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Analyzing the core competencies in medicine, nursing, and dentistry

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Abstract

This study explores the core competencies in medicine, nursing, and dentistry, focusing on both their shared and unique aspects. Shared competencies include ethical practices, effective communication, and a patient-centered approach, which are essential for delivering high-quality healthcare. Distinct competencies reflect the specialized nature of each profession, such as diagnostic acumen in medicine, holistic care in nursing, and oral health expertise in dentistry. The paper emphasizes the importance of interdisciplinary collaboration to bridge gaps, enhance education, and optimize patient outcomes. By identifying overlaps and differences, the study provides insights into improving healthcare training and fostering a more integrated approach to care delivery.

Keywords

Core competencies, medicine, nursing, dentistry, patient care, healthcare education, interdisciplinary collaboration, professional ethics.

1. introduction

Which competencies really matter in medicine, nursing, and dentistry? many competencies are currently listed in the curricula of these healthcare professions, but some have shown that some competencies are much less acquired in medical or dental studies. in this paper, we will consider the overall objective of core professional competencies in the context of new understanding and new expectations of the health needs of older persons, and what these new assumptions mean for training programs of future physicians, nurses, and dentists. (mcgleenon & morison, 2021)(hattar et al.2021)

We will use the delphi method to analyze, compare, and order the relevance of educational competencies based on outcomes, the practice process of interdisciplinary collaboration, and the relevance of proximity in multi-professional courses and practices of veterinary medicine, medical, and dental students on one hand, and the education courses of veterinary medicine and dentistry targeting interdisciplinary collaboration with graduate nurses and other professionals on the other. the integration of the research input was feasible; most of the competencies reviewed overlapped to a large extent in all healthcare practices involving patients and healthcare professionals. situational differences were appreciated, and the competencies are already being incorporated into existing draft professional practice publications. care for older persons is a challenge at present and in the future, not only for medicine but for the healthcare sector as a whole. (jimenez et al.2020)(qiao et al., 2021)

1.1. background

Over the past centuries, trends in practice have formed the context of why and how we might create a system to list competencies. the educational standards for dentistry are codified largely because of the influence and interests of various organizations. today, many licensure boards at least consider various versions of competencies proposed in the late 1990s. the hallmark of these might be an ability to do no harm, to research and implement the clinical practices that are most effective, to manage workloads and discharge patients in an efficient manner, and a trend to incorporate non-western medical practices more holistically. (mertz et al.2021)(amin et al.2021)

The number of older adults is expected to double by 2030, and adults aged 65 and older are the nation's fastest-growing segment. this elderly, rapidly diversifying demographic will require greater access to all aspects of medical care, including those issues addressed in this paper. much is mentioned in the medical literature regarding disparities in providing a service to the poor, and language and racial/ethnic minorities. it has been maintained that we should redouble our efforts to meet the needs of the diverse populations living with the greatest disparities in health care, and specifically noted that cultural competence is not a luxury, but a well-documented necessity to establish quality care for these at-risk populations. virtually every health care profession has been urged to educate toward more 'core competencies' deemed necessary. the only exception appears to be in the oral health field, for which it is clear that accreditation standards are driving the academic teaching and professional practice of the competencies. the newest standards call for the establishment of a long-term outcome system for evaluating, on a continual basis, the progress of graduates in meeting the competencies essential for the beginning practitioner. (roosevelt et al.2021)(weber et al., 2021)(mcewing, 2020)(woodland et al.2021)(feinberg et al.2021)

2. core competencies in medicine

The practice of medicine requires a combination of skills and knowledge. firstly, clinical judgment involves gathering and analyzing patient information for accurate diagnoses, alongside a comprehensive understanding of biomedical, clinical, and population-based science. staying updated on research is also crucial. evidence-based practice is essential,

whereby practitioners integrate clinical evidence with judgment and prioritize patient care. incorporating patient values, following guidelines, and recognizing the impact of different interventions are also important. collaboration with diverse health care teams and effective communication with patients and families is a must. lastly, providing patient-centered care involves addressing emotions, respecting values, offering comfort and privacy, and supporting shared decision-making. (hoffmann et al., 2023)(al-worafi, 2020)(dang et al., 2021)(subbiah, 2023)

2.1. medical knowledge and clinical skills

An extensive literature on competencies needs to begin with these two skills that are documented as evaluating foundational medical knowledge and the clinical skills that derive from it. books on residency education for a variety of clinical disciplines, along with articles on the training of attending physicians and other health care workers, universally begin with these topics. what we commonly associate with the medical profession are the specialized sets of knowledge and skills that doctors employ to diagnose diseases and then to apply specific treatments for their unique patients. the proficiency, mindset, and pattern of practice must proceed competently to develop this foundational knowledge and clinical skills, which are emphasized as being alien to the way corporate managers, at least the successful ones, might behave. in more general terms, disguising superior knowledge and skill, another reviewer begins and goes on to discuss some of the other steps required to do one's duty as a doctor, most of it predicated on general social notions of what makes a good doctor. for the most part, residents are evaluated during their training based on how effectively they acquire medical knowledge, compelling us to add to or adjust what we know about the clinical applications of medical science or clinical competency. (abbasi et al.2023)(day et al., 2020)(zhao et al., 2020)(barteit et al.2021)(krishnamurthy et al.2022)

