Recruitment and Retention Strategies for Hospital Laboratory Personnel in Urban and Rural Settings

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ABSTRACT

Laboratory directors and administrators play vital roles in the recruitment and retention processes of their employees. A total of 71 laboratory directors from hospitals across 51 counties in Tennessee responded to questionnaires regarding recruitment and retention strategies. Respondents reported strategies for recruitment and retention, which were agreed to be effective by management. Overall, these major strategies were consistent regardless of geographic location and limited differences were noted with regard to urban-rural locations. The findings that varied significantly between urban and rural locations included: 1) rural employees needed additional supervision; 2) rural hospitals relied on local residents more so than urban hospitals; 3) rural laboratory administrators noted more limited access to resources; and the 4) lower effectiveness of recruitment agencies and family relocation programs for rural hospitals. This is significant given the disparities often associated with rural areas, and the potential to develop more successful recruitment and retention strategies for those areas Active managers in clinical laboratory science programs in the hospital setting should note effective strategies for both, recruitment and retention of personnel, and note the potential impact of geography on such processes.

ABBREVIATIONS: NAACLS-National Accrediting Agency for Clinical Laboratory Science, MLS-medical laboratory scientist, MLT-medical laboratory technician,

INDEX TERMS: Laboratories, Hospital; Personnel Administration, Hospital; Urban Health Services; Rural Health Services

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INTRODUCTION

On national, state, and local levels, there is a need for an understanding of effective recruitment and retention strategies of laboratory personnel. Changes in technology and diagnostic practices are encouraging more testing and spurring employment. However, approximately 40 percent of current laboratory staff is expected to retire in the next ten years.[1-3] In addition, continued and significant national shortages and dramatic declines in medical technology programs are all impacting the medical laboratory profession directly and therefore reinforces the importance for laboratory administrators to understand strategies for recruitment and retention of laboratory personnel.[1-3]

Nationwide laboratories require 5,000 new laboratory technologists each year to maintain optimal staffing levels; however, schools are graduating only 1,500 technologists per year, which falls well short of the demand.[4] National program trends also mirror the fact that there are fewer professionals are entering the workforce.[6] This national decline in programs is also seen at statewide levels. From personal communication to all NAACLS accredited and approved programs it was determined that Tennessee graduated 51 Medical Technologists and 77 Medical Laboratory Technicians in 2010-2011 through five programs offering MLS and five programs that offer MLT degrees.[1,7] Nonetheless both, technologists and technicians employment, are expected to grow by 14 percent between the years of 2008 and 2018; job opportunities are expected to be excellent since anticipated job openings will exceed the number of applicants; and most job openings are still expected to occur in the hospital setting.[3]

Previous studies of clinical laboratory personnel have been conducted to examine connections between recruitment, retention, and turnover. Beck and Doig

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(2005) found five reasons why employees left their jobs: 1) new laboratory job, 2) moved/family obligations, 3) retirement, 4) left the field entirely, and 5) employee was fired.[8] Over 60% of these employees left their job within the first five years. Gardner and Estry (1990) surveyed laboratory managers and found that turnover, rather than low applicant numbers, contributed to a shortage at the end of the 1980's.[9] Whereas other studies of laboratory managers revealed strategies for retention that included autonomy and employee control, higher salaries, better recognition, career advancement, reduced stress, and development of better work hours.[10,11] Previous surveys of laboratory professionals recognized salary as a major factor affecting employee satisfaction and retention; whereas poor benefits, high stress, poor advancement opportunities, and deficiencies in recognition allowed for employee attrition.[12-17] What these studies have not addressed are recruitment and retention strategies from the management perspective, nor the potential impact of geography upon these processes.

Furthermore, examination should be given specifically to rural areas since these factors impact secondary health indicators such as availability and development of services offered in communities as well as availability of employment.[18] This shortage of healthcare professionals in rural communities is a problem that poses serious complications to equitable healthcare delivery. These geographically skewed distributions of healthcare professionals are favoring more urban and wealthier areas, despite the fact that people in rural communities experience more health related problems.[19]

METHODS AND MATERIALS

A thorough literature review was used to generate the strategies for recruitment and retention of laboratory professionals included in the survey tool. Participants included laboratory directors in Tennessee hospitals who were identified using the American Hospital Association Guide 2009 and the Hospital Blue Book 2009 South edition. In order to ensure accuracy regarding proper contact information and hospital information only hospitals appearing in *both* selection tools were included. The questionnaire was mailed out in three waves over a four week time period. The mailings included the survey tool, a cover letter explaining the purpose of the study, assurance of respondent confidentiality, and a self-addressed stamped envelope for questionnaire return.[20] The returned questionnaires were organized according to an internal coding system and the data were input into SPSS (Statistical Package for Social Studies) Version 18. Frequency distributions were converted to percentages of the total responses to facilitate reporting. Descriptive statistics allow the researcher to measure perception of laboratory administrators on survey questionnaire items related to recruitment and retention strategies of their hospitals, specifically focusing on rural and urban differences.

