OHIO HEALTH LITERACY PARTNERS

Health Literacy Curricula Bibliography

A total of 86 citations were reviewed. 46 citations were identified to support the relevance of including health literacy concepts in the course of formal training as medical professionals within areas of dentistry, nursing, physical therapy, pharmacy and medicine.

Academic Search Complete (CINAHL) Education Research Complete (ERIC) PubMed - National Center for Biotechnoloy Information (NCBI) at National Library of Medicine (NLM) (http://www.ncbi.nlm.nih.gov/pubmed)

Listed alphabetically by Author

1. AHRQ releases pharmacy health literacy modules for faculty. (2012). AHRQ Research Activities, (379), 25.

2. Alfrey, L., & Brown, T. D. (2013). Health Literacy and the Australian Curriculum for Health and Physical Education: A Marriage of Convenience or a Process of Empowerment? Asia-Pacific Journal Of Health, Sport And Physical Education, 4(2), 159-173.

3. Ali, N. K. (2013). Are we training residents to communicate with low health literacy patients? Journal of Community Hospital Internal Medicine Perspectives

4. Atcherson, S.R., Zraick, R.I., & Hadden, K. (2013). A need for health literacy curriculum: Knowledge of health literacy among audiologists and speech-language pathologists in Arkansas. *Education for Health (Abingdon, England), 26,* 85-88.

5. Bradley, S. M., Chang, D., & Karani, R. (2015). A patient safety and transitions of care curriculum for third year medical students. *Gerontology & Geriatrics Education, 36(1),* 45-57.

6. Bress, L. E. (2013). Improving oral health literacy – the new standard in dental hygiene practice. *Journal of Dental Hygiene, 87,* 322-9.

7. Cafiero, M. (2013). Nurse practitioners' knowledge, experience, and intention to use health literacy strategies in clinical practice. *Journal of Health Communication, 18,* 70-81.

8. Caron, R. M. (2010). Public health literacy and community-based learning: Keys to expanding undergraduate public health education. Journal of Education Research, 4(4), 349-379.

9. Coleman, C. (2011). Teaching health care professionals about health literacy: A review of the literature. *Nursing Outlook, 59,* 70–78.

10. Coleman, C. A. & Appy S. (2012). Health literacy teaching in US medical schools, 2010. *Family Medicine, 44(7),* 504-7.

11. Coleman, C. A., Hudson, S., & Maine, L. L. (2013). Health literacy practices and educational competencies for health professionals: A consensus study. *Journal of Health Communication, 18,* 82–102.

12. Coleman C &Fromer A. (2015). A health literacy training intervention for physicians and other health professionals. *Family Medicine*, 47(5):388-92

13. Coleman CA, Nguyen NT, Garvin R, Sou C, Carney PA. "Health Literacy Teaching in U.S. Family Medicine Residency Programs: A National Survey." *Journal of Health Communication,* in press

14. Cormier C., & Kotrlik J. W. (2009). Health literacy knowledge and experiences of senior level baccalaureate nursing students. *Journal of Nursing Education, 48,* 237-48

15. Cotugna, N. & Vickery, C. E. (2003). Health literacy education and training: A student-professional collaboration. *Journal of the American Dietetic Association, 103(7),* 878-80.

16. Devraj R, Butler LM, Gupcjup GV, Poirier TI. (2010). Active-learning strategies to develop health literacy knowledge and skills. *American Journal of Pharmaceutical Education, 74(8),* 137.

17. Evans, K. H., Bereknyei, S., Yeo, G., Hikoyeda, N., Tzuang, M., & Braddock, C. H. (2014) The impact of a faculty development program in health literacy and ethnogeriatrics. *Academic Medicine: Journal of the Association of American Medical Colleges, 89,* 1640-4.

18. Farrell, T. W., (2011). Review of a geriatric health literacy workshop for medical students and residents. *Journal of the American Geriatrics Society, 59(12),* 2347-9.

19. Frazier, A. (2013). An evaluation of physician-to-patient communication training in medical schools across the United States: A status report on the nation's efforts to promote health literacy by adding health literacy courses to medical school curriculum. *Dissertation. Lindenwood University School of Education.*

20. Grace, M., & Bay, J. L. (2011). Developing a pedagogy to support science for health literacy. *Asia-Pacific Forum on Science Learning & Teaching, 12(2),* 1- 13.

21. Green, J. A., Gonzaga, A. M., Cohen, E. D., & Spagnoletti, C. L. (2014). Addressing health literacy through clear health communication: A training program for internal medicine residents. *Patient Education and Counseling, 95,* 76-82.

22. Grice, G. R., Gattas, N. M., Sailors, J., Murphy, J. A., Tiemeier A, Hurd P, …Duncan, W. (2013). Health literacy: Use of the four habits model to improve student pharmacists' communication. *Patient Education and Counseling, 90(1),* 23-8.

23. Hamel, P. (2006). Communication and health literacy: a changing focus in physical therapist education.

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26. Kripalani, S., & Weiss, B. D. (2006). Teaching about health literacy and clear communication. *Journal of General Internal Medicine 21,* 888–890.

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37. Roberts, D. M., Reid, J. R., Conner, A. L., Barrer, S., Miller, K. H., & Ziegler, C. (2012). A replicable model of a health literacy curriculum for a third-year clerkship. *Teaching and Learning in Medicine, 24,* 200–210.

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41. Smith, J. A. & Zsohar, H. (2011). Teaching health literacy in the undergraduate curriculum: Beyond traditional methods. *Nursing Education Perspectives, 32(1),* 48-50.

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AHRQ releases pharmacy health literacy modules for faculty. (2012). AHRQ Research Activities, (379), 25.