Physical diagnosis/examination. as technology has improved, while the repertoire of specific physical examinations has decreased, the general mindset has not, and that focus has been replaced by an increasing need to apply sophisticated technology and new molecular and genetic data to tested common clinical techniques to evaluate their usefulness. engineers combine ct technology, which is capable of slicing thinner sections of the human body, registered at ever more rapid rates. across the rest of medicine, expertise is characterized by those habits of the mind and patterns of practice that allow relationships to be recognized and the prompt and efficient diagnosis, treatment, or prevention of specific medical issues. for every year of evidence-based, patient-centered, efficiently devoted medical practice, and in the application of medical research to the practice of medicine, there is now a rapidly growing and long-standing consensus that, on the whole, many skillful doctors practice sub-optimally. effective medical practice must be both skilled and yet skills abhor accumulating sufficiently more training for the development of the requisite skills. the pursuit of ever-increasing clinical competency also encompasses the development of new clinical techniques in the practice of medicine. however, increasingly, medical educators rely on introducing emerging technologies to improve the skills of diagnosis, clinical evaluation, and patient outcomes. the public health service act requires that be an advocate for institutionalizing a national mechanism to evaluate clinical performance and competency. to do so would necessarily mean that would organize conferences and issue reports that would assist in raising issues that are relevant to the federal government and the nation with respect to the evaluation of clinical performance

and competency on an ongoing basis. (claramita & susilo)(menear et al.2022)(wojda et al.2023)(varkonyi-sepp et al.2022)

2.2. communication and interpersonal skills

Effective communication with patients represents a critical core competency for all healthcare professionals that leads to increases in patient satisfaction, information retention, and adherence to treatment plans. conversely, poor communication may result in lower patient satisfaction, misunderstandings related to treatment approaches, and a decrease in adherence. training in effective communication emphasizes active listening, listening with intent, and resisting the urge to respond immediately. learning to listen for emotional content is also an important part of active listening as it can help listeners recognize engagement and understanding. engaging in empathetic responses further invokes a patient-centered approach, and studies have found that patients desire their providers to be courteous, caring, questioning, attentive, and emphatic, as these characteristics suggest that the providers are connected to them. empathy has been correlated with improved patient outcomes, satisfaction, and better patient engagement. (jarva et al.2022)(wei et al.2020)

Interprofessional education and collaboration among various healthcare providers are paramount in the planning and coordination of care of a patient. interpersonal and communication strategies crucial to this competency revolve around conflict management and utilizing transparency in solving problems. within the practice of dentistry, surface and sub-surface communication challenges exist. there is evidence that oral communication methods used by clinicians are suboptimal and that communication by dentists is non-verbal in nature with patients. cultural competencies are necessary to provide care to various cultural groups. they can have a direct bearing on health outcomes and can contribute to the ease of navigating the healthcare system and the ability to educate about informed decision-making. the use of reflective practice in dental education has been shown to aid in shaping the patient-provider relationship and in discovering the missing pieces of patient assessments. in dentistry, technology can assist in communication, including communicating with patients regarding follow-up visits, adherence to treatment, and increasing patient education. training programs in the united states are available to train dental providers in improving various communication skills, with early communication training showing significant impacts on early patient perceptions of the provider. in dentistry, patient education through communication is acknowledged as an important behavioral challenge. successful communication, in turn, can increase interactions with the practice and patient adherence to appointments and treatment. it can also ensure treatment decisions and informed consents are understood and offer patient-centered care. like nursing and medicine, dentistry has a curriculum in communication to deliver care in an empathetic manner. interdisciplinary standards of undergraduate and postgraduate dental education emphasize the biopsychosocial model, which calls for emphasis on the application of communication skills. the use of technology may assist in communication, including communication through teledentistry, but evaluating outcomes of communication methods in dentistry has not been done.

3. core competencies in nursing

The core competencies of nursing define the skills and abilities that competent nursing practice demands. it is generally assumed that, in addition to technical skills, a good nurse should display human-related and ethical competencies. in many countries, nursing curricula combine necessary knowledge, values, and practice competencies. this is based on the conceptualization of nursing as a holistic approach to providing care in which the unique needs of each patient are integrated, and the priorities of the individual patient come first. a competent nurse is one who not only has the expertise to provide safe and effective basic health care, but also understands the impacts of diseases and treatments as well as the social, emotional, and personal needs of patients.

Conditions in the health system and the competencies required in nursing curricula have great value. the rapid development of medical technology and laboratory sciences, as well as the increase in the elderly population, pose numerous challenges to the nursing profession. firstly, with the advent of it, nursing schools have shifted from traditional theories to blended learning. second, nursing education requires a clinical component that will expose students to their daily lives as health professionals and provide the opportunity to practice with patients. the core competencies of nursing identify ethical value as a critical component of the nursing curriculum. some of the core competencies of nursing stem from six core values of nursing faculties: altruism, interest in others; human dignity, respecting the inherent value and uniqueness of each individual; autonomy, authority over one's own decisions and respect for other decision-makers; integrity, acting in accordance with professional standards and adherence to ethical behavior; social justice, equality for all regardless of religion, race, sex, nationality, etc. (stokes & palmer, 2020)(chen et al., 2021)(hanssen et al., 2020)

