



## Medical education in the face of cultural and religious diversity

Marín-Ortega, Cristihian Gabriel

Internal Medicine Specialist, Department of Internal Medicine, “Dr. Domingo Guzmán Lander Hospital”, Anzoátegui, Venezuela

### Abstract

The growing cultural and religious diversity in today's societies requires a profound transformation in medical education to ensure equitable and quality healthcare. This study synthesises the evidence on the effective integration of these dimensions into medical curricula, analysing the transition from a cultural competence approach—criticised for promoting static stereotypes—to one of cultural humility, based on continuous self-reflection, recognition of one's own limitations, and appreciation of the patient's lived experience. Systemic barriers in clinical practice are identified, such as divergent explanatory models of disease, ethical conflicts in decision-making, and limitations in intercultural communication. Curricular implementation faces challenges such as a lack of diverse representation in the teaching staff, institutional resistance, and insufficient assessment of these competencies. Innovative pedagogical models are proposed that combine problem-based learning, standardised patients, and rotations in diverse settings, along with continuous assessment strategies and validated tools. Teacher development and collaboration with community and religious leaders stand out as key elements in creating inclusive institutional environments and explicit diversity policies. It is concluded that training in cultural humility should be integrated across the board and extended beyond the degree level, through continuing medical education, to prepare professionals to navigate multicultural healthcare contexts and ensure person-centred care.

**Keywords:** Medical education, cultural diversity, religious diversity, intercultural competence

### Introduction

Global demographic transformation, driven by mass migration and globalisation, has created a highly complex healthcare landscape characterised by significant cultural and religious diversity. International migration flows have grown exponentially, representing more than 10% of the European population and 16% of the Norwegian population, creating super-diverse communities that challenge traditional healthcare systems by generating communication and cultural barriers that compromise equity in access and quality of care. Migration forced by armed conflict, violence, political instability, and environmental crises has intensified this reality, establishing multilingual communities that demand culturally adapted health services, a phenomenon amplified by globalisation that transcends geographical and cultural boundaries to create healthcare environments that reflect global diversity in national origin, religious beliefs, health practices, and socioeconomic structures [1, 3].

Cultural competence is defined as the ability of healthcare professionals and organisations to provide services that meet the social, cultural and linguistic needs of patients, encompassing a set of consistent behaviours, attitudes, knowledge and policies that work together to enable effective work in cross-cultural situations. Cultural humility is a process of ongoing self-reflection and discovery that enables the building of honest and trusting relationships through a lifelong commitment to self-evaluation and self-criticism in order to address power imbalances in the doctor-patient dynamic, while religious diversity encompasses the multiple spiritual traditions and belief systems that influence perceptions of health, illness, and treatment, from specific ritual practices to fundamental conceptions of life, death, and suffering [4, 6].

The relevance of these constructs is evident in the quality of the doctor-patient relationship, where the professional's cultural competence correlates positively with patient satisfaction, trust in the doctor, and active participation in the care process. Therapeutic adherence is significantly affected by cultural and religious factors, where traditional beliefs, trust in natural remedies, communication barriers, and religious values are critical determinants of treatment compliance, with documented disparities in health outcomes between ethnic and religious groups in infant and maternal mortality, prevalence of chronic diseases, and access to specialised health services. The implementation of culturally competent interventions has been shown to reduce health disparities, improve doctor-patient communication, increase patient trust, and optimise clinical outcomes, while their absence leads to adverse consequences including misdiagnosis, preventable events, lower patient satisfaction, and the perpetuation of existing health inequalities [7, 10].

The aim of this study is to synthesise the current evidence, challenges and proposals for the effective integration of cultural and religious diversity into medical curricula. It seeks to analyse the transition from the paradigm of cultural competence to cultural humility, identify systemic barriers in curriculum implementation and clinical practice, and review innovative pedagogical models, assessment strategies, and institutional frameworks that enable the training of health professionals capable of providing equitable and effective care in multicultural contexts.

### Research Methodology

#### Nature of the Study

This study adopts a narrative literature review design, conducting a critical and synthetic analysis of existing academic evidence on the subject.

**Sources of Data**

The data sources consist of academic and grey literature, including original research articles, review articles, and systematic reviews indexed in biomedical and social science databases (PubMed, Scopus, Scielo), specialised books, technical reports from medical accreditation bodies (AAMC, LCME), and clinical protocols from recognised institutions.