Advancing Pharmacy Health Literacy Practices Through Quality Improvement: Curricular Modules for Faculty is a set of modules to help pharmacy faculty integrate health literacy and health literacy quality improvement into courses, experiential education, and projects for PharmD students and pharmacy residents. The curricular modules can be used for lectures, seminars, laboratory classes, and experiential education. The modules consist of 17 activity guides with 4 accompanying PowerPoint® presentations. Each activity guide includes a list of further resources.

RETURN TO LIST

Alfrey, L., & Brown, T. D. (2013). Health Literacy and the Australian Curriculum for Health and Physical Education: A Marriage of Convenience or a Process of Empowerment? Asia-Pacific Journal Of Health, Sport And Physical Education, 4(2), 159-173.

The concept of 'health literacy' is becoming increasingly prominent internationally, and it has been identified as one of the five key propositions that underpin the forthcoming Australian Curriculum: Health and Physical Education (ACHPE). The ACHPE is one of few national curricula to explicitly refer to health literacy, identifying it as an empowerment strategy that involves young people taking action to promote their own and others' good health. Given ongoing concerns surrounding the efficacy of Health Education, coupled with the privileged status of literacy education in contemporary schooling, health literacy could also be viewed as an unsurprising marriage of convenience between health and dominant education discourses. This paper explores health literacy from socio-historical, theoretical and future-focused perspectives. In so doing, it discusses some possible implications, challenges and opportunities that we could expect once the ACHPE is mobilized in schools.

RETURN TO LIST

Ali, N. K. (2013). Are we training residents to communicate with low health literacy patients? Journal of Community Hospital Internal Medicine Perspectives

Health literacy (HL) education programs at community-based internal medicine residencies were evaluated. Fewer than half the programs had formal HL education, and among those who did, 75% conducted didactic, half utilized clinical observation and 25% used role-playing. Emphasis was placed on the teach-back technique and use of plain language, the prevalence of low HL and the association of low HL with patient outcomes. Techniques used to teach other aspects of doctor-patient communication (real-time feedback, role play) were not routinely applied to teaching HL. The study concluded that there is significant variation in HL education for residents and no guidelines exist regarding the best methods for teaching doctor-patient communication regarding HL They suggested the application of Miller's framework: 1) knowledge acquisition, 2) performance via demonstration 3) performance in a real-life setting.

RETURN TO LIST

Atcherson, S.R., Zraick, R.I., & Hadden, K. (2013). A need for health literacy curriculum: Knowledge of health literacy among audiologists and speech-language pathologists in Arkansas. *Education for Health (Abingdon, England), 26,* 85-88.

One hundred and ninety-eight (198) professionals and students in communication sciences and disorders in Arkansas completed a 10-item survey. The 10-items were divided into one demographic question, six patient-related health literacy questions, and three systems-related health literacy questions. Most professionals and students were aware that limited health literacy can be an obstacle for patients, but they were only somewhat or not aware of existing data on the average US adult reading grade level, the readability of clinic forms, or the estimated economic healthcare cost as a result of low health literacy. More work is needed to study health literacy in various patient populations and to develop effective approaches to combat low health literacy in the field of communication sciences and disorders, as well as other healthcare disciplines, across the globe.

RETURN TO LIST

Bradley, S. M., Chang, D., & Karani, R. (2015). A patient safety and transitions of care curriculum for third year medical students. *Gerontology & Geriatrics Education, 36(1),* 45-57.

The elderly are the most vulnerable to adverse events during and after hospitalization. This study sought to evaluate the effectiveness of a curriculum on patient safety and transitions of care for medical students during an Internal Medicine-Geriatrics Clerkship on students' knowledge, skills, and attitudes. The curriculum included didactics on patient safety, health literacy, and discharge planning and transitions of care, and post-discharge visits to patients. Pre and post assessments showed that students were significantly more comfortable assessing a patient's health literacy and confident performing a medication reconciliation, providing education regarding medications, and identifying barriers during transitions. More students were able to identify the most common source of adverse events after discharge, risk factors for low health literacy, and ways to assess a patient's health literacy.

RETURN TO LIST

Bress, L. E. (2013). Improving oral health literacy – the new standard in dental hygiene practice. *Journal of Dental Hygiene, 87,* 322-9.

Research has shown that poor oral health literacy (OHL) affects oral health, can negatively influence quality of life and has a significant financial impact on society. National initiatives to increase the OHL levels of American citizens include training health care professionals about effective communication

skills and disseminating oral health information to groups outside of dentistry. This paper describes a new course on OHL and communication techniques for dental hygiene students at the University of Maryland, School of Dentistry.

RETURN TO LIST

Cafiero, M. (2013). Nurse practitioners' knowledge, experience, and intention to use health literacy strategies in clinical practice. *Journal of Health Communication, 18,* 70-81.

Using the Theory of Planned Behavior as the theoretical framework, the authors administered 3 self-report instruments to nurse practitioners who work in outpatient settings. The instruments included Health Literacy Knowledge and Experience Survey, Parts I and II, and the Health Literacy Strategies Behavioral Intention Questionnaire. Overall knowledge of health literacy and health literacy strategies was found to be low, as well as screening patients for low health literacy and evaluating patient education. The NPs used written patient education materials, but rarely used alternative formats, such as videotapes or computer programs. The intention to use health literacy strategies in practice was found to be strong. Enhancing NP curriculum and offering continuing education opportunities to increase knowledge of health literacy and the use of health literacy strategies has the potential to change clinical practice and support improved patient outcomes.

RETURN TO LIST

Caron, R. M. (2010). Public health literacy and community-based learning: Keys to expanding undergraduate public health education. Journal of Education Research, 4(4), 349-379.