According to sections of various documents, the ethics code for nurses emphasizes the responsibility of the nurse to improve ethical competence and provide ethical practice for patients in credible professional environments. competence must be easy, involving interaction with patients and providing healthcare for everyone with transparency. there are many philosophical theories about ethics in healthcare. nursing ethics are related to important norms in professional practice. based on their philosophy and ethics, nurses need to protect the interests of patients, stay honest and independent, and resist unfair demands that do not meet a person's or family's expectations. patient care is nursing care based on literature that determines nursing care and supports the care requirements of the community through patient care. studies show that competencies related to patient care include continuous improvement, science, culture, and ethics. the nursing core curriculum supported patient care nursing institutional learning experiences, while five areas are nursing. in community health nursing, it complements this concept with variations in orientation and competencies in a wide range of healthcare settings. these competencies define nursing and engage sound initiative of an extended scholar. applicants who selected nursing particularly changed to the nursing ability for the excitement we found and conditions for the care of patients. we are dedicated to the progress of social and healthcare communities; assessing the satisfaction of society, the most complex dimensions of attitude are in the application of the science of practice in the field. a basic philosophy that identifies competence also presents the fundamental principles of the field that distinguish it from other fields through science and practice in activities related to the care of health. nurses

also facilitate healthcare practices that are aware of a wide range of differences in professionals.

3.1. patient-centered care

In nursing, one of the core competencies revolves around a patient-centered care approach. in a patient-centered care model, the patient and their individual needs are primary, rather than treating them as a diagnosis or a hospital room. effective and safe care includes the involvement of the patient in the planning and delivery of their care. this is often known as shared decision-making and is at the core of good patient-centered care. in a communication format, patient-centered care would require an open and shared conversation about the patient's diagnosis or concerns, their potential treatment options, the nature of their decisions, their personal preferences, and their comfort and satisfaction with their decisions and planning for their follow-up. a patient-centered care model also implies caring for more than the person just in front of you, but understanding the full context of the patient's life to improve their outcomes.

Patients expect to be recognized as the people they are, with goals, preferences, and life experiences that affect the care they receive. improving patient satisfaction, manner name recognition, and appropriate utilization of health care resources are all key components of patient-centered care. the principal nurse and stakeholder in healthcare who often interacts with the patient first is most responsible for ingraining core competencies in patient-centered care throughout the organization. all communication systems and all customer service activities are enhanced when the professional training enhances these skills in each of our employees. lastly, with more and more technological advances in the patient-centered care realm, integrating technology into nursing models that focus on developing nurse-patient relationships for improved health is a key attractant for improved patient satisfaction scores. an integrative patient care center designed to bring top-notch care, lifestyle counseling, and proactive health coaching that centers patient-centered care around each patient's unique health history as well as their desired care goals. this is done by providing a coordinated team approach to care delivered by hospitals, doctors' offices, as well as providing community-based services such as integrative medicine, which includes acupuncture, reiki, massage, and herbal therapy. a critical component to patient-centered care delivery is ensuring that our patients receive the same patient-centered care and coaching regardless of the setting they walk into.

3.2. professionalism and ethics

Ethical principles are the building blocks for nursing practice. if the public is to trust nurses to provide compassionate and safe care, nurses must be ethical in their practice. patients must be able to trust those who provide their care. therefore, nurses must have strong values and be responsible in their decision-making that will assist them in their daily ethical dilemmas and provide patients and their families with safe care that is of high quality. this requires nurses to be competent and capable, resulting in the reduction of errors that lead to injury and loss of life. accountability is key for all healthcare providers, as it is important that each one of them willingly accepts responsibility in their patient care practices. this

will lead to clients and other providers working as a team to promote the needs of their clients in a professional and ethical manner.

Professionalism is more than just following ethical principles, as there is a code of ethics that nurses must adhere to. professionalism is the cornerstone of the nursing profession. professionalism also requires integrity and caring, in addition to internal and external values that comply with calls for right actions in ethically challenging situations. professionalism is also a way of life, and nurses never remove their professionalism when they leave the work environment. it is paramount that we apply professional and ethical strategies when providing client care. it has been linked to shorter healing times and decreased illness in clients when they were nurtured in a compassionate approach. there are real advantages to effective functional understanding, expertise, and performance that fit into a hospitality-built measure of wholeness. in this way, we can see that appropriate responses to and knowledge of client care in a holistic, broad aspect is the right thing to do by promoting clients in ethical decision-making.

4. core competencies in dentistry

Dentistry is a regulated clinical discipline and practice that is directed toward the diagnosis and treatment of disease and injury, rehabilitation and replacement of lost or carious tissue, and the promotion of oral health and the education required to work within the scope of professional discipline. core dental competencies are characterized by the practice of fundamental knowledge and technical skills, supported by the patient management expertise necessary to integrate this care within the patient population experience. technical skills resident within this discipline are multifaceted and include an understanding of dental anatomy and physiology, local and general disease processes, operative surgical treatment of these conditions, and the application, clinical deliverability, and maintenance of biologically and clinically based oral health restoration. it also demands comprehensive knowledge of dental materials, including reaction kinetics, stressors, and surface chemistry as it pertains to physical and clinical properties in both the laboratory and oral environment. preventive dentistry has moved well beyond education and into the practice and management of health maintenance. additionally, knowledgeable contemporary dentists must educate and encourage patients to understand this proposition and support ongoing patient compliance with preventive care. inter-professionalism has gained traction in recent years, and many core competencies have been identified and agreed upon by the inter-professional communities. the knowledge and practice of wellness and the importance of proper management of disease processes and their prevention have gained a foothold in general dentistry. however, there continues to be fragmentation in the practice of medicine and the practice of dentistry in some countries, limiting effective patient care. many of the challenges confronting the integration of the practice of dentistry in patient care are in the curricula and how they are taught. there have been considerable advancements and evolution in the practice of individually defined dentistry, the practice of care, and societal expectations of the perfect caregiver. challenges facing dental faculty and administrators as they work to integrate the new recommendations of being comprehensive in care and educating new dental students in the context of new medical curriculums for the practice of postgraduate dental residency training have been identified. infectious diseases of international concern and oral health are interdependent and connected. every dental professional must possess the necessary skills and expertise to diagnose, plan, and execute

such diagnostic capability and do so whether in general practice or in a specialty condition. (clear et al.2020)(sharka et al., 2020)(uribe cantalejo & pardo, 2020)(ghaemi-amiri et al.)(do and warmling2021)

