



COUNCIL ON LINKAGES BETWEEN ACADEMIA AND PUBLIC HEALTH PRACTICE

Spring/Summer 2009

The National Library of Medicine (NLM) conducted several literature searches to assist the Council on Linkages Between Academia and Public Health Practice (Council) with compiling information related to recruitment and retention, and reasons why individuals seek employment in the public sector. Some of this information was used by the Council to design a survey for the governmental public health workforce, which will be disseminated to registered [TRAIN](#) users. To learn more about the survey, please email [Pam Saungweme](#).

Searches were mainly conducted using the PubMed database. **Per NLM's request, please do not copy these abstracts and post them on any other website.** You may however, copy the bibliographic citations.

The Council would like to thank NLM and in particular, Catherine Selden and Lisa Lang for compiling these resources!!!

1. Purcell, Jennifer. *Recruiting the Future Public Health Workforce: An Analysis of Prospect Communication Among Accredited Schools of Public Health*. J Community Health. 2009 Jan 6. [Epub ahead of print]

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ABSTRACT: Schools of Public Health cannot sustain the national momentum for public health justice and human rights without recruiting and training a skilled public health workforce. With growing demand for public health workers, schools must work to increase their applicant pools. This project examined prospect communication materials from accredited Schools of Public Health and found that the vast majority of schools did not capitalize on opportunities to move prospects to applicants. Whereas most responded within a reasonable time, several schools made no communication efforts at all. Recruitment materials varied widely from institution to institution and between epidemiology and health education programs. Strategic, personalized communication strategies-the 3 Cs-are recommended to increase the pools of qualified applicants nationwide and can be utilized to increase prospect pools in a wide range of health sciences.

PMID: 19127415

2. Scott, E.S. and Smith, E.D. *Group mentoring: a transition-to-work strategy*. J Nurses Staff Dev. 2008 Sep-Oct; 24(5):232-8.

ABSTRACT: Current financial constraints and workplace staffing shortages challenge the viability of using one-on-one mentoring models to support new graduate nurses. This article describes an innovative strategy for mentoring a large cohort of new nurses. Using a Group Mentoring Team, education specialists in a small rural hospital implemented a cost-effective program to help new nurses gain confidence and competence in the first year of nursing practice.

PMID- 18838903

3. Daisy C. Carreon, M.P.H.; Pamela L. Davidson, Ph.D.; Ronald M. Andersen, Ph.D.
The Evaluation Framework for the Dental Pipeline Program with Literature Review J Dent Educ. 73(2_suppl): 23-36 2009

This chapter begins with an overview of the framework developed by the National Evaluation Team (NET) at the University of California, Los Angeles, School of Public Health to assess the effects of the Pipeline, Profession, and Practice: Community-Based Dental Education program. As members of that team, we outline the major evaluation questions and provide a comprehensive literature review associated with each question. Subsequent analytical chapters will build on this chapter as we report findings from the longitudinal evaluation and discuss implications for policy, dental care delivery systems, universities/dental schools, and population access.

Key words: evaluation framework, literature review, dental education

4. Censullo JL. *The nursing shortage: breach of ideology as an unexplored cause*. ANS Adv Nurs Sci. 2008 Oct-Dec; 31(4):E11-8.

ABSTRACT: The worldwide nursing shortage is unprecedented. Studies show increasing demand for nursing services coupled with a finite nursing supply. Many theories have been developed to explain the nursing shortage, to no avail. One unexplored theory is the psychological contract, which explores the impact of unwritten yet real expectations on work relationships. Understanding breach of the psychological contract is essential to resolution of the ongoing nursing shortage.

PMID: 19033737

5. Ellett, Alberta J. *Intentions to remain employed in child welfare: The role of human caring, self-efficacy beliefs, and professional organizational culture*. Children and Youth Services Review, vol. 31, no. 1, pp. 78-88, Jan. 2009

ABSTRACT: This study reflects the national concern about high employee turnover rates in child welfare (CW). Personal and organizational factors contributing to CW employee's intentions to remain employed in CW were studied as an alternative to more traditional studies of employee burnout and turnover. New measures of intent to remain employed in CW, human caring, self-efficacy beliefs, and professional organizational culture were developed and administered to all CW staff in two states (n = 941). Reliability estimates for the new measures ranged from .79 to .92. Core findings supported relationships hypothesized among the measures and identified human caring as an important, new variable linked to CW employees' intentions to remain employed in CW. In two discriminant function analyses, the human caring variable was the most heavily weighted variable in linear combinations of the study variables that differentiated extreme intent to remain employed groups (upper and lower quartiles). The measure of self-efficacy beliefs about capabilities to accomplish work tasks was positively and more strongly related to human caring than to professional organizational culture. Explanations of the core findings are provided and implications for theory development, education and practice in CW, and future research are discussed. [Copyright Elsevier B.V.]

Descriptors: *Child Welfare Services; *Empowerment; *Social Services; *Organizational Culture; *Attitudes; *Workers

6. Anastas, Jeane W.; Kuerbis, Alexis N. *Doctoral Education in Social Work: What We Know and What We Need to Know*. Social Work, vol. 54, no. 1, pp. 71-81, Jan. 2009

ABSTRACT: Little is known about social work doctoral students and graduates: why they chose doctoral study, the kind of work they do, and the nature of their unique contributions to the profession. This article reviews past studies of doctoral education in social work in the context of general trends in doctoral education in the United States, underscoring the need for more social workers with doctoral degrees. Using data from the Survey of Earned Doctorates, social work doctoral graduates from two recent years are described, including their employment plans at graduation and their indebtedness. Implications of the findings for the profession are discussed. Adapted from the source document.

Descriptors: *Social Work Education; *Doctoral Programs; *Social Workers; *Doctoral Degrees; *United States of America; *Education Work Relationship; *Educational Attainment

7. Haley-Lock, Anna; Kruzich, Jean. *Serving Workers in the Human Services: The Roles of Organizational Ownership, Chain Affiliation, and Professional Leadership in Frontline Job Benefits*. Nonprofit and Voluntary Sector Quarterly, vol. 37, no. 3, pp. 443-467, Sept. 2008

ABSTRACT: A growing body of research has sought to understand forces shaping firms' approaches to employee compensation and the impacts of job benefits on both organizational performance and worker well-being. One such line of work has documented advantages from employers adopting generous compensation practices, as evidenced by more successful worker recruitment and retention. Little of this work, however, has attended to benefits provided within nonprofit and public human service settings or to low-level workers. Drawing on a sample of Wisconsin nursing homes, this study addresses this gap by examining the roles of ownership, chain affiliation, and professional leadership in compensation provided to nursing assistants. Results indicate that public and nonprofit ownership and chain membership are positively related to benefit levels. Workers fare unexpectedly less well with professional directors in for-profit and public settings but better within professionally led nonprofits.

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Descriptors: *Ownership; *Human Service Organizations; *Nursing Homes; *Health Problems; *Salaries; *Nonprofit Organizations; *Leadership

8. Venneberg, Donald L.; Wilkinson, Vida D. *Retirees Who Returned to Work: Human and Social Capital Implications for Organizations*. Journal of Workplace Behavioral Health, vol. 23, no. 1-2, pp. 1-15, 2008

ABSTRACT: The potential impact of the significant loss of skills and experience as the aging workforce approaches

retirement is raising concerns. The shortage of workers will be driven by the beginning retirement of the skilled cohort of Baby Boomers followed by the much smaller Generation X workforce cohort. A qualitative study of the experiences of a set of retirees who have returned to the workforce provides an insight to the needs these retirees desire to have fulfilled for them to return to the workforce. The experiences of these retirees also provide insight into the human and social capital considerations organizations can use for planning and developing programs for the retention and recruitment of older workers to meet future workforce needs.

Descriptors: *Work; *Retirement; *Cultural Capital; *Recruitment; *Human Capital; *Workers; *Scarcity

9. Wolf-Branigin, Michael; Wolf-Branigin, Karen; Israel, Nathaniel. *Complexities in Attracting and Retaining Direct Support Professionals*. Journal of Social Work in Disability & Rehabilitation, vol. 6, no. 4, pp. 15-30, 4 Dec. 2007

ABSTRACT: Recruiting and retaining direct support professionals (DSPs) remains essential to the full inclusion for persons with disabilities. Using a mixed-evaluation model, we measured DSPs' views versus those of their supervisors. DSPs expressed lower perceptions concerning their supervisors, satisfaction with their work situation, and environmental and safety factors. Focus groups provided insights into resolving issues related to compensation, work environment, and recruiting and retaining future DSPs. Motivating factors included wanting to be part of a helping community where all are valued. To improve their performance, DSPs stated their desire to understand the roles of managers and of the consumer. DSPs indicated that having career paths that provided advancement opportunities and direct contact with persons with disabilities were primary motivators.