This chapter explores this new application of liberal education and its implications for key stakeholders in the learning community as it pertains to curriculum and pedagogy. The author illustrates that an epidemiology course can serve as a conduit for creating a population of undergraduates who possess "life tools" based in a liberal education viewpoint that enables them to effectively respond to the challenges of their learning community. The professional skills obtained through such a course will not only result in an educated population but one who can think broadly, make informed decisions, and participate in community health issues. This integrative and relative course framework can serve as a model for other liberal arts institutions that are attempting to heed this call for an educated public via a theory and practice approach. Second, the value associated with community-based learning is well documented. To attract new fields and disciplines to the public health community learning movement, the author identifies and addresses issues associated with faculty and program development. The chapter presents specific challenges related to community-based learning and proposes specific recommendations related to using service and experiential learning approaches in higher education. The chapter concludes with a summary of how expanding public health literacy and community-based learning into undergraduate liberal education can accomplish the following: encourage life-long learning and a commitment to social responsibility; allow for new course/major/minor development in public

health in two-year and four-year colleges; promote collaboration with the public health community; and enable faculty to expand their expertise.

RETURN TO LIST

Coleman, C. (2011). Teaching health care professionals about health literacy: A review of the literature. *Nursing Outlook, 59,* 70–78*.*

This review assessed the current state of HL education in medicine. HL education for students in the health professions and continuing education was inadequate. Curricula addressing HL have been increasing, but there is limited literature, no guidelines for curricular content and minimal rigorous curricular evaluation. Examples of HL education in the literature include lecture, video, discussion with an individual with low HL, small groups exercises assessing readability and translating material to plain language, receiving feedback on use of jargon, practicing the teach-back method with a simulated patient (SP), OSCE assessment on using the teach-back method, video review with one-on-one feedback, developing a plain language presentation on a health-related topic for adults literacy students and real patient encounters. There is an overall lack of consistent methodology and validated outcomes, but the techniques appear effective. More curricular evaluation and comparison of teaching methods, the establishment of competencies, utilizing tools from other fields and settings and longitudinal teaching using mixed tools are recommended.

RETURN TO LIST

Coleman, C. A. & Appy S. (2012). Health literacy teaching in US medical schools, 2010. *Family Medicine, 44(7),* 504-7.

This study aimed to provide a baseline snapshot of the quantity and characteristics of health literacy teaching in US medical schools. A self-administered web-based survey of the deans responsible for medical education at 133 US schools of allopathic medicine was conducted. Data were received from 61 institutions; 72% of respondents reported teaching about health literacy in their required curriculum. Among schools with a required health literacy curriculum, the median time spent teaching about health literacy was 3 hours. The majority of health literacy teaching occurred in the first 2 years of the curriculum. The most commonly reported techniques for teaching about health literacy included didactics, standard patient (SP) encounters, and workshops. Evaluation of learners was most commonly achieved using standardized patients, clinical observation, and written examinations. There is considerable variability in the number of hours devoted to such instruction and in the content and teaching and evaluative techniques used in these health literacy curricula.

RETURN TO LIST

Coleman, C. A., Hudson, S., & Maine, L. L. (2013). Health literacy practices and educational competencies for health professionals: A consensus study. *Journal of Health Communication, 18,* 82–102.

A literature review was used to identify a list of HL competencies and practices, which were then presented to health professionals to address the lack of generally accepted guidelines in the HL field. Important educational competencies and practices were identified by a 70% consensus, using multiple Delphi rounds to pare down choices. The panel identified 62 educational competencies and 32 practices that were split into 4 categories: knowledge items (e.g. the learner knows the relationship between HL and access to preventive service), skill items (e.g. demonstrates the ability to translate medical instruction into unambiguous terms), attitudes (e.g. expresses the attitude that every patient has a right to understand their health care) and practices (e.g. routinely uses a teach-back/show me technique to check for understanding). The full list is included in the article. The authors also note that faculty development, while not included, will be important in developing HL education curricula.

RETURN TO LIST

Coleman C &Fromer A. (2015). A health literacy training intervention for physicians and other health professionals. *Family Medicine*, 47(5):388-92

Examined the effects of health literacy training on physicians and non-physician health professionals utilizing pre-/post-intervention self-reported assessment of knowledge, perceived skills, and current and intended behaviors vis-à-vis communicating with patients who have limited health literacy to evaluate the effects of a 3.5-hour health literacy training intervention designed to improve communication with such patients for the entire staff of a single family medicine residency program clinic. A total of 58 health professionals participated. Complete data were available for 45 individuals (11 physicians and 34 non-physicians). Forty-eight percent reported having initially overestimated their pre-training understanding of health literacy issues. Mean ratings significantly improved on all 12 knowledge, perceived skill, and intended behavior items. Results varied by health profession, with physicians reporting less positive change on several items. Among physicians, the training impact varied by years of experience.

RETURN TO LIST

Coleman CA, Nguyen NT, Garvin R, Sou C, Carney PA. "Health Literacy Teaching in U.S. Family Medicine Residency Programs: A National Survey." *Journal of Health Communication,* in press

This study aimed to assess the status of health literacy training for physicians in U.S. family medicine residency programs. We conducted an online survey of residency directors at 444 U.S. family medicine residencies. Among 138 respondents (31% response rate), 58 programs (42%) reported teaching residents about health literacy as part of the required curriculum. Most instruction occurred during the 1st year of training. Hours of instruction ranged from 2 to 5 during Years 1 through 3. Skills-based training (e.g., plain language techniques) was taught by most programs. Not having access to a faculty

authority on health literacy was strongly associated with lack of a required health literacy curriculum. Respondents overwhelmingly agreed that increasing health literacy training for medical students and residents would help improve residents' clinical skills. This study provides a baseline snapshot of health literacy curricula in U.S. family medicine residencies and likely overestimates the prevalence of such curricula.