**Sampling Method**

Purposive sampling of the literature was used, selecting studies, conceptual frameworks, and validated tools that directly address the key components of the research: medical education, cultural competence, cultural humility, religious diversity, curriculum, pedagogical assessment, and intercultural clinical practice.

**Data Collection Tools**

Data collection was carried out using a structured extraction template designed ad hoc. This tool allowed for the systematic collection of information on the objectives, methodology, main findings, proposals, and limitations of each source consulted, with an emphasis on the challenges and strategies of curriculum integration.

**Data Analysis Procedure**

Data analysis was carried out using a thematic analysis procedure. The extracted data were organised, coded and categorised to identify recurring themes, patterns and central

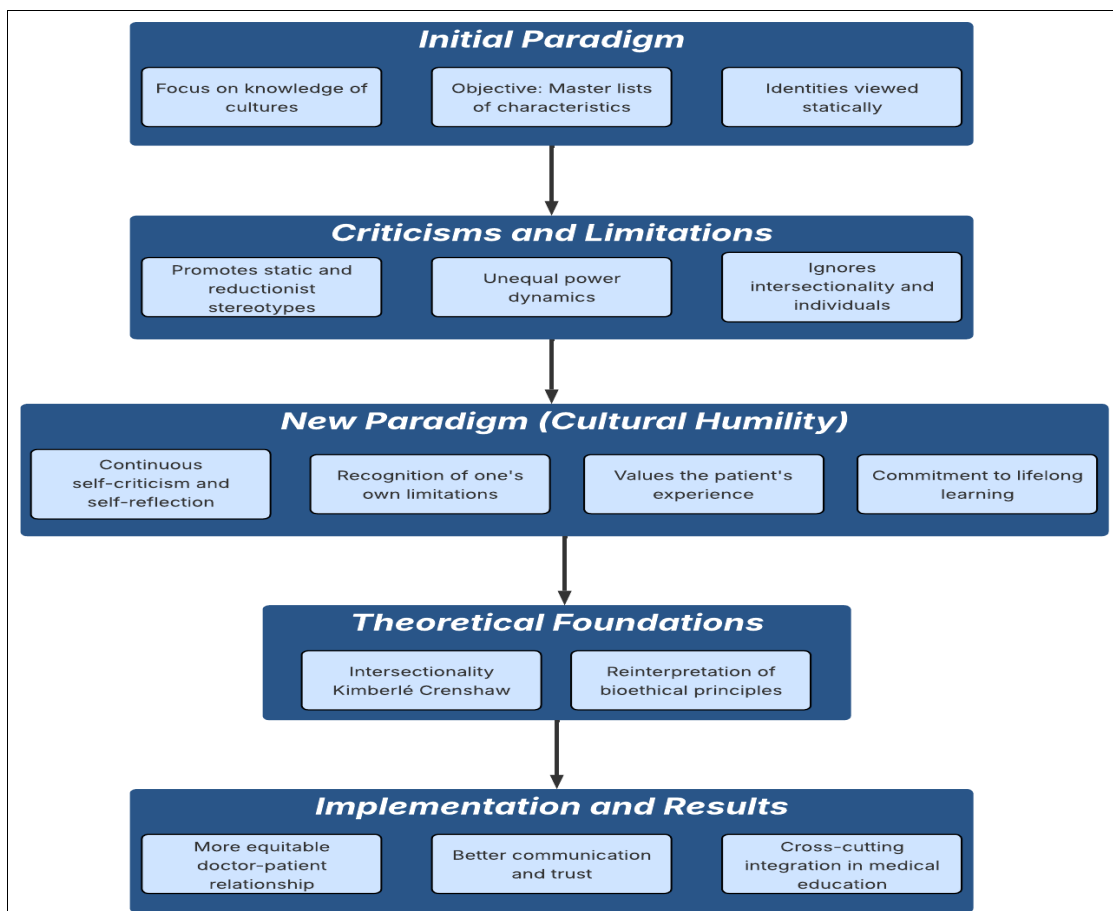
concepts. This process allowed for the synthesis of evidence into coherent categories such as: conceptual evolution (from competence to cultural humility), challenges in clinical practice, curricular barriers, effective pedagogical models, assessment instruments, and institutional and teacher development strategies.

