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# The Impact of the Flexner Report on the Fate of Medical Schools in North America After 1909

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**Purpose:** To quantify the influence of Abraham Flexner in terms of medical school closings and mergers attributable to his 1910 Report.

**Methods:** The online English language literature was searched using *Yahoo!'s Google* search engine to identify comments regarding the impact of the Report on school closings and mergers. Three hundred seventy-eight sites were thus identified, all of which were reviewed.

**Results:** Twelve (7 percent) of the 168 schools Flexner evaluated closed or merged because of the Report. The closings and mergers of another 26 schools (15 percent) were not credited by any comment to Flexner, but occurred in the two decades following the Report for reasons that may have been related to the Report. The impact of Flexner's work on another 33 schools (20 percent) is unclear. Finally, 97 (58 percent) did not close or merge because of the Report.

**Conclusion:** At least 12 (7 percent) of the 168 North American medical schools may have closed or merged after 1909 because of a bad grade from Flexner. The actual number of schools affected in this way is probably higher, perhaps 38 (22 percent), but could not be definitely determined.

The Flexner Report<sup>1</sup> of Abraham Flexner is considered pivotal in North American medical education shortly after the turn of the twentieth century. In the turbulent wake of the Report's publication, a host of schools closed and others merged. Many assume that the Report played a leading part in these closings and mergers,<sup>2-4</sup> but none have quantified precisely the extent of Flexner's influence. One reason is the difficulty of determining whether a bad grade from Flexner was the sole cause of a school's ultimate demise when several other factors, including economic

and statutory, may have played supporting or even lead roles. This study is a preliminary attempt to quantify the influence of Flexner in terms of school closings and mergers attributable to his Report. In the absence of controlled trials, expert opinion is the essential source of data. Although an obviously imperfect approach, compiling the opinions of medical historians and educators lays a foundation for exploring further the impact of the Flexner Report.

## **Methods**

The online English language literature was searched using *Yahoo!*'s<sup>5</sup> *Google*<sup>6</sup> search engine to identify comments relating the Report to school closings and mergers. Three hundred seventy-eight sites were thus identified, all of which were reviewed, although not all addressed the Report's impact. The key words "Flexner Report" were used to identify 56 relevant sites. Once a definitive comment regarding a school had been obtained, as ascertained by reviewing the sites returned by *Yahoo!* in the order of their *Google* prioritization, no further searching for that school was performed. The impact of the Report on 11 (6 percent) of the 168 schools evaluated was determined in this manner.

*Google* searches were also performed on the names of all schools. Visiting these sites, in turn, frequently led to even more sites containing relevant information. Three hundred twenty-two additional sites were thus visited and reviewed. The fate of 127 schools (76 percent) was determined in this way. Online searching failed to reveal any reason for the closing or merger of 30 schools (18 percent), all of which were in the United States.

## **Results**

Twelve (7 percent) of the 168 schools closed ( $n = 9$ ) or merged ( $n = 3$ ) for reasons attributed to the Report. For another 29 schools (17 percent) that closed or merged, the cause was unclear,

but 26 (15 percent) of these schools closed or merged within two decades of the Report's publication. The authors of the online comments implied that an additional 97 schools (58 percent) were unaffected by the Report; several of these closed or merged, but apparently did so for reasons unrelated to the Report. Finally, online searching failed to yield comments for 30 schools (18 percent). The table accompanying this article provides summary information; the results for each individual school and corresponding references are presented in the appendix to the online version of this paper.

## **Discussion**

The Flexner Report is pertinent to both epidemiology and policy. Epidemiology concerns itself with “the distribution and determinants of disease frequency” in human populations.<sup>7</sup> How does studying the fate of medical schools fit this definition? Arguably, the education of doctors is within the purview of epidemiologists because of its indirect, but certain, impact on the treatment of disease. Besides, the repercussion of the Report is of the nature readily analyzed by epidemiologists: both a denominator (*the number of schools evaluated*) and numerator (*the number that closed or merged as a result of Flexner*) are present.<sup>8</sup> Like pioneering epidemiologists John Graunt, who in the middle of the 17<sup>th</sup> century quantified patterns of disease in a population by analyzing the weekly reports of births and deaths in London,<sup>9</sup> and William Farr, who in the middle of the 19<sup>th</sup> century set up a system to compile routinely the numbers and causes of deaths in England and Wales,<sup>10</sup> Flexner collected extensive data on which to base his conclusions.

His well researched Report is one of the most cited evaluations of medical education in the twentieth century, was considered the “most influential publication of all” in medical education,<sup>2</sup> and was sufficiently momentous to be included in a 1974 issue of *Daedalus* entitled “Twentieth-Century Classics Revisited.”<sup>11</sup> Yet, definitive analysis of its impact has not been performed.

The list of schools in Flexner's day<sup>1</sup> is quite different from a list of current schools.<sup>12</sup> Did the Report play a part in this change? In the absence of experimental data, can we declare a cause-effect relationship between the Report and the fate of schools?

The set of criteria that British statistician Sir Austin Bradford Hill proposed to decide whether an environmental factor is a cause of disease<sup>13</sup> may be adapted to our determination of whether the Report was a cause of a school's closing or merger. The Report as a cause satisfies the criteria of *temporality* (Flexner's inspections in 1909 preceded the rash of closings and mergers in subsequent years), *dose-response* (the casualty list of schools contains a high proportion of the ones most harshly criticized), *consistency* (many researchers have placed Flexner at the root of the reduction in the number of schools<sup>2-4</sup>), *plausibility* (disfavored schools subsequently found it difficult to secure funding from foundations and governments and licensure for their students from state regulatory boards), and *analogy* (similar surveys have had a similar effect).

### **Serendipitous Searching**

Although no experimental data exist, data for this study were nevertheless needed and readily available at a remarkable number of diverse sites, many of which were of remarkable quality. Investigating the fate of schools via searching the Web using each school's name was straightforward. Once a school's official site had been identified, links were followed to historical information about that institution. Often, one site would reveal the fate of more than one school. For example, a page at the site of Loyola University<sup>14</sup> covered not only the medical school of Loyola, but also Bennett, Illinois, and Reliance Medical Colleges, all of which merged with Loyola. In this case, one site disclosed the fate of four schools.

Some searches did not lead directly to a page for a school, particularly if it had closed. However, a search for a school that had closed often led to other sites that disclosed its fate. Some

pages addressed the history of schools in the same region. Others were for historical societies for a particular region that revealed information about schools that had closed. For example, one site presented the history of schools in Maryland<sup>15</sup> and another<sup>16</sup> discussed the defunct North Carolina Medical College in a passage about the school's building, which is a historic landmark.