Adapted from the source document. COPIES ARE AVAILABLE FROM: HAWORTH DOCUMENT DELIVERY CENTER, The Haworth Press, Inc., 10 Alice Street, Binghamton, NY 13904-1580

Descriptors: *Social Workers; *Recruitment; *Handicapped; *Social Support

10. Redman-Simmons, Lois Monica. *Graduate students attraction to government public service professions*. Dissertation Abstracts International, A: The Humanities and Social Sciences, vol. 68, no. 12, pp. 5204, 2008

ABSTRACT: Attracting competent, committed candidates to government public service professions is of ongoing concern to government leaders, recruiters, and citizens. Without employees capable of achieving governments' objectives, acceptable standards in the democratic delivery of public services are difficult to achieve. Traditionally, choosing government public service professions was considered the response to a special calling and to an affinity with employment environments

imbued with the public service ethos. With public services now delivered from a multi-sectored environment, the locus of the public service ethos is open to debate. The two main goals of this research were to identify what, in the U.S. northeast, most strongly predicts MPA and MBA students' decisions to enter government public service professions and to assess the public service ethos among a set of career choice predictors from relevant literatures. The predictors included organizational culture, career planning, motivation, socialization, and demographic characteristics. From data collected through an electronic survey and estimates from logistic regression models, the most significant predictors of the decision whether to choose government public service professions were educational, paternal, and professional socialization; perception of whether the government agency shared the candidate's commitment to public service; and motivation toward public service, as demonstrated by respondents' levels of attraction to public policy-making and their inclination toward doing good for others over personal financial gain. Traditional concepts of the public service ethos proved insignificant compared to the perception that its value is upheld in government agencies. This study supports and broadens earlier public administration research that explained attraction to government public service professions as intrinsic motivation with sociological antecedents. It introduces cultural influences to the framework through integrating complementary organizational behavior theory. Finally, given that the MPA student population is ideal for staffing government agencies, this study indicates that students are likely to be receptive to recruiting strategies that appeal to their socialization, emphasize organizational commitment to public service, offer opportunities for public policy making that reflect that commitment, and provide opportunities for meaningful service to the public. Copies of dissertations may be obtained by addressing your request to ProQuest, 789 E. Eisenhower Parkway, P.O. Box 1346, Ann Arbor, MI 48106-1346. Telephone 1-800-521-3042; email: disspub@umi.com

Descriptors: *Public Services; *Government Agencies; *Motivation; *Students; *Professions; *Organizational Culture; *Careers; *Public Administration; *Citizens

11. Chapman, SA, Blau G, Pred RS, Lindler V., *Testing for correlates of intent to leave one's job versus intent to leave one's occupation among cancer registrars*. J Allied Health. 2009 Spring; 38(1):24-30.
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ABSTRACT: The present investigation involved a field study of cancer registrars (CRs), who collect data used by the National Cancer Institute and the Centers for Disease Control and Prevention to study trends in cancer incidence and outcomes. Because of the forecasted shortage of CRs due to the aging of the CR workforce, the professional organization of CRs needed to research the factors related to the recruitment and retention of this workforce. From a national database of 3,393 CRs, data regarding intent to leave one's job and occupation, along with occupational

commitment, were obtained from a sample of 374 CRs to meet this research need. The focus of this field study was to assess patterns of association between the correlates of "intent to leave" variables, including measures of job satisfaction and occupational commitment. Results showed that satisfaction with job rewards, interpersonal relations, and fringe benefits had a stronger negative relationship to intent to leave one's job compared with intent to leave one's occupation. Affective and normative occupational commitment facets had a stronger negative relationship to intent to leave one's occupation compared with intent to leave one's job. Beyond demographic control and perceptual variables, these attitudinal job satisfaction and occupational commitment variables together explained the greatest amount of variance in both "intent to leave" measures.

Publication Types: Research Support, Non-U.S. Gov't

MeSH Terms: Age Factors, Career Mobility*, Female, Government Agencies, Health Personnel/psychology*, Hospitals, Humans, Job Satisfaction, Male, Middle Aged, Neoplasms*, Registries*, Socioeconomic Factors, United States
PMID: 19361020 [PubMed - indexed for MEDLINE]

12. McClure, K. *Student perceptions of the clinical laboratory science profession*. Clin Lab Sci. 2009 Winter;22(1):16-21.

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OBJECTIVE: The purpose of this paper is to describe the attitudes and perceptions among college biology and CLS/CLT students. These students were on selected college campuses at Texas universities in Houston, Dallas and the Austin/San Antonio areas for the Spring 2007 semester. Specifically, students were questioned on factors that influence their choice of field of study, career expectations, legislative measures which might be used to attract individuals to the career, and factors that will be required to keep them in the field of practice. **DESIGN:** This study was part of a larger qualitative study which included exploratory discovery and inductive logic regarding the attitudes of four focus groups in Texas. **SETTING:** Focus groups took place on college campuses or in hotel conference rooms. **PARTICIPANTS:** (1) junior/senior-level college biology students and (2) junior/senior-level students currently enrolled in CLS/CLT programs. **INTERVENTIONS:** Focus group discussions using a standard set of questions; group sessions lasted about 45 minutes. **MAIN OUTCOME MEASURE:** This study was a qualitative study which included exploratory discovery and inductive logic regarding the attitudes of two groups in Texas. **RESULTS:** College biology and CLS/CLT students find the clinical laboratory science profession to be interesting and exciting as a career prospect, however, many do not see themselves remaining in the profession and perceive it does not have good prospects for career advancement. The majority of students must work to support themselves through their college education and

would welcome additional grants, scholarships and loan forgiveness programs as incentives to study the clinical laboratory sciences. Students believe that additional recruitment on high school and college campuses is needed to increase the visibility of the field as career choice. CONCLUSION: The majority of students who are entering the clinical laboratory science profession do not see the profession as their final career choice, but rather a stepping stone to another career field in healthcare or a related field. The perception that the profession lacks a career ladder is a critical detriment to the retention of CLS/CLT professionals. The clinical laboratory science profession continues to suffer from a lack of knowledge about the field by the general public, college advisors, and even healthcare workers. State and national programs involving grants/scholarships or loan forgiveness programs offered by healthcare institutions would be beneficial in attracting students to study the clinical laboratory sciences.

MeSH Terms: Adult, Career Choice, Career Mobility, Female, Humans, Laboratory Personnel/education*, Male, Students, Health Occupations/psychology*, Technology, Medical/education*

PMID: 19354023 [PubMed - indexed for MEDLINE]

13. Street, D. and Cossman, JS. *Perspectives on Mississippi's 21st century Physician Workforce Supply: findings from the 2007 MSMD survey*. J Miss State Med Assoc. 2008 Apr;49(4):99-103.

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The capacity to recruit and retain physicians to practice in Mississippi has been a perennial concern of the profession. In the first Mississippi Physician Workforce Study (2003) conducted at the height of the state 'malpractice crisis,' Professor Cossman identified several looming threats to effective Mississippi physician recruitment and retention, including a high percentage of physicians who reported they were considering relocation or retirement in the near future. In this article, Street and Cossman report survey findings from actively practicing physicians (N=848) who responded to the second Mississippi Physician Workforce Study (2007 MSMD). This analysis updates perspectives on the physician workforce supply in the aftermath of malpractice legislative reform and Hurricane Katrina.