**Discussion**

**1. Conceptual Evolution: From Cultural Competence to Cultural Humility**

The paradigm in medical education has undergone a fundamental shift from cultural competence to cultural humility. Cultural competence, traditionally defined as the mastery of specific knowledge about diverse cultures, has been criticized for creating static stereotypes and perpetuating unequal power dynamics by assuming professionals could achieve ‘mastery’ over other cultures, thus fostering a reductionist view of cultural identities.

Cultural humility emerges as a paradigmatic alternative, characterized by continuous self-reflection, recognition of the limitations of one's own knowledge, valuing the patient's lived experience as expert knowledge, and a commitment to lifelong learning. This reflects the academic recognition that cultural identities operate intersectionally, where factors such as race, gender, religion, socioeconomic status, and sexual orientation intertwine to create unique experiences that cannot be categorized using predetermined frameworks [11, 13].



Source: Created by the author.

Transition from the “Cultural Competence” model, focused on the acquisition of static knowledge and criticised for promoting stereotypes, to the “Cultural Humility” model. This new paradigm is based on continuous self-reflection, recognition of one's own limitations, and valuing the patient's experience. The evolution is theoretically grounded in intersectionality and a reinterpretation of bioethics, pointing towards more equitable clinical outcomes and person-centred care.

**Fig 1:** Paradigm Shift: From Competence to Cultural Humility

## 2. Theoretical Foundations: Intersectionality and Bioethics

Intersectionality, a concept developed by Kimberlé Crenshaw, provides the theoretical framework for understanding how the confluence of social identities generates unique experiences of discrimination and privilege that transcend the sum of their individual parts. It reveals that factors like culture, religion, gender, socioeconomic status, and ethnicity intersect to determine differential access, quality, and outcomes in healthcare.

The fundamental bioethical principles require reinterpretation in intercultural contexts. Western conceptions of individual autonomy may contrast with community ethical systems that prioritize collective decision-making, while beneficence and non-maleficence acquire culturally specific meanings. The principle of justice becomes more complex when considering structural disparities that disproportionately affect populations with multiple intersectional identities, requiring interventions that address systemic inequalities rather than superficial cultural differences [12, 14, 15].

## 3. Challenges in Clinical Practice

### 3.1. Communication Barriers and Explanatory Models

Challenges arise from the convergence of Western biomedical systems and diverse cultural belief structures. Language barriers are an immediate obstacle, with professional interpreters demonstrating superiority in patient satisfaction (96% vs. 24%) and comprehension (93% vs. 18%) compared to ad hoc interpreters. Non-verbal communication can also be misinterpreted across cultural frames of reference.

Explanatory models of disease are culturally determined conceptual frameworks. The Western biomedical model focuses on biological causes, while traditional models may incorporate spiritual, social, and cosmological elements (humoral, spiritual, or social models). This divergence has clinical consequences when patients present late, when beliefs are misinterpreted as psychopathology, or when disorder severity is misjudged [16, 17].

### 3.2. Ethical Dilemmas and Decision-Making Conflicts

Decision-making reveals tensions between individualistic and collectivist concepts of autonomy. In collectivist cultures, families are often the primary decision-making unit, leading to the concept of relational autonomy which balances individuality with relationality.

Ethical conflicts intensify when religious/cultural beliefs clash with medical recommendations, such as Jehovah's Witnesses refusing blood transfusions. While competent adults have the right to refuse treatment, situations involving minors or unconscious patients require judicial evaluation. Further dilemmas arise from limitations on physical examinations due to modesty, conflicts in family planning, and profound cultural variations in end-of-life decisions [18, 22].

## 4. Integration into Medical Education

### 4.1. Curricular Implementation Challenges

Implementation faces systemic barriers, including a lack of diverse faculty, homogeneous curricula, and the absence of structured assessments. Students from minority groups experience less favourable environments due to a lack of

role models and discriminatory incidents. Institutional resistance stems from viewing cultural diversity as additive content rather than a cross-cutting framework, exacerbated by insufficient faculty training and traditional assessment methods [23, 25].

Despite LCME regulations, cultural competence is often absent or fragmented, implemented as isolated modules in the first two years with limited relevance for pre-clinical students. The Tool for Assessing Cultural Competence Training (TACCT) reveals approximately 30% of U.S. medical schools lack clear conceptual frameworks, while 45% report inconsistent implementation [23, 24].