RETURN TO LIST

Cormier C., & Kotrlik J. W. (2009). Health literacy knowledge and experiences of senior level baccalaureate nursing students. *Journal of Nursing Education, 48,* 237-48

This study assessed the health literacy knowledge and experiences of senior baccalaureate nursing students enrolled at state universities in Louisiana. A total of 361 nursing students at eight institutions completed the Health Literacy Knowledge and Experience Survey. Results indicated participants were able to identify low socioeconomic groups at high risk for low health literacy, were aware of the consequences associated with low health literacy, and could identify effective interventions used to evaluate patients' understanding of health care teaching. However, knowledge gaps were evident in the following areas: identifying older adults as a high-risk group, screening for health literacy, and assessing guidelines for written health care information. Responses to the Health Literacy Experience scale suggest participants' health literacy experiences were limited regarding conducting health literacy screenings and assessing the reading level, illustrations, and cultural appropriateness of written materials.

RETURN TO LIST

Cotugna, N. & Vickery, C. E. (2003). Health literacy education and training: A student- professional collaboration. *Journal of the American Dietetic Association, 103(7),* 878-80.

A Healthy People 2010 objective is to improve the health literacy of persons with inadequate or marginal literacy skills. A nutrition education module for dietetic students was designed that allowed learning about health literacy, while teaching this information to interested practitioners. Students designed a workshop for nutritionists by conducting a learning needs assessment and then developing learning objectives, content/methods, and process/outcome objectives. Students presented interactive sessions on using literacy assessment tools and developing low-literacy education materials. Handout packets included a list of relevant Websites on health literacy. Evaluations unanimously rated the workshop as excellent or good. By helping teach others, students' learning experience was enhanced.

RETURN TO LIST

Devraj R, Butler LM, Gupcjup GV, Poirier TI. (2010). Active-learning strategies to develop health literacy knowledge and skills. *American Journal of Pharmaceutical Education, 74(8),* 137.

Active-learning activities including administering health literacy assessments, identifying informal signs of low health literacy, conducting mock patient counseling sessions, rating the readability of drug information, analyzing information in drug advertisements, and writing patient education materials were incorporated into the 6-sesssion health literacy portion of the course. A pretest and posttest showed that students' knowledge of health literacy increased, and a retrospective pretest found improvement in students' confidence in their ability to care for patients with low health literacy. In-class discussions provided informal evidence that students gained new knowledge from the active-learning activities.

RETURN TO LIST

Evans, K. H., Bereknyei, S., Yeo, G., Hikoyeda, N., Tzuang, M., & Braddock, C. H. (2014) The impact of a faculty development program in health literacy and ethnogeriatrics. *Academic Medicine: Journal of the Association of American Medical Colleges, 89,* 1640-4.

The goal of this program was to enhance faculty and health professionals' knowledge, skills, and attitudes in Health Literacy and Ethnogeriatrics (HLE)-related areas (e.g., health disparities, low health literacy, quality of care for ethnically diverse elders, patient/provider communication). The curriculum was implemented during an intensive weeklong program over a three-year period. The eight-module core curriculum was presented in a train-the-trainer format, supplemented by daily resource sessions.

The curriculum positively affected participants' knowledge, skills, and attitudes related to topics in HLE. Participants rated the curriculum's usefulness highly, and they reported that over 57% of the content was new. The HLE curriculum provided a mechanism to increase the self-assessed knowledge, skills, and attitudes of participants. Over 91% of the participants have either disseminated the HLE curriculum through seminars conducted at their home sites or implemented HLE- related projects in their local communities, reaching diverse patient populations.

RETURN TO LIST

Farrell, T. W., (2011). Review of a geriatric health literacy workshop for medical students and residents. *Journal of the American Geriatrics Society, 59(12),* 2347-9.

The "Geriatric Health Literacy Workshop for Medical Students and Residents" developed by Seema Limaye, MD, introduces medical students and residents to important concepts in communicating with older adults with low health literacy through a variety of teaching modalities. The workshop is available on the Portal of Geriatric Online Education (POGOe) and includes a didactic session, role-playing

exercises, and a critique of patient education handouts. A pre-workshop health literacy module and post-workshop clinical observation sessions reinforce the workshop content. The activity is designed to take approximately 2.5 hours to administer to small groups of three to five learners and is also suitable for interdisciplinary teams of health professions trainees. This POGOe product review highlights important features of the workshop and suggests opportunities for improvement.

RETURN TO LIST

Frazier, A. (2013). An evaluation of physician-to-patient communication training in medical schools across the United States: A status report on the nation's efforts to promote health literacy by adding health literacy courses to medical school curriculum. *Dissertation. Lindenwood University School of Education.*

A mixed method sequential approach was used to investigate the number of U.S. Schools of Medicine that offer health literacy as a component of their curriculum. Person interviews and surveys were used to gather data about curriculum content, learning objective, subject matter sequence, assessment, course schedule, and other relevant elements. Surveys indicated a health literacy component in medical school curriculum, introduced during the first year of training, and a requirement for medical students years one through four. Medical schools, or other health care training institutes considering implementing or expanding their curriculum, would benefit from this research in their efforts to address health literacy concerns.

RETURN TO LIST

Grace, M., & Bay, J. L. (2011). Developing a pedagogy to support science for health literacy. *Asia-Pacific Forum on Science Learning & Teaching, 12(2),* 1- 13.

Key pedagogical approaches underpinning the science-science education-school partnership programs designed by experienced science educators working within scientific institutions which have shown signs of success in promoting science for health literacy. 1.) Students background knowledge, attitude and behavior 2.) Transactional and transformative learning 3.) A biopsychosocial model approach 4.)Risk and probability 5.) Using science stories and accessing scientific data 6.) Structured decision-making discussions 7.) Professional develops programs for science teachers 8.) Accessing and interacting with the science and health communities.

RETURN TO LIST

Green, J. A., Gonzaga, A. M., Cohen, E. D., & Spagnoletti, C. L. (2014). Addressing health literacy through clear health communication: A training program for internal medicine residents. *Patient Education and Counseling, 95,* 76-82.