Many comments explicitly identified the Report as a cause for a school's closing or merger. The previously mentioned passage about the North Carolina Medical College implicated the Report as a cause for its demise:

In the summer of 1910, . . . the Carnegie Foundation sent a representative to the North Carolina Medical College to evaluate the institution. In a published report, the Carnegie Foundation criticized the college for not having adequate facilities. In 1914, Dr. Monroe and his associates, unwilling or unable to spend the money required to bring the college into conformance with the Carnegie standards, closed the facilities . . .<sup>16</sup>

Unfortunately, many sites did not so clearly address the causes for schools' closings and mergers. Absent any attribution, these closings and mergers were not credited to Flexner. However, further research may likely show that his Report was instrumental, given that the majority of these schools closed or merged in the years shortly following Flexner's inspections.\* If these 26 schools that closed or merged in the two decades following his inspections were credited to Flexner, his Report would then be responsible for the closing or merger of 38 (22 percent) of the 168 schools. Including the 3 schools (2 percent) that closed or merged more than two decades

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\* Such schools include the Hippocratean College of Medicine in 1909 (shortly after Flexner's visit in April of that year);<sup>1, 17</sup> the two campuses of the American Medical Missionary College;<sup>18</sup> Women's Medical College of Baltimore,<sup>19</sup> Atlantic Medical College,<sup>20</sup> Pulte Medical College,<sup>21</sup> State University of Oklahoma<sup>22, 23</sup> and Epworth College of Medicine<sup>22, 23</sup> in 1910; Barnes<sup>24</sup> and American<sup>24</sup> Medical Colleges and College of Physicians and Surgeons (Memphis) in 1911;<sup>25</sup> College of Physicians and Surgeons (Chicago),<sup>26</sup> Littlejohn College of Osteopathy,<sup>27</sup> Willamette University Medical Department,<sup>28</sup> Memphis Hospital Medical College,<sup>25</sup> Universities of Nashville and Tennessee Medical Department,<sup>25</sup> and Wisconsin College of Physicians and Surgeons<sup>29</sup> in 1913; Bennett, Illinois, and Reliance Medical Colleges in 1915;<sup>14</sup> Medico-Chirurgical College of Philadelphia in 1916;<sup>30</sup> Philadelphia Polyclinic in 1917;<sup>30, 31</sup> Kansas City Hahnemann Medical College in 1918;<sup>32</sup> State University of Iowa College of Homeopathic Medicine in 1919;<sup>33</sup> Hahnemann Medical College (Chicago) in 1922;<sup>34</sup> and New York Homeopathic Medical College and Flower Hospital in 1929.<sup>34</sup>

after the Report and the 30 schools (18 percent) of unknown disposition would increase this percentage to 42, representing a potential maximum proportion of schools affected by the Report.

### **About the Report**

What are we to think of this document that may have had so profound an effect? It is popularly known as the *Flexner Report*, but officially entitled *Medical Education in the United States and Canada: A Report to the Carnegie Foundation for the Advancement of Teaching*.<sup>1</sup> Published in 1910 by the Carnegie Foundation, the 346-page tome arose from research conducted by Flexner, who claimed to have visited and objectively evaluated 156 graduate and twelve postgraduate medical schools in the United States and Canada. He sought data on five points for each of the schools: (1) entrance requirements and adherence to them, (2) the size and training of the faculty, (3) the sum and allocation of endowment and fees to support the institution, (4) the adequacy and quality of the laboratories as well as the training and qualifications of the laboratory instructors, and (5) the relationships between the school and its associated hospitals.

Although Flexner's motives<sup>35</sup> and methods<sup>36</sup> may be disputed, his systematic collection of data is remarkable for his time. Indeed, a scientific veneer distinguishes the Report from prior attempts to reform medical education, which partly consisted of largely unsubstantiated vilification of those who competed against the favored allopathic approach. Flexner, for example, shared Oliver Wendell Holmes' contempt for practitioners of homeopathy.<sup>37</sup> Flexner's words, however, were particularly powerful because they were substantiated by data supposedly obtained through thorough and objective investigation. It should be noted that Flexner's approach was remarkable, but not entirely novel. It was rooted in the British Victorian social reformers' enthusiasm for collection and enumeration<sup>38, 39</sup> and likely influenced by an article based on

school inspections performed by the Council on Medical Education of the American Medical Association in 1906.<sup>40</sup> Flexner walked on paths that others had recently pioneered.

The Report consisted of two parts. In the first part, Flexner discussed the history of medical education, described what its proper basis should be as well as what the actual basis was, recommended a curriculum, discussed financial aspects, proposed a plan for reconstructing medical education, and commented on “medical sectarianism,” state boards of licensure, postgraduate education, and educating women and “Negroes.”<sup>41</sup> In the second part, Flexner summarized his findings for the 168 schools he claimed to have visited. He described them with striking and often caustic candor. The equipment at one school, Flexner observed, was “dirty and disorderly beyond description.”<sup>42</sup> He recorded that the department of anatomy at another school occupied an “outhouse, whence the noisome odor of decaying cadavers permeates the premises.”<sup>43</sup> Another institution had “in place of laboratories, laboratory signs . . . .”<sup>44</sup>

The University of Virginia is an example of one of the few that escaped Flexner’s typical imputation. After visiting its Department of Medicine in February of 1909,<sup>45</sup> Flexner presented data for each of the five points. First, the “[e]ntrance requirement” was “[o]ne year of college work in sciences.” Second, the “[t]eaching staff” consisted of “31 teachers, of whom 12 [were] professors, 19 of other grade” and the “laboratory branches [were] taught by 8 instructors who [gave] their entire time to them.” Third, the “[r]esources available for maintenance” derived from “funds of the university” and \$10,060 in income from fees to meet the \$52,195 departmental budget, which included the hospital deficit. Fourth, the “[l]aboratory facilities” were “good” and overseen by “enthusiastic teachers of modern training and ideals.” Their “main present lack” was “a suitable building and an adequate medical library.” Finally, the “[c]linical facilities” consisted of 100 beds. The relation of the University Hospital “to the medical school and its



organization for teaching purposes” left “nothing to be desired.” Although the material had “not yet reached proper proportions,” it was “increasing” and “skilfully [sic] and effectively used to train the student body in the technique and methods of scientific medicine.”<sup>1</sup>

