2022 STATE OF MARYLAND'S HEALTH CARE WORKFORCE REPORT

Task Force on Maryland's Future Health Workforce

August 2022

Maryland
Hospital Association

TABLE OF CONTENTS

TASK FORCE MEMBERS FISCAL YEAR 2022

Edward Lovern, Chair
President & Chief Executive Officer
Ascension Saint Agnes
Baltimore

Veronica Ford Asmond
Vice President, Human Resources
University of Maryland Capital Region Health
Largo

Christopher Bumbaugh
Vice President, Human Resources
Frederick Health
Frederick

Quinn Collins
Senior Director, Nursing Strategy & Integration
Johns Hopkins Health System
Baltimore

Bonnie DiPietro
Vice President, Operations
Maryland Patient Safety Center
Elkridge

Jill Donaldson
President
MedStar Harbor Hospital
Baltimore

Demile Gilmore
Vice President, Human Resources
MedStar Franklin Square Medical Center & MedStar Harbor Hospital
Baltimore

Kathleen Chavanu Gorman
Executive Vice President & Chief Operating Officer
Children's National Hospital
Washington DC

Celia Guarino
Chief Nursing Officer
Holy Cross Health
Silver Spring

Brendan Johnson
Chief Human Resources Officer
Adventist HealthCare
Gaithersburg

Sharon Kurfuerst
System Chief Operating Officer & President
ChristianaCare, Union Hospital
Elkton

Cindy Lunsford
Executive Vice President & Chief Operating Officer
TidalHealth Peninsula Regional
Salisbury

Manuel Ocasio
Chief Human Resources Officer
Luminis Health
Annapolis

Dione Powell
Vice President, Human Resources Employee & Labor Relations
The Johns Hopkins Health System
Baltimore

Karen Robertson-Keck
Vice President, Human Resources
Sheppard Pratt Health System
Baltimore

Lisa Rowen
System Chief Nurse Executive
University of Maryland Medical System
Baltimore

Leslie Simmons
Executive Vice President & Chief Operating Officer
LifeBridge Health
Baltimore

Dean Teague
President & Chief Executive Officer
CalvertHealth Medical Center
Prince Frederick

Kendra Thayer
Senior Vice President Patient Care Services, Chief Operating Officer & Chief Nursing Officer
Garrett Regional Medical Center
Oakland

TASK FORCE GOALS

Increase sustainable workforce capacities and cultivate a diverse workforce through a stronger talent pipeline, enabling hospitals to hire, retain, and grow while supporting the health of their communities.

EXECUTIVE SUMMARY

Maryland
Hospital Association

WORKFORCE CRISIS

Maryland hospitals face the most critical staffing shortage in recent history. MHA's Executive Committee launched the Task Force on Maryland's Future Health Workforce in Fall 2021 to propose a strategy to build a sustainable health care workforce. **The Task Force agreed to focus initial recommendations on nurses and nurse extenders.** However, members recognized growing the pipeline of allied health professionals and other health care workers must be addressed in the near term.

Maryland Health Care Workforce Crisis By the Numbers

86,555
active licensed registered nurses in MD [1]

1 in every 4 hospital nursing positions is vacant [2]

Growing Shortfall of Nurses:[1]
- 13,800 additional RNs needed by 2035
- 9,200 additional LPNs needed by 2035

62% of surveyed Maryland Board of Nursing licensees and certificate holders thought about leaving nursing recently [3]
- Feeling overworked, burned out, unappreciated was #1 reason for nearly **40%** of respondents

TASK FORCE CHARGE

To provide strategic thought leadership on the future of the health care workforce. The Task Force will help MHA explore health care workforce challenges, identify future trends, recommend both public policy changes and operational adjustments, and help raise awareness of workforce issues among the health care field and external influencers.