### 4.2. Effective Pedagogical Models

Effective models combine theoretical teaching with experiential learning

**Problem-Based Learning (PBL):** Using culturally complex cases to develop critical thinking about social determinants of health.

**Diverse Standardised Patients (DSPs):** Providing controlled immersive experiences for practicing intercultural communication.

**Clinical Narratives and Literature:** Developing empathy through discussions of illness experiences in different cultural contexts.

**Clinical Rotations in Diverse Settings:** Facilitating practical skill development under the supervision of culturally competent mentors and community-based cultural mentors [26, 29].

### 4.3. Assessment of Competencies

Assessment requires a mixed-methods approach measuring knowledge, skills, and attitudes continuously. Methods include

Longitudinal self-assessment (Multicultural Assessment Questionnaire - MAQ).

Performance evaluation via standardised patient activities with structured feedback.

Cumulative portfolios documenting learning experiences and critical reflections.

Assessment must be continuous, integrated, and use tools that are culturally validated for different populations and contexts [24, 25, 30].

## 5. Institutional Strategies and Faculty Development

### 5.1. Faculty Training

Teacher training is an institutional imperative to counteract the hidden curriculum. Development programmes should include interactive modules on cultural needs assessment, patient-centred interviews, and community utilisation. Clinical teachers require specific training to recognise implicit biases and manage culturally complex situations using methodologies like video vignettes, role-playing, and community immersion. Evaluating these programmes must measure changes in knowledge, attitudes, and pedagogical behaviours [24, 31, 33].

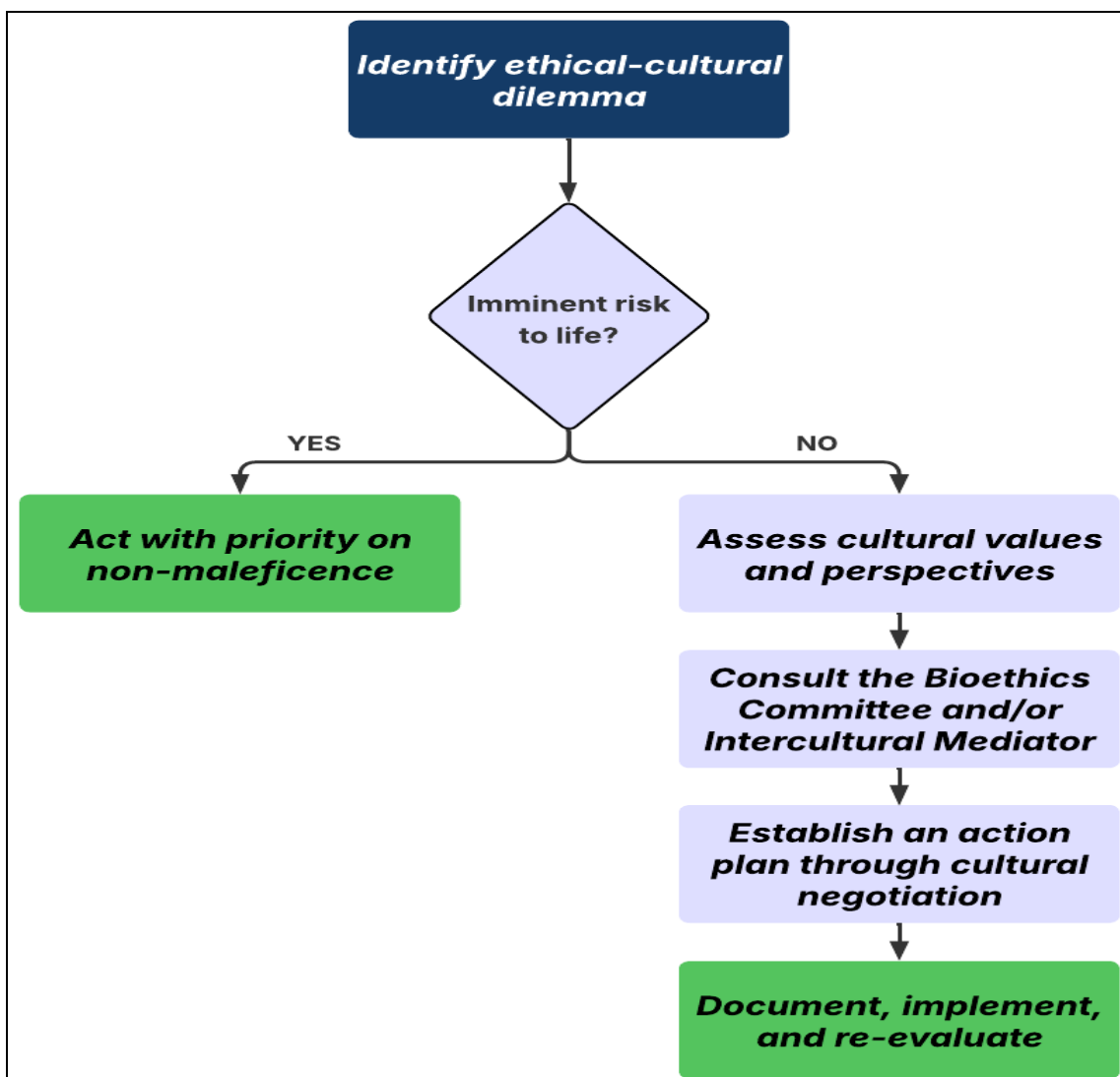
### 5.2. Institutional Development and Community Collaboration