At the conclusion of each section corresponding to a region, Flexner presented “General Considerations” consisting of his summary and recommendations. For Virginia, he concluded that “[t]he rapid improvement of the medical department of the University of Virginia in the last three years is one of the striking phenomena of recent medical school history.”<sup>b</sup> In contrast, the Commonwealth’s two independent schools were clinically inadequate, for which Flexner recommended their consolidation.<sup>1</sup>

The recommendation to consolidate or close schools and raise standards was a common cry of Flexner. His intent was to reduce the physician supply, for far too many physicians were practicing, according to Flexner, due to “an enormous over-production” of practitioners.<sup>1</sup> He thus ambitiously called for reducing the number of schools to 31, cutting the annual output of physicians from 4,442 to 2,000.<sup>1</sup> The change effected was not as severe as that recommended, but was nonetheless dramatic. Between 1904 and 1920, the number of medical schools decreased to 85 and the number of students from 28,142 to 13,798. The percentage of schools requiring two years of college for admission rose from three to 92. The resulting increased preparation in science allowed schools to concentrate more on the biomedical sciences instead of chemistry and physics and the curriculum to contain more laboratory experience.<sup>41</sup>

### **Women and Blacks**

Flexner’s criticism seems to have fallen most heavily on schools that professed philosophies diverging from the allopathic, were proprietary, or educated primarily women or blacks. Flexner, for example, argued that there was no need for medical schools specifically devoted to women

and recommended that all three such schools be closed. He explained that “it is clear that [women] show a decreasing inclination” to enter the profession because “any strong demand for women physicians or any strong ungratified desire on the part of women to enter the profession . . . is lacking.”<sup>1</sup>

Flexner also recommended that “the seven medical schools for negroes” be reduced to two; he considered five to be “ineffectual” and “in no position to make any contribution of value.”<sup>1</sup> Flexner argued that the two schools should remain operational because there would always be a need for black physicians, even though the “medical care of the negro race will never be wholly left to negro physicians.”<sup>1</sup> Blacks, being “a potential source of infection and contagion,” needed their own physicians.<sup>1</sup> Flexner further recommended that “hygiene rather than surgery” be “strongly accentuated” in these schools.<sup>1</sup> By 1923, only two medical schools for blacks remained.<sup>42</sup> The Report, with its patronizing tone toward black institutions and physicians, set the pattern for admitting minorities into medical schools that persisted for several decades; between 1920 and 1964, less than three percent of students entering American medical schools were black.<sup>43</sup>

Although Flexner may have been neither objective<sup>35</sup> nor thorough,<sup>36</sup> this study reveals the considerable influence that he nevertheless exerted on the fate of North American medical schools in the early part of the twentieth century. In a broader sense, the current study shows the significant impact that surveys of the type conducted for the Flexner Report can have, whether performed to evaluate managed-care plans,<sup>44</sup> hospitals,<sup>45</sup> or the physician supply.<sup>46</sup> It is important, therefore, that such surveys be conducted thoroughly and objectively.

## **Limitations**

The current study has its own problems. In quantifying the impact of the Report *only* in terms of school closings and mergers, this study fails to capture Flexner's influence that may have been manifest in other ways, such as, for example, changing the curriculum of those schools that survived the Report.<sup>2</sup> A follow-up study should ascertain the impact of Flexner's recommendations in this regard. In defense of the current approach, however, initial epidemiological studies often look at the mortality of people in the way that this study focuses on the "mortality" (closing or merger) of institutions.

Further limitations arise from using online comments, calling the validity and reliability of the results into question. First, this method failed to uncover causes for the closing or merger of 30 (18 percent) of the 168 schools. Another 29 schools (17 percent) merged for reasons that may have been associated with Flexner but cannot be attributed to him because of the lack of comments to this effect. Second, the validity of this study, of course, is susceptible to all the biases and deficiencies of relying on data obtained through online searching. Conjecture in comments based on perception, of course, does not define reality, but this preliminary subjective assessment is a reasonable first step into an area in which few easily traversable paths to the truth exist. The study could perhaps be made more rigorous by presenting Kappa statistics ( $\kappa$ )<sup>47</sup> to yield a sense of the degree to which commentators agreed.

The next step would be a multivariate analysis to take into account the varying effects of various factors.<sup>48</sup> In a regression model, the dependent, or outcome, variable ( $Y$ ) would be whether a school closed or merged, as determined by multiple independent, or predictor, variables ( $X$ ):

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_nX_n.$$

These predictor variables could include Flexner's evaluation of a school, either favorable or critical; a school's endowment, annual income, debt-to-asset ratio, and degree of competition faced, perhaps measured by the number of schools in the same region divided by the population of that region; the amount of funding received from external sources, both from governments and foundations;<sup>49</sup> and the rigor of statutory change in the state in which the school resided.

### **Conclusion**

Just in terms of school closings and mergers, the Flexner Report has had a profound impact on North American medical education. Between 7 and 22 percent of schools may have closed or merged because of what Flexner wrote. Further research is needed to pinpoint more precisely the extent of Flexner's influence in the context of other contemporaneous factors affecting the fate of medical schools after the turn of the twentieth century.

More broadly, given the potentially enormous impact that a single study related to a policy agenda can have, critical scrutiny of the underlying assumptions and applied methods of such studies is warranted.

**Table. Flexner's Impact on U.S. and Canadian Schools**

<b>Did not close or merge as a result of the Report</b> <sup>†</sup>	<b>97</b>	<b>58%</b>
<b>Closed or merged because of the Report</b>	<b>12</b>	<b>7%</b>
<i>Closed</i>	9	5%
<i>Merged</i>	3	2%
<b>Closed or merged for unclear reasons</b>	<b>59</b>	<b>35%</b>
<i>Closed or merged in the two decades after the Report</i>	26	15%
<i>Closed or merged more than two decades after the Report</i>	3	2%
<i>Unknown disposition</i>	30	18%
<b>Total</b>	<b>168</b>	<b>100%</b>

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<sup>†</sup> None of the eight Canadian schools closed or merged as a result of the Report.

