**Crisis in Competency: A Defining Moment in Nursing Education**

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**Abstract**

Advancing the mission of nursing education for a future we cannot yet fully conceive is a daunting task. The rapidly changing healthcare landscape is an exciting world of innovation, digital transformation, and accelerated knowledge creation that offers hopeful, and infinite possibilities to improve patient care, safety, and outcomes. New data suggest a continuing decline in the initial preparedness of new nurses at a time when preparation is most needed. We must adapt and embrace pedagogies relevant to a new generation of learners. In this article, we first describe the [digital disruption](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Disruption) informed by innovation moving at warp speed, catalyzing necessary and long overdue change not only in healthcare, but in how education is conceptualized and delivered. Leading and promoting [the paradigm shift](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Shift) needed for this change is not discretionary as nurse educators strive to enhance the [competency of new registered nurses](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Competency). Leaders in nursing education have initiated efforts to appraise the state of the academy and find approaches to lessen the transition gap, such as competency-based education. We discuss current trends at this defining moment in nursing education, and strategies to [leverage the tipping point](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Point) as educators mobilize to prepare future nurses for successful collaborative artificial intelligence-infused, clinical practice.

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The rapidly changing healthcare landscape is an exciting world of innovation, digital transformation, and accelerated knowledge creation that offers hopeful, and perhaps infinite possibilities to improve patient care, safety, and outcomes. The exponential rate of progress in Artificial Intelligence (AI) and machine learning, along with advances in genetics, genomics, and dramatic enhancements in wearable and implanted sensors, are pressurizing and shifting tectonic plates in every industry ([Marx & Padmanabhan, 2021](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Marx)). In healthcare, the changes are massive and, in many instances, long overdue. Reforms include the move from volume to value; from process to a focus on quality and outcomes; from episodic to life cycle care; and from acute care to population health. This new world order shift from sick care to health care generates continued and critical opportunities for nurses to play a vital role in patient safety, advocacy, education, and leadership, regardless of the setting and focus of care.

In this article, we first describe the digital disruption informed by innovation, and the paradigm shift needed for change, particularly to address the continued decline in initial competency of new registered nurses. We discuss current trends at this defining moment in nursing education, and strategies to leverage the tipping point as educators mobilize to prepare future nurses.

# ****Digital Disruption****

The worlds of big data, discovery, and innovation are moving at warp speed, catalyzing necessary and long overdue changes. Changes are happening not only in healthcare, but in how education is conceptualized and delivered, creating opportunities to live and learn in a whole new way ([Carroll, 2021](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Carroll); [Remtula, 2019](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print" \l "Remtula); [Thomas & Rogers, 2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Thomas); [Weston, 2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Weston)). Klaus Schwab ([2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Schwab)), Executive Director of the World Economic Forum, has named this epoch of AI, digitization, and biotechnological advances as "The Fourth Industrial Revolution." Schwab ([2018](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Schwab8)) admonishes that many of our current education systems are already disconnected from the needed competencies to thrive in today's workforce and that the rate of technological innovation and change threatens to widen the gap between education and the demands of practice if we do not respond.

Advancing the mission of nursing education for a future that we cannot yet fully conceive is a daunting task, but leading and promoting change is not discretionary. To understand digital disruption, the impact on patient care, and the implications for education, we need only look at the worldwide evolution of care delivery already enabled by technology and supported by AI. Digital tools have become ubiquitous and invaluable partners in care; from sensors providing critical patient data, to the Internet of Things (IoT) connecting devices and sensors, to entire hospitals without patients, where interprofessional healthcare teams remotely monitor and care for individuals with complex health challenges in their homes ([Allen, 2018](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Allen)). These advances provide a glimpse at the present-day, seemingly futuristic, and evolving skills and competencies necessary to harness technology and enhance the quality of care.

Although healthcare has been relatively slow to integrate robotics, that is rapidly changing. With an aging population, an aging workforce, and a global nursing shortage, the use of robots to perform routine tasks has captured the interest and financial backing of the Japanese government, who generously support technology research that might decrease the high demand for nurses ([Carroll, 2021](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Carroll)). It is estimated that by 2025 there will be 1.5 billion commercial and industrial robots and that by 2030 industrial robots will replace 50 to 70% of existing jobs ([King, 2016](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#King)).