Publication Types: Research Support, Non-U.S. Gov't

MeSH Terms: Career Choice, Data Collection, Health Services Needs and Demand, Humans, Mississippi, Personnel Selection/statistics & numerical data*, Physicians/supply & distribution*, Societies, Medical*

PMID: 19297906 [PubMed - indexed for MEDLINE]

14. Henry, JA, Edwards, BJ, Crotty B. *Why do medical graduates choose rural careers?* Rural Remote Health. 2009 Jan-Mar; 9(1):1083. Epub 200

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INTRODUCTION: This study is based on the metaphor of the 'rural pipeline' into medical practice. The four stages of the rural pipeline are: (1) contact between rural secondary schools and the medical profession; (2) selection of rural students into medical programs; (3) rural exposure during medical training; and (4) measures to address retention of the rural medical workforce. METHODS: Using the rural pipeline template we conducted a literature review, analysed the selection methods of Australian graduate entry medical schools and interviewed 17 interns about their medical career aspirations. RESULTS: Literature review: The literature was reviewed to assess the effectiveness of selection practices to predict successful gradation and the impact of rural pipeline components on eventual rural practice. Undergraduate academic performance is the strongest predictor of medical course academic performance. The predictive power of interviews is modest. There are limited data on the predictive power of other measures of non-cognitive performance or the content of the undergraduate degree. Prior rural residence is the strongest predictor of choice of a rural career but extended rural exposure during medical training also has a significant impact. The most significant influencing factors are: professional support at national, state and local levels; career pathway opportunities; contentedness of the practitioner's spouse in rural communities; preparedness to adopt a rural lifestyle; educational opportunities for children; and proximity to extended family and social circle. Analysis of selection methods: Staff involved in student selection into 9 Australian graduate entry medical schools were interviewed. Four themes were identified: (1) rurality as a factor in student selection; (2) rurality as a factor in student selection interviews; (3) rural representation on student selection interview panels; (4) rural experience during the medical course. Interns' career intentions: Three themes were identified: (1) the efficacy of the rural pipeline; (2) community connectedness through the rural pipeline; (3) impediments to the effect of the rural pipeline, the most significant being a partner who was not committed to rural life CONCLUSION: Based on the literature review and interviews, 11 strategies are suggested to increase the number of graduates choosing a career in rural medicine, and one strategy for maintaining practitioners in rural health settings after graduation.

Publication Types: Research Support, Non-U.S. Gov't Review

MeSH Terms: Adult, Attitude of Health Personnel*, Australia, Career Choice*, Faculty, Medical, Health Services Needs and Demand, Humans, Intention, Internship and Residency/organization & administration, Life Style, Personnel Selection/organization & administration*, Professional Practice Location*, Questionnaires, Residence Characteristics, Rural Health Services*/organization & administration, School Admission

Criteria, Students, Medical/psychology*, Training Support, Victoria

PMID: 19257797 [PubMed - indexed for MEDLINE]

15. Shier B, DeBasio N, Roberts K. *Profile of non-nurse college graduates enrolled in accelerated baccalaureate curricula: results of a national study*. Nurs Educ Perspect. 2008 Nov-Dec;29(6):336-41.

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The rapid growth of accelerated baccalaureate curricula for non-nurse college graduates has been viewed as a critical strategy in efforts to address the projected nursing shortfall of 1.2 million registered nurses by the year 2014. While these programs have proliferated over the past decade, research has been limited to descriptions of students and their performance in selected programs. The purpose of this national study was to survey non-nurse college graduates enrolled in accelerated baccalaureate programs throughout the United States in order to identify the factors influencing program and career selection and provide a contemporary profile of these students. The results of this study provide a clearer understanding of this population in relation to their motivation, academic backgrounds, and their unique personal and educational needs.

Publication Types: Research Support, Non-U.S. Gov't

MeSH Terms: Adult, Attitude of Health Personnel, Career Choice*, Curriculum*, Education, Nursing, Baccalaureate/organization & administration*, Education, Professional, Retraining/organization & administration*, Female, Forecasting, Humans, Male, Middle Aged, Motivation, Needs Assessment/organization & administration*, Nursing Education Research, Nursing Methodology Research, Nursing Staff/education, Nursing Staff/organization & administration, Personnel Selection, Questionnaires, Socioeconomic Factors, Students, Nursing*/psychology, Students, Nursing*/statistics & numerical data, United States, Young Adult

PMID: 19244798 [PubMed - indexed for MEDLINE]

16. Powell AC, Casey K, Liewehr DJ, Hayanga A, James TA, Cherr GS. *Results of a national survey of surgical resident interest in international experience, electives, and volunteerism*. J Am Coll Surg. 2009 Feb;208(2):304-12. Epub 2008 Dec

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BACKGROUND: Data are emerging about the essential nature of sustainable global surgical care and interest among North American surgeons. Currently, there is no formal mechanism for US surgical residents to participate in international training opportunities. A small, single-institution survey found that general surgery residents at

New York University are highly motivated to pursue international training. But little research has addressed the attitudes of North American residents about international training. The goal of this study was to acquire a broader understanding of surgical resident interest in international training. STUDY DESIGN: A structured questionnaire was administered anonymously and voluntarily to all American College of Surgeons resident members. RESULTS: Seven hundred twenty-four residents completed surveys. Ninety-four percent of respondents planned careers in general surgery. Ninety-two percent of respondents were interested in an international elective, and 82% would prioritize the experience over all or some other electives. Fifty-four percent and 73% of respondents would be willing to use vacation and participate even if cases were not counted for graduation requirements, respectively. Educational indebtedness was high among respondents (50% of respondents carried >or=\$100,000 debt). Despite debt, 85% of respondents plan to volunteer while in practice. The most frequent barriers identified by respondents were financial (61%) and logistic (66%). CONCLUSIONS: American College of Surgeons resident members are highly motivated to acquire international training experience, with many planning to volunteer in the future. A consensus among stakeholders in North American surgical education is needed to further explore international training within surgical residency.

MeSH Terms: Adult, Attitude of Health Personnel*, Clinical Competence*, Curriculum*, Female, General Surgery/education*, Humans, International Educational Exchange*/economics, Internship and Residency/statistics & numerical data*, Male, Medically Underserved Area, Questionnaires, United States, Voluntary Workers*, Young Adult

PMID: 19228545 [PubMed - indexed for MEDLINE]

17. Fernandez RM, Mors ML. *Competing for jobs: labor queues and gender sorting in the hiring process*. Soc Sci Res. 2008 Dec;37(4):1061-80

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While much research has documented the pattern and extent of sex segregation of workers once they are employed, few studies have addressed the pre-hire mechanisms that are posited to produce sex segregation in employment. While the notion of a labor queue-the rank order of the set of people that employers choose among-plays a prominent role in pre-hire accounts of job sex sorting mechanisms, few studies have examined the ways in which job candidates are sorted into labor queues. In this paper, we explore the mechanisms by which labor queues contribute to the gendering of jobs by studying the hiring process for all jobs at a call center. Being placed in a queue has a clear gendering effect on the hiring process: the sex distribution of applicants who are matched to queues and those who are rejected at this phase diverge, and among those assigned to queues, women are prevalent in queues for low pay, low status jobs. The

screening process also contributes to the gendering of the population of hires at this firm. Females are more prevalent among hires than they are among candidates at initial queue assignment. Among high status jobs, however, males are more prevalent than females. Moreover, there are important wage implications associated with matching to queues. While there are large between-queue sex differences in the paid wages associated with allocation to queues, once allocated to queues the wage differences between male and female candidates are nil. Consequently, the roots of gender wage inequality in this setting lie in the initial sorting of candidates to labor queues.

Publication Types: Historical Article

MeSH Terms: Employment/history*, Female, History, 20th Century, History, 21st Century, Humans, Logistic Models, Male, Personnel Selection/history*, Salaries and Fringe, Benefits/history*, Sex Distribution
PMID: 19227692 [PubMed - indexed for MEDLINE]

18. Seale H, Leask J, Po K, MacIntyre CR. *"Will they just pack up and leave?" - attitudes and intended behaviour of hospital health care workers during an influenza pandemic.* BMC Health Serv Res. 2009 Feb 13;9:30

