboratory have a quality assurance plan?



21.(d) Does your laboratory have written policies and/or procedures for monitoring an HIV testing quality assurance plan?



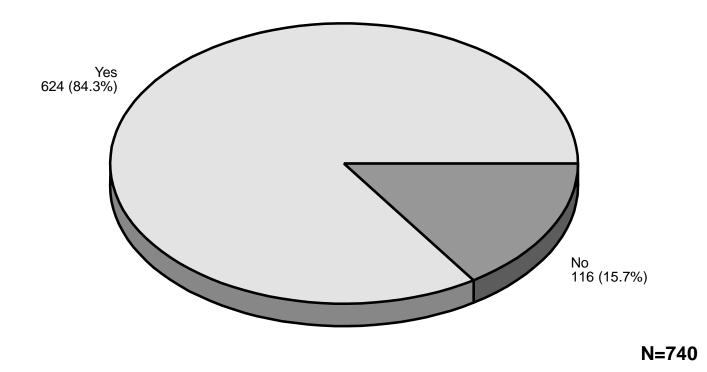
22. This question refers to the volume of HIV antibody testing performed in your laboratory. Responses should reflect the number of patient/donor specimens tested since your laboratory began testing (Round off to the nearest whole number.)

| N=529 Number Since Testing Began | Total Specimens Tested | Reactive by Screen | Tested by Suppl/Conf | Reactive by Suppl/Conf |
|-------------------------------------|------------------------------|--------------------------|----------------------------|------------------------------|
| <10 | 1 | 39 | 34 | 52 |
| 10-99 | 3 | 92 | 79 | 84 |
| 100-999 | 26 | 156 | 138 | 133 |
| 1,000-9,999 | 136 | 117 | 105 | 74 |
| 10,000-99,999 | 210 | 31 | 32 | 26 |
| 100,000-999,999 | 124 | 2 | 4 | 3 |
| 1,000,000-9,999,999 | 18 | 1 | 1 | 0 |
| >9,999,999 | 4 | 0 | 0 | 0 |

22. This question refers to the volume of HIV antibody testing performed in your laboratory. Responses should reflect the number of patient/donor specimens tested during the most recent representative week. (Round off to the nearest whole number.)

| N=693 Number During Most Recent Week | Total Specimens Tested | Reactive by Screen | Tested by Suppl/Conf | Reactive by Suppl/Conf |
|---|------------------------------|--------------------------|----------------------------|------------------------------|
| 0 | 6 | 193 | 174 | 213 |
| <10 | 38 | 311 | 265 | 235 |
| 10-99 | 291 | 112 | 113 | 84 |
| 100-999 | 269 | 8 | 11 | 6 |
| 1,000-9,999 | 89 | 0 | 0 | 0 |
| 10,000-99,999 | 4 | 0 | 0 | 0 |

23.(a) Does your laboratory refer HIV specimens to other laboratories for additional testing?



23.(c) Please identify the types of laboratories to which HIV specimens are referred for these additional tests (Check all that apply.):

| N=613 Test Requested | Hospital | Health Department | Blood Bank | Independent | Other | Total |
|-------------------------|----------|----------------------|---------------|-------------|-------|-------|
| EIA HIV-1 | 4 | 51 | 9 | 57 | 33 | 154 |
| EIA HIV-2 | 4 | 29 | 20 | 80 | 43 | 176 |
| EIA HIV-1 HIV-2 | 10 | 9 | 10 | 50 | 21 | 100 |
| WB HIV-1 | 26 | 90 | 32 | 261 | 72 | 481 |
| WB HIV-2 | 14 | 30 | 16 | 172 | 68 | 300 |
| IIF HIV-1 | 8 | 33 | 8 | 18 | 10 | 77 |
| IIF HIV-2 | 2 | 10 | 1 | 14 | 5 | 32 |
| PA | 1 | 3 | 1 | 6 | 3 | 14 |
| PCR | 9 | 13 | 1 | 107 | 33 | 163 |
| Culture | 7 | 12 | 0 | 30 | 15 | 64 |
| Antigen | 12 | 5 | 2 | 88 | 27 | 134 |
| Other | 1 | 4 | 0 | 9 | 9 | 23 |