Inquiry

- Initiated quarterly workforce surveys and widely disseminated results
- Curated current policy, educational, and strategic initiatives
- Facilitated pathway for acute care focused CNA training
- Convened focus groups and completed study on nursing supply and demand projections

Learnings

- Across the board recruitment and retention challenges
- Unsustainable staffing costs
- Lack of workforce diversity
- Workplace violence and trauma and stress related to the pandemic
- Inefficient and burdensome licensure processes and requirements

The Task Force identified three key challenges:

- **High Staff Turnover**
- **Shifting Care Delivery Models**
- **Insufficient Nursing Pipeline**

FORMULATION OF RECOMMENDATIONS

High Staff Turnover

Shifting Care Delivery Models

Insufficient Nursing Pipeline

Develop comprehensive list of action items to address leading workforce challenges identified by members and informed by labor demand and projected supply

Categorize by Key Actors:
MHA, MHA Partners, Policymakers

Assess:
Complexity, Impact, Timing

Action items were grouped into 4 high level recommendations of the Task Force

Expand Maryland's Workforce Pipeline

Remove Barriers to Health Care Education

Retain the Health Care Workforce

Leverage Talent with New Care Models

RECOMMENDATIONS FOR **HOSPITALS AND HEALTH SYSTEMS**

Expand Maryland's Workforce Pipeline

1. Partner with community-based agencies and educational institutions for local workforce development (include focus on veterans, individuals with disabilities, and other underrepresented populations)
2. Collaborate to ensure optimal implementation of acute care CNA pathway

Remove Barriers to Health Care Education

1. Commit to make additional clinical training sites available to nursing schools at no cost
2. Explore opportunities to increase qualified faculty and clinical instructors
3. Collaborate with universities and/or community colleges to create school-to-work and school-at-work programs

Retain the Health Care Workforce

1. Reimagine internal policies to keep health care workers in jobs by addressing social determinants of health and establishing flexible scheduling, shifts, and roles
2. Promote an organizational culture that prioritizes employee physical and psychological safety
3. Establish internal career lattice and training to enable staff advancement within, between, and beyond current occupations and professional scope
4. Ensure that inclusion and well-being are embedded in organizational values. Operationalize these values through policy and practice

Leverage Talent with New Care Models

1. Explore alternative and appropriate use of personnel to incorporate as members of the care delivery team
2. Consider a remote or virtual nursing care delivery model to augment in-person care delivery along with opportunities for surveillance from a home setting
3. Eliminate extraneous administrative steps and EHR documentation to reduce nurses' workload and enable extension of care team

RECOMMENDATIONS FOR **POLICYMAKERS**

Expand Maryland's Workforce Pipeline

1. Designate state entity responsible for multi-agency coordination of data driven policy change and programs to ensure Maryland has the health workforce necessary for the future
2. Create programs that provide stipends or financial incentives to pursue careers in high demand health care fields
3. Remove barriers to internationally-trained providers joining the workforce by aligning Maryland's English language competency requirements with established standards
4. Leverage proximity to military bases and launch "Green to Blue" campaign to enable timely transition of discharged/retired military personnel with caregiver experience to care settings

Remove Barriers to Health Care Education

1. Pass legislation to lower costs for students pursuing in-demand health care professions at community colleges through tuition assistance, stipends and loan repayment
2. Offer additional funding and incentives to get more instructors in schools of nursing and well-prepared preceptors in acute care settings
3. Expand funding for nurse clinical education, including Nurse Support Programs (NSP) I & II

Retain the Health Care Workforce

1. Address social and economic drivers that cause health care workers to leave the profession, including the cost and availability of child and elder care
2. Establish a statewide workplace violence prevention consortium to provide training and support and recommend policy changes

Leverage Talent with New Care Models

1. Review scope of practice and training curriculum for nursing support staff to enable new acute care models
2. Remove arbitrary barriers to licensure across state borders to facilitate access to telehealth

MHA COMMITMENT TO SUPPORT THE HEALTH CARE WORKFORCE

#1: Expand Maryland's Workforce Pipeline

- Partner to launch a marketing campaign in Maryland (1) highlighting viable careers in hospitals and (2) attracting underrepresented populations into nursing
- Routinely publish data snapshots of hospital workforce to inform policy and collaboration
- Remove barriers to licensure and engage occupational boards in workforce planning and data collection

#2: Remove Barriers to Health Care Education

- Develop a communications and dissemination strategy to promote emerging bedside-to-clinical instructor models
- Partner with local colleges and universities to grow and diversify entrants into health care professions and enhance access to incentives and wraparound supports to expand student pipeline
- Collaborate with academia to evolve curriculum to strengthen nurse graduate readiness

#3: Retain the Health Care Workforce

- Convene forums to share promising member policies and practices to operationalize equity and inclusion
- Partner with Maryland Healthcare Education Institute, Maryland Patient Safety Center, and their organizations to facilitate training and education addressing burnout and moral distress and support workplace violence prevention and tracking