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BACKGROUND: There is a general consensus that another influenza pandemic is inevitable. Although health care workers (HCWs) are essential to the health system response, there are few studies exploring HCW attitudes to pandemic influenza. The aim of this study was to explore HCWs knowledge, attitudes and intended behaviour towards pandemic influenza. METHODS: Cross-sectional investigation of a convenience sample of clinical and non-clinical HCWs from two tertiary-referral teaching hospitals in Sydney, Australia was conducted between June 4 and October 19, 2007. The self-administered questionnaire was distributed to hospital personal from 40 different wards and departments. The main outcome measures were intentions regarding work attendance and quarantine, antiviral use and perceived preparation. RESULTS: Respondents were categorized into four main groups by occupation: Nursing (47.5%), Medical (26.0%), Allied (15.3%) and Ancillary (11.2%). Our study found that most HCWs perceived pandemic influenza to be very serious (80.9%, n = 873) but less than half were able to correctly define it (43.9%, n = 473). Only 24.8% of respondents believed their department to be prepared for a pandemic, but nonetheless most were willing to work during a pandemic if a patient or colleague had influenza. The main determinants of variation in our study were occupational factors, demographics and health beliefs. Non-clinical staff were significantly most likely to be unsure of their intentions (OR 1.43, p < 0.001). Only 42.5% (n = 459) of respondents considered that neuraminidase inhibitor antiviral medications (oseltamivir/zanamivir) would protect them against pandemic influenza, whereas 77.5% (n =

836) believed that vaccination would be of benefit. CONCLUSION: We identified two issues that could undermine the best of pandemic plans - the first, a low level of confidence in antivirals as an effective measure; secondly, that non-clinical workers are an overlooked group whose lack of knowledge and awareness could undermine pandemic plans. Other issues included a high level of confidence in dietary measures to protect against influenza, and a belief among ancillary workers that antibiotics would be protective. All health care worker strategies should include non clinical and ancillary staff to ensure adequate business continuity for hospitals. HCW education, psychosocial support and staff communication could improve knowledge of appropriate pandemic interventions and confidence in antivirals.

MeSH Terms: Absenteeism*, Adolescent, Adult, Attitude of Health, Personnel*, Australia, Cross-Sectional Studies, Disease Outbreaks*, Family Relations, Fear/psychology, Female, Guideline Adherence, Health Behavior*, Hospitals, Teaching, Humans, Influenza, Human/psychology*, Male, Medical Staff, Hospital/psychology*, Medical Staff, Hospital/standards, Middle Aged, Questionnaires, Young Adult

PMID: 19216792 [PubMed - indexed for MEDLINE]
PMCID: PMC2661074

19. Fuster V, Van Der Zee S, Elmariah S, Bonow RO. *Academic careers in cardiovascular medicine.* Circulation. 2009 Feb 10;119(5):754-60.

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Publication Types: Review

MeSH Terms: Biomedical Research/manpower*, Biomedical, Research/trends, Cardiology/manpower*, Cardiovascular Diseases/epidemiology, Cardiovascular Diseases/therapy*, Career Choice*, Humans, Physicians/supply & distribution*, Prevalence, Research Support as Topic/trends, United States/epidemiology
PMID: 19204318 [PubMed - indexed for MEDLINE]

20. Snyder RA, Bills JL, Phillips SE, Tarpley MJ, Tarpley JL. *Specific interventions to increase women's interest in surgery.* J Am Coll Surg. 2008 Dec;207(6):942-7, 947.e1-8.

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MeSH Terms: Adult, Career Choice*, Female, General Surgery/manpower, General Surgery/organization & administration*, Humans, Internship and Residency/organization & administration, Life Style, Male,

Mentors, Motivation, Personnel Selection/organization & administration*, Personnel Staffing and Scheduling, Sex Factors, Time Factors, United States, Workload

PMID: 19183543 [PubMed - indexed for MEDLINE]

21. Berman L, Rosenthal MS, Curry LA, Evans LV, Gusberg RJ. *Attracting surgical clerks to surgical careers: role models, mentoring, and engagement in the operating room.* J Am Coll Surg. 2008 Dec;207(6):793-800, 800.e1-2. Epub 2008

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BACKGROUND: Declining interest in careers in surgery among medical students has contributed to growing concerns about the surgical workforce. Although the medical student clerkship is likely to play an important role in shaping students' impressions of careers in surgery, little is known about the nature of this process. This study was designed to identify those aspects of the clerkship that are associated with medical students expressing an interest in surgery at the end of the clerkship. **STUDY DESIGN:** Medical students completed a survey at the end of the surgical clerkship assessing characteristics of the clerkship experience and students' level of interest in pursuing a career in surgery. The survey also included open-ended questions about students' reasons for having increased or decreased interest in surgery, which were systematically analyzed to complement quantitative findings. **RESULTS:** Students who sutured ($p = 0.001$), drove the camera ($p = 0.01$), stated that they felt involved in the operating room ($p = 0.009$), and saw residents ($p = 0.03$) and attendings ($p = 0.0003$) as positive role models were more likely to be interested in surgery. After adjusting for covariates, students who sutured in the operating room were 4.8 times as likely to be interested in surgery (95% CI, 1.5 to 14.9) and students who drove the camera were 7.2 times as likely to be interested in surgery (95% CI, 1.1 to 46.8). **CONCLUSIONS:** Students who participate actively in the operating room and those who are exposed to positive role models are more likely to be interested in pursuing a career in surgery. To optimize students' clerkship experiences and attract top candidates to the field of surgery, clerkship directors should encourage meaningful engagement of students in the operating room and facilitate mentoring experiences.

MeSH Terms: Adult, Career Choice*, Clinical Clerkship/organization & administration*, Data Collection, Female, General Surgery, Humans, Male, Mentors, Operating Rooms, Physician's Role, Surgical Procedures, Operative*

PMID: 19183524 [PubMed - indexed for MEDLINE]

22. Keane S, Smith TN, Lincoln M, Wanger SR, Lowe SE. *The rural allied health workforce study (RAHWS): background, rationale and questionnaire development.*

Rural Remote Health. 2008 Oct-Dec; 8(4):1132. Epub 2008 D

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The allied health professions form approximately 18% of the health workforce in Australia and are well placed to contribute to future multidisciplinary models of health care. There are many reports describing the health workforce in Australia for the medical and nursing professions but there is very little information available about the nature of the allied health workforce. Recent studies have highlighted the need for more current and detailed information about the rural allied health workforce to inform future workforce planning. National health policy reform requires that new healthcare models take into account future workforce requirements, the distribution and work contexts of existing practitioners, training needs, workforce roles and scope of practice. The absence of accurate data profiling the existing rural allied health workforce makes this impossible. The Rural Allied Health Workforce Study (RAHWS) aims to use a cross-sectional survey instrument with high validity to provide a large scale but detailed profile of the allied health workforce in regional, rural and remote Australia. The RAHWS survey instrument used in this study is the result of a comprehensive consultation with clinicians, academics and managers. The RAHWS survey instrument has been designed to provide uniform data across a wide range of healthcare settings. Good concurrent and face validity have been demonstrated and its design allows for data analysis using a wide range of variables. Cross-correlation of responses can answer a number of research questions in relation to rural recruitment and retention, professional education and service delivery models. This valid and feasible instrument will be used to explore the rural allied health workforce by implementing the RAHWS survey in rural regions on a state-by-state basis in Australia during 2009 and 2010.

Publication Types: Portraits

MeSH Terms: Allied Health Personnel/psychology*, Attitude of Health Personnel*, Career Choice, Cross-Sectional Studies, Health Manpower*, Health Services Needs and Demand, Health Surveys, Humans, Job Satisfaction*, New South Wales, Questionnaires*, Rural Health Services*, Tasmania

PMID: 19182857 [PubMed - indexed for MEDLINE]

23. Jelinski MD, Campbell JR, Lissemore K, Miller LM. *Demographics and career path choices of graduates from three Canadian veterinary colleges.* Can Vet J. 2008 Oct; 49(10):995-1001.

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The classes of 2007 from the Atlantic Veterinary College, Ontario Veterinary College, and Western College of Veterinary Medicine were surveyed to determine what factors influenced the respondents' career path choices. Seventy percent (166/237) of those contacted participated in the survey of which 89.1% were female, 62.7% had an urban upbringing, and 33.0% expected to be employed in a small center (population < or = 10,000). Half (52.5%) of the respondents reported that they were interested in mixed or food animal practice at the time of entry into veterinary college, but this proportion declined to 34.2% by the time of graduation. Three factors were significantly associated with choosing a career in mixed or food animal practice: having been raised in a small center, being a male, and having a good to excellent knowledge of food animal production at the time of entry into veterinary college, as determined by a self-assessment.