24. Indicate (1) the type(s) of HTLV tests routinely performed in your laboratory,
(2) the order in which they are performed (1st step, 2nd step, etc.),
(3) whether an enzyme immunoassay (EIA) is performed singly or in duplicate, and (4) whether the EIA method used is manual or nonmanual:

| N=255 | Step 1 | Step 2 | Step 3 | Step 4 | Number of Laboratories | Percentage of Laboratories |
|---------------------|-----------|-----------|-----------|-----------|---------------------------|-------------------------------|
| Algorithm* | EIA-S** | EIA-D** | А | | 123 | 48.2 |
| | EIA-S | EIA-D | | | 34 | 13.3 |
| | EIA-S | EIA-D | WB | | 19 | 7.5 |
| | EIA-S | EIA-D | WB | А | 7 | 2.7 |
| | EIA-S | EIA-D | WB | А | 6 | 2.4 |
| | EIA-S | EIA-D | А | | 5 | 2.0 |
| | EIA-S | EIA-D | WB | 0 | 4 | 1.6 |
| | EIA-S | WB | | | 4 | 1.6 |
| | EIA-S | А | | | 4 | 1.6 |
| | WB | | | | 4 | 1.6 |
| Other Algorithms | | | | | 45 | 17.6 |

Labels

Test

EIA-S = HTLV Enzyme Immunoassay (EIA) singly

EIA-D = HTLV EIA in duplicate

WB = HTLV Western blot (WB)

O = test Other than HTLV EIA, IIF or WB

A = refer for Additional testing

Footnotes

* A total of 46 unique algorithms were reported

** EIA data in this table includes both manual and non-manual procedures

25. Please indicate the number of months your laboratory has been performing these specific HTLV-I/II tests:

| N=227 Number of Months | EIA | WB | IIF | PCR | PA | RIPA | HTLV Antigen | Viral Culture | Other |
|---------------------------|-----|----|-----|-----|----|------|-----------------|------------------|-------|
| <=12 | 30 | 7 | 0 | 6 | 1 | 1 | 0 | 0 | 2 |
| >12-24 | 13 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| >24-36 | 16 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| >36-48 | 5 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| >48-60 | 22 | 3 | 0 | 2 | 0 | 1 | 1 | 0 | 0 |
| >60-72 | 24 | 3 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| >72-84 | 71 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| >84-96 | 23 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| >96-108 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| >108 | 14 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |

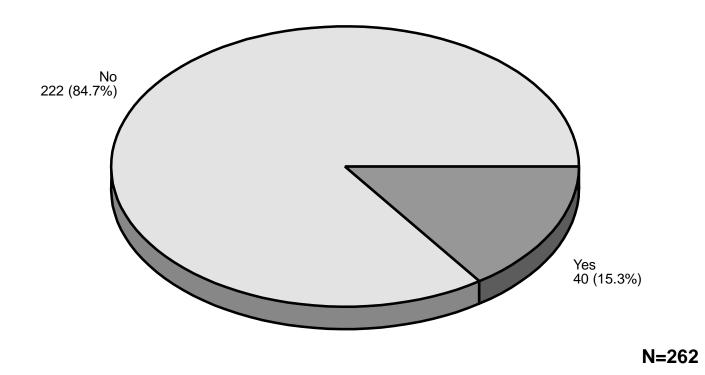
25. Please indicate the number of different employees in your laboratory that perform these specific HTLV-I/II tests:

| N=242 Number of Employees | EIA | WB | IIF | PCR | PA | RIPA | HTLV Antigen | Viral Culture | Other |
|------------------------------|-----|----|-----|-----|----|------|-----------------|------------------|-------|
| 1 | 6 | 2 | 0 | 2 | 1 | 0 | 0 | 1 | 0 |
| >1-4 | 79 | 24 | 5 | 7 | 3 | 2 | 2 | 0 | 2 |
| >4-10 | 102 | 9 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |
| >10 | 48 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |

26. Please identify the source of written procedure(s) your laboratory follows for performing the following HTLV-I/II tests? (Check all that apply only for the procedures performed in your laboratory.)

| N=255 | | | | |
|-------------------------------------|-----|----|-----|-------|
| Type of procedure | EIA | WB | IIF | Other |
| No written procedures | 0 | 0 | 1 | 0 |
| In-house written protocol | 210 | 33 | 2 | 11 |
| Manufacturers insert | 221 | 30 | 1 | 6 |
| Provided by State Health Department | 6 | 0 | 0 | 0 |
| Other sources | 15 | 1 | 0 | 1 |

27.(a) Does your laboratory perform HTLV Western blot testing?