## Appendix. Schools Visited by Abraham Flexner and Their Fate

<u>School</u>	<u>Closed or Merged as a Result of the Report</u>
<b>Alabama</b>	
Birmingham Medical College	? <sup>‡</sup>
University of Alabama	No <sup>12</sup>
<b>Arkansas</b>	
University of Arkansas	Yes <sup>50</sup>
<b>California</b>	
University of Southern California (Los Angeles)	No <sup>51</sup>
University of California Clinical Department (Los Angeles)	No <sup>52</sup>
California Medical College (Los Angeles)	?
Los Angeles College of Osteopathy (Los Angeles)	No <sup>27</sup>
Pacific College of Osteopathy (Los Angeles)	No <sup>27</sup>
College of Medicine and Surgery (Oakland)	?
University of California Medical Department (San Francisco)	No <sup>4</sup>
Stanford University (San Francisco)	No <sup>53</sup>
College of Physicians and Surgeons (San Francisco)	?
Hahnemann Medical College of the Pacific (San Francisco)	No
<b>Colorado</b>	
Denver and Gross College of Medicine	No <sup>54</sup>
University of Colorado (Boulder)	No <sup>54</sup>
<b>Connecticut</b>	
Yale University	No <sup>55, 56</sup>
<b>District of Columbia</b>	
George Washington University	No <sup>12</sup>
Georgetown University	No <sup>12</sup>
Howard University	No <sup>34</sup>
Army Medical School	No
Navy Medical School	No
<b>Georgia</b>	
Atlanta College of Physicians and Surgeons	?
Atlanta School of Medicine	No <sup>57</sup>
Georgia College of Eclectic Medicine and Surgery (Atlanta)	?
Hospital Medical College (Atlanta)	?
Medical College of Georgia (Augusta)	Yes <sup>58</sup>

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<sup>‡</sup> A ? beside 59 institutions indicates that searching failed to yield comments about the influence of the Flexner Report in the schools' subsequent histories because either no comments of any type were found for a particular school ( $n = 30$ ) or comments were found, but they failed to address the role of the Report in the school's closing or merger ( $n = 29$ ).

**Appendix. Schools Visited by Abraham Flexner and Their Fate** (continued)

<b>School</b>	<b>Closed or Merged as a Result of the Report</b>
<b>Illinois</b>	
University of Chicago	No <sup>12</sup>
Northwestern University (Chicago)	No <sup>12</sup>
College of Physicians and Surgeons (Chicago)	? <sup>26</sup>
Chicago College of Medicine and Surgery	No <sup>59</sup>
Bennett Medical College (Chicago)	? <sup>14</sup>
American Medical Missionary College	? <sup>18</sup>
Jenner Medical College	?
Illinois Medical College	? <sup>14</sup>
Reliance Medical College	? <sup>14</sup>
National Medical University (Chicago)	?
College of Medicine and Surgery: Physio-Medical (Chicago)	Yes <sup>60</sup>
Hering Medical College (Chicago)	? <sup>32</sup>
Hahnemann Medical College (Chicago)	? <sup>34</sup>
Littlejohn College of Osteopathy (Chicago)	? <sup>27</sup>
The Postgraduate Medical School and Hospital (Chicago)	?
Chicago Polyclinic	?
Chicago Ear, Eye, Nose and Throat College	No
Illinois Postgraduate School (Chicago)	?
<b>Indiana</b>	
Indiana University (Bloomington)	No <sup>61</sup>
Valparaiso University	No <sup>59</sup>
<b>Iowa</b>	
Drake University (Des Moines)	?
Still College of Osteopathy (Des Moines)	No <sup>27</sup>
State University of Iowa College of Medicine (Iowa City)	No <sup>62</sup>
State University of Iowa College of Homeopathic Medicine (Iowa City)	? <sup>33</sup>
<b>Kansas</b>	
University of Kansas (Lawrence)	No <sup>63</sup>
Western Eclectic College of Medicine and Surgery (Lawrence-Rosedale)	?
Kansas Medical College (Topeka)	No <sup>64</sup>
<b>Kentucky</b>	
University of Louisville	No <sup>12</sup>
Southwestern Homeopathic Medical College (Louisville)	No <sup>65</sup>
Louisville National Medical College	No <sup>66</sup>
<b>Louisiana</b>	
Tulane University (New Orleans)	No <sup>12</sup>
Flint Medical College of New Orleans University	Yes <sup>34</sup>

## **Appendix. Schools Visited by Abraham Flexner and Their Fate** *(continued)*

<b>School</b>	<b>Closed or Merged as a Result of the Report</b>
<b>Maine</b>	
Bowdoin College/Medical School of Maine (Brunswick)	?
<b>Maryland</b>	
Johns Hopkins (Baltimore)	No <sup>67</sup>
College of Physicians and Surgeons (Baltimore)	?
University of Maryland School of Medicine (Baltimore)	No <sup>68</sup>
Baltimore Medical College	?
Women's Medical College of Baltimore	? <sup>19</sup>
Atlantic Medical College (Baltimore)	? <sup>20</sup>
<b>Massachusetts</b>	
Harvard University (Boston)	No <sup>69</sup>
Tufts College (Boston)	No <sup>70</sup>
Boston University	No <sup>71</sup>
College of Physicians and Surgeons (Boston)	?
Massachusetts College of Osteopathy (Cambridge)	No <sup>27</sup>
<b>Michigan</b>	
University of Michigan (Ann Arbor)	No <sup>72</sup>
University of Michigan Homeopathic College (Ann Arbor)	?
American Medical Missionary College (Battle Creek)	? <sup>18</sup>
Detroit College of Medicine	No <sup>73</sup>
Detroit Homeopathic College	?
<b>Minnesota</b>	
University of Minnesota (Minneapolis/St. Paul)	No <sup>74</sup>
<b>Mississippi</b>	
Mississippi Medical College (Meridian)	?
University of Mississippi (Oxford/Vicksburg)	No <sup>75</sup>
<b>Missouri</b>	
University of Missouri (Columbia)	No <sup>76</sup>
University Medical College (Kansas City)	?
Kansas City Hahnemann Medical College	? <sup>32</sup>
Central College of Osteopathy (Kansas City)	No <sup>27</sup>
American School of Osteopathy (Kirksville)	No <sup>77</sup>
Ensworth Medical College (St. Joseph)	?
Washington University (St. Louis)	No <sup>78</sup>
St. Louis University	No <sup>79</sup>
St. Louis College of Physicians and Surgeons	?
Barnes Medical College (St. Louis)	? <sup>24</sup>
American Medical College (St. Louis)	? <sup>24</sup>
Hippocratean College of Medicine (St. Louis)	? <sup>17</sup>
Postgraduate Hospital School (Kansas City)	?