#4: Leverage Talent with New Care Models

- Advocate for scope of practice and curriculum changes to enable new care models
- Advocate for legislative and regulatory updates to enhance access to health care providers in neighboring states

WORKFORCE CHALLENGES

Maryland
Hospital Association

Key Issues

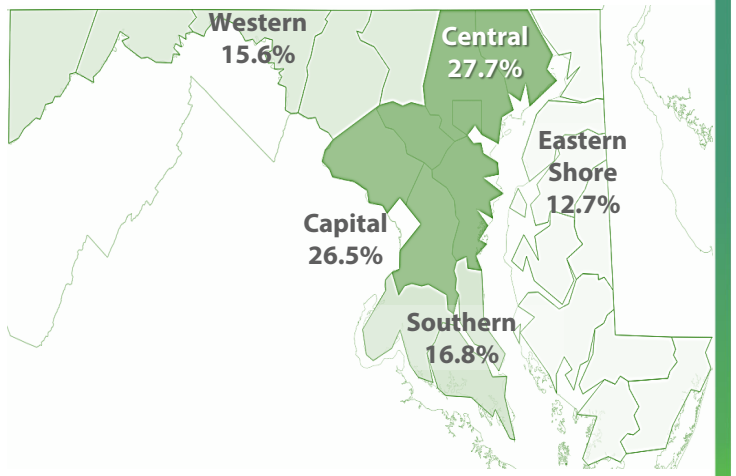
- **Difficulty retaining staff due to:**
  - Stress of acute care
  - Aging workforce/early retirement
  - Competitive wages from other industries
  - Choice of roles outside acute care and additional remote work alternatives
- **COVID-19 accelerated existing issues**
  - Burnout and moral injury
  - Increased demand for contract labor to respond to geographic hotspots
- **Maryland's unique financing system**
  - Hospitals operate under capped budgets, hindering ability to compete nationally to retain talent
- **Violence against health care personnel**
  - Majority of workplace violence events impact nurses and nursing assistants

CHALLENGE #1: HIGH STAFF TURNOVER

LPNs, RNs, Respiratory Therapists, and Nursing Assistants are among the top hospital occupations representing the highest vacancy rates

Top 10 Hospital Occupations by Vacancy Rate[2] (as of 12/31/2021)	
Licensed Practical (Vocational) Nurses	**37.7%**
Registered Nurses	**25.4%**
Respiratory Therapists	**23.7%**
Nursing Assistive Personnel	**22.9%**
Overall Vacancy Rate	**21.2%**
Nurse Practitioners	21.0%
Surgical Technicians	20.5%
Pharmacy Technicians	19.0%
Sterile Processing Technicians	17.2%
Laboratory Technicians	17.1%
Radiology Technicians	16.9%

Registered Nurse Vacancy Rates by Region[2]



Note: Data represents submissions by 49 of 51 Maryland hospitals (Survey Response Rate = 96.1%). Data will be updated as new submissions are received.

CHALLENGE #2:
SHIFTING CARE DELIVERY MODELS

Key Issues

Lack of Resources to Support Innovation:

- Care model limitations
  - Shortage of LPNs, CNAs and nursing support in acute care
  - Need to upskill advanced practice providers, train nurses in delegation
  - Available technology capabilities
  - Implementation given current workforce shortage, survival mindset

Changing Patient Populations call for Additional Training and Resources:

- Increased utilization of aging patients (in particular, frail elders) and those with higher acuity and behavioral health needs
- Demographic shifts require additional training in cultural competency and institutional bias

Potential to Leverage New Technology and Care Delivery Modalities [4]

$3 Billion: Pre-pandemic annual revenues of U.S. telehealth leaders

$250 Billion: Current U.S. health care spending, which could potentially be virtualized

- 35% of home health visits
- 24% of office visits, outpatient
- Hospital-at-home models also gaining traction