Publication Types: Research Support, Non-U.S. Gov't

MeSH Terms: Adult, Animals, Animals, Domestic, Canada, Career Choice*, Demography, Employment/psychology*, Employment/statistics & numerical data*, Female, Humans, Male, Questionnaires, Schools, Veterinary, Sex Distribution, Veterinarians/psychology*, Veterinarians/statistics & numerical data*, Veterinary Medicine/manpower*, Veterinary Medicine/statistics & numerical data

PMID: 19119368 [PubMed - indexed for MEDLINE]
PMCID: PMC2553513

24. Fraser DR, McGregor DD, Grohn YT. *Career paths of alumni of the Cornell Leadership Program for veterinary students*. Vet Rec. 2008 Dec 20-27;163(25):750-6

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The Cornell Leadership Program at Cornell University, USA, aims to assist talented veterinary students to embark on careers in research, academia, government agencies or industry. Over 400 students have participated since the Program began in 1990 and their subsequent careers have been followed. In this study, five sources of data were analysed: application documents of the participants; audio recordings of interviews with each participant from 2000 to 2007; annual tracking records of alumni after graduating with a veterinary degree; spontaneous comments from alumni about how the Program influenced their career plans; and a list of published scientific papers by alumni. Analysis revealed that about 50 per cent of veterinary graduates were establishing themselves in careers envisaged by the Program, although many of them experienced conflicts between a vocational commitment to clinical practice and a desire to solve problems through research. Many alumni asserted that the Program had influenced their career plans, but they had difficulty in accepting that rigorous scientific training was more important in acquiring research skills than working directly on a veterinary research problem. One career of great appeal to alumni was that of veterinary translational

science, in which disease mechanisms are defined through fundamental research. It is concluded from the data that there are three challenging concepts for recently qualified veterinarians aiming to advance the knowledge of animal disease: research careers are satisfying and rewarding for veterinarians; a deep understanding of the chosen field of research is needed; and a high standard of scientific training is required to become an effective veterinary scientist.

Publication Types: Research Support, N.I.H., Extramural, Research Support, Non-U.S. Gov't

MeSH Terms: Bibliometrics, Career Choice*, Career, Mobility*, Education, Veterinary, Female, Foreign Professional Personnel/statistics & numerical data, Humans, Interviews as Topic, Leadership, Male, New York, Research/statistics & numerical data, Schools, Veterinary, Students, Survival Analysis, United States, Veterinarians/statistics & numerical data*

PMID: 19103620 [PubMed - indexed for MEDLINE]

25. Kheterpal S, Tremper KK, Shanks A, Morris M. *Six-year follow-up on work force and finances of the United States anesthesiology training programs: 2000 to 2006*. Anesth Analg. 2009 Jan;108(1):263-72

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BACKGROUND: In the mid 1990s, interest in the field of anesthesiology decreased significantly among medical students, resulting in a decreasing resident class size and, subsequently, fewer anesthesiologists entering the United States workforce. This apparent practitioner shortage was associated with increased salary demands, which placed anesthesiology training departments in financial jeopardy. Starting in 1999, a survey was sent to the department chairs of the United States anesthesiology training programs to assess the status of faculty and finances of their departments. Follow-up surveys have been conducted each year thereafter. We present the results of the 2006 survey and 7 yr trend data. **METHODS:** Surveys were distributed by e-mail in September 2006 to anesthesiology department chairs of the United States training programs. The responses were received by e-mail. Descriptive statistics were performed on responder data. In addition, a linear regression model to predict institutional support was developed. **RESULTS:** One-hundred-eighteen departments were surveyed with a response rate of 61%. There were an average of 4 open faculty positions in the 71% of the departments reporting open faculty positions. This would imply an overall 5% open position rate, down from 10% in 2000. Of the 96% of departments who employ certified registered nurse anesthetists, 70% had an average of 4 open positions, or approximately 11% shortage. The average department received \$5,500,000 in total institutional support annually (\$120,000/faculty). When the portion of this support provided for certified registered nurse anesthetists was removed, the average

amount received was \$4,600,000 or \$100,000/faculty. This is a 10% increase over the previous year and an approximate 300% increase over the year 2000. Faculty academic time averaged 18% (where 20% is 1 day per week). The departments billed an average of 12,200 U/faculty/year. The average anesthesia unit value collected was \$31/unit, while departments would require \$46/unit to meet expenses. In a linear regression model, clinical revenue per unit billed minus expenses per unit billed predicted faculty support per full-time equivalent. CONCLUSION: This current survey reveals a continuing need for institutional support to keep anesthesiology training departments financially solvent. The amount of support is associated with the reimbursement for anesthesia work. There is also a continuing, but decreasing, number of open faculty anesthesiologist positions nationwide.

MeSH Terms: Anesthesia Department, Hospital*/economics, Anesthesia Department, Hospital*/manpower, Anesthesiology*/economics, Anesthesiology*/education, Anesthesiology*/manpower, Career Choice*, Education, Medical, Graduate/economics*, Faculty, Medical, Follow-Up, Studies, Hospital Costs, Humans, Insurance, Health, Reimbursement, Internship and Residency*/economics, Internship and Residency*/manpower, Nurse Anesthetists/economics, Personnel Selection/economics*, Personnel Staffing and Scheduling/economics*, Program Evaluation, Questionnaires, Research Support as Topic, Salaries and Fringe Benefits*, United States

PMID: 19095861 [PubMed - indexed for MEDLINE]

26. Villarejo M, Barlow AE, Kogan D, Veazey BD, Sweeney JK. *Encouraging minority undergraduates to choose science careers: career paths survey results*. CBE Life Sci Educ. 2008 Winter;7(4):394-409.

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To explore the reasons for the dearth of minorities in Ph.D.-level biomedical research and identify opportunities to increase minority participation, we surveyed high-achieving alumni of an undergraduate biology enrichment program for underrepresented minorities. Respondents were asked to describe their career paths and to reflect on the influences that guided their career choices. We particularly probed for attitudes and experiences that influenced students to pursue a research career, as well as factors relevant to their choice between medicine (the dominant career choice) and basic science. In agreement with earlier studies, alumni strongly endorsed supplemental instruction as a mechanism for achieving excellence in basic science courses. Undergraduate research was seen as broadening by many and was transformative for half of the alumni who ultimately decided to pursue Ph.D.s in biomedical research. That group had expressed no interest in research careers at college entry and credits their undergraduate research experience with putting them on track toward a research career. A policy

implication of these results is that making undergraduate research opportunities widely available to biology students (including "premed" students) in the context of a structured educational enrichment program should increase the number of minority students who choose to pursue biomedical Ph.D.s.

Publication Types: Research Support, N.I.H., Extramural

MeSH Terms: Achievement, Career Choice*, Data Collection*, Education, Medical, Goals, Minority Groups/education*, Research, Science/education*, Science/manpower*, Students*

PMID: 19047426 [PubMed - indexed for MEDLINE]
PMCID: PMC2592049

27. Lavoie-Tremblay M, O'Brien-Pallas L, Gélinas C, Desforges N, Marchionni C. *Addressing the turnover issue among new nurses from a generational viewpoint*. J Nurs Manag. 2008 Sep; 16(6):724-33.

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AIM: To investigate the relationship between dimensions of the psychosocial work environment and the intent to quit among a new generation of nurses. BACKGROUND: As a new generation of nurses enters the workforce, we know little about their perception of their current work environment and its impact on their intent to stay. METHOD: A self-administered questionnaire was distributed to 1002 nurses. RESULTS: The nurses who intended to quit their positions perceived a significant effort/reward imbalance as well as a lack of social support. The nurses who intended to quit the profession perceived a significant effort/reward imbalance, high psychological demands and elevated job strain. Conclusion: The balance between the level of effort expended and reward received plays an important role in young nurses' intent to leave. IMPLICATIONS FOR NURSING MANAGERS: Nurse Managers must offer Nexters, from the beginning of their career, a meaningful work and supportive environment. Without the efforts of the organization to improve the work environment and support nurses, this generation may not feel valued and move to another organization that will support them or another career that will offer fulfilment.