4.1. diagnostic and treatment planning

The diagnostic and treatment planning subsection for the fourth competency in dentistry is organized into the following learning outcomes:

Dentistry is fundamentally a domain medical profession, largely built on diagnosing conditions and treating diseases. the ability to diagnose associated health problems, diseases, or conditions in the most accurate and least burdensome way is an important element. to do so, you have to carry out a thorough process of patient evaluation which, in many cases, also includes making a set of diagnostic tests. by thinking through and listing the competencies involved to carry out the necessary diagnostic planning, we recognize the multifaceted nature of the diagnostic and treatment planning competency. this part also largely stresses the importance of planning treatment from a patient- and, over the short term, oral health-related point of view, rather than from a dental point of view. this process should normally result in being able to describe a treatment plan for the individual patient in general terms, following up with a completed treatment plan after specific treatments have been planned. (benoit et al., 2022)(schwendicke & krois, 2022)(papale et al.2022)(reyes et al.2021)(schwendicke & krois, 2022)

Creation of a comprehensive treatment plan helps ensure the best outcome for the patient. while the treatment typically begins with the pain, infection, or other concern that led the patient to call for an appointment, this step usually provides a point of entry for the creation of an individualized treatment plan, based in large part on the patient's apparent preferences, expectations, values, and considerations of affordability. development of the treatment plan is typically the product of collaboration, typically occurring during conversations largely one-on-one between the patient and the primary care dentist, usually informed by technical experts from the treatment team. techniques employed to identify and state the nature of a particular condition, disease, or disorder, including the use of best practice, rather than personal judgment. overall, the process of choosing among available options and potential courses of action in a clinical care plan may generate grading on the professional's confidence in the likely outcome of particular decisions. a focus on ethical decision-making generally is removed at this level. instead, the performance aspect should focus on a simple understanding of the decision-making process and the potential challenges of conducting a clinical encounter. learning objectives to achieve this outcome should be clear.

4.2. oral health promotion and disease prevention

Effective strategies for oral health promotion and disease prevention

Prevention is fundamental to dentistry, and a dentist should encourage patients to avoid dental caries and periodontal disease through recommended healthy behaviors and help those who have dental caries or periodontal disease to prevent further ill health. an

important responsibility of a dentist is to educate patients about behavior management and lifestyle choices to prevent future illness. (scannapieco & gershovich, 2020)

Research provides significant evidence that patient outcomes can be improved by incorporating those who have been affected by a disease into educational programs, disease management training, and self-help groups. by engaging patients in their care, encouraging and assisting them to make educated choices, a dentist can influence oral health and subsequently improve overall health. communicating effectively with the public and an individual patient is an important requirement for such practice improvements in health care. in addition to an individual's oral health, which can impact one's well-being, future studies should also explore the individual and societal returns of improving oral health. several outreach programs from different dental schools include information promoting the oral-systemic or oral-body health connection with the potential benefits of maintaining oral hygiene, receiving fluoride treatments, and eating a balanced diet or recommendations to reduce consumption of added sugars. future planning and writing from the medical, dental, and nursing professions will help to refine curricular content to facilitate further integration of the message that preventive oral care can reduce the risk for future noncommunicable diseases and improve systemic health. (ailani et al.2021)(mao et al.2022)(alowais et al.2023)

Conclusion: restructuring the oral health workforce. encouraging oral health habits and instilling the concept of prevention as integral to maintaining oral and systemic health in the dental workforce have been ongoing challenges. the toll of caries currently afflicting the us suggests dental educators must be innovative in the way oral health care providers approach prevention in dentistry. the results suggest that in order for dental providers to follow the current best practices in preventive care, evolving dental curricula and continued education questioning continued resistance must be in place. the information that emerged from this study also provides the direction for effectively designing and conducting the larger study and the approach and methods to be applied. the results of the larger study are intended to educate dental faculty, students, practicing dentists, and national think tanks on the content necessary to restructure the american oral health care workforce. the information also is intended to have implications for determining future policy direction related to the provision of oral health care and for improving the delivery and access to caries management for the entire population. since the results indicate a massive caries burden in the united states, providing effective caries risk assessment and management in primary care safety net settings will also be essential to affordably meet the needs of society. (dobrzański et al.2020)(niessen et al.2022)(waliszewski, 2021)(gordon et al.2022)

5. comparative analysis of core competencies

This paper provides a comparative analysis of core competencies for medicine, nursing, and dentistry using core competencies for medical students as an example. by showing core competencies that are similar to the readers, it clarifies the common but distinct scope of training and practice peculiar to these professions. in addition, it sheds light on three professional core competencies. first, it introduces educational systems and environmental structures for developing medical students' core competencies. second, it overviews competency frameworks and discusses their general models. last, it highlights the interconnectivity of relationships designed around patient care. regulatory bodies and

accrediting bodies link with the three educational systems and discuss the implications. it addresses the ability to communicate and interact, the concept of patients and patient care, and professionalism. (li et al.2021)(leslie et al.2021)(vallée et al.2020)(salsberg et al.2021)