Creating inclusive environments requires explicit diversity policies, dedicated administrative leadership (associate

deans for diversity), and adequate infrastructure (interpretation services, appropriate physical spaces). Support resources include cultural mentoring programmes and affinity groups for underrepresented students. Collaboration with community and religious leaders is essential for providing authentic learning experiences and improving public health. Structured partnerships can involve community representatives in curriculum design and provide clinical rotation sites, as demonstrated by successful programmes like the Memphis Congregational Health Network [34, 38].

**6. Standardized Protocols and Assessment Tools**  
**6.1. Clinical Protocols and Documentation**

Validated instruments, such as the SPIRIT history and the FICA questionnaire, integrate sociocultural variables into the medical record. Electronic health record systems should establish standardised fields to capture cultural preferences and religious restrictions. Guidelines for using professional interpreters must specify differentiated protocols based on clinical context and establish triadic communication procedures between doctor, interpreter, and patient [39-41]. Algorithms for resolving ethical-cultural conflicts provide structured flowcharts to identify dilemmas, evaluate values, and establish courses of action. These incorporate cultural validation and cross-cultural negotiation, often requiring communication with healthcare ethics committees and cultural mediators [42, 45].



Source: Created by the author.

Managing ethical-cultural conflicts in clinical settings. The protocol prioritises stabilising the patient in life-threatening situations, followed by an assessment of values, consultation with experts, and the establishment of a consensus action plan through cultural negotiation.

Figure 2: Algorithm for Resolving Ethical-Cultural Conflicts

**6.2. Validated Assessment Instruments and Digital Platforms**

Validated psychometric tools, such as the Inventory for Assessing the Process of Cultural Competence (IAPCC) and the Cultural Competence Assessment (CCA), measure intercultural competence reliably. Resources for simulation include banks of cases with diverse cultural profiles and

trained actors using established methodologies (MEAPE) and acting techniques to ensure fidelity [46, 47].

Digital platforms (Moodle, Blackboard) and virtual reality (VR/AR) systems comprise e-learning tools for cultural immersion, allowing for the experimentation of diverse clinical situations without risk. These platforms often include automated self-assessment tools that provide

personalised feedback and generate individualised development plans [48, 50].

### Conclusion

Cultural and religious competence is a fundamental pillar for ensuring quality and equitable healthcare in increasingly diverse societies. Far from being an optional extra, it is an essential dimension of medical practice that directly impacts the clinical relationship, therapeutic adherence and health outcomes. The evolution from a model of cultural competence, which risked perpetuating stereotypes, to one of cultural humility—based on constant self-criticism, recognition of one's own limitations, and appreciation of the patient's lived experience—represents a decisive paradigm shift. This approach, framed within intersectionality, allows us to understand the complex interaction of social identities that shape unique experiences of health and illness, redefining bioethical principles in intercultural contexts to prioritise social and equitable justice.