While robots will never replace the registered nurse, they can already support care, follow algorithms, suggest plans of action supported by AI, and perform routine tasks. The Duke University schools of nursing and engineering have previously revealed that Rethink Robotics' Baxter robot could accomplish more than twenty simulated nursing tasks ([Carroll, 2021](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Carroll)). In The Future is Faster Than You Think, Diamandis and Kotler ([2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Diamandis)) remind us that emerging technology can not only promote optimal patient care, but allows us as educators to create an infinite range of immersive, multi-sensory, experiential teaching-learning environments. What an exciting and engaging way to prepare the next generation of nurses!

**The Paradigm Shift**

Densen ([2011](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Densen)) accurately predicted that by 2020, medical knowledge would double every 73 days. Today, awash in accelerated knowledge creation and sweeping innovation, professionals in the healthcare and higher education find themselves facing isomer-like challenges to provide value, positive outcomes, access, and affordability for their consumers--or become obsolete ([Kavanagh, 2019](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Kavanagh9)). This opportunity necessitates a paradigm shift in education that moves us from cohort-based teaching and learning to personalized adaptive learning (AL), focused not on time but competency. The Landscape of Change paradigm shift can be visualized in the [Figure 1](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Figure1).

**Figure 1. Landscape of Change**

|  |  |
| --- | --- |
| Healthcare | Education |
| Sick care focused | Healthcare | Cohort Based | Personalized |
| VolumeFee for Service | ValuePay for Performance | Static- One size fits all | Adaptive |
| Acute care,Episodic focus | Continuum of Care,Life focus | Time-based | Competency-basedTime-variable |
| Process & Delivery | Quality & Outcomes | Analog | Distributed learning |
| Unclear Cost | Cost Transparency | Content-focused | Brain-based neuroscience |

Preparing future nurses as knowledge workers is the required and essential pivot...

Adaptive learning (AL) platforms deliver customized instruction to students based on past knowledge and adjust delivery of content based on distinct preferences and variances in knowledge acquisition ([Hinkle, Jones, & Saccomano, 2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Hinkle); [Sharma, Doherty, & Dong, 2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Sharma)). Preparing future nurses as knowledge workers is the required and essential pivot, supported by technology and underpinned by AI. The burgeoning world of AI is positive, disruptive innovation and creates the ability for educators to envision and design individualized AL experiences that will accelerate the pace of learning and potentially, knowledge use ([Hinkle, Jones, & Saccomano, 2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Hinkle); [Samadbeik et al., 2018](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print" \l "Samadbeik)).

Strategies such as spaced learning, bridging, and chunking of information are excellent examples of evidence-based tactics to decrease cognitive load and promote memory and learning ([Kelter, Steward & Zamis, 2019](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Kelter)). Yet, despite the substantial evidence that brain-based, active learning in educational design leads to students engaged in deeper thinking and learning, the move to consistently apply cognitive neuroscience to education remains in the nascent phase of adoption ([Carr & O'Mahony, 2019](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Carr); [Deslauriers, McCarty, Miller, Callaghan, & Kestin, 2019](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Deslauriers); [Pilcher, 2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Pilcher); [Remtula, 2019](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print" \l "Remtula)). The thought that these innovative technologies will guide educational transformation assumes that educators will accept and use the evidence, and these technologies, to engage learners.

Research findings have indicated that educators do not quickly accept new technologies. Even when they do, they are used to support prevailing teaching practices, rather than to develop new pedagogies ([Grainger, Liu, & Geertshuis, 2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Grainger)). In just a few short years, the digital revolution fueled by AI will be commonplace; but will we be ready? The time is now to embrace digital disruption, including immersive learning technologies that can transform education.

Virtual reality (VR), augmented reality (AR), and mixed reality (MR) technologies enable users to interact with and control virtually displayed components within virtual and physical environments ([Carroll, 2021](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Carroll); [Remtula, 2019](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print" \l "Remtula); [Weinstein, Madan & Sumeracki, 2018](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Weinstein)). These rich, immersive technologies will continue to evolve as powerful and essential tools in clinical education. This shift requires a holistic view of education and pedagogies that empower both students and faculty as life-long learners. Education scholar Dennis Shirley ([2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Shirley)), author of The New Imperatives of Educational Change, reminds us of the power of the present moment. There is cause for hope and optimism, but past success does not entitle us to future success; we must plan for success and move quickly.