Interdisciplinary health care requires that professionals from various disciplines work together in a harmonious, non-hierarchical way. therefore, the health workforce needs to have a common understanding and mastery of core competencies that are required for patient care across the entire health spectrum. core competencies are those that apply to multiple training and practice contexts within a given profession and are essential for high-quality services in interdisciplinary health care. medicine, nursing, and dentistry have each developed their own concept of what these core competencies are. at the same time, there is hope for cooperation and respect for other disciplines, especially in terms of patient care. this chapter will explore core competencies across the spectrum of health training, explaining both the differences and the similarities. there are interconnections on both the training side and the practice side, and by looking at different core competencies, this top-level analysis individually helps to better define the nature of each profession. (blobel et al., 2022)(paterson et al.2020)(flores-sandoval et al.2021)(rosa et al.2022)

5.1. education and training requirements

The ability of current practitioners to demonstrate core competencies is the product of a well-structured and rigorous preparation in an academic and clinical environment. medicine, nursing, and dentistry are learned professions. professionals in these fields obtain a predetermined combination of education, training, and practical experience as a basis for their scope of practice. in medicine, this begins with the completion of an accredited undergraduate medical education program leading to either a doctor of medicine or doctor of osteopathic medicine, and is followed by a period of graduate medical education in a specialty or subspecialty field. in nursing, potential professionals complete a diploma program, an associate of science in nursing degree, or a bachelor of science in nursing degree, and follow with internship, residency, or fellowship or licensure. in dentistry, professionals attain a doctor of dental surgery or doctor of dental medicine degree, and engage in a residency, specialty, or fellowship program or in licensure. (quek et al.2024)(damar, 2022)(thibault, 2020)(bhagat et al., 2020)(sacoor et al., 2020)

Education and training programs for all three of these professions are overseen by specialized accreditation bodies. these bodies set standards for educational programs, test for content mastery, and accredit curricula that will produce graduates with core entry-level competencies. it has also become clear that, given the limited resources of educational programs, professionals at graduation are only beginning what will need to be a lifelong learning journey. health needs and the practice of the profession are evolving much more quickly than curricula can be changed to keep up. because of this, medical education has been designed to develop the professional, while nursing and dentistry also require the development of professional and advanced practitioner master's-level core competencies. more than ever, our healthcare needs professionals who can work with complex, critically ill, and injured patients, interpret diagnostic tests, and conduct procedures. training professionals to perform in this fashion cannot be done in isolation of ongoing, hands-on

clinical training. much of this training is conducted in simulation centers that provide appraisals of the participants on their ability to integrate the learned knowledge, skills, and attitudes competently in a time-sensitive, non-partisan, and collaborative fashion to benefit the patient. (amaral & norcini, 2023)(gaston, 2023)(kayingo et al.2022)

5.2. scope of practice

scopes of practice define day-to-day practice, legal and ethical responsibilities in each field of healthcare are iteratively connected. as an exclusive legal entity in hospital bylaws, scopes of practice guide the interpretative, disciplinary, and individualized procedure of professional expectations. professional roles and responsibilities can be understood. in turn, delineating professional roles brings transparent expectations of professionals to patients and the broader public, which contributes to the making and maintenance of public trust. (feringa et al.2020)(davis et al.2022)(martin et al.2023)(fee et al.2020)

Professional scopes of practice represent the minimum competencies of a professional within a defined setting, staffed by a defined interprofessional team. these competencies may overlap with other professionals, which can lead to significant interprofessional competition in policymaking or the development of graduate programs or postgraduate opportunities that are unique to professionals. however, these competencies are not developed with the intent to reflect an exclusive area of focus. the unique cohort of case scenarios and challenges developed from interviews provides new evidence that illuminates how healthcare professionals work together. regional variations or alternatives in developing a scope of practice were created to meet local professional regulations or variations of local laws, or were led by the negotiation between the professions encouraged by the tri-partied agreement. independent terms of the behavioral competencies for these roles are currently recognized in formal documents. practice responsibilities evolved as healthcare demands, laws, and relationships have also evolved between providers, patients, employers, researchers, and educators. understanding the practical differences between professions is vital, as effective teamwork is only possible when the team members are clear about and understand each member’s contributions, constraints, and professional requirements. (morrell et al., 2020)(jarva et al.2022)(zimmer & matthews, 2022)(king et al.2021)(skantz-åberg et al.2022)

6. conclusion

In conclusion, there are overlaps and important distinctions between core competencies across the professions of medicine, nursing, and dentistry. outlining and serving as another verification that these items are important to perceive, appreciate, and sustain in our teachers, students, and educators. it is beyond time to flip the classrooms or teaching environments to be more about patient care and less about stand-alone care. of note is that these can indeed be received and assessed in a number of different healthcare and educational environments, and that maybe this is the next important study. our results also substantiate that there are nuances to these items that are profession-specific and therefore provide sustained evidence that the professions are interdependent for patient care and their outcomes.