Publication Types: Research Support, Non-U.S. Gov't

MeSH Terms: Adult, Age Factors, Attitude of Health Personnel*, Chi-Square Distribution, Female, Health Facility Environment/organization & administration, Humans, Intention, Intergenerational Relations*, Job Satisfaction, Male, Nurse Administrators/organization & administration, Nurse's Role/psychology, Nursing Methodology Research, Nursing Staff, Hospital/organization & administration, Nursing Staff, Hospital/psychology*, Personnel Selection, Personnel Turnover*/statistics & numerical data, Professional Autonomy, Quebec, Questionnaires, Social Support,

Workplace/organization & administration,
Workplace/psychology

PMID: 18808467 [PubMed - indexed for MEDLINE]

28. Jeffe DB, Andriole DA, Hageman HL, Whelan AJ. *Reaping what we sow: the emerging academic medicine workforce*. J Natl Med Assoc. 2008 Sep; 100(9):1026-34

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National efforts to increase diversity of academic medicine faculty led us to study the evolution of medical graduates' academic medicine career intentions. We conducted a retrospective cohort study of 1997-2004 U.S. allopathic medical graduates who completed both the Association of American Medical Colleges' Matriculating Student Questionnaire and Graduation Questionnaire, categorizing the evolution of academic medicine career intentions (sustained, emerging, diminished and no intent) by similarities/differences in graduates' responses to the career choice question on both questionnaires. Multivariable logistic regression models identified independent predictors of sustained and emerging intent (compared with no intent) and diminished intent (compared with sustained intent). Of 87,763 graduates, 67% indicated no intent, 20% emerging intent, 8% sustained intent and 5% diminished intent to pursue an academic medicine career. Asians were more likely and underrepresented minorities less likely to have sustained and emerging intent. Women were more likely to have emerging intent. Graduates planning more extensive career involvement in research at matriculation and reporting greater satisfaction with the quality of their medical education, higher clinical clerkship ratings, and lower debt were more likely to have sustained and emerging intent and less likely to have diminished intent. Graduates planning to practice in underserved areas and choosing family medicine were less likely to have sustained and emerging intent and more likely to have diminished intent (all $p < 0.05$). Findings can inform efforts to develop an academic medicine workforce that can meet our nation's healthcare needs and more equitably reflect the diversity of our society and medical student population.

Publication Types: Research Support, Non-U.S. Gov't

MeSH Terms: Career Choice*, Cohort Studies, Faculty, Medical*, Questionnaires, Research, Retrospective Studies, United States

PMID: 18807430 [PubMed - indexed for MEDLINE]

29. Andriole DA, Whelan AJ, Jeffe DB. *Characteristics and career intentions of the emerging MD/PhD workforce*. JAMA. 2008 Sep 10;300(10):1165-73.

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CONTEXT: MD/PhD program participants represent only a small proportion of all US medical students, yet they are expected to play a major role in the future physician-scientist workforce. The characteristics and career intentions of recent MD/PhD program and other MD program graduates have not been compared.

OBJECTIVE: To identify factors associated with MD/PhD program graduation among recent medical graduates.

DESIGN, SETTING, AND PARTICIPANTS: Deidentified data were obtained from a nationally representative sample of 88,575 US medical graduates who completed the national Association of American Medical Colleges Graduation Questionnaire from 2000-2006. Multivariate logistic regression was used to test responses to items regarding graduates' characteristics and career plans in association with program graduation, reporting adjusted odds ratios (ORs). MAIN OUTCOME MEASURE: MD/PhD program graduation. RESULTS: Of the 79,104 respondents with complete data (71.7% of all 2000-2006 graduates), 1833 (2.3%) were MD/PhD program graduates. Variables associated with greater likelihood of MD/PhD program graduation included planned substantial career involvement in research (OR, 10.30; 95% confidence interval [CI], 8.89-11.93); lower educational debt (compared with $> \text{or} = \$150,000$: \$100,000-\$149,999, OR, 1.85; 95% CI, 1.35-2.52; \$50,000-\$99,999, OR, 5.50; 95% CI, 4.14-7.29; \$1-\$49,999, OR, 17.50; 95% CI, 13.30-23.03; no debt, OR, 17.41; 95% CI, 13.22-22.92); and receipt of medical school scholarships or grants (OR, 3.22; 95% CI, 2.82-3.69). Compared with planned training in internal medicine, MD/PhD graduation was positively associated with planned training in dermatology, neurology, ophthalmology, pathology, pediatrics, or radiology. Variables associated with lower likelihood of MD/PhD graduation included female sex (OR, 0.68; 95% CI, 0.60-0.77); race/ethnicity underrepresented in medicine (OR, 0.64; 95% CI, 0.52-0.80); and, compared with internal medicine, planned training in emergency medicine (OR, 0.58; 95% CI, 0.40-0.84) or surgery (OR, 0.70; 95% CI, 0.57-0.85). CONCLUSION: Compared with graduates of other MD degree programs, MD/PhD graduates tend to be less demographically diverse, have a lower debt burden, favor different medical specialties, and have greater planned career involvement in research.

MeSH Terms: Adult, Biomedical Research/economics, Biomedical Research/education*, Biomedical, Research/manpower, Biomedical Research/statistics & numerical data*, Career Choice*, Education, Graduate/economics, Education, Graduate/statistics & numerical data*, Education, Medical, Graduate/economics, Education, Medical, Graduate/statistics & numerical data*, Female, Humans, Logistic Models, Male, Questionnaires, Specialties, Medical/manpower, Specialties, Medical/statistics & numerical data*, Students, Medical/psychology, Students, Medical/statistics & numerical data*, Training Support, United States

PMID: 18780845 [PubMed - indexed for MEDLINE]

30. Hauer KE, Durning SJ, Kernan WN, Fagan MJ, Mintz M, O'Sullivan PS, Battistone M, DeFer T, Elnicki M, Harrell H, Reddy S, Boscardin CK, Schwartz MD. *Factors associated with medical students' career choices regarding internal medicine*. JAMA. 2008 Sep 10; 300(10):1154-64.

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CONTEXT: Shortfalls in the US physician workforce are anticipated as the population ages and medical students' interest in careers in internal medicine (IM) has declined (particularly general IM, the primary specialty serving older adults). The factors influencing current students' career choices regarding IM are unclear. OBJECTIVES: To describe medical students' career decision making regarding IM and to identify modifiable factors related to this decision making. DESIGN, SETTING, AND PARTICIPANTS: Web-based cross-sectional survey of 1177 fourth-year medical students (82% response rate) at 11 US medical schools in spring 2007. MAIN OUTCOME MEASURES: Demographics, debt, educational experiences, and number who chose or considered IM careers were measured. Factor analysis was performed to assess influences on career chosen. Logistic regression analysis was conducted to assess independent association of variables with IM career choice. RESULTS: Of 1177 respondents, 274 (23.2%) planned careers in IM, including 24 (2.0%) in general IM. Only 228 (19.4%) responded that their core IM clerkship made a career in general IM seem more attractive, whereas 574 (48.8%) responded that it made a career in subspecialty IM more attractive. Three factors influenced career choice regarding IM: educational experiences in IM, the nature of patient care in IM, and lifestyle. Students were more likely to pursue careers in IM if they were male (odds ratio [OR] 1.75; 95% confidence interval [CI], 1.20-2.56), were attending a private school (OR, 1.88; 95% CI, 1.26-2.83), were favorably impressed with their educational experience in IM (OR, 4.57; 95% CI, 3.01-6.93), reported favorable feelings about caring for IM patients (OR, 8.72; 95% CI, 6.03-12.62), or reported a favorable impression of internists' lifestyle (OR, 2.00; 95% CI, 1.39-2.87). CONCLUSIONS: Medical students valued the teaching during IM clerkships but expressed serious reservations about IM as a career. Students who reported more favorable impressions of the patients cared for by internists, the IM practice environment, and internists' lifestyle were more likely to pursue a career in IM.

Publication Types: Research Support, Non-U.S. Gov't

MeSH Terms: Adult, Career Choice*, Cross-Sectional Studies, Factor Analysis, Statistical, Female, Humans, Internal Medicine/education, Internship and Residency, Life Style, Logistic Models, Male, Questionnaires, Specialties, Medical/education*, Specialties, Medical/manpower, Students, Medical/psychology*, Students, Medical/statistics & numerical data*, United States

PMID: 18780844 [PubMed - indexed for MEDLINE]

31. Cinner JE, Daw T, McClanahan TR. *Socioeconomic factors that affect artisanal fishers' readiness to exit a declining fishery*. Conserv Biol. 2009 Feb;23(1):124-30. Epub 2008 Sep 4.