The objective of this study was to develop, pilot, and test the effectiveness of a clear health communication curriculum to improve resident knowledge, attitudes, and skills regarding health

literacy. Thirty-one internal medicine residents participated in a small group curriculum that included didactic teaching, practice with a standardized patient, and individualized feedback on videotaped encounters with real patients. Outcomes were assessed using a pre-post survey and a communication skills checklist. Mean knowledge scores increased significantly, as well as, increased familiarity with the concept of health literacy, importance placed on health literacy, frequency of considering health literacy in patient care, and confidence in communicating with low literacy patients. Use of plain language increased significantly from 33% to 86%. There were non-significant increases in the use of teach-back and encouraging questions. The increased use of clear health communication techniques can significantly improve the care and outcomes of vulnerable patients with limited health literacy.

RETURN TO LIST

Grice, G. R., Gattas, N. M., Sailors, J., Murphy, J. A., Tiemeier A, Hurd P, …Duncan, W. (2013). Health literacy: Use of the four habits model to improve student pharmacists' communication. *Patient Education and Counseling, 90(1),* 23-8.

The objective of this study was to assess whether student pharmacists' communication skills improved using the Four Habits Model (FHM) at the St. Louis College of Pharmacy. Third year pharmacy students learned and practiced the FHM, were given feedback by faculty on three of the four Habits, used the FHM for self and peer assessment, and then were formally evaluated on all four Habits during a standardized patient encounter. Student pharmacist performance significantly improved from baseline in the majority of the Habits assessed. Use of the FHM in pharmacy education can improve a student pharmacists' ability to display the four Habits of communicating and developing relationships with patients.

RETURN TO LIST

Hamel, P. (2006). Communication and health literacy: a changing focus in physical therapist education.

Paper discusses the importance of integrating health literacy into rehabilitation practice. The effectiveness of rehabilitation interventions and clients' long-term health might depend on various factors, including health literacy. Rehabilitation professionals are often uniformed about and neglect health literacy in their interventions. Health literacy is one of the foundations of individual health and might have an impact on interventions, the individual and society. All papers addressing both health literacy and rehabilitation (n = 10) specifically mentioned that rehabilitation professionals need to consider their clients' health literacy. Rehabilitation is particularly linked to health literacy because both stress the importance of (1) capacities, functioning, participation and empowerment of clients; (2) holistic approach; (3) client-centered practice; (4) teaching of information and methods; and (5) access to services and equity issues.

RETURN TO LIST

Harper, W., Cook, S., & Makoul, G. (2007). Teaching medical students about health literacy: 2 Chicago initiatives. *American Journal of Health Behavior, Suppl 1,* 8111-8114.

The objective of this study was to develop medical students' skills in interacting with individuals who have limited health literacy. Described are two novel approaches to health literacy curriculum design. Efforts at both schools have been implemented to improve medical student awareness of health literacy, as well as specific skills in clear communication and strategies that ensure patient understanding. Preliminary data from one school suggest an increase in use of health literacy behaviors. Curriculum development at both schools is ongoing.

RETURN TO LIST

Jackson, R. D., Coan, L. L., Hughes, E., & Eckert, G. J. (2010). Introduction of health literacy into the allied dental curriculum: First steps and plans for the future. *Journal of Dental Education, 74(3),* 318-324.

The purpose of this article is to describe our initial efforts to educate our students concerning health literacy, its consequences, and our assessment. As part of a new segment of the allied health curriculum, second-year dental hygiene students received a lecture concerning the prevalence of poor literacy in America and the possible consequences of poor literacy on their patients' ability to maintain oral health. To provide clinical experience with assessing health literacy, the students were instructed in the administration of a validated medical health literacy tool. This clinical exercise had two functions: 1) to familiarize students with assessing health literacy as part of their clinical experience and 2) to continue to gather preliminary data concerning the level of health literacy of adult patients at Indiana University School of Dentistry using a standardized methodology, the Short Test of Functional Health Literacy in Adults (S-TOFHLA). The results indicated that 13 percent of those assessed had "inadequate" or "marginal" literacy as measured by the S-TOFHLA. As a result, we plan to continue to expand our educational efforts and develop a larger investigation of the prevalence in our dental school population.

RETURN TO LIST

Kripalani, S., & Weiss, B. D. (2006). Teaching about health literacy and clear communication. *Journal of General Internal Medicine 21,* 888–890.

The authors identify jargon, excessive information and ineffective confirmation of patient understanding as primary deficiencies in HL communication. They note that patients with low HL often ask fewer questions and that physicians often overestimate literacy skills and fail to identify low HL as an obstacle to understanding health information. Resources noted include AMA patient testimonials and IOM health literacy videos. Best practices for teaching HL include interactive workshops, hands-on skill sessions, video reviews, faculty feedback, modeling, SP sessions, and talks by patient advocates and adult literacy

students. Strategies the physician should use include assessing a baseline understanding, using plain language, encouraging questions, using open-ended questions, using the teach-back method, writing down important information and having effective educational materials. HL education likely saves time or is overall neutral regarding time spent due to time saved later. Incorporating HL assessment into the differential diagnosis and including HL education longitudinally into the curricula are recommended.

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Kripalani, S., Jacobson, K. L., Brown, S., Manning, K., Rask, K. J., & Jacobson, T. A. (2006). Development and implementation of a health literacy training program for medical residents. *Medical Education Online 11.*

A residency training program for HL that was conducted with 1st through 3rd year residents at Emory included a HL overview, description of the association of HL with knowledge, behavior, cost and outcome, an AMA video clip, education regarding red flags for low HL, discussion of perceptions of and experiences with low literacy patients, recommended communication techniques, small-group practice session, a videotaped simulated patient (SP) session, one-on-one video feedback, providing behavioral prescriptions, and program evaluation. The program was 2.5-3 hours long and program evaluation was positive, but the program would be most appropriate and effective in the first year when residents are beginning to formulate their communication strategies and so are more flexible with their communication techniques. It may not be appropriate for 2nd medical students who have insufficient clinical exposure and knowledge. Educational strategies should vary with the target population and future studies should assess patient outcomes.