This must be recognized as we continue in the assessment and development efforts of practitioners in all of these disciplines. it was not the goal of this research to definitively establish a future threshold score on which to base high competence in a health

professional, but to simply and cohesively replicate and confirm where the psychiatric and cognitive organizations stand with these concepts as a foundation to shape the future of health care practitioners. the data display where that anchoring stops. as a result, it is recommended that further research and implementation efforts be made to enhance these modules and societal cues, and provide a broad, comprehensive response to society.

6.1. key findings and implications for practice

This literature review identifies several implications that are discussed in detail in preceding sections. the first and most concrete implication of these findings for practice is the need for a number of key stakeholders to become involved in the reform of medicine, nursing, and dentistry educational curricula, and for such reforms to adopt an interdisciplinary systems approach. more specifically, these findings have the potential to affect practice by highlighting the need for health care institutions to offer interprofessional staff competencies, evaluations, appraisals, feedback, continuing education, and professional development tools to practice, and scholars the need to link these core competencies of the health professional workforce to patients' important health status and clinical care outcomes, in order to transition the health professional's focus from outputs and high throughput to outcomes of safe, efficient, and effective patient care.

In so doing, these findings could inform policy on how health care professionals should be accredited, regulated, and recruited to change from solo or hierarchical rather than a team of professionals who set mutual practice goals and work together to achieve them, to those who will work in collaborative and technologically informed interdisciplinary teams to meet the needs of people whose needs span care sectors and geographical divides, and remain functional, person-centered, technically robust, and culturally appropriate. second, the present findings also support the development of a range of new regulatory, accreditation, educational, and audit tools, such as a review of support tools for revising curricula to include systems-relevant core competencies, and practitioner development outcomes patients consider important to improving their clinical practice.

These findings could also underpin new tools for educating and evaluating health care professionals on their ability to provide technical self-regulatory practice and general and disease prevention-based population health patient-centered care. third, the present findings also suggest that regulators have a range of options for addressing the additional knowledge, skills, and attitudes gaps the methodology identified in health professional practice, including strict deficiency-specific conditions, search team professional remedies, the development of training and/or educational professional development tools, and public health practice standards to drive change in the workplace. by articulating the evidence that links them to efficient and effective long-term clinical and health status consumer and public health and public safety patient care differences, this literature review represents other contributions that are directly relevant to practice.

References:

Mcgleenon, e. l. & morison, s. (2021). preparing dental students for independent practice: a scoping review of methods and trends in undergraduate clinical skills teaching in the uk and ireland. british dental journal.

Hattar, s., alhadidi, a., sawair, f. a., alraheam, i. a., el-ma'aita, a., & wahab, f. k. (2021). impact of covid-19 pandemic on dental education: online experience and practice expectations among dental students at the university of jordan. bmc medical education, 21(1), 1-10.

Jimenez, g., spinazze, p., matchar, d., huat, g. k. c., van der kleij, r. m., chavannes, n. h., & car, j. (2020). digital health competencies for primary healthcare professionals: a scoping review. international journal of medical informatics, 143, 104260.

Qiao, j., xu, j., li, l., & ouyang, y. q. (2021). the integration of immersive virtual reality simulation in interprofessional education: a scoping review. nurse education today.

Mertz, e., kottek, a., werts, m., langelier, m., surdu, s., & moore, j. (2021). dental therapists in the united states: health equity, advancing. medical care, 59, s441-s448.

Amin, m., lai, j. y., lindauer, p. a., mcpherson, k., & qari, h. (2021). should dental schools adopt teledentistry in their curricula? two viewpoints. journal of dental education, 85(7), 1238-1244.

Roosevelt, l. k., pietzmeier, s., & reed, r. (2021). clinically and culturally competent care for transgender and nonbinary people: a challenge to providers of perinatal care. the journal of perinatal & neonatal nursing, 35(2), 142-149.

Weber, o., semlali, i., gamondi, c., & singy, p. (2021). cultural competency and sensitivity in the curriculum for palliative care professionals: a survey in switzerland. bmc medical education.

Mcewing, e. (2020). delivering culturally competent care to the lesbian, gay, bisexual, and transgender (lgbt) population: education for nursing students. nurse education today.

Woodland, l., blignault, i., o'callaghan, c., & harris-roxas, b. (2021). a framework for preferred practices in conducting culturally competent health research in a multicultural society. health research policy and systems, 19, 1-11.

Feinberg, i. z., owen-smith, a., o'connor, m. h., ogrodnick, m. m., rothenberg, r., & eriksen, m. p. (2021). strengthening culturally competent health communication. health security, 19(s1), s-41.

Hoffmann, t., bennett, s., & del mar, c. (2023). evidence-based practice across the health professions.

Al-worafi, y. m. (2020). evidence-based medications safety practice. drug safety in developing countries.

Dang, d., dearholt, s. l., bissett, k., ascenzi, j., & whalen, m. (2021). johns hopkins evidence-based practice for nurses and healthcare professionals: model and guidelines.

Subbiah, v. (2023). the next generation of evidence-based medicine. nature medicine.

Abbasi, m., shirazi, m., torkmandi, h., homayoon, s., & abdi, m. (2023). impact of teaching, learning, and assessment of medical law on cognitive, affective and psychomotor skills of medical students: a systematic review. bmc medical education, 23(1), 703.

Day, l. b., miles, a., ginsburg, s., & melvin, l. (2020). resident perceptions of assessment and feedback in competency-based medical education: a focus group study of one internal medicine residency program. academic medicine.

Zhao, w., he, l., deng, w., zhu, j., su, a., & zhang, y. (2020). the effectiveness of the combined problem-based learning (pbl) and case-based learning (cbl) teaching method in the clinical practical teaching of thyroid disease. bmc medical education.