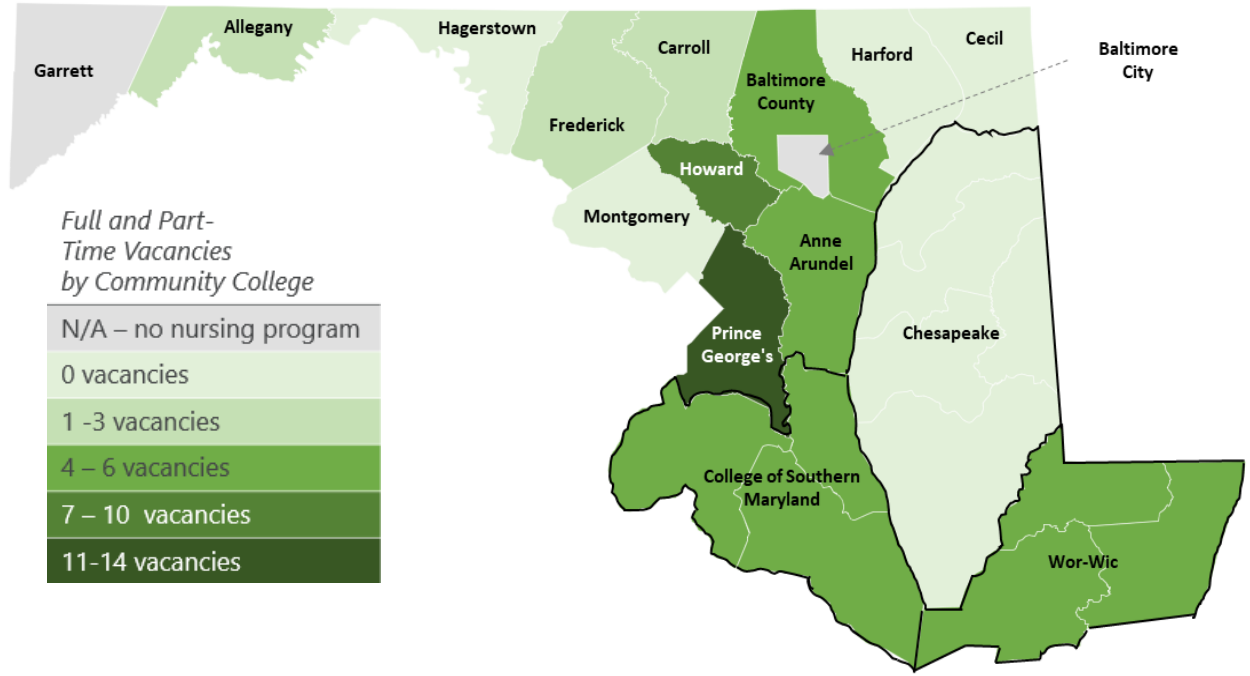
CHALLENGE #3:
INSUFFICIENT NURSING PIPELINE

Key Issues

- **Resources to meet prospective student demand:**
  - Lack of clinical sites
  - Clinical faculty and preceptor shortages
  - Lack of clinical experience and training
  - High student drop-out rates
- **Barriers to nursing education**
  - Cost of tuition
  - Lack of support services (e.g., childcare, tuition assistance)
- **Diversity of workforce does not reflect patient population**
- **Limited programs targeting inclusion of underrepresented groups including individuals with a disability and veterans**
- **Barriers to recruit and hire international nurses**
  - Higher state English language requirements
  - Arduous federal and state processes

In 2021, **more than half** of responding community colleges in Maryland reported at least one full-time vacancy (up to six)

Vacancies by Community College and Service Area [5]



*Note: BCCC not reporting

TASK FORCE RECOMMENDATIONS

Rationale and Demand Projections

Maryland
Hospital Association

#1: Expand Maryland's Nursing Pipeline

Challenge #1
High Staff Turnover

Challenge #2
Shifting Care Delivery Models

Challenge #3
Insufficient Nursing Pipeline

Hospitals and Health Systems

Action Items

- Partner with community-based agencies and educational institutions for local workforce development (include focus on veterans, individuals with disabilities, and other underrepresented populations)
- Collaborate for optimal implementation of acute care CNA pathway

Policymakers

Action Items

- Designate state entity responsible for multi-agency coordination of data driven policy change and programs to ensure Maryland has the health workforce necessary for the future
- Create programs that provide stipends or financial incentives to pursue careers in high demand health care fields
- Remove barriers to internationally-trained providers joining the workforce by aligning Maryland's English language competency requirements with established standards
- Leverage proximity to military bases and launch "Green to Blue" campaign to enable timely transition of discharged/retired military personnel with caregiver experience to care settings

Rationale

Nursing workforce should respond to changing demographics

- By 2034, **older adults will outnumber children** for the first time in U.S. history [6]