Therefore, a call to action for effective cross-curricular integration that overcomes the current fragmentation is imperative. This requires a multi-level institutional commitment that includes: mandatory training for teachers in cultural humility and the deconstruction of implicit biases; the development of explicit diversity and inclusion policies with evaluation metrics; and structured collaboration with community and religious leaders. Policy makers must incorporate intercultural competence standards into medical accreditation processes and fund the implementation of resources such as professional interpreters and validated assessment tools. It is crucial to recognise that this training does not end with graduation, but must be extended through continuing medical education, integrating professional development opportunities that encourage reflection on actual practice and adaptation to the emerging needs of an ever-changing global population. Only then will professionals be trained to navigate the complexity of modern healthcare settings and ensure truly person-centred care.

### References

- Hossin M. International migration and health: it is time to go beyond conventional theoretical frameworks. *BMJ Global Health*,2020;5:e001938. <https://doi.org/10.1136/bmjgh-2019-001938>
- Diaz E, Kumar B. Health care curricula in multicultural societies. *Int J Med Educ*,2018;9:42-44. <https://doi.org/10.5116/ijme.5a7e.bd17>
- Mohiyeddini C. The imperative for cross-cultural medical education in globalized healthcare. *Front Psychol*,2024;15:1326723. <https://doi.org/10.3389/fpsyg.2024.1326723>
- Asian Counseling and Referral Service. ACRS participates in national effort to train mental health interpreters. Seattle, WA, 2003.
- Rukadikar C, Mali S, Bajpai R, Rukadikar A, Singh A. A review on cultural competency in medical education. *J Family Med Prim Care*,2022;11(8):4319-4329. [https://doi.org/10.4103/jfmpc.jfmpc\\_2503\\_21](https://doi.org/10.4103/jfmpc.jfmpc_2503_21)
- Yeager K, Bauer S. Cultural humility: essential foundation for clinical researchers. *Appl Nurs Res*,2013;26(4):251-6. <https://doi.org/10.1016/j.apnr.2013.06.008>
- McQuaid E, Landier W. Cultural Issues in Medication Adherence: Disparities and Directions. *J Gen Intern Med*,2018;33(2):200-206. <https://doi.org/10.1007/s11606-017-4199-3>
- Shahin W, Kennedy G, Stupans I. The impact of personal and cultural beliefs on medication adherence of patients with chronic illnesses: a systematic review. *Patient Prefer Adherence*,2019;13:1019-1035. <https://doi.org/10.2147/PPA.S212046>
- Paez K, Allen J, Beach M, Carson K, Cooper L. Physician cultural competence and patient ratings of the patient-physician relationship. *J Gen Intern Med*,2009;24(4):495-8. <https://doi.org/10.1007/s11606-009-0919-7>
- Brach C, Fraser I. Reducing disparities through culturally competent health care: an analysis of the business case. *Qual Manag Health Care*,2002;10(4):15-28. <https://doi.org/10.1097/00019514-200210040-00005>
- Tervalon M, Murray J. Cultural humility versus cultural competence: a critical distinction in defining physician training outcomes in multicultural education. *J Health Care Poor Underserved*,1998;9(2):117-25. <https://doi.org/10.1353/hpu.2010.0233>
- Vohra S, Petruzzi L, Jones C, Cubbin C. An Intersectional Approach to Understanding Barriers to Healthcare for Women. *J Community Health*,2023;48(1):89-98. <https://doi.org/10.1007/s10900-022-01147-8>
- Lekas H, Pahl K, Fuller C. Rethinking Cultural Competence: Shifting to Cultural Humility. *Health Serv Insights*,2020;13:1178632920970580. <https://doi.org/10.1177/1178632920970580>
- Chukwunke F, Umeora O, Maduabuchi J, Egbunike N. Global Bioethics and Culture in a Pluralistic World: How does Culture influence Bioethics in Africa? *Ann Med Health Sci Res*,2014;4(5):672-5. <https://doi.org/10.4103/2141-9248.141495>
- Iserson K. Applying Bioethics Across Cultures. *J Emerg Med*,2022;62(3):413-418. <https://doi.org/10.1016/j.jemermed.2021.11.011>
- Heath M, Hvass A, Wejse C. Interpreter services and effect on healthcare - a systematic review of the impact of different types of interpreters on patient outcome. *J Migr Health*,2023;7:100162. <https://doi.org/10.1016/j.jmh.2023.100162>
- Shange S, Ross E. "The Question Is Not How but Why Things Happen": South African Traditional Healers' Explanatory Model of Mental Illness, Its Diagnosis and Treatment. *J Cross Cult Psychol*,2022;53(5):503-521. <https://doi.org/10.1177/00220221221077310>
- Alfahmi M. Patients' preference approach to overcome the moral implications of family-centred decisions in Saudi medical settings. *BMC Med Ethics*,2022;23(1):128. <https://doi.org/10.1186/s12910-022-00868-8>
- Menon S, Entwistle V, Campbell A, van Delden J. Some Unresolved Ethical Challenges in Healthcare Decision-Making: Navigating Family Involvement. *Asian Bioeth Rev*,2020;12(1):27-36. <https://doi.org/10.1007/s41649-020-00111-9>
- Steinberg S. Cultural and religious aspects of palliative care. *Int J Crit Illn Inj Sci*,2011;1(2):154-6. <https://doi.org/10.4103/2229-5151.84804>