**Appendix. Schools Visited by Abraham Flexner and Their Fate** *(continued)*

<b>School</b>	<b>Closed or Merged as a Result of the Report</b>
<b>Nebraska</b>	
University of Nebraska (Lincoln-Omaha)	No <sup>12</sup>
Lincoln Medical College	No
Creighton University (Omaha)	No <sup>12</sup>
<b>New Hampshire</b>	
Dartmouth University (Hanover)	No <sup>12</sup>
<b>New York</b>	
Albany Medical College	No <sup>12</sup>
Long Island College Hospital (Brooklyn)	No <sup>12</sup>
University of Buffalo Medical Department	No <sup>12</sup>
College of Physicians and Surgeons, Columbia University (New York)	No <sup>12</sup>
Cornell University (New York)	No <sup>12</sup>
New York University Bellevue Hospital Medical College	No <sup>80</sup>
Fordham University (New York)	?
New York Medical College and Hospital for Women	No <sup>81</sup>
Eclectic Medical College	No <sup>82</sup>
New York Homeopathic Medical College and Flower Hospital	? <sup>34</sup>
Syracuse University College of Medicine (Syracuse)	No <sup>83</sup>
Brooklyn Postgraduate Medical School (New York)	?
New York Postgraduate School	No <sup>84</sup>
New York Polyclinic School and Hospital	No <sup>85</sup>
Manhattan Eye, Ear and Throat Hospital Postgraduate School	No <sup>86</sup>
<b>North Carolina</b>	
University of North Carolina (Chapel Hill)	No <sup>12</sup>
North Carolina Medical College (Charlotte)	Yes <sup>11</sup>
Wake Forest College School of Medicine (Wake Forest)	No <sup>12</sup>
Leonard Medical School of Shaw University (Raleigh)	Yes <sup>34</sup>
<b>North Dakota</b>	
State University of North Dakota (Grand Forks)	No <sup>12</sup>
<b>Ohio</b>	
Ohio-Miami Medical College of the University of Cincinnati	No <sup>87</sup>
Eclectic Medical Institute (Cincinnati)	Yes <sup>88</sup>
Pulte Medical College (Cincinnati)	? <sup>21</sup>
Cleveland Homeopathic Medical College	No <sup>89</sup>
Western Reserve University (Cleveland)	No <sup>21</sup>
College of Physicians and Surgeons (Cleveland)	?
Starling Ohio Medical College (Columbus)	No <sup>90</sup>
Toledo University Medical College	Yes <sup>3</sup>

**Appendix. Schools Visited by Abraham Flexner and Their Fate** (continued)

<b>School</b>	<b>Closed or Merged as a Result of the Report</b>
<b>Oklahoma</b>	
State University of Oklahoma (Norman)	? <sup>22, 23</sup>
Epworth College of Medicine (Oklahoma City)	? <sup>22, 23</sup>
<b>Oregon</b>	
University of Oregon (Portland)	No <sup>28</sup>
Willamette University Medical Department (Salem)	? <sup>28</sup>
<b>Pennsylvania</b>	
University of Pennsylvania (Philadelphia)	No <sup>12</sup>
Jefferson Medical College (Philadelphia)	No <sup>91</sup>
Medico-Chirurgical College of Philadelphia	? <sup>30</sup>
Temple University (Philadelphia)	No <sup>12</sup>
Hahnemann Medical College and Hospital	No <sup>92, 93</sup>
Woman's Medical College of Pennsylvania (Philadelphia)	No <sup>93</sup>
Philadelphia College and Infirmary of Osteopathy	No <sup>27</sup>
University of Pittsburgh	No <sup>12</sup>
The Philadelphia Polyclinic	? <sup>30, 31</sup>
<b>South Carolina</b>	
Medical College of the State of South Carolina (Charleston)	No <sup>12</sup>
<b>South Dakota</b>	
University of South Dakota (Vermilion)	No <sup>12</sup>
<b>Tennessee</b>	
University of Chattanooga	?
Tennessee Medical College (Knoxville)	?
Knoxville Medical College	Yes <sup>34</sup>
College of Physicians and Surgeons (Memphis)	? <sup>25</sup>
Memphis Hospital Medical College	? <sup>25</sup>
University of West Tennessee	Yes <sup>34</sup>
Vanderbilt University (Nashville)	No <sup>94</sup>
Universities of Nashville and Tennessee Medical Department	? <sup>25</sup>
Meharry Medical College of Walden University (Nashville)	No <sup>34</sup>
<b>Texas</b>	
Baylor University (Dallas)	No <sup>95</sup>
Southwestern University Medical College (Dallas)	Yes <sup>95</sup>
Fort Worth University Medical Department	Yes <sup>95</sup>
University of Texas (Galveston)	No <sup>12</sup>
<b>Utah</b>	
University of Utah (Salt Lake City)	No <sup>12</sup>

**Appendix. Schools Visited by Abraham Flexner and Their Fate** *(continued)*

<b>School</b>	<b>Closed or Merged as a Result of the Report</b>
<b>Vermont</b>	
University of Vermont (Burlington)	No <sup>12</sup>
<b>Virginia</b>	
University of Virginia (Charlottesville)	No <sup>12</sup>
Medical College of Virginia (Richmond)	No <sup>12</sup>
University College of Medicine (Richmond)	? <sup>96</sup>
<b>West Virginia</b>	
West Virginia University (Morgantown)	No <sup>12</sup>
<b>Wisconsin</b>	
University of Wisconsin (Madison)	No <sup>12</sup>
Milwaukee Medical College of Marquette University	? <sup>29</sup>
Wisconsin College of Physicians and Surgeons (Milwaukee)	? <sup>29</sup>
<b>Canada</b>	
Manitoba Medical College (Winnipeg, Manitoba)	No <sup>12</sup>
Halifax Medical College (Halifax, Nova Scotia)	No <sup>12</sup>
Queen's University (Kingston, Ontario)	No <sup>12</sup>
Western University Medical Department (London, Ontario)	No <sup>12</sup>
University of Toronto (Toronto, Ontario)	No <sup>12</sup>
McGill University (Montreal, Quebec)	No <sup>12</sup>
Laval University (Montreal, Quebec)	No <sup>12</sup>
Laval University (Quebec City, Quebec)	No <sup>12</sup>