Diversity among health care providers **improves access for underserved groups, improves health outcomes and reduces disparities**

- **19.4%** of Marylanders speak a language other than English [7]

Higher demand on health care services will require nurse and nurse extender availability across the care continuum. **Between 2021 and 2035, demand for RNs is expected to grow:**[1]

- 57% in residential care
- 50% in nursing homes
- 38% in home health
- 12% in emergency departments

#2: Remove Barriers to Health Care Education

Challenge #1
High Staff Turnover

Challenge #2
Shifting Care Delivery Models

Challenge #3
Insufficient Nursing Pipeline

Hospitals and Health Systems

Action Items

- Commit to make additional clinical training sites available to nursing schools at no cost
- Explore opportunities to increase qualified faculty and clinical instructors
- Collaborate with universities and/or community colleges to create school-to-work and school-at-work programs

Policymakers

Action Items

- Pass legislation to lower costs for students pursuing in-demand health care professions at community colleges through tuition assistance, stipends, and loan repayment
- Offer additional funding and incentives to get more instructors in schools of nursing and well-prepared preceptors in acute care settings
- Expand funding for nurse clinical education, including Nurse Support Programs (NSP) I & II

Rationale

Providing access to wraparound services (e.g., childcare, tutoring, transportation assistance) can help **ensure students who are non-traditional or from underserved populations** can access education and complete programs

- On average, **20% of nursing students will drop out**, with the highest rates observed after the first semester [8]

Adding access to clinical sites and expanding nursing faculty and hospital-based preceptors can ensure institutions are equipped to accept more prospective students and contribute to nursing workforce pipelines

- In **2020, 80,521 qualified nursing applicants were not accepted** at schools of nursing due primarily to the shortage of clinical sites, faculty, and resource constraints [9]

#3: Retain the Health Care Workforce

Challenge #1
High Staff Turnover

Challenge #2
Shifting Care Delivery Models

Challenge #3
Insufficient Nursing Pipeline

Action Items

Hospitals and Health Systems

- Reimagine internal policies to keep health care workers in jobs by addressing social determinants of health and establishing flexible scheduling, shifts, and roles
- Promote an organizational culture that prioritizes employee physical and psychological safety
- Establish internal career lattice and training to enable staff advancement within, between, and beyond current occupations and professional scope
- Ensure that inclusion and wellbeing are embedded in organizational values. Operationalize these values through policy and practice

Action Items

Policymakers

- Address social and economic drivers that cause health care workers to leave the profession, including the cost and availability of child and elder care
- Establish a statewide workplace violence prevention consortium to provide training and support and recommend policy changes

Rationale

- RN supply was adequate to meet about 91% of demand in 2021, but is projected to meet only **80% of expected demand by 2035** [1]
  - A model where nurses retire up to 2 years earlier than pre-COVID patterns, the RN and LPN workforce will only be able to meet **78% and 42% of demand** by 2035, respectively [1*]
- **Nearly 25%** of Maryland nurses said having caregiver support for children and the elderly would keep them from leaving in the next few years [10]
- Incidences of workplace violence impact job satisfaction and are cited as rationale for leaving the bedside
- In 2020, nursing and personal care facility workers were injured from assaults and violent acts at a rate of 21.8 per 10,000 full time workers.[11] Health care and social service workers are **five times as likely** to be injured on the job than workers overall [12]

*This scenario reflects the reported increase in burnout leading to higher-than-usual retirements during COVID, but regarding which reliable data is not yet available.

#4: Leverage Talent with New Care Models

Challenge #1
High Staff Turnover

Challenge #2
Shifting Care Delivery Models

Challenge #3
Insufficient Nursing Pipeline

Action Items

Hospitals and Health Systems

- Explore alternative and appropriate use of personnel to incorporate as members of the care delivery team
- Consider a remote or virtual nursing care delivery model to augment in person care delivery along with opportunities for surveillance from a home setting
- Eliminate extraneous administrative steps and EHR documentation to reduce nurses' workload and enable extension of care team

Action Items

Policymakers

- Review scope of practice and training curriculum for nursing support staff to enable new acute care models
- Remove arbitrary barriers to licensure across state borders to facilitate access to telehealth

Rationale

Methods to maximize existing health care staff include implementing new care delivery models and removing licensing barriers to enable nurses and nurse extenders to practice at the top of their scope

- An estimated **36,000 of RNs** and **3,800 of LPNs** will be needed across emergency and inpatient settings by 2035 [1]

Care delivery models can incentivize hospitals to identify appropriate staffing benchmarks, incorporate volume-based approaches, and ensure that patients are matched with the appropriate staff skills **to address their needs**

- 8 in 10 telehealth patients support the option to receive telehealth services across state lines [13]

CONSIDERATIONS BEYOND NURSING

The initial Task Force recommendations focused on **nurses and nurse extenders**. Future efforts may address the unique needs of allied health professionals as key to advancing the health care workforce.