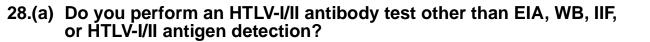


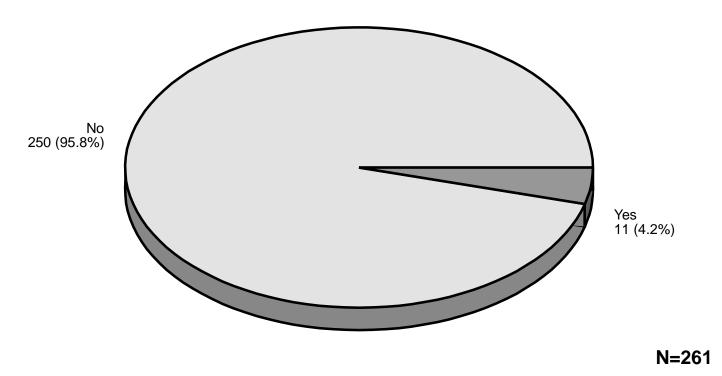
27.(b) Which of the following WB band patterns does your laboratory routinely use to classify a specimen as HTLV-I/II antibody reactive? (Check only one.)

| N=40 Band Patterns | Number of Laboratories | Percentage of Laboratories |
|---|------------------------------|----------------------------------|
| p24 and gp46 or r21e (recombinant envelope protein) | 15 | 37.5 |
| Other | 9 | 22.5 |
| p19 or p24, and gp46 or gp61/68 | 8 | 20.0 |
| One protein from each of the viral gene product groups: gag(19, p24), and env (gp21, gp46, gp61/68) | 4 | 10.0 |
| any HTLV-I/II specific protein bands | 2 | 5.0 |
| p24 and gp46 or gp61/68 | 2 | 5.0 |

27.(c) Which of the following is required for your laboratory to interpret an HTLV-I/II WB result as negative? (Check only one.)

| N=40 | Number | Percentage |
|---------------------------------------|--------------|--------------|
| Band Patterns | Laboratories | Laboratories |
| No HTLV-I/II specific protein band(s) | 22 | 55.0 |
| No bands present | 17 | 42.5 |
| Other | 1 | 2.5 |

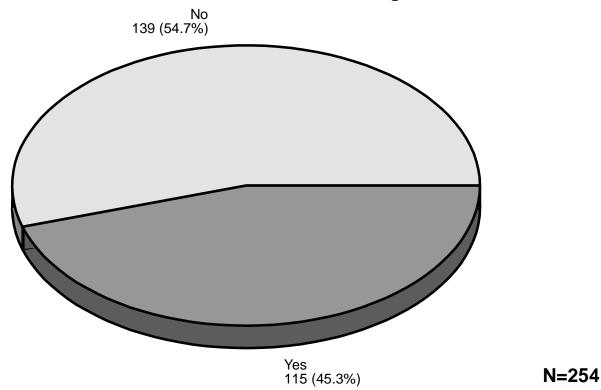




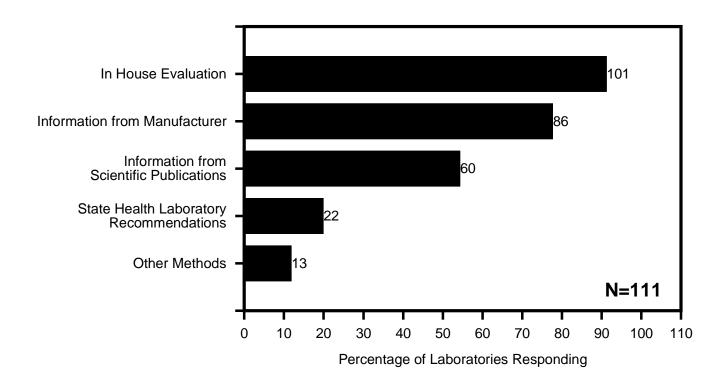
29. Please indicate the frequency with which your laboratory uses HTLV-I/II control sera (other than kit manufacturer controls) for each of the test methods below (Check all that apply.):

| N=124 | Each | Each | Two Each | Other |
|-------------|------|------|-------------|-----------|
| Test Method | Test | Set | Day | Frequency |
| EIA | 49 | 41 | 7 | 25 |
| WB | 0 | 28 | 1 | 2 |
| lif | 0 | 3 | 0 | 0 |
| Other | 3 | 5 | 2 | 1 |

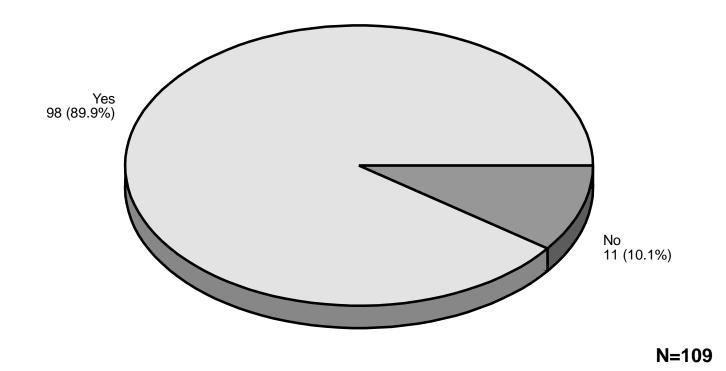
30.(a) Does your laboratory have written criteria for adopting a new test or a different manufacturer's test for HTLV-I/II testing?