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Macabasco-O'Connell, A., & Fry-Bowers, E. K. (2011). Knowledge and perceptions of health literacy among nursing professionals. *Journal of Health Communication, 16,* 295–307.

This pilot study was a web-based survey of nursing professionals in California regarding their knowledge of health literacy. The questions were adapted from the Limited Literacy Impact Measure (Jukala et al. 2009). Fifty-nine percent (59%) of respondents had not received formal HL training, 20% had never heard of HL, 75% thought they knew a moderate or large amount about HL and less than half thought that low HL interfered with access to health services or treatment follow through. One third asked patients if they have difficulty reading, 80% never or rarely formally assess HL, but proceeded to give information based on gut feeling, while half consider HL to be low priority relative to other issues. Half of respondents stated that low literacy materials were available at their practice site and only 1/5 thought they were effective. Many respondents did not know if there was an HL program at their practice. Self-reported techniques included asking "do you understand?" utilizing the teach-back method (<1/2), and asking if the patient has difficulty reading medical information (1/3). Barriers identified by respondents included low priority of HL cost of health education, challenge of many different languages and cultures, lack of knowledge among providers, time and a lack of good tools. The

authors advocate for universal precautions for HL and conclude that there is a need for increased HL training for nurses and other health care providers as well as for more research on educational strategies for nurses and the impact of these interventions on patient outcomes.

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Manning, K. D., & Kripalani, S. (2007). The use of standardized patients to teach low-literacy communication skills. *American Journal of Health Behavior*, *31, Suppl 1,* S105–110.

The authors report on an intervention to improve literacy awareness among medical students and to improve their communication with low literacy patients. A baseline for first through third year medical students was established by using a videotaped standard patient (SP) encounter. The intervention was a 90 minute interactive workshop that emphasized techniques including using 1-3 key message, using the teach-back method and identifying educational materials. The students were then assessed on a different day by a videotaped SP encounter. The authors describe the SP training, which totaled 3 hours. Benefits for using SPs included the opportunity to target learning objectives and reduced provider anxiety. The SPs were found to portray the characters reliably and were able to provide valid feedback and to demonstrate that anyone can have low HL. Challenges include the inherent cost and use of resources, the possibility that the SPs may not reflect the patient population and the fact that physician behavior may differ with SPs versus real patients.

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McCleary-Jones, V. (2012). Assessing nursing students' knowledge of health literacy. *Nurse Educator, 37(5),* 214-7.

Because patients' limited level of health literacy can have a negative impact on patient health outcomes, it is important to address this topic in the nursing curricula. The author discusses a comparative study that assessed baccalaureate nursing students' knowledge of health literacy before and after implementation of an asynchronous online educational module. With a significant difference between the pretest and posttest scores, the findings provide information that can inform curriculum planning in baccalaureate nursing programs.

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Moser, EM & Stagnaro-Green, A. (2009) Teaching behavior change concepts and skills during the third-year medicine clerkship. *Academic Medicine, 84(7), 851-58.*

Physicians report lack of training as one of the barriers to providing behavior change counseling. The authors developed the Health Beliefs and Behavior (HBB) course at University of Medicine and

Dentistry–New Jersey Medical School (UMDNJ-NJMS) to teach the impact of unhealthy behaviors on health and wellness, to broaden students' understanding of the many factors that affect behavior, and to give medical students tools to facilitate health behavior change in patients. The authors intercalated the 60-hour HBB course in the four-week, third-year internal medicine clerkship ambulatory block. Thus, students practice learned techniques in both the ambulatory and classroom settings, and they gain insight into health behavior by applying learned health models to patients and engaging in experiential exercises. Course components stress the biopsychosocial and patient-centered approach. The authors measure the impact of the course through student surveys. Third-year medical students at UMDNJ-NJMS who have completed the HBB course report enhanced understanding of the principles of behavior change and improved ability to perform behavior change counseling

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Novitizky, J. (2009). Towards a health literacy curriculum. *Adults Learning, 20(5),* 28-29.

An emerging element of health literacy is the promotion of a healthy workforce. Approaches to building a healthy workforce include the development of quality kite-marks for employers, such as the "Mindful Employer" initiative; the development of employer awards to promote best practice, such as the Healthy Workplaces Award; and the development of courses such as "Mental First Aid" and the Department of Health pilot "Self Care" program. The challenges of developing multi-sector partnerships are not insubstantial, and include lack of shared language, lack of a clear evidence base for the design of curricula, and politicking over resources. Further, public health commissioners do not always see learning as a valid area for funding through health improvement monies. However, only a closer relationship at local, regional and national levels between the health and education sectors will resolve this issue. The challenge, the author argues, is for health and education providers to recognize their mutual agendas and to work together to ensure that a broad range of programs are developed, delivered, evaluated and refined.

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Pagels, P., Kindratt, T., Arnold, D., Brandt, J., Woodfin, G., & Gimpel, N. (2013). Health literacy Objective Structured Clinical Exam for family medicine residents. *Medical Teacher, 35(10),* 874-875. doi:10.3109/0142159X.2013.786819

Health literacy curriculum to train Family Medicine residents how to effectively communicate with patients challenged by limited health literacy. Curriculum can be used as a model for training providers in different medical education settings. Consists of 90-minute workshop and Objective Structured Clinical Exam (OSCE). It was piloted in the UT Southwestern Family Medicine Residency, which includes 28 postgraduate residents on a three-year training program. The curriculum is designed to train residents how to (1) administer and score the results of the Newest Vital Sign to measure health literacy in English (Weiss et al. 2005),(2) practice the ASK ME 3 communication method (National Patient Safety Foundation 1997), (3) employ the teach-back method and (4) work with an interpreter. Residents learn

these techniques during the workshop and are evaluated by standardized patients (SPs) during four OSCE stations. We train bilingual (English and Spanish) lay health promoters and medical students to act as SPs. We evaluate our curriculum by measuring residents' changes in knowledge and attitudes (pre- and post-test), post-workshop feedback, self-reported skills used three months after training and OSCE scores.