# ****Declining Initial Competency of New Registered Nurses****

Jim Collins ([2001](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Collins)), famed author of Good to Great, cautions that if success is ones' goal, one must first ask, what are the brutal facts - not what are our opinions, but what are the facts? If we do not confront the facts, they will surely rise-up and confront us. While we continue to appreciate the many in-roads and tangible signs of excellence in the evolution of teaching and learning, from flipped classrooms to simulation and standardized patients; from monologue to dialogue and Socratic method; to makerspaces and virtual learning, there remains substantive work yet to be considered ([Forneris, 2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Forneris)).

As educators, we must address the brutal facts of failing to prepare graduates as residency-ready and confront the issue that the academic, or preparation-to-practice gap, is increasing despite current efforts. While we continue to explore and research how best to prepare nurses for practice, Ironside ([2008](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Ironside)) conceded long ago that practice is evolving faster than education can respond. Our current educational model, developed in the 19th century, is obsolete ([Gidley, 2016](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Gidley)). Gidley ([2016](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Gidley)) argued that we are unable to solve tomorrow's problems with yesterday's thinking.

We suggest that tomorrow's problems are already here. Transforming nursing education to meet the technologically savvy, digital native students of today requires embracing the capacity of technology to transform education ([Clark, Glazer, Edwards, & Pryse, 2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Clark)). We must shift to a post-formal pedagogy to prepare students for the higher-order thinking and knowledge work required for today's clinical practice ([Forneris & Fey, 2018](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Forneris8)).

New data suggest that we are continuing to lose ground in the preparedness of New Graduate Registered Nurses (NGRNs) at a time when it is needed most. Initial competency of NGRNs is declining at an alarming rate, slightly exacerbated by the impact of the COVID-19 pandemic as many traditional in-person clinical and classroom experiences have been adapted or abbreviated. In her seminal work, del Bueno ([2005](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Bueno)) shared aggregate national data on initial NGRN competency for all hospitals utilizing Performance Based Development System (PBDS), an assessment del Bueno designed to identify growth opportunities in critical thinking and provide insight into the thought processes of the NGRN. Del Bueno ([2005](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Bueno)) reported that 35% of NGRNs assessed as safe or in the acceptable range. Kavanagh and Szweda ([2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Kavanagh7)) documented a decline in initial competency with assessments of more than 5,000 NGRNs from 2011-2015, from more than 140 nursing programs in 21 states, with 23% scoring in the acceptable range for a novice new nurse. Current aggregate assessment data utilizing the same PBDS assessment collected between 2016-2020 on more than 5000 NGRNs indicate that 14% of them demonstrated entry-level competencies or readiness for residency, and 2020 YTD graduate data (n=1222) from 200 unique schools of nursing display an even more disturbing decline, with only 9% of NGRNs in the acceptable competency range for a novice nurse.

A decade of PBDS assessments representing more than 10,000 NGRNs reveals an alarming year-over-year decline in initial competency. PBDS assessments are administered post-hire but prior to orientation to ensure that results are indicative of the time before patient care initiation and that orientation and residency are not cofounding variables in the assessment results. Although the assessment is only one data point, it captures a snapshot of NGRN initial competency after graduation and, in most instances, post successful completion of the NCLEX.

The PBDS assessment is a valid and reliable tool ([del Bueno, 2001](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Bueno1)). The tool has not changed over time, other than updating clinical scenarios to reflect modern equipment and technology. The subjects in data collection from 2016-2020 included 60% holding a BSN; 35% an ADN; 1% a diploma; and 1% were MSN graduates. Consistent with earlier findings from del Bueno ([2005](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Bueno)) and Kavanagh and Szweda ([2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Kavanagh7)), there was no difference in assessment ratings regardless of the type of nursing program. Site-specific aggregated PBDS assessment data is depicted in the [Table](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Table1). Aggregate data (2016-2020) indicated 14% of NGRNs assessing in the acceptable range; 29% failing to recognize urgency or a change in a patient's status; and 57% demonstrated opportunities for growth in the management of patient problems, including selecting the proper nursing interventions, communication of relevant data to the Licensed Independent Professional (LIP) and rationale for nursing actions.

The 2020 aggregate PBDS data includes an *n* of 1222, with less than 10% assessing in the acceptable range. When further subdivided to isolate the April/May 2020 graduates who experienced the impact of limited clinical experiences (sample size of 626), 7% assessed in the acceptable range for a novice nurse and 40% assessed in the lowest domain, failing to recognize urgency or a change in a patient's condition. In sum, evidence supports a continued decline in the competency of HGRNs.