Barteit, s., lanfermann, l., bärnighausen, t., neuhann, f., & beiersmann, c. (2021). augmented, mixed, and virtual reality-based head-mounted devices for medical education: systematic review. jmir serious games, 9(3), e29080.

Krishnamurthy, k., selvaraj, n., gupta, p., cyriac, b., dhurairaj, p., abdullah, a., ... & ang, e. t. (2022). benefits of gamification in medical education. clinical anatomy, 35(6), 795-807.

Claramita, m. & susilo, a. p. (). bridging the communication gap in health care. springer.

Menear, m., girard, a., dugas, m., gervais, m., gilbert, m., & gagnon, m. p. (2022). personalized care planning and shared decision making in collaborative care programs for depression and anxiety disorders: a systematic review. plos one, 17(6), e0268649.

Wojda, t., hoffman, c., jackson, j., conti, t., & maier, j. (2023). ai in healthcare: implications for family medicine and primary care. in artificial intelligence in medicine and surgery-an exploration of current trends, potential opportunities, and evolving threats-volume 1. intechopen.

Varkonyi-sepp, j., freeman, a., ainsworth, b., kadalayil, l. p., haitchi, h. m., & kurukulaaratchy, r. j. (2022). multimorbidity in difficult asthma: the need for personalised and non-pharmacological approaches to address a difficult breathing syndrome. journal of personalized medicine, 12(9), 1435.

Jarva, e., oikarinen, a., andersson, j., tuomikoski, a. m., kääriäinen, m., meriläinen, m., & mikkonen, k. (2022). healthcare professionals' perceptions of digital health competence: a qualitative descriptive study. nursing open, 9(2), 1379-1393.

Wei, h., corbett, r. w., ray, j., & wei, t. l. (2020). a culture of caring: the essence of healthcare interprofessional collaboration. journal of interprofessional care, 34(3), 324-331.

Stokes, f. & palmer, a. (2020). artificial intelligence and robotics in nursing: ethics of caring as a guide to dividing tasks between ai and humans. nursing philosophy.

Chen, q., su, x., liu, s., miao, k., & fang, h. (2021). the relationship between moral sensitivity and professional values and ethical decision-making in nursing students. nurse education today.

Hanssen, i., smith jacobsen, i. l., & skråmm, s. h. (2020). non-technical skills in operating room nursing: ethical aspects. nursing ethics.

Clear, a., clear, t., impagliazzo, j., & wang, p. (2020, october). from knowledge-based to competency-based computing education: future directions. in 2020 ieee frontiers in education conference (fie) (pp. 1-7). ieee.

Sharka, r., abed, h., & dziedzic, a. (2020). can undergraduate dental education be online and virtual during the covid-19 era? clinical training as a crucial element of practical competencies. mededpublish.

Uribe cantalejo, j. c. & pardo, m. i. (2020). fink's integrated course design and taxonomy: the impact of their use in a “basics of dental anatomy” course. journal of dental education.

Ghaemi-amiri, m., mirzapour, a., gholinia, h., & sistani, m. m. n. self-assessment of professional competence and influential factors among dental students. journal of dental education.

Do nascimento, c. f., & warmling, c. m. (2021). service-learning in undergraduate dental education: professional competence for clinical decision-making. european journal of dental education, 25(1), 191-198.

Benoit, b., frédéric, b., & jean-charles, d. (2022). current state of dental informatics in the field of health information systems: a scoping review. bmc oral health.

Schwendicke, f. & krois, j. (2022). data dentistry: how data are changing clinical care and research. journal of dental research.

Papale, f., santonocito, s., polizzi, a., giudice, a. l., capodiferro, s., favia, g., & isola, g. (2022). the new era of salivaomics in dentistry: frontiers and facts in the early diagnosis and prevention of oral diseases and cancer. metabolites, 12(7), 638.

Reyes, l. t., knorst, j. k., ortiz, f. r., & ardenghi, t. m. (2021). scope and challenges of machine learning-based diagnosis and prognosis in clinical dentistry: a literature review. journal of clinical and translational research, 7(4), 523.

Schwendicke, f. & krois, j. (2022). precision dentistry—what it is, where it fails (yet), and how to get there. clinical oral investigations.

Scannapieco, f. a. & gershovich, e. (2020). the prevention of periodontal disease—an overview. periodontology 2000.

Ailani, j., burch, r. c., robbins, m. s., & board of directors of the american headache society. (2021). the american headache society consensus statement: update on integrating new migraine treatments into clinical practice. headache: the journal of head and face pain, 61(7), 1021-1039.

Mao, j. j., pillai, g. g., andrade, c. j., ligibel, j. a., basu, p., cohen, l., ... & salicrup, l. a. (2022). integrative oncology: addressing the global challenges of cancer prevention and treatment. ca: a cancer journal for clinicians, 72(2), 144-164.

Alowais, s. a., alghamdi, s. s., alsuhebany, n., alqahtani, t., alshaya, a. i., almohareb, s. n., ... & albekairy, a. m. (2023). revolutionizing healthcare: the role of artificial intelligence in clinical practice. bmc medical education, 23(1), 689.

Dobrzański, l. a., dobrzański, l. b., dobrzańska-danikiewicz, a. d., & dobrzańska, j. (2020). the concept of sustainable development of modern dentistry. processes, 8(12), 1605.