Urban and rural areas were identified according to United States Census Bureau categories. The Census Bureau classifies as "urban" all territory, population, and housing units located within an urbanized area (UA) or an urban cluster (UC). An area deemed an UA and UC consists of boundaries to encompass densely settled territory of "core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile. In addition under certain conditions, less densely settled territory may be part of each UA or UC." Whereas, classification of "rural" consists of all territory, population, and housing units located outside of UAs and UCs.[21-23]

RESULTS

A total of 102 laboratory directors from Tennessee hospitals met the inclusion criteria and therefore received the mailed survey tools. A total of 71 laboratory directors responded to the questionnaires. Respondents were representative of 51 counties across the state, and responses represented a 69.6% response rate.

All laboratory administrators were asked to respond to a survey tool of recruitment and retention strategies, as collected through the literature review process, of what were considered effective recruitment and retention strategies. While many strategies were not considered beneficial there were, strategies selected for recruitment (Table 1) and strategies selected for retention (Table 2) agreed upon by the majority of respondents. Additionally, the administrators were asked for general information on the status of their programs, turnover, recruitment, retention, and administrative practices. From this administrative section portion there was no

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strong consensus that there existed a retention problem; however, a significant percentage of all laboratory directors stated that there was a need for laboratory personnel (85.7%) and that it was difficult to recruit new health professionals (81.5%). It was also noted that there were current vacancies (69.6%) for laboratory positions and 82.8% of respondents stated there was a shortage of available employees. When prompted as to what educational levels are hired as allied health employees at hospitals, laboratory directors stated that positions are mostly filled by Bachelors degree (83%), followed by Associates degree (76%), Masters Degree (39%), Certificate (37%), Diploma (26%), and Doctoral Degree (11%).

Table 1. Laboratory Administrator Positive Responses for Recruitment Strategies

Strategy	Responses (%)	Urban Responses (%)	Rural Responses (%)
Need to increase public awareness of allied health	96.6	97.5	94.7
Accessible community college	79.6	82.9	72.2
Recruitment by word-of-mouth	73.3	75.0	69.6
Competitive benefits	72.0	73.3	69.6
Effective co-op programs with universities	64.8	63.9	66.7
Targeting technical and community colleges	63.2	59.0	72.3
Competitive wage packets	62.9	65.9	56.5
Recruitment bonuses	62.8	68.6	50.1
Online and website marketing	60.6	62.2	57.1
The hospital emphasizes diversity when recruiting	58.4	51.2	73.7
Employees are typically from a rural area	53.4	38.5	84.3
Newspapers are effective for recruitment	44.9	44.7	45.5
Family relocation programs	42.8	56.3	17.6
Professional journal advertisements	37.0	34.2	43.8
Recruitment agencies	23.9	29.1	13.3
Our institution targets non-traditional students	8.9	10.5	5.6

DISCUSSION

There were strategies for recruitment where over half of all respondents agreed on their effectiveness regardless of geographic location: (1) there is a need to increase public awareness of allied health; (2) accessible community college; (3) recruitment by word-of-mouth; (4) competitive benefits; (5) effective co-op programs with universities; (6) targeting technical and community colleges; (7) competitive wage packets; (8) recruitment bonuses; (9) online and website marketing; and (10) the hospital emphasizes diversity when recruiting. Similarly, strategies were noted for retention where over half of all respondents agreed on their effectiveness when regardless of geographic location: (1) relevance of job fit; (2) job security; (3) interpersonal relationships; (4) job design; (5) clear job descriptions; (6) adequate orientation; (7) perceived self-value of employees; (8) sufficient on the job training; (9) employee decision-making power; (10) departmental decision-making power; (11) undergoing stressful working conditions; (12) individual employee's lifestyle aiding in organizational retention; (13) sufficient autonomy. Overall, these major strategies were consistent regardless