## References

1. Flexner A. *Medical Education in the United States and Canada: A Report to the Carnegie Foundation for the Advancement of Teaching; Bulletin No. 4*. New York: Carnegie Foundation for the Advancement of Teaching, 1910.
2. Johnson DG. *Physicians in the Making*. Washington, D.C.: Association of American Medical Colleges, 1983.
3. Floyd B. Medical education [University of Toledo Libraries Web site]. Available at: <http://www.cl.utoledo.edu/canaday/quackery/quack10.html>. Accessed December 9, 2001.
4. Rockafellar N. The Flexner Report in context [Digital Library of the University of California San Francisco Web site]. Available at: [http://www.library.ucsf.edu/ucsfhistory/themes/themes\\_flexner.html](http://www.library.ucsf.edu/ucsfhistory/themes/themes_flexner.html). Accessed December 9, 2001.
5. Yahoo! Web site. Available at: <http://www.yahoo.com>. Accessed December 9, 2001.
6. Google Web site. Available at: <http://www.google.com>. Accessed December 9, 2001.
7. MacMahon B, Pugh TF. *Epidemiology: Principles and Methods*. Boston: Little, Brown, 1970.
8. Victora CG. What's the denominator? *Lancet* 1993; 342; 97-9.
9. Graunt J. *Natural and Political Observations Made Upon the Bills of Mortality: London, 1662*. Baltimore: Johns Hopkins Press, 1939.
10. Humphreys NA, ed. *Vital Statistics: A Memorial Volume of Selections from the Reports and Writings of William Farr, 1807-1883*. London: Sanitary Institute of Great Britain, 1885.
11. Chapman CB. The Flexner Report by Abraham Flexner. *Daedalus* 1974; 103: 105-17.
12. Medical schools of the U.S. and Canada – geographical listing [Association of American Medical Colleges Web site]. Available at: <http://pnet400.aamc.org/directories/schools/msgeo.cfm>. Accessed December 9, 2001.
13. Hill AB. The environment and disease: association or causation? *Proc R Soc Med* 1965; 58: 295-300.
14. Department of Pharmacology [Department of Pharmacology of Loyola University Health System Web site]. Available at: <http://www.meddean.luc.edu/lumen/DeptWebs/pharm/history.htm>. Accessed December 9, 2001.

15. Bramucci N. Medical care in the city of Baltimore, 1752-1919 [Teaching Maryland History in the Age of the Internet Web site]. Available at: <http://www.mdhistoryonline.net/mdmedicine/cfm/schools.cfm>. Accessed December 9, 2001.
16. Morrill DL. The North Carolina Medical College Building [Charlotte-Mecklenburg Historic Landmarks Commission]. February 6, 1979. Available at: <http://www.cmhpf.org/S&RR/NCMedicalColl.html>. Accessed December 9, 2001.
17. Series 2, Barnes Medical College or University Bulletins, 1900-1912 [Bernard Becker Medical Library of Washington University in St. Louis School of Medicine Web site]. Available at: <http://becker.wustl.edu/ARB/find/PC059-00/2.htm>. Accessed December 9, 2001.
18. Monument stone from 1899 stands in Loma Linda [Loma Linda University Adventist Health Sciences Center Web site]. March 23, 2000. Available at: <http://www.llu.edu/news/today/mar2300/llu.htm>. Accessed December 9, 2001.
19. Bramucci N. Women's Medical College of Baltimore [Medical Care in the City of Baltimore, 1752-1919 Web site]. Available at: <http://www.mdhistoryonline.net/mdmedicine/cfm/schoolinfo.cfm?id=6>. Accessed December 9, 2001.
20. Bramucci N. Southern Homeopathic Medical College -- Atlantic Medical College [Medical Care in the City of Baltimore, 1752-1919 Web site]. Available at: <http://www.mdhistoryonline.net/mdmedicine/cfm/schoolinfo.cfm?id=15>. Accessed December 9, 2001.
21. The medical schools of Cleveland [Dittrick Medical History Center of Case Western Reserve University Web site]. Available at: <http://www.cwru.edu/artsci/dittrick/smallpox/med-schools.htm>. Accessed December 9, 2001.
22. History [College of Medicine at the University of Oklahoma Health Sciences Center Web site]. July 6, 2001. Available at: <http://www.medicine.ouhsc.edu/template.cfm?LinkID=1F96CE45-63D3-11D4-A20E009027DE0A94>. Accessed December 13, 2001.
23. College of Medicine [Department of Obstetrics and Gynecology at the University of Oklahoma Health Sciences Center Web site]. Available at: <http://w3.uokhsc.edu/obgyn/medicine.asp>. Accessed December 9, 2001.
24. American, Barnes, and National Colleges Collection [Bernard Becker Medical Library of Washington University in St. Louis School of Medicine Web site]. Available at: <http://becker.wustl.edu/ARB/find/PC059-00/>. Accessed December 9, 2001.

25. A brief history: University of Tennessee Health Science Center College of Medicine [University of Tennessee Health Science Center Web site]. Fall 1999. Available at: [http://www.utmem.edu/com\\_studaffs/history/2uthistory.html](http://www.utmem.edu/com_studaffs/history/2uthistory.html). Accessed December 9, 2001.
26. Nyhus LM. Historical perspective [Department of Surgery of the University of Illinois at Chicago Health Sciences Center Web site]. July 25, 2001. Available at: [http://www.uic.edu/com/surgery/\\_private/history.htm](http://www.uic.edu/com/surgery/_private/history.htm). Accessed December 10, 2001.
27. Historic reference of osteopathic colleges [History of Osteopathic Medicine Virtual Museum Web site]. Available at: <http://history.aoa-net.org/Education/collegehist.htm>. Accessed December 9, 2001.
28. OHSU: an historical chronology [Oregon Health and Science University Web site]. July 20, 2001. Available at: <http://www.ohsu.edu/about/history.html>. Accessed December 9, 2001.
29. Department of Otolaryngology and Communication Sciences [Medical College of Wisconsin Web site]. July 15, 2001. Available at: <http://www.mcw.edu/oto>. Accessed December 10, 2001.
30. Charters, Statutes, By-Laws and Rules Collection, 1791-1971 [University Archives and Records Center of the University of Pennsylvania Web site]. Available at: <http://www.archives.upenn.edu/faids/upa/upa2/upa2.html>. Accessed December 9, 2001.
31. John Bingham Roberts [Who Named It? Web site]. Available at: <http://www.whonamedit.com/doctor.cfm/1225.html>. Accessed December 9, 2001.
32. Homeopathy timeline, 1875-1899 [Whole Health Now Web site]. Available at: [http://www.wholehealthnow.com/homeopathy\\_pro/homeopathy\\_1875\\_1899.html](http://www.wholehealthnow.com/homeopathy_pro/homeopathy_1875_1899.html). Accessed December 9, 2001.
33. The University of Iowa Homeopathic Medical Department (1876-1919) [University of Iowa Health Care Web site]. August 27, 2001. Available at: <http://www.uihealthcare.com/depts/medmuseum/wallexhibits/homeo/homeopathy.html>. Accessed December 9, 2001.
34. Homeopathy timeline, 1850-1874 [Whole Health Now Web site]. Available at: [http://www.wholehealthnow.com/homeopathy\\_pro/homeopathy\\_1850\\_1874.html](http://www.wholehealthnow.com/homeopathy_pro/homeopathy_1850_1874.html). Accessed December 9, 2001.
35. Hiatt MD. Around the continent in 180 days: the controversial journey of Abraham Flexner. *The Pharos* 1999; 62(1): 18-24.
36. Hiatt MD. The amazing logistics of Flexner's fieldwork. *Medical Sentinel* 2000; 5(5): 167-8.
37. Holmes OW. *Homeopathy and its Kindred Delusions*. Boston: Ticknor, 1842.