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Pleasant, A., & Centre for Literacy of Quebec, (2008). Measuring health Literacy: A challenge to curriculum design and evaluation. *Research Briefs on Adult Literacy.* Number 1. *Centre for Literacy of Quebec*.

Research brief critically reviews the literature on health literacy measures. Current health literacy measures have contributed to the strong development of the study of health literacy and that contribution should not be minimized. However, the field has advanced beyond its beginning. As new curricula, complex social interventions and collaborative initiatives are steadily being put into place to improve health literacy skills, the need for a new comprehensive measure of health literacy becomes more urgent. Building this new measure may well be the next significant and necessary task facing health literacy research and practice. Until that is accomplished, each new health literacy curriculum will be forced to build a unique – and thus likely incomparable – approach to evaluation

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Query J. L., Wright K. B., Bylund C. L., Mattson M. (2014). Health communication instruction: Toward identifying common learning goals, course content, and pedagogical strategies to guide curricular development. *Health Communication, 21:2,* 133-141.

Health communication has an abundance of theoretical grounding and practical application, however there has yet to be published a description of health communication pedagogy that could identify conceptual approaches and teaching practices. An online survey of health communication instructors at 77 colleges and universities throughout the United States was conducted to help bridge this gap. The questionnaire elicited information about the general characteristics of the institutions and the courses, learning goals, content areas, teaching strategies, and pedagogical practices.

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Riley, J., Cloonan, P., & Rogan, E. (2008). Improving student understanding of health literacy through experiential learning. *The Journal of Health Adminstration Education, 25(3),* 213-28.

Low health literacy is a pervasive yet under-appreciated issue in contemporary healthcare. It has a significant impact on cost and quality indicators, and affects patients and professionals along the entire

care continuum. Educators must sensitize healthcare administration students to the complexity of low health literacy, and teach strategies to address it. This project combined conceptual and experiential approaches to increase students' sensitivity to low health literacy by combining: (1) classroom discussion of health literacy; (2) healthcare environmental assessment; (3) interviews with healthcare administrators; (4) analysis of healthcare documents that patients use; and (5) reflections on the students' experiences, both individually and as a group. Students learned that awareness of and appreciation for issues around health literacy have the potential to improve the quality of patient care and patient outcomes. Experiential learning is the key to teaching students about health literacy. This pedagogical approach increases students' understanding of the patient experience and the challenges that low health literacy poses for all participants in the healthcare system.

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Roberts, D. M., Reid, J. R., Conner, A. L., Barrer, S., Miller, K. H., & Ziegler, C. (2012). A replicable model of a health literacy curriculum for a third-year clerkship. *Teaching and Learning in Medicine, 24,* 200–210.

A HL program in a family medicine clerkship at the University of Louisville School of Medicine used a combination of discussion, didactic teaching and standard patient (SP) encounters resulted in a statistically significant increase in HL knowledge and high HL scores in the SP encounter. Program design included a pre-test, didactic session, teach-back video and in-person faculty demonstration, small group practice, discussion, SP encounter and post-test. The acronym CLEAR was used to teach HL strategies: Create a safe environment, Listen actively, Encourage questions, Avoid jargon, Reinforce with visual and written materials.

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Ross, P. T., Lukela, M. P., Agbakwuru, U., & Lypson, M. L. (2013). Medical students' recognition of health literacy in a single embedded curricular activity. *International Journal Of Medical Education, 4115-119.* doi:10.5116/ijme.51aa.3508

To explore medical students' recognition of health literacy as a barrier to care and social determinant of health within a single embedded curricular activity. Students' responses revealed three themes: the impact of low health literacy on health, the correlation between health literacy and literacy, and health care provider strategies for addressing health literacy. The majority of students 61.5% (n=161) recognized health literacy as a barrier to optimal health outcomes; however, an equal number of students 66.8% (n=175) failed to identify the manner in which health literacy serves as a social determinate of health.

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Sand-Jecklin, K., Murray, B., Summers, B., & Watson, J. (2010). Educating nursing students about health literacy: From the classroom to the patient bedside. *Online Journal Of Issues In Nursing, 15(3),* 1. doi:10.3912/OJIN. Vol15No03PPT02

In this article the authors discuss the significance of the health literacy problem and share strategies for identifying and intervening with patients who have limited health literacy. They also describe how they incorporated health literacy content into their nursing education program and assessed the impact of this brief, health literacy education session. The analysis and results of this assessment indicated both a significant increase in student knowledge related to health literacy and the need for nurses to assess more fully patients' understanding of what they have been taught. Patient initiative in asking for assistance in understanding health-related information was limited. Discussion and implications of these findings for nursing education and nursing practice are provided.

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Scheckel, M., Emery, N., & Nosek, C. (2010). Addressing health literacy: The experiences of undergraduate nursing students. *Journal of Clinical Nursing, 19(5-6),* 794-802.

To teach nursing students principles and practices of patient education, nurse educators design evidenced-based instructional strategies using educational and clinical practice guidelines, research and theories. Despite their efforts, research shows that students lack knowledge and skills needed for proficiency in providing patient education. However, this research does not explicate students' experiences of learning and providing patient education, which can inform teachers of ways to structure approaches to teaching students this nursing practice.