Table 2. Laboratory Administrator Positive Responses for Retention Strategies

Strategy	Responses (%)	Urban Responses (%)	Rural Responses (%)
Relevance of job fit	93.2	95.0	89.5
Job security	90.0	95.1	78.9
Interpersonal relationships	90.0	90.3	89.5
Job design	89.9	90.0	89.4
Clear job descriptions	88.1	90.0	84.2
Adequate orientation	83.3	82.9	84.3
Perceived self-value of employees	81.1	84.6	73.7
Sufficient on the job training	79.7	82.6	73.9
Employee decision making power	78.4	78.1	79.0
Departmental decision making power	77.5	79.5	73.7
Undergoing stressful working conditions	73.3	68.3	84.2
Individual employee's lifestyle aids in organizational retention	70.7	71.8	68.5
Implementing new technologies	60.0	65.8	47.3
Employees take advantage of professional development	56.0	61.4	45.5
Career ladder and career structure	55.2	60.0	44.5
Sufficient autonomy	54.2	52.5	57.9
Resources are unevenly distributed or limited	53.3	46.3	68.5
Employees experience burnout	45.2	41.5	52.7
Our employees need regular supervision	45.0	36.5	63.2
Management issues causes turnover	37.3	32.5	47.4
There are adequate opportunities for professional development	36.5	50.0	39.1
Work intensity is too high	35.6	35.0	36.9
Policy issues increase turnover	23.4	21.9	26.3
Chronicity and severity of clients' illnesses lead to turnover	15.9	12.8	22.7

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of geographic location and limited differences were noted with regard to urban-rural locations. However, laboratory management did cite key differences on select strategies in favor of geographic locale.

There is strong evidence from various studies that 'rural origin' (or rural background) is associated with rural practice.[19,24-28] In this study, rural responses (84.3%) doubled that of urban responses (38.5%) when asked if they believed employees are typically from a rural area. This indicated that laboratory personnel working in a rural setting are more likely from a rural area than their counterparts, which leads to the implication that rural laboratory directors should potentially focus recruitment efforts locally or at other rural applicants when filling open positions. Initiatives aimed at local technical and community colleges or programs associated with nearby universities may be beneficial methods for rural recruitment. Further, concentrated efforts aimed at targeting residents of rural locations such as word-of-mouth and efforts of locally targeting members of the community may be beneficial in attracting applicants to positions in rural hospitals. Also, there were some differences in perceptions from rural (68.5%) and urban (46.3%) respondents when questioned about limited or unevenly distributed resources at their hospitals. Within hospitals there are multiple demands for access to capital, the maintenance of the facilities, and for advancements in technologies. These rural respondents are reporting that the funding for laboratory services is limited and there can be waiting lists that impact the services provided. For these laboratory professionals there can be a lack of opportunities to practice and develop job-related skills, frustrations over funding and facilities, and decreased services to patients; all of which can impact retention of the employees. This fact should not be surprising given the perception of disparities of rural hospitals compared to urban locations or the actual, greater access to management resources associated with some urban localities. Urban managers could potentially highlight these resource advantages for urban areas when applicants are from more suburban or rural areas. Similarly, a large number of comments from hospital administrators noted the difficulty of suburban hospitals when competing with accessible urban hospitals.

Family relocation programs for new recruits was an area where there was a discrepancy in responses for urban (56.3%) and rural (17.6%) responses. Similarly, if looking at the negative responses from laboratory directors, rural administrators stated, (53.4%) recruitment agencies were ineffective when just 22.6% of urban respondents disagreed with the statement. Further, examination into the impact of urban and rural on recruitment initiatives could increase both the efficiency and effectiveness of the hiring process for laboratory personnel, especially if resources are limited.

Rural laboratory respondents reported (63.2%) at a much higher rate than their urban counterparts (36.5%) when asked if their employees needed additional supervision. Examination of management practices, employee autonomy, and adequate orientation, training, and education should be conducted in order to address the issue that managers stated their employees needed additional supervision based upon geographical location.

CONCLUSION

This study highlighted strategies for recruitment and for retention of laboratory personnel as reported by administrators across Tennessee hospitals. Current managers in clinical laboratory science programs in hospitals should note these strategies and potentially utilize these within their programs since the top responses for strategies weren't necessarily impacted by geography. However, certain responses saw a geographically skewed distribution of responses regarding what were effective recruitment and retention approaches for laboratory personnel. Further consideration of the potential impact of geography on the methods of laboratory management could potentially yield local remedies to shortages, changes caused by technology and diagnostic practices, and expected retirement trends. Continued examination into these findings is needed for clinical laboratory science in hospital settings regarding future trends of employment for the profession.

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