Challenges and Opportunities to Advance Allied Health Professionals

- **High-need positions:** Lab, Radiology, and Pharmacy Techs, Patient Care Techs, Medical Assistants, Respiratory Therapists, Clinical Laboratory Scientists, Transporters, and Dietary Specialists
- **Opportunities** for how current or future allied health professionals can support the nurse workforce:
  - Expand roles and leverage technology to enable nurses to work at top of license (e.g., MAs and other technicians taking on nurse support roles like COVID testing, "tele-sitting" conducted by allied health staff under nurse supervision)
  - Attract high school students and early college students to pursue high potential, low-volume professions
- **Opportunities to support** allied health students and professionals include:
  - Funding for wrap-around services (ex. transportation, childcare, academic case management)
  - Free tuition and instructional costs for high-demand allied health professions
  - Stipends for students who work full-time

PROMISING PRACTICES

Maryland
Hospital Association

PROMISING PRACTICES:
EXPAND MARYLAND'S NURSING PIPELINE

Step Up to UH
University Hospitals
Cleveland, Ohio

- Recruitment program targeting low-income residents in the Cleveland area
- Partners with Neighborhood Connections a community group to develop programming to target neighborhoods surrounding the hospitals
- 314 new hires since the program began; 80% retention rate, 14% higher than department averages

Conway Nursing Pathway Program
Children's National
Washington, D.C.

- High school, college students provided scholarships, professional development and work-study programs to build relationships, successfully transition from academics into practice and increase retention in their career of choice
- 66 mentors and student mentees with 100% retention to date
- 10 RNs now practice at Children's National; 6 graduate degrees awarded; 100% NCLEX pass rate; over $1 million in debt averted

PROMISING PRACTICES:
REMOVE BARRIERS TO HEALTH CARE EDUCATION

Clinical Faculty Academy, Preceptor Academy

Kansas & Missouri Hospital Associations

- Two-day program prepared bedside RNs to serve as clinical instructors, adjunct faculty at nursing schools
- Missouri Board of Nursing allowed RNs with a BSN to teach clinical education in a BSN program if pursuing master's degree, attend a two-day Clinical Faculty Academy
- Since 2004, 3500+ participants. Increased nursing school enrollment.
- Preceptor Academy: One day intensive training for RNs and allied health professionals to learn how to guide new employees, recent graduates and students through onboarding and competence validation

Fourth Semester BSN Student Pilot Program

University of Maryland Medical System & University of Maryland School of Nursing

- In this newly established pilot program, students take their final practicum at one of three UMMS hospitals on a unit aligned with the area they wish to practice
- After successful completion, the student is hired on the unit
- Outcome data is expected to be shared in the near future

PROMISING PRACTICES:
RETAIN THE HEALTH CARE WORKFORCE

The Daisy Award for Extraordinary Nurses Globally Awarded

- The DAISY Foundation, created by the Barnes family to express gratitude for nurses after the death of their son, is the leader in the meaningful recognition of nurses worldwide
- The Foundation partners with 5200+ health care organizations in 32 countries to honor extraordinary, skillful, compassionate nursing care. Two million nurses have been nominated and 177,000 have received awards

Green Garden Project Sinai Hospital Baltimore, Maryland

- Provide garden plots for employees to grow food for themselves or to donate
- Staff are provided with gardening tools, water irrigation system and seeds

Truman Medical Centers & US Bank Kansas City, Missouri

- Opened full-service branch within hospital and offered checking account to all hospital staff
- Enabled staff to have access to a bank and removed expense of check cashing fees and reliance on all-cash stores

PROMISING PRACTICES:
LEVERAGE TALENT WITH NEW CARE MODELS

BSN Veteran Option
George Washington University
School of Nursing
Washington, D.C.