**Table 1. Site-Specific PBDS Assessment Data**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year | Sample Size | Opportunity for Growth | Opportunity for Growth | Acceptable |
|  |  | Recognizing Urgency / Change in Patient Condition | Problem Management |  |
| 2015 | *n* =1225 | 23% | 54% | 23% |
| 2016 | *n* =983 | 20% | 59% | 21% |
| 2017 | *n*=970 | 24% | 59% | 17% |
| 2018 | *n* =1047 | 31% | 55% | 15% |
| 2019 | *n* =1015 | 35% | 55% | 11% |
| 2020 YTD | *n* =1222April/May/Aug NGRNSubset n=726 | 38%39% | 53%53% | 9%8% |

 **Leveraging the Tipping-Point**

The crisis in initial competency of NGRNs must not become a portent of patient safety challenges and NGRN success. In a day when we can transplant a face, a heart, or a uterus, we can certainly design and create processes and grow cultures where patients come first and safety always is a living breathing testament to our great profession's commitment to patients and nurses alike. Whether one's primary role is in academe or practice, five critical sub-narratives demand our reflection and re-evaluation. These sub-narratives include an acceptance of the chasm between academe and practice and the resultant challenge deemed inherent and inevitable in transition-to-practice (TTP); accountability for success and what NGRN residency-readiness requires; speed of learning, education transformation, and moving innovations to scale; the impact of digital disruption, and finally, the divide and inequality in education.

n this, the International Year of the Nurse and Midwife ([WHO, 2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#WHO)), the challenges before us are vast and complex. However, we argue that these challenges are ours to embrace. This is our moment, our time! As nurse leaders, we have the power to either build excitement and anticipation about change, about ongoing and much-needed education transformation, or potentially contribute to stress, anxiety, and even disengagement. We need only look to the past ten months to marvel and celebrate the victories, the quick pivots in unchartered territory. Most academic programs moved from in-person to virtual learning, from in-person clinical to virtual simulations mapped to the curricula within just a few days! Technology was readily incorporated and enhanced remote student classroom experiences introduced as the new normal in instructional design. Agility by fire, and yet we prevailed!

Despite each of these successes, the COVID-19 pandemic added to the chasm in NGRN preparedness. While no one can predict the longitudinal consequences of the pandemic with certainty, there is no question that healthcare and education responded in a profound and remarkably swift way. The demonstration of agility in a time of crisis dissolves long-held assumptions about how much time progress takes ([Berwick, 2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Berwick)), particularly in higher education. The success of an agile and thoughtful response in a time of crisis, albeit not perfect, brings honor to us all and hope for the future.

Leaders in nursing education have initiated efforts to appraise the state of the academy and find approaches to lessen the transition gap. Nursing education reform is indebted to the iconic work of Dr. Patricia Benner, whose contributions from the Carnegie Foundation Preparation for the Professions research fueled the celerity of education reform ([Benner, Sutphen, Leonard, & Day, 2010](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Benner)). In the past few years, we have seen increasing attention addressing the development of critical thinking, clinical judgment, and clinical reasoning in our pre-licensure nursing students. Significant trends in higher education that foster higher-order thinking include moving from structured, cohort-based education to a personalized, individualized, adaptive learning approach, such as smart book technology and virtual on-screen simulation like NovEx, that adapts information to the learner's progression ([Santos, 2013](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Santos); [Hooper-Kyriakidis, Ahrens, & Benner, 2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Hooper-Kyriakidis); [Benner, 2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Benner0)).

Another major trend gaining traction is the severing of time, measured in credit hours, from learning and competency. In a traditional academic environment, programs of study are delineated by credit hours that equate to time spent either in class or online. The credit hour, initially conceived a century ago by the Carnegie Foundation to describe educators eligible for pensions, grew into an easily understood and adopted method to track academic progression, financial aid, and faculty workload. However, no evidence exists that the credit hour and time spent in class or online equates with learning ([Laitinen, 2012](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Laitinen); [Kirst & Stevens, 2015](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Kirst); [Robinson, 2018](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Robinson)). The 2015 Carnegie Foundation report on the 'Carnegie Unit,' concluded that although flawed, the credit hour remains a necessary model. Laitinen ([2012](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Laitinen)) urged that the credit hour is negatively impacting our nation's workforce and that, as the cost of education soars, federal policy needs to shift from paying for and valuing time to paying for and valuing learning.