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The emerging world crisis created by declining fish stocks poses a challenge to resource users and managers. The problem is particularly acute in poor nations, such as those in East Africa, where fishing is an important subsistence activity but high fishing intensity and use of destructive gear have resulted in declining catches. In this context developing effective management strategies requires an understanding of how fishers may respond to declines in catch. We examined the readiness of 141 Kenyan fishers to stop fishing under hypothetical scenarios of declines in catch and how socioeconomic conditions influenced their decisions. As expected, the proportion of fishers that would exit the fishery increased with magnitude of decline in catch. Fishers were more likely to say they would stop fishing if they were from households that had a higher material style of life and a greater number of occupations. Variables such as capital investment in the fishery and the proportion of catch sold had weak, nonsignificant relationships. Our finding that fishers from poorer households would be less likely to exit a severely declining fishery is consistent with the literature on poverty traps, which suggests the poor are unable to mobilize the necessary resources to overcome either shocks or chronic low-income situations and consequently may remain in poverty. This finding supports the proposition that wealth generation and employment opportunities directed at the poorest fishers may help reduce fishing effort on overexploited fisheries, but successful interventions such as these will require an understanding of the socioeconomic context in which fishers operate.

Publication Types: Research Support, Non-U.S. Gov't

MeSH Terms: Animals, Factor Analysis, Statistical, Fisheries/economics*, Fisheries/manpower*, Fishes/physiology*, Humans, Interviews as Topic, Kenya, Population Density, Poverty, Principal Component Analysis, Socioeconomic Factors*

PMID: 18778267 [PubMed - indexed for MEDLINE]

32. Pretorius RW, Milling DA, McGuigan D. *Influence of a rural background on a medical student's decision to specialize in family medicine*. Rural Remote Health. 2008 Jul-Sep;8(3):928. Epub 2008 Aug 21.

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INTRODUCTION: Minority populations, including those from rural areas, continue to be underrepresented in medical schools despite increased efforts to recruit them. Although family physicians are more highly represented in rural areas, and medical students from rural areas are more likely to return to rural areas, relatively few medical students enter the specialty of family medicine in the USA. Because family physicians are a smaller proportion of all practicing physicians--both urban and rural--in the east when compared with the remainder of the USA, this study examines the influence of a rural background on career decisions of medical students in an eastern state, New York. New York's social and political structure is additionally influenced by the presence of New York City, the largest city in the USA and one of the world's major financial centers. **METHODS:** A retrospective, case-control study comparing medical school graduates entering family medicine residencies with those entering residencies in other disciplines was conducted for a period of 16 years at a north-east medical school. The size of the town or city of the student's high school graduation was used to determine which students came from a rural background. **RESULTS:** Students graduating from rural high schools were more than twice as likely to enter family medicine (OR 2.27, $p < 0.01$) than those from non-rural high schools. **CONCLUSIONS:** In order to alleviate health disparities and meet health manpower needs, admitting students to medical school who graduated from rural high schools will increase the rural workforce.

MeSH Terms: Career Choice*, Case-Control Studies, Family Practice*, Female, Humans, Male, Medically Underserved Area*, New York, Professional Practice Location, Retrospective Studies, Rural Health Services, Rural Population, School Admission Criteria, Students, Medical*

PMID: 18778169 [PubMed - indexed for MEDLINE]

33. Rindoks A, Daniłowicz E. *International science careers survey: staying a step ahead*. N Biotechnol. 2008;25(2-3):125. Epub 2008 Aug 27.

Publication Types: Editorial

MeSH Terms: Career Choice*, Data Collection*, Employment/statistics & numerical data*, Internationality*, Science/manpower*, Science/statistics & numerical data*

PMID: 18775523 [PubMed - indexed for MEDLINE]

34. Van Hoya G. *Nursing recruitment: relationship between perceived employer image and nursing employees' recommendations*. J Adv Nurs. 2008 Aug;63(4):366-75

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AIM: This paper is a report of a study to examine the relationship between nursing employees' perceptions of

instrumental and symbolic dimensions of employer image on the one hand and their intentions to recommend their organization as an employer and their willingness to testify in their organization's recruitment materials on the other. **BACKGROUND:** Previous research suggests that word-of-mouth recommendations by current nursing employees can enhance healthcare organizations' attractiveness as an employer for potential applicants. However, it is not known what motivates employees to provide positive word-of-mouth comments and to endorse their employer in recruitment testimonials. **METHOD:** The instrumental-symbolic framework was applied to identify relevant dimensions of perceived employer image that might relate to employee recommendations. A questionnaire was administered in 2006 to 106 nurses and nursing aides from four non-profit nursing homes in Belgium. The response rate was 55%. **RESULTS:** Overall, nursing employees were more willing to recommend their nursing home to others than to testify in recruitment materials. Both instrumental and symbolic employer image dimensions predicted nursing employees' recommendation intentions. Conversely, willingness to testify was only predicted by symbolic image dimensions. Specifically, the more the nursing employees perceived that their nursing home offers task diversity, offers the possibility to help people and is prestigious, the more they intended to recommend their organization to others. The more they perceived their nursing home as competent, the higher were their recommendation intentions and their willingness to testify in recruitment communication. **CONCLUSION:** To increase nursing employees' willingness to recommend their employer to potential applicants, organizations should enhance their perceived employer image.

MeSH Terms: Adult, Attitude of Health Personnel*, Belgium, Career Mobility, Employment*/methods, Female, Humans, Male, Middle Aged, Nursing Homes/standards*, Nursing Staff/economics*, Nursing Staff/psychology*, Personnel Selection*, Questionnaires

PMID: 18727764 [PubMed - indexed for MEDLINE]

35. Victoria A. Cargill, MD, MSCE. *Recruiting, Retaining, and Maintaining Racial and Ethnic Minority Investigators: Why We Should Bother, Why We Should Care*. AJPH April 2009, Vol 99, No. S1 | American Journal of Public Health S5-S7

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DOI: 10.2105/AJPH.2008.147645

36. Andersen RM, Atchison KA, Hewlett ER, Grant-Mills D. *The Pipeline program at Howard University College of Dentistry*. J Dent Educ. 2009 Feb;73(2 Suppl):S70-81; discussion S81-2.

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Mesh Terms: Attitude, Career Choice, Community Dentistry/education*, Cultural Competency Curriculum, District of Columbia, Education, Dental*, Health Care Reform, Health Services Accessibility, Humans, Medically Underserved Area, Mentors, Minority Groups/education*, Personnel Selection, Preceptorship, Professional Practice Location, Program Evaluation, School Admission Criteria, Schools, Dental*, Students, Dental*, Training Support

PMID: 19237379 [PubMed - indexed for MEDLINE]

37. Davidson PL, Nakazono TT, Afifi A, Gutierrez JJ. *Methods for evaluating change in community-based dental education*. J Dent Educ. 2009 Feb;73(2 Suppl):S37-51.

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Mesh Terms: Communication, Community, Dentistry/education*, Curriculum, Data Collection, Dental Care, Education, Dental*, Health Services, Accessibility, Humans, Medically Underserved Area, Minority Groups/education*, Personnel Selection/methods, Poverty, Professional Practice Location, Program Evaluation/methods*, School Admission Criteria, Schools, Dental/organization & administration, Students, Dental, United States, Vulnerable Populations

PMID: 19237373 [PubMed - indexed for MEDLINE]

38. Andersen RM, Davidson PL, Atchison KA, Crall JJ, Friedman JA, Hewlett ER, Thind A. *Summary and implications of the Dental Pipeline program evaluation*. J Dent Educ. 2009 Feb; 73 (2 Suppl):S319-30.

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Mesh Terms: Community Dentistry/education*, Cultural Competency, Cultural Diversity, Curriculum, Education, Dental*, Faculty, Dental, Humans, Learning, Medically Underserved Area, Minority Groups/education*, Personnel Selection/methods, Policy Making, Poverty, Professional Practice Location, Program Evaluation*, Schools, Dental*, Students, Dental*, Teaching/methods, Time Factors, United States

PMID: 19237366 [PubMed - indexed for MEDLINE]

39. Andersen RM, Friedman JA, Carreon DC, Bai J, Nakazono TT, Afifi A, Gutierrez JJ. *Recruitment and retention of underrepresented minority and low-income dental students: effects of the Pipeline program*. J Dent Educ. 2009 Feb;73(2 Suppl):S238-58, S375.