38. Booth C, ed. *Labour and Life of the People of London*. 17 volumes. Basingstoke: Macmillan, 1899-1902.
39. Rowntree BS. *Poverty: A Study of Town Life*. London: Longman, 1902.
40. Bevan AD. Council on Medical Education of the American Medical Association. *JAMA* 1907; 48(20): 1701-7.
41. Colwell NP. Improvements in medical education in sixteen years. *American Medical Association Bulletin* 1920; 14: 11-2.
42. Black History Month: a medical perspective [Duke University Medical Center Library Web site]. February 26, 1999. Available at: <http://www.mclibrary.duke.edu/hot/blkhist.html>. Accessed December 9, 2001.
43. Hasbrouck LM. Minorities in medicine: the Flexner Report [letter]. *JAMA* 1996; 275: 1547-8.
44. National Committee for Quality Assurance Web site. Available at: <http://www.ncqa.org>. Accessed December 10, 2001.
45. Nadzam DM, Turpin R, Hanold LS, White RE. Data-driven performance improvement in health care: the Joint Commission's Indicator Measurement System (IMSsystem). *Joint Commission Journal on Quality Improvement* 1993; 19(11): 492-500.
46. Tarlov A. *Summary Report of the Graduate Medical Education National Advisory Committee*. Vol. 1. DHHS Publication (Health Resources Administration) No. 81-651. Washington, D.C.: U.S. Government Printing Office, 1981.
47. Rosner B. *Fundamentals of Biostatistics*. Pacific Grove, CA: Duxbury, 2000.
48. Bishop YMM, Fienberg SE, Holland PW. *Discrete Multivariate Analysis: Theory and Practice*. Cambridge, MA: MIT Press, 1975.
49. Berliner HS. *A System of Scientific Medicine: Philanthropic Foundations in the Flexner Era*. New York: Tavistock Publications, 1985.
50. Old State House Exhibit is on Arkansas medical education [University of Arkansas for Medical Sciences Web site]. October 5, 2001. Available at: <http://www.uams.edu/today/100401/osh.htm>. Accessed December 9, 2001.
51. Keck School of Medicine of the University of Southern California Web site. Available at: <http://www.usc.edu/schools/medicine>. Accessed December 9, 2001.

52. School of Medicine, UCLA Web site. Available at: <http://www.medsch.ucla.edu>. Accessed December 9, 2001.
53. Wilson JL. Stanford University School of Medicine and the predecessor schools: an historical perspective [Lane Medical Library Digital Document Repository Web site]. April 12, 2000. Available at: <http://elane.stanford.edu/wilson/Text/31d.html>. Accessed December 9, 2001.
54. Class A medicine [University of Colorado Web site]. Available at: <http://www.cu.edu/125/light3.html>. Accessed October 17, 2002.
55. Medicine at Yale, 1901-1951 [Harvey Cushing John Hay Whitney Medical Library of Yale University Web site]. Available at: <http://info.med.yale.edu/library/exhibits/yalemed2/1901-1911.html>. Accessed December 10, 2001.
56. Medicine at Yale, 1911-1921 [Harvey Cushing John Hay Whitney Medical Library of Yale University Web site]. Available at: <http://info.med.yale.edu/library/exhibits/yalemed2/1911-1921.html>. Accessed December 10, 2001.
57. The Health Sciences Center: a timeline. [Robert W. Woodruff Health Sciences Center of Emory University Web site]. Available at: <http://www.emory.edu/WHSC/history.html>. Accessed December 9, 2001.
58. MCG highlights [Medical College of Georgia Website]. September 7, 2001. Available at: <http://www.mcg.edu/history/mcghigh.htm>. Accessed December 9, 2001.
59. Medical schools in Indiana [Ruth Lilly Medical Library of Indiana University School of Medicine Web site]. October 2, 2002. Available at: <http://www.medlib.iupui.edu/hom/indmed.html>. Accessed October 17, 2002.
60. Barnett LM. Kindly medicine: physio-medicalism in America, 1836-1911 [JAMA Web site]. November 11, 1998. Available at: <http://jama.ama-assn.org/issues/v280n18/ffull/jbk1111-3.html>. Accessed December 9, 2001.
61. Historical overview [Indiana University School of Medicine Web site]. December 3, 2001. Available at: <http://www.medicine.iu.edu/about/history.html>. Accessed December 9, 2001.
62. Sondergard M. Historic turnaround from humble beginnings, Iowa emerges as a national leader in graduate medical education [University of Iowa Health Care Web site]. July 2000. Available at: <http://www.uihealthcare.com/news/pacemaker/2000/julyaug/graduatemededucation.html>. Accessed December 9, 2001.