Competency-based education (CBE) is gaining momentum buoyed by the 2013 Department of Education Experimental Sites program success, which allowed select institutions to grant credit through competency-based assessments ([Cunningham, Key & Capron, 2016](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Cunningham); [Silva, White & Thomas, 2015](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Silva)). Although CBE and direct assessment are in the earliest phase of development, the transition from time-based to competency-based assessment is a movement whose time has come ([Johnson, 2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Johnson); [Josiah Macy Jr. Foundation, 2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Macy); [Robinson, 2018](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Robinson)). To date, the United States Department of Education has granted approval for almost 200 universities to offer some form of CBE, and the Higher Learning Commission has embraced CBE as the future of academic preparation ([Nodine, 2016](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Nodine); [Silva et al. 2015](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Silva)).

The magnitude and significance of Benner's ([2010](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Benner)) call for radical transformation and her innovative work to elucidate the current science of teaching and learning has been compared to Abraham Flexner's report ([1910](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Flexner)) on medical edition. Benner's findings spurred leaders from national nursing organizations to examine the current state of academia and initiate much needed change efforts. The National League for Nursing's (NLN) strategic educational resources, the National Council of State Boards of Nursing's (NCSBN) work to design a psychometrically sound and legally defensible Next Generation NCLEX ([Dickinson, Haerling & Lasater, 2019](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Dickinson)) to assess higher-order thinking better and thus, preparedness for practice of new graduates, and more recently, the American Association of Colleges of Nursing's (AACN) call for reformation of nursing education are substantial attempts to mitigate the NGRN competency gap.

The AACN Vision for Academic Nursing ([2019](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#AACN9)) white paper addresses fundamental academic failings. It proposes an action plan to meet the needs of a dynamic, global society and a diverse patient population ([AACN, 2019](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#AACN9)). The report identifies several trends and changes that inform nursing education. These include a changing higher education climate; competency-based education; learners who hail from diverse backgrounds and generations; advances in neuroscience that have resulted in the development and adoption of innovative educational technologies; a rapidly evolving healthcare system with a shifting workforce; an aging faculty; and the ongoing evolution of regulatory bodies ([AACN, 2019](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#AACN9)). The overarching goals described in the AACN vision statement align with the changing healthcare landscape and accountability for residency-ready graduates. Strengthening academic-practice partnerships, accelerating diversity and inclusion through holistic admission policies, improved faculty development through a greater understanding of the neuroscience of learning, efficient use of resources, and competency-based education and assessment are central to these recommendations.

While the recommendations are intended to be realized as a compendium, it will take time to fully engage the academic community in these initiatives. Innovative thinking and approaches to preparing the nursing workforce of tomorrow are critical if nursing education is to meet the public demands for graduates to be able to **know and do** the work of nursing ([AACN, 2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#AACN)). The Essentials: Core Competencies for Professional Nursing Education, the framework proposed to supersede the current BSN, MSN, and DNP Essentials documents, is informed by the lived experiences of nursing practice where there is a fusion of knowledge and action ([AACN, 2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#AACN)).

The foundational elements of the new recommendations are built upon nursing as a discipline, the underpinning of a liberal arts education, and competency-based education principles. While considering the vital preparation for a residency-ready graduate, additional elements have shaped the proposed essentials document. These include diversity equity and inclusion, spheres of care, academic partnerships, systems-based practice, technology and informatics, consumerism, and career-long learning ([AACN, 2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#AACN)). The goal is to prepare a generalist who can practice in any setting through mastery of competencies. Scaffolding and measuring these competencies will require nurse educators to foster higher-order thinking. Common competencies for NGRNs will demonstrate the effectiveness of educational programs and assure the public of a graduate's capability.

Advances in teaching-learning technologies and strategies, shifting learning styles of students, and the push for outcome-based education all point to the necessity of competency-based education ([AACN, 2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#AACN)). Public demand for accountability in the health professions is propelling the shift toward CBE ([Englander et al., 2013](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Englander)). Nevertheless, there exists no common taxonomy for domains of competence for health professions. Methods to best measure competency in nursing education need further exploration and a design that will challenge students and prepare them for practice. Rigorous quantitative and qualitative research must be conducted to determine the reliability and validity of CBE ([Gravina, 2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Gravina)).