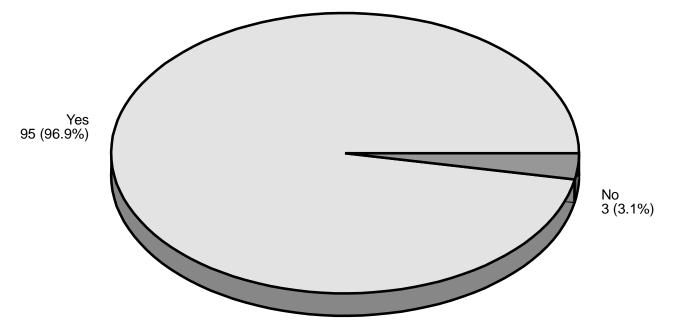
30.(b) If YES, please identify the methods used for establishing these written criteria (Check all that apply.):



30.(c) Does your laboratory have an HTLV quality assurance plan?



30.(d) Does your laboratory have written policies and/or procedures for monitoring an HTLV testing quality assurance plan?



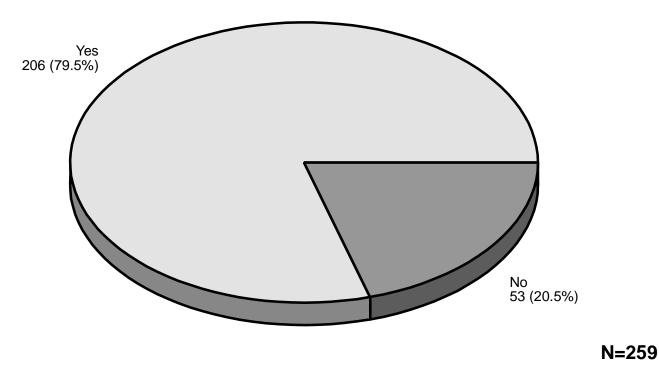
31. This question refers to the volume of HTLV-I/II antibody testing performed in your laboratory. Responses should reflect the number of patient/donor specimens tested since your laboratory began testing. (Round off to the nearest whole number.)

| N=166 Number Since Testing Began | Total Specimens Tested | Reactive by Screen | Tested by Suppl/Conf | Reactive by Suppl/Conf |
|-------------------------------------|------------------------------|--------------------------|----------------------------|------------------------------|
| <10 | 0 | 35 | 27 | 51 |
| 10-99 | 5 | 42 | 41 | 29 |
| 100-999 | 16 | 39 | 32 | 10 |
| 1,000-9,999 | 45 | 13 | 13 | 5 |
| 10,000-99,999 | 53 | 1 | 3 | 0 |
| 100,000-999,999 | 41 | 0 | 0 | 0 |
| 1,000,000-9,999,999 | 3 | 0 | 0 | 0 |

31. This question refers to the volume of HTLV-I/II antibody testing performed in your laboratory. Responses should reflect the number of patient/donor specimens tested during the most recent representative week. (Round off to the nearest whole number.)

| N=220 Number During Most Recent Week | Total Specimens Tested | Reactive by Screen | Tested by Suppl/Conf | Reactive by Suppl/Conf |
|---|------------------------------|--------------------------|----------------------------|------------------------------|
| 0 | 6 | 103 | 91 | 124 |
| <10 | 36 | 79 | 62 | 28 |
| 10-99 | 73 | 7 | 7 | 3 |
| 100-999 | 81 | 1 | 2 | 0 |
| 1,000-9,999 | 28 | 0 | 0 | 0 |
| 10,000-99,999 | 1 | 0 | 0 | 0 |

32.(a) Does your laboratory send HTLV-I/II specimens to other laboratories for additional testing?



32.(c) Please identify the types of laboratories to which HTLV-I/II specimens are referred for these additional tests (Check all that apply.):

| N=204 | | Health | Blood | | | |
|----------------|----------|------------|-------|-------------|-------|-------|
| Test Requested | Hospital | Department | Bank | Independent | Other | Total |
| EIA | 1 | 5 | 4 | 20 | 19 | 49 |
| WB | 10 | 8 | 18 | 113 | 45 | 194 |
| lif | 0 | 1 | 0 | 3 | 0 | 4 |
| PA | 0 | 0 | 0 | 0 | 2 | 2 |
| RIPA | 2 | 1 | 2 | 34 | 22 | 61 |
| PCR | 1 | 4 | 2 | 12 | 4 | 23 |
| Culture | 0 | 0 | 0 | 2 | 1 | 3 |
| Antigen | 0 | 1 | 1 | 2 | 0 | 4 |
| Other | 0 | 0 | 0 | 1 | 0 | 1 |