Niessen, l. c., fontana, m., weyant, r. j., casamassimo, p. s., feine, j., & karimbux, n. (2022). oral health in america 2021: making a case for curricular change. journal of dental education, 86(6), 637-648.

Waliszewski, k. j. (2021). inventing dental continuing education: history of the dental forum--milwaukee.

Gordon, s. c., riedy, c. a., stohler, c. s., & vujicic, m. (2022). trends in scope of practice for oral health care: future transformative effects. jdr clinical & translational research, 7(1_suppl), 31s-39s.

Li, y., ye, h., ye, f., liu, y., lv, l., zhang, p., ... & zhou, y. (2021). the current situation and future prospects of simulators in dental education. journal of medical internet research, 23(4), e23635.

Leslie, k., moore, j., robertson, c., bilton, d., hirschkorn, k., langelier, m. h., & bourgeault, i. l. (2021). regulating health professional scopes of practice: comparing institutional arrangements and approaches in the us, canada, australia and the uk. human resources for health, 19, 1-12.

Vallée, a., blacher, j., cariou, a., & sorbets, e. (2020). blended learning compared to traditional learning in medical education: systematic review and meta-analysis. journal of medical internet research, 22(8), e16504.

Salsberg, e., richwine, c., westergaard, s., martinez, m. p., oyeyemi, t., vichare, a., & chen, c. p. (2021). estimation and comparison of current and future racial/ethnic representation in the us health care workforce. jama network open, 4(3), e213789-e213789.

Blobel, b., oemig, f., ruotsalainen, p., & lopez, d. m. (2022). transformation of health and social care systems—an interdisciplinary approach toward a foundational architecture. frontiers in medicine.

Paterson, c., bacon, r., dwyer, r., morrison, k. s., toohey, k., o'dea, a., ... & hayes, s. c. (2020, december). the role of telehealth during the covid-19 pandemic across the interdisciplinary cancer team: implications for practice. in seminars in oncology nursing (vol. 36, no. 6, p. 151090). wb saunders.

Flores-sandoval, c., sibbald, s., ryan, b. l., & orange, j. b. (2021). healthcare teams and patient-related terminology: a review of concepts and uses. scandinavian journal of caring sciences, 35(1), 55-66.

Rosa, w. e., de campos, a. p., abedini, n. c., gray, t. f., huijer, h. a. s., bhadelia, a., ... & downing, j. (2022). optimizing the global nursing workforce to ensure universal palliative care access and alleviate serious health-related suffering worldwide. journal of pain and symptom management, 63(2), e224-e236.

Quek, l. h., tan, a. j., sim, m. j., ignacio, j., harder, n., lamb, a., ... & liaw, s. y. (2024). educational escape rooms for healthcare students: a systematic review. nurse education today, 132, 106004.

Damar, m. (2022). what the literature on medicine, nursing, public health, midwifery, and dentistry reveals: an overview of the rapidly approaching metaverse. journal of metaverse.

Thibault, g. e. (2020). the future of health professions education: emerging trends in the united states. faseb bioadvances.

Bhagat, v., hoang, h., crocombe, l. a., & goldberg, l. r. (2020). incorporating oral health care education in undergraduate nursing curricula-a systematic review. bmc nursing.

Sacoor, s., chana, s., & fortune, f. (2020). the dental team as part of the medical workforce during national and global crises. british dental journal.

Amaral, e. & norcini, j. (2023). quality assurance in health professions education: role of accreditation and licensure. medical education.

Gaston, p. l. (2023). higher education accreditation: how it's changing, why it must.

Kayingo, g., gordes, k. l., kulo, v., & cawley, j. f. (2022). accreditation in the health professions: implications for physician assistant education. the journal of physician assistant education, 33(4), 318-324.

Feringa, m. m., de swardt, h. c., & havenga, y. (2020). registered nurses' knowledge, attitude and practice regarding their scope of practice in botswana. health sa gesondheid (online), 25, 1-10.

Davis, a., lembo, t., laurie, e., mutua, e., loosli, k., nthambi, m., ... & mmbaga, b. t. (2022). how public health crises expose systemic, day-to-day health inequalities in low-and-middle income countries: an example from east africa. antimicrobial resistance & infection control, 11(1), 34.

Martin, g., chew, s., mccarthy, i., dawson, j., & dixon-woods, m. (2023). encouraging openness in health care: policy and practice implications of a mixed-methods study in the english national health service. journal of health services research & policy, 28(1), 14-24.

Fee, a., muldrew, d., slater, p., payne, s., mcilfatrick, s., mcconnell, t., ... & hasson, f. (2020). the roles, responsibilities and practices of healthcare assistants in out-of-hours

community palliative care: a systematic scoping review. palliative medicine, 34(8), 976-988.

Morrell, b. l. m., eukel, h. n., & santurri, l. e. (2020). soft skills and implications for future professional practice: qualitative findings of a nursing education escape room. nurse education today.

Zimmer, w. k. & matthews, s. d. (2022). a virtual coaching model of professional development to increase teachers' digital learning competencies. teaching and teacher education.

King, r., taylor, b., talpur, a., jackson, c., manley, k., ashby, n., ... & robertson, s. (2021). factors that optimise the impact of continuing professional development in nursing: a rapid evidence review. nurse education today, 98, 104652.

Skantz-åberg, e., lantz-andersson, a., lundin, m., & williams, p. (2022). teachers' professional digital competence: an overview of conceptualisations in the literature. cogent education, 9(1), 2063224.