Eight undergraduate nursing students in their final semester of a baccalaureate nursing program were interviewed using face-to-face, unstructured interviews. Data were collected using unstructured interviews and analyzed using hermeneutics. Common meanings from the analysis of data shows that health literacy is addressed as a primary practice of students' learning and providing patient education. Three sub-themes: (1) respecting languages: learning persistence (2) helping patients understand: learning to teach and (3) promoting engagement: learning sensitivity, exemplify how students are addressing health literacy. The findings of this study reveal extraordinary competencies students already have in addressing health literacy. The results of this study show the paramount need for teachers to design instructional strategies that deepen students' knowledge and skills in health literacy prior to graduation from nursing programs.

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Smith, J. A. & Zsohar, H. (2011). Teaching health literacy in the undergraduate curriculum: Beyond traditional methods. *Nursing Education Perspectives, 32(1),* 48-50.

The authors provide a table with learning objectives, content areas and teaching activities for a comprehensive approach to teaching health literacy in the undergraduate program. Content areas include: (1) Definitions of low literacy and health literacy, the scope of the health literacy problem, at-risk populations, and the relationship between health literacy and health outcomes (2) Assessment of literacy levels in clients (3) Observed client behaviors related to low literacy (4) Plain language communication (5) Interpersonal skills (6) Cultural sensitivity (7) Common myths and health literacy.

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Soller, R. W. (2006). An integrated approach to teaching health literacy in the clinical pharmacy curriculum. *Journal of Pharmacy Teaching, 13(1),* 17-28. doi:10.1300/J060v13m01_03

Assessment of the UCSF clinical pharmacy curriculum was undertaken to raise awareness about health literacy among faculty and students, and as needed catalyze curricular change. The assessment included a literature review, a detailed review of course syllabi, in-depth interviews with mid-level and senior faculty, an all-school lecture and by-invitation workshop, and expert consultation. Outcomes of this process included, among other things, development of an overarching conceptual framework for health literacy proficiency for health professionals and a strategic approach to moving forward with curricular change and faculty development.

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Sperry, JA, Williams, D, & Guiffre, AM. (2010) Addressing communication skill deficits in fourth-year medical students: An intensive remediation curriculum. *Annals of Behavioral Science and Medical Education, 16(1), 14- 20.*

Communication skills can be taught and learned, and are assessed as part of the standard medical school curriculum. At West Virginia University, fourth-year medical students are required to pass the Clinical Performance Exam (CPX), in which students demonstrate clinical skills with simulated patients. A remediation curriculum has been instituted to facilitate experiential and didactic learning in provider-patient communication for students failing the Relationship/Communications section of the CPX. Thus far, the three students who have completed this intense curriculum have subsequently passed the CPX and successfully matriculated. Students report that the experiential component of the remediation has been the most effective learning tool. This curriculum has gained such credibility that the authors have been charged with adapting the course components to allow for inclusion of more students. Future direction of the curriculum is discussed.

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Toronto, C. E. & Weatherford, B. (2015). Health literacy education in health professions schools: An integrative review. *Journal of Nursing Education, 54(12),* 669-76.

Nine articles met the inclusion criteria for the literature review. Educational interventions include multimodal approaches using didactic content, followed by active learning strategies. Evaluative methods in the classroom were used in all studies; however, only one study assessed students' health literacy skills. Findings support research efforts that (a) clarify where health literacy should be taught, (b) target the assessment of students' health literacy skills, (c) perform rigorous psychometric testing of evaluative instruments used, and (d) create inter-professional learning opportunities.

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US Department of Health and Human Services: Office of Disease Prevention and Health Promotion. (2010). *The National action plan to improve health literacy.*

This report is based upon the principle that everyone has a right to health information that helps them make informed decisions and present a vision of providing everyone with access to accurate and actionable health information, delivering person-centered health information and services and supporting life-long learning and skills to promote good health. It details 7 goals to improve health literacy and presents several examples of programs around the country that have addressed aspects of these goals. The authors advocate universal precautions and note that targeted approaches have resulted in improved health outcomes, and medication adherence, and that high HL people benefit from these interventions as well. Tools need to be made available for hospitals, primary care practices and pharmacies to self-assess their HL capacity. Actionable items include improving communication skills of health care providers, cultural and linguistic targeting of information and services, health information presented accurately in the media, public health infrastructure to support healthy behaviors and access.

The 7 goals are: 1. Develop and disseminate health and safety information that is accurate, accessible, and actionable. 2. Promote changes in the health care system that improve health information, communication, informed decision-making, and access to health services. 3. Incorporate accurate, standards-based, and developmentally appropriate health and science information and curricula in childcare and education through the university level. 4. Support and expand local efforts to provide adult education, English language instruction, and culturally and linguistically appropriate health information services in the community 5. Build partnerships, develop guidance, and change policies. 6. Increase basic research and the development, implementation, and evaluation of practices and interventions to improve health literacy. 7. Increase the dissemination and use of evidence-based health literacy practices and interventions.

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Wilcoxen, K. & King, S. R. (2013). An educational strategy to enhance pharmacy students' attitudes toward addressing health literacy of patients. *Currents In Pharmacy Teaching & Learning, 5(2),* 85-92. doi:10.1016/j.cptl.2012.11.001

Evaluate the impact of an educational intervention based on Theory of Planned Behavior (TPB), on enhancing pharmacy students' attitudes toward health literacy, perceived behavioral control and intentions concerning communicating with patients possessing inadequate health literacy. Analyses revealed significant improvements over time within the experimental group for attitudes toward health literacy (p = 0.033) and perceived behavioral control concerning communicating with patients possessing inadequate health literacy (p = 0.033). Intentions to communicate were high for both groups at pretest and no differences were found to exist for this construct in any analyses. **RETURN TO LIST**