21. Muller J, Desmond B. Ethical dilemmas in a cross-cultural context. A Chinese example. *West J Med*,1992;157(3):323-7
22. Wong K, Camacho J, Dulani S, Trivedi K. Honoring Long-Lived Cultural Beliefs for End-of-Life Care: Are We Prepared in the Modern Western Society? *Cureus*,2022;14(10):e30313. <https://doi.org/10.7759/cureus.30313>
23. Dogra N, Reitmanova S, Carter O. Twelve tips for teaching diversity and embedding it in the medical curriculum. *Med Teach*,2009;31(11):990-3. <https://doi.org/10.3109/01421590902960326>
24. Kripalani S, Bussey J, Katz M, Genao I. A prescription for cultural competence in medical education. *J Gen Intern Med*,2006;21(10):1116-20. <https://doi.org/10.1111/j.1525-1497.2006.00557.x>
25. Goodkind J, Rohan F, Romero V. A Multi-Method Approach to Assessing Cultural Competency in Medical Education. *Hawaii J Med Public Health*,2013;72(8 Suppl 3):13
26. Ozkara E. Development of the Diverse Standardized Patient Simulation Cultural Competence Education Strategy. *Nurs Educ Perspect*,2019;40(6):E31-E33. <https://doi.org/10.1097/01.NEP.0000000000000519>
27. DasGupta S, Meyer D, Calero A, Costley A, Guillen S. Teaching cultural competency through narrative medicine: intersections of classroom and community. *Teach Learn Med*,2006;18(1):14-7. [https://doi.org/10.1207/s15328015tlm1801\\_4](https://doi.org/10.1207/s15328015tlm1801_4)
28. Qin Y, Chaimongkol N. Simulation With Standardized Patients Designed as Interventions to Develop Nursing Students' Cultural Competence: A Systematic Review. *J Transcult Nurs*,2021;32(6):778-789. <https://doi.org/10.1177/10436596211023968>
29. Sotto S, Mac J, Genao I. "Value my culture, value me": a case for culturally relevant mentoring in medical education and academic medicine. *BMC Med Educ*,2023;23(1):229. <https://doi.org/10.1186/s12909-023-04148-w>
30. Center for Substance Abuse Treatment. Improving Cultural Competence. Rockville (MD): Substance Abuse and Mental Health Services Administration. (Treatment Improvement Protocol (TIP) Series), 2014, 59. <https://www.ncbi.nlm.nih.gov/books/NBK248429/>
31. Ferguson W, Keller D, Haley H, Quirk M. Developing culturally competent community faculty: a model program. *Acad Med*,2003;78(12):1221-8. <https://doi.org/10.1097/00001888-200312000-00005>
32. Liu J, Li S. An ethnographic investigation of medical students' cultural competence development in clinical placements. *Adv Health Sci Educ Theory Pract*,2023;28(3):705-739. <https://doi.org/10.1007/s10459-022-10179-7>
33. Obermeyer M. Are you a culturally competent preceptor? *Nursing*,2006;36(6):54-5. <https://doi.org/10.1097/00152193-200606000-00043>
34. Sanchez S, Westervelt M, Boatright D, Fancher T, London M, Concepcion A. *et al.* Promising Practices in US Sponsoring Institutions to Advance Diversity, Equity, and Inclusion in Graduate Medical Education. *J Grad Med Educ*,2023;15(6):638-647. <https://doi.org/10.4300/JGME-D-23-00260.1>
35. Jonas W, Jonas R. Faith-Health Collaboration to Improve Community and Population Health. *NAM Perspect*,2019;2019:10.31478/201908a. <https://doi.org/10.31478/201908a>
36. Soto M, Culbreath K, Guzman D, Sánchez J, Romero V. Diversity and Inclusion in the Academic Medicine Workforce: Encouraging Medical Students and Residents to Consider Academic Careers. *MedEdPORTAL*,2018;14:10689. [https://doi.org/10.15766/mep\\_2374-8265.10689](https://doi.org/10.15766/mep_2374-8265.10689)