UCLA School of Public Health, Los Angeles, CA 90095-1772, USA. randerse@ucla.edu

Mesh Terms: Administrative Personnel, African Americans/statistics & numerical data, Attitude, Attitude of Health Personnel, California, Career Choice, Community Dentistry/education*, Education, Dental* Faculty, Dental, Hispanic Americans/statistics & numerical data, Humans, Indians, North American/statistics & numerical data, Minority Groups/education*, Minority Groups/statistics & numerical data, Personnel Selection/methods*, Personnel Selection/statistics & numerical data, Poverty*/statistics & numerical data, Professional Practice Location, Program Evaluation, Schools, Dental*, Students, Dental*/statistics & numerical data, United States

PMID: 19237360 [PubMed - indexed for MEDLINE]

40. Carreon DC, Davidson PL, Andersen RM. *The evaluation framework for the Dental Pipeline program with literature review*. J Dent Educ. 2009 Feb; 73(2 Suppl):S23-36.

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Publication Types:Review

Mesh Terms: Community Dentistry/education*, Curriculum, Dental Care, Education, Dental*, Feedback, Health Services, Accessibility, Humans, Medically Underserved Area, Minority Groups/education*, Personnel Selection, Poverty, Preceptorship, Program Development, Program Evaluation*, Schools, Dental/organization & administration, Students, Dental Training Support, United States, Vulnerable Populations

PMID: 19237358 [PubMed - indexed for MEDLINE]

41. Davidson PL, Andersen RM, Thind A, Mulligan R, Nathanson N. *The Pipeline program at the University of Southern California School of Dentistry*. J Dent Educ. 2009 Feb;73(2 Suppl):S222-34; discussion S234-5.

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Mesh Terms: Community Dentistry/education*, Cultural Competency, Curriculum, Dental Care, Education, Dental*, Health Services Accessibility, Humans

Los Angeles, Medically Underserved Area, Minority Groups/education*, Personnel Selection, Preceptorship Problem-Based Learning, Professional Practice Location, Program Evaluation, School Admission Criteria, Schools, Dental*, Students, Dental*, Training Support

PMID: 19237357 [PubMed - indexed for MEDLINE]

42. Davidson PL, Thind A, Friedman JA, Carreon DC, Hodge C. *The Pipeline program at the University of Connecticut School of Dental Medicine*. J Dent Educ. 2009 Feb; 73(2 Suppl):S108-118; discussion S118-9.

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Mesh Terms: Communication, Community Dentistry/education*, Connecticut Cultural Competency, Curriculum, Delivery of Health Care, Dental Care, Education, Dental*, Health Services Accessibility, Humans, Minority Groups/education*, Personnel Selection, Preceptorship, Program Evaluation School Admission Criteria, Schools, Dental*, Students, Dental*, Training Support

PMID: 19237347 [PubMed - indexed for MEDLINE]

43. Andersen RM, Davidson PL. *Introduction to the evaluating the Dental Pipeline program report*. J Dent Educ. 2009 Feb;73(2 Suppl):S10-14.

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Mesh Terms: Community Dentistry/education*, Cultural Competency, Curriculum*, Dental Care, Education, Dental*, Health Services Accessibility, Humans, Medically Underserved Area, Minority Groups/education* Needs Assessment, Organizational Objectives, Personnel Selection, Preceptorship, Program Evaluation, Students, Dental*, United States, Vulnerable Populations

PMID: 19237346 [PubMed - indexed for MEDLINE]

44. Stretton DV, Bolon DS. *Recruitment and retention of rural hospital administrators: a multifaceted approach*. Hosp Top. 2009 Winter;87(1):10-4.

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A major challenge confronting healthcare delivery in the United States is the shortage of clinical professionals in rural areas. Although most of the research surrounding this problem has focused on physicians and nurses, other healthcare professionals have received much less attention. Although not a clinician or hands-on care provider, the hospital administrator is an integral

component of rural healthcare delivery systems and is instrumental in the organization and delivery of services. This article examines some of the factors that impact the recruitment and retention process for rural hospital administrators. The authors suggest that recruitment and retention success can be best achieved by adopting a multifaceted approach that includes aspects of and considerations from 3 separate areas: personal, organizational, and community attributes. The authors provide recommendations and insights for rural hospital governing boards responsible for this process.

Mesh Terms: Hospital Administrators*, Hospitals, Rural*, Humans, Personnel Loyalty*, Personnel, Selection/methods*

PMID: 19103583 [PubMed - indexed for MEDLINE]

45. Scott, Elaine S. PhD, RN; Smith, Sherry D. MSN, RN. *Group Mentoring: A Transition-to-Work Strategy*. Journal for Nurses in Staff Development (JNSD): September/October 2008. 24(5):232-238.

ABSTRACT: Current financial constraints and workplace staffing shortages challenge the viability of using one-on-one mentoring models to support new graduate nurses. This article describes an innovative strategy for mentoring a large cohort of new nurses. Using a Group Mentoring Team, education specialists in a small rural hospital implemented a cost-effective program to help new nurses gain confidence and competence in the first year of nursing practice.

PMID 18838903

46. Burk, Gloria J. *Forecasting Instead of Reacting to Educational Needs*. Journal for Nurses in Staff Development. September/October 2008. 24(5):226-231.

ABSTRACT: As healthcare resources become increasingly scarce, professional development educators will be expected to provide cost-effective education to meet the organization's mission and strategic goals. This can only happen when educators collaborate with organizational leaders to identify actual educational needs in a proactive way. Rather than reacting to educational needs, educators must use a proactive and collaborative approach in forecasting these needs in a consistent and timely manner. This is best accomplished when the mission of staff development is clear; the stakeholders are identified; and tools and processes are in place to assess, plan, implement, and evaluate educational offerings.

PMID 18838902

47. DeOnna J. *Rural healthcare manager academy: a best practice in Pennsylvania workforce development*. Pa Nurse. 2008 Dec;63(4):14-6.

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MeSH Terms: Attitude of Health Personnel
Benchmarking/organization & administration*
Career Mobility, Education, Nursing,
Continuing/organization & administration*, Hospitals,
Rural/organization & administration*, Humans, Needs
Assessment, Nurse Administrators/education*, Nurse
Administrators/psychology, Nurse's Role, Nursing Staff,
Hospital/supply & distribution, Pennsylvania, Personnel
Selection/organization & administration*, Professional
Competence, Questionnaires, Staff
Development/organization & administration

PMID: 19365906 [PubMed - indexed for MEDLINE] ____

48. Olson ME. *The "millennials": first year in practice.*
Nurs Outlook. 2009 Jan-Feb;57(1):10-7.

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Each year, thousands of novice nurses join the workforce. The overwhelming majority begin their careers in an acute care facility. Most of what we know about novice nurses comes from studies conducted over the last several decades. These studies have focused heavily on issues such as novice/expert differences on the performance of tasks. While they illuminate differences in judgment and decision-making skills, they provide little information on the reality of the novices' clinical practice. What is missing in the literature is an insider's look from the perspective of the millennial-born (1980-1999) novice nurse. Millennial novice nurses have both educators and experienced nurses searching for communication and learning strategies to engage the newest members of the nursing profession, yet the perceptions of millennial novice nurses have not yet been identified. This is a qualitative interpretive longitudinal study that utilized phenomenology as the philosophical and context method to illuminate the perceptions of millennial novice nurses. Audio-taped interviews were conducted at 3 months, 6 months, and 1 year. Findings have implications for both nurse educators and nurses in acute care facilities, especially those orienting the newest generation of novice nurses.

Publication Types: Research Support, Non-U.S. Gov't

MeSH Terms: Adaptation, Psychological*, Adult,
Age Factors, Attitude of Health Personnel*, Clinical
Competence*, Education, Nursing, Associate, Education,
Nursing, Baccalaureate, Education, Nursing, Continuing
Fear, Female, Humans, Inservice Training,
Intergenerational Relations, Interprofessional Relations,
Longitudinal Studies, Male, Nursing Methodology,
Research, Nursing Staff, Hospital/education, Nursing Staff,
Hospital/organization & administration, Nursing Staff,
Hospital/psychology*, Qualitative Research,
Questionnaires, Self Efficacy*, Shame, Time Management

PMID: 19150262 [PubMed - indexed for MEDLINE]

Additional Resources:

The document listed below contains literature searches that were conducted by NLM in efforts to assist the Council with obtaining information related to the public health governmental agency pipeline.

[2008](#)

The document listed below contains literature searches that were conducted by NLM to assist the Council with building the evidence base of resources related to successful worker recruitment and retention strategies.

[2004](#)