Bridging the gap between CBE, practice, and implementation of knowledge, skills, and attitudes, has been explored by implementing Entrustable Professional Acts (EPAs) in medical education ([Wagner, Dolansky, & Englander, 2018](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Wagner). Entrustable Professional Acts are units of professional practice, defined as tasks or responsibilities, to be entrusted to the unsupervised execution by a trainee once they have attained a specific competence. They are not an alternative for competencies but a way to translate competencies into clinical practice ([Cate, 2016](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Cate)). Similar to the revised Healthcare Quality Competency Framework that guides academic institutions to reduce variability in quality competencies and supports workforce readiness and effectiveness in healthcare quality ([NAHQ, 2020](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#NAHQ)), sequencing domains of competence of increasing difficulty, risk, or sophistication can serve as a practical approach to integrate competencies in nursing.

Competency-based education will require novel approaches to enhance nursing education using technology. Integrating technology into nursing curricula improves efficiency and enhances student experiences, accomplished primarily through active learning and interactive learning designs ([Luo &Yang, 2018](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Luo)). The development of augmented, mixed, and virtual reality simulation offers an opportunity for focused application-based learning ([Fertleman et al., 2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print" \l "Fertleman)). Foronda and colleagues ([2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Foronda)) argued that using these realities may influence the length of the learning curve, reduce practice time, and enhance learning outcomes ([Foronda et al., 2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Foronda)). Augmented or mixed reality tools such as Microsoft HoloLens®, and virtual simulations such as vSims® created through a partnership with Laerdal®, Wolters Kluwer Health®, and the NLN have already been integrated into nursing programs to augment existing teaching-learning practices.

AI is being used to create virtual patients (VP) scenarios that improve interactions with patients, the interprofessional team, and nursing colleagues. These scenarios enhance self-efficacy and confidence in effective communication skills. Academe must support the technological and digital transformation to foster student success, improve the TTP outcomes, and provide foundational and advanced faculty development that fosters the adoption of a new educational paradigm.

Finally, the requirement to strengthen interprofessional educational opportunities intensifies the prerequisite of a common language for outcomes for each discipline. The Joint Commission ([2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Joint)) has cited communication failures among interdisciplinary team members as the most common root cause of sentinel events and pronounces the inability to communicate and work effectively in teams as a significant threat to patient safety. Foundational competencies commonly understood by all professionals will support appropriate role expectations and predictable outcomes and, arguably, improved teamwork and collaboration.

# ****Conclusion****

The 2010 Institute of Medicine report argued that entry-level nurses must be able to efficiently transition from their academic preparation to a range of practice environments, with an increased emphasis on community and public health settings ([IOM, 2010](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#IOM)). Ten years have elapsed without discernable change in our outcomes, based upon quantifiable outcomes of preparedness for practice or residency. Given the COVID-19 pandemic, one could contend that we lost ground. Despite advances in technology, in practice, and accessibility, nursing education struggles to own the outcomes of the graduate nurse.

The initiatives proposed by AACN may provide an opportunity to re-examine our efforts. Nurse educators must mobilize to prepare future nurses for successful, collaborative, AI-infused, clinical practice. The call for transformation is more robust because of the pace of change and obvious gaps that can no longer be tolerated. We must adapt and embrace pedagogies relevant to a new generation of learners and a new world order replete with quantum leaps in technology, addressing each student as a unique learner ([Hopkins et al. 2018](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Hopkins); [Presti & Sanko, 2019](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Presti)). Risling ([2017](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Risling)) warns that the evolving technological advances will necessitate responses and navigational shifts, unlike any that we have ever negotiated. The time is now. We have an unprecedented opportunity to become architects to advance nursing education in a digital age!

Ludvik reminds us that *the requisite demonstration of whether learning can be applied in "real-life" contexts requires collaboration with the professionals who will either hire the students or admit them into ongoing professional or academic degree programs* ([2018](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Ludvik), p. 13). Whether our primary role is practice or academe, we are called to evolve from the perspective that an educator's job is just one part of the whole, to the belief that the job is a system. Practice and academe must work together as a system supporting student success and that of the eventual NGRN, a collaborative belief long held but infrequently realized. Almost five decades ago, Myrtle Aydelotte ([1972](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Aydelotte)), founding Dean and Professor at the University of Iowa College of Nursing, shared: "What is needed is a reexamination of nursing leadership and a new thrust forward. Nursing leadership must reorient itself and restructure itself in such a way that nursing education and practice are inseparable, are symbolic, and are united in purpose" ([1972](https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-26-2021/No1-Jan-2021/Crisis-in-Competency-A-Defining-Moment-in-Nursing-Education.html?css=print#Aydelotte), p.23). That defining moment is now.

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