63. Hulston NJ. A history of the University of Kansas School of Medicine [School of Medicine of the University of Kansas Web site]. <http://www.kumc.edu/som/guide/history.html>. Accessed October 17, 2002.
64. History of Washburn University [Washburn University Web site]. Available at: <http://www.washburn.edu/crest/history.html>. Accessed October 17, 2002.
65. Johnson KB. Female medical students and physicians in nineteenth century Louisville [Women's Center of the University of Louisville Web site]. Available at: [http://www.louisville.edu/provost/womenctr/dev/wcnews\\_8\\_1\\_p9.html](http://www.louisville.edu/provost/womenctr/dev/wcnews_8_1_p9.html). Accessed October 17, 2002.
66. Louisville National Medical College records [University Libraries of the University of Louisville]. Available at: <http://special.library.louisville.edu/display-collection.asp?ID=124>. Accessed October 18, 2002.
67. Johns Hopkins medicine: about us [Johns Hopkins University School of Medicine Web site]. Available at: <http://www.hopkinsmedicine.org/history.html>. Accessed December 9, 2001.
68. About the University of Maryland School of Medicine [University of Maryland School of Medicine Web site]. Available at: <http://medschool.umaryland.edu/about.htm>. Accessed December 9, 2001.
69. HMS history [Harvard Medical School Web site]. December 14, 1998. Available at: <http://www.hms.harvard.edu/about/history.html>. Accessed December 9, 2001.
70. The history of TUSM [Tufts School of Medicine Web site]. August 31, 2001. Available at: <http://www.tufts.edu/med/about/history.html>. Accessed December 9, 2001.
71. History [Boston University School of Medicine Web site]. November 27, 2000. Available at: <http://www.bumc.bu.edu/Departments/PageMain.asp?Page=1293&DepartmentID=45>. Accessed December 9, 2001.
72. University of Michigan Medical School History [University of Michigan Medical School Web site]. Available at: <http://www.med.umich.edu/medschool/about/history.html>. Accessed December 9, 2001.
73. Detroit College of Medicine and Surgery [Historical Center for the Health Sciences at the University of Michigan Web site]. Available at: <http://www.med.umich.edu/HCHS/books/AnnesGuide/Source2/hchs.source204.html>. Accessed December 9, 2001.
74. History of the Medical School [Medical School of the University of Minnesota Web site]. October 11, 2001. Available at: [http://www.meded.umn.edu/about\\_us/history.htm](http://www.meded.umn.edu/about_us/history.htm). Accessed December 9, 2001.

75. The School of Medicine [University of Mississippi Web site]. May 24, 2001. Available at: [http://www.olemiss.edu/course\\_cat\\_index/course\\_catalog2000/html/Schools/Medicine/index.htm](http://www.olemiss.edu/course_cat_index/course_catalog2000/html/Schools/Medicine/index.htm). Accessed December 9, 2001.
76. School of Medicine [University of Missouri-Columbia Web site]. November 5, 1999. Available at: <http://web.missouri.edu/~uawww/history/medicine.html>. Accessed December 9, 2001.
77. The history of KCOM [Kirksville College of Osteopathic Medicine Web site]. Available at: <http://www.kcom.edu>. Accessed December 9, 2001.
78. History [Washington University in St. Louis School of Medicine Web site]. Available at: <http://medschool.wustl.edu/overview.html#history>. Accessed December 9, 2001.
79. The Washington University tour [Washington University in St. Louis Web site]. Available at: <http://www.wustl.edu/tour/medicine/default.htm>. Accessed December 9, 2001.
80. About the School: a historical sketch [New York University School of Medicine Web site]. Available at: <http://www.med.nyu.edu/som/history.html>. Accessed December 9, 2001.
81. History of the New York Medical College and Hospital for Women [Notable Women Ancestors Web site]. Available at: <http://www.rootsweb.com/~nwa/college.html>. Accessed December 9, 2001.
82. Deaths [American College of Physicians – American Society of Internal Medicine Web site]. March 2001. Available at: <http://www.acponline.org/journals/news/mar01/deaths.htm>. Accessed October 18, 2002.
83. History of the Upstate College of Medicine [Health Sciences Library of Upstate Medical University of the State University of New York Web site]. April 28, 2000. Available at: <http://www.upstate.edu/library/history/history-of-medschool.html>. Accessed December 10, 2001.
84. [American National Library Web site]. Available at: <http://www.anb.org/articles/12/12-02109-article.html>. Accessed October 18, 2002.
85. Louis E. Bisch (1885-1963) [Michael Stutz Web site]. November 27, 2001. Available at: <http://www.dsl.org/faq/bisch>. Accessed October 18, 2002.
86. Meet Dr. Bernard I. Krupp [Spector + Krupp Center for Facial Enhancement]. Available at: <http://www.facecrafters.com/krupp.html>. Accessed October 18, 2002.
87. History [College of Medicine of the University of Cincinnati Web site]. Available at: [http://www.med.uc.edu/departme/ent/ENT\\_Pages/overview/history.html](http://www.med.uc.edu/departme/ent/ENT_Pages/overview/history.html). Accessed December 9, 2001.

88. Eclectic Medical Institute: college records and library, 1845-1942 [University Libraries of the University of Cincinnati Web site]. February 8, 2001. Available at: [http://www.libraries.uc.edu/lloyd/archive\\_4.htm](http://www.libraries.uc.edu/lloyd/archive_4.htm). Accessed December 9, 2001.
89. The Cleveland Homeopathic Hospital [Encyclopedia of Cleveland History Web site]. July 14, 1997. Available at: <http://ech.cwru.edu/Scripts/Article.asp?ID=CHH1>. Accessed December 9, 2001.
90. Pinta ER. Samuel M. Smith, M.D., and the beginning of psychiatry [The Ohio State University Department of Psychiatry Web site]. Available at: <http://medicine.osu.edu/psychiatry/chapter.htm>. Accessed October 18, 2002.
91. A long tradition of excellence [Thomas Jefferson University Web site]. October 30, 2001. Available at: <http://www.tju.edu/tjuweb/tju/about2.html>. Accessed December 9, 2001.
92. The MCP Hahnemann tradition [School of Medicine of MCP Hahnemann University Web site]. November 2, 2001. Available at: <http://www.mcphu.edu/medschool/viewbook/Tradition.asp>. Accessed December 9, 2001.
93. Milestones [School of Medicine of MCP Hahnemann University Web site]. June 30, 2000. Available at: <http://www.mcphu.edu/learn/milestones.html>. Accessed December 9, 2001.
94. Photo gallery: Vanderbilt Medical Center in 1925 [Vanderbilt Medical Center Web site]. November 13, 1997. Available at: <http://www.mc.vanderbilt.edu/biolib/hc/photographs.html>. Accessed December 9, 2001.
95. Brown DC. Medical education [Texas State Historical Association Web site]. July 23, 2001. Available at: <http://www.tsha.utexas.edu/handbook/online/articles/view/MM/sfm2.html>. Accessed December 9, 2001.
96. Historical review to July 1, 2000: 1838-1998 [Virginia Commonwealth University Health System Web site]. December 9, 2001. Available at: <http://www.vcuhealth.org/about/historical.html>. Accessed December 9, 2001.

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