37. Sorensen J, Norredam M, Dogra N, Essink M, Suurmond J, Krasnik A. *et al.* Enhancing cultural competence in medical education. *Int J Med Educ*,2017;8:28-30. <https://doi.org/10.5116/ijme.587a.0333>
38. Ko M, Henderson M, Fancher T, London M, Simon M, Hardeman R. *et al.* US Medical School Admissions Leaders' Experiences With Barriers to and Advancements in Diversity, Equity, and Inclusion. *JAMA Netw Open*,2023;6(2):e2254928. <https://doi.org/10.1001/jamanetworkopen.2022.54928>
39. Chuchon V. Validación del formato de evaluación social inicial en el Instituto Nacional de Salud Mental "Honorio Delgado - Hideyo Noguchi". *An Salud Ment*,1994;X:147-57
40. Cerase A, Expósito V, García M, Martínez P, Rodríguez J, coordinadores. Manual de la Relación Médico-Paciente. Madrid: Foro de la Profesión Médica de España, 2019.
41. International Medical Interpreters Association; Education Development Center, Inc. Estándares para la práctica de la interpretación médica. Boston, MA: International Medical Interpreters Association, 2007. <http://www.imiaweb.org/standards/standards.asp>
42. Andrade G, Alves G, Melo T, Santos V, Oliveira A. Razonamiento ético en las decisiones médicas: dilema médico-paciente. *Rev Bioet*,2024;32:e3658ES. <http://dx.doi.org/10.1590/1983-803420243658ES>
43. Katia M. Salud integral y migración: abordaje transcultural del Proceso Enfermero en un caso clínico del Programa de Salud Migratoria de Ginebra, Suiza. *Enfermería (Montevideo)*,2017;6(2):66-75. <https://doi.org/10.22235/ech.v6i2.1512>
44. Alarcón A, Vidal H, Neira J. Salud intercultural: elementos para la construcción de sus bases conceptuales. *Rev Med Chile*,2003;131(9):1061-5. <http://dx.doi.org/10.4067/S0034-98872003000900014>
45. Reyes P, Delong R. Algunos dilemas éticos en la práctica médica. *Arch Cardiol Mex*,2010;80(4):338-42. [http://www.scielo.org.mx/scielo.php?script=sci\\_arttext&pid=S1405-99402010000400020&lng=es](http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1405-99402010000400020&lng=es)
46. Pedrero V, Bernaldes M, Chepo M, Manzi J, Pérez M, Fernández P. *et al.* Development of an instrument to measure the cultural competence of health care workers. *Rev Saude Publica*,2020;54:29. <https://doi.org/10.11606/s1518-8787.2020054001695>
47. Carvajal A, Centeno C, Watson R, Martínez M, Sanz Rubiales Á. ¿Cómo validar un instrumento de medida de la salud? *An Sist Sanit Navar*,2011;34(1):63-72. [http://scielo.isciii.es/scielo.php?script=sci\\_arttext&pid=S1137-66272011000100007&lng=es](http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S1137-66272011000100007&lng=es)
48. Gatica F, Rosales A. E-learning en la educación médica. *Rev Fac Med Mex*,2012;55(2):27-37. [http://www.scielo.org.mx/scielo.php?script=sci\\_arttext&pid=S0026-17422012000200005&lng=es](http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0026-17422012000200005&lng=es)

49. Pedrero V, Bernales M, Chepo M. Escala de Medición Competencia Cultural (EMCC-14): Manual de Aplicación. 1st ed. Santiago, Chile: Universidad del Desarrollo, 2019.
50. Grilli M. e-Learning en educación médica. Salud de la Mujer, 2014, 83-144