- 15 month accelerated full time program
- Customized curriculum accounts for prior education, military service and experience
- Includes scholarship funding totaling 50% of tuition costs which can be used for tuition or as a stipend

Patient and Family Care Liaison
University of Maryland Medical System
Baltimore, Maryland

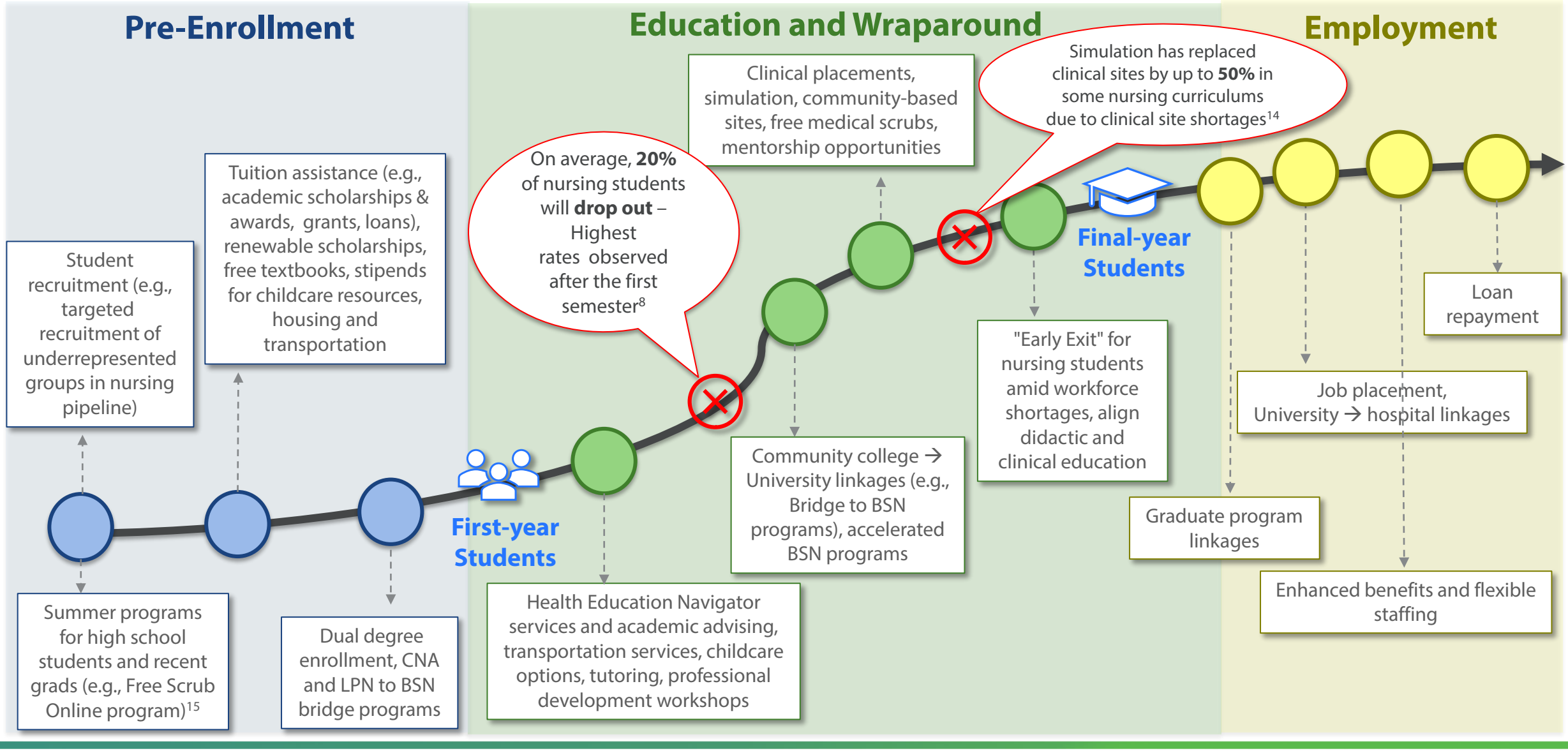
- Hiring individuals with one year of customer service experience in any field
- Responsible for administrative tasks to support the patient and their family
- Answers call bells, communicates needs of patient to nursing staff, manages requests and offers comfort items such as blankets, lines, etc.

ADDITIONAL RESOURCES:

- STUDENT LIFE CYCLE
- STAFFING & CARE MODELS
-REFERENCES

Maryland
Hospital Association

STUDENT LIFE CYCLE



NURSE-LED MODELS

- A nurse is responsible for the **coordination, management, and continuity of patient care**
- Can include nurses, NPs, clinical nurse specialists and other specialist nurses independently managing complex care
- Nurses and other staff (e.g., CNAs) **work to the full scope of their licensure** as part of a team, guided by principles of nurse-led care to deliver evidence-based, whole-person care [16]

Features of successful nurse-led care models [17,18]

- Staff nurses lead patient intervention and care plans, promote leadership buy-in, and foster culture of change
- Staffing tools use nursing documentation to calculate acuity vs. redundant or duplicative nursing documentation
- Implementing nurse-sensitive quality measures including quality and safety indicators (i.e., patient falls, injuries) that can be tracked in relation to nursing hours

Implementation considerations

- Hire more LPNs so RNs can work at top of license and scope [19,20]
- Adopt health-system wide financial incentives to hire more mid-level providers [21]
- Provide professional development to support mid-level providers to practice at top of scope [20]

SKILL MIX MODELS

- Skill Mix Models **optimize a combination of nursing skills**, as well as other occupational and training characteristics of care team (e.g., CNAs, MAs, advance practice providers) and levels to meet patient needs and **address complex work** depending on skill level[22]
- Focuses on matching a clinician based on their training to a patient as is **appropriate for the individual's needs**[22]
- Assigning tasks by skill level can yield both budget savings and better quality of care[23]

Models in Action

A longitudinal observational study from 2012-2015 collecting data from a single acute care NHS hospital in England using a skill mix model of care found higher RN staffing was associated with reduced adverse events (including 3% reduction in hazard of death) and length of stay. Changing average skill mix (increase of .32 RN hours per patient day) was associated with reduced mortality, an increase in staffing costs ($30 per patient) and cost-savings (63 cents per patient per hospital stay.)[24]

FLEXIBLE STAFFING MODELS

Description: Flexible staffing models allow nurses to work how, when, and where they want to better meet their own needs while improving efficiencies in their institutions by increasing overall productivity.[25] Some options include:

Provide shorter shifts, non-traditional roles to keep experienced RNs at bedside	Pool nurses with similar technical skills to address experience and specialty shortages	Scale RN experience with expert-led staffing models	Enable non float RNs to regularly practice across multiple settings
• Some nurses may find 12 hour shifts too physically demanding or difficult to balance with family obligations • Nontraditional roles can help keep these nurses in the workforce	• By proactively creating larger pools of specialized staff or blended roles, enable nurses to practice in multiple highly technical settings	• By raising skills of expert nurses, organizations can extend nursing expertise farther during shortages	• Increase their familiarity with these settings and thus their abilities to practice outside of their home unit/facility

LEVERAGING TECHNOLOGY

- **Description:** Hospitals can leverage technology to alleviate administrative burden, predict adverse events, and boost workflow efficiencies. This gives clinicians more time to focus on improving overall patient care.

- **Challenges**
  - Need for staff and patient training to promote adoption
  - Time and cost to implement
  - Difficulty maintaining strong patient relationships in virtual environment
  - Need to ensure data privacy protections and cybersecurity to prevent data breaches or disruptive events
  - Need to monitor changes in policies and payment
  - Need to train clinical and non-clinical staff on "webside manner" for virtual visits[32]

What Types of Technology are Hospitals Using?

- Telehealth for Virtual Patient Consults
- Telehealth for Remote Patient Monitoring[26,27]
- Tele-sitting[28]
- Automated Systems for License Renewals & Credential Approvals[29,30]
- Using AI to Detect Disease
- Automatic Speech Recognition[31]

STAFFING TACTICS: **NURSE ORGANIZATION**

Flexible Staffing Pools

Description: A flexible staffing model, also referred to a "flex pool," allocates staff where needed most and engages interim staff when there is high patient demand or staffing shortages [33]

Highlights: The use of flex pools in response to the COVID-19 pandemic has allowed hospitals to focus on providing high quality patient care, allow more access to specialized skills, reduce full-time employee burden, and lower labor costs [34]

- Nurse test scores improved after Children's Hospital of Orange County provided float pool nurses with additional education to care for critical care patients [34]
- Hospital network Atrium Health is forming an in-house staffing agency for travel nurses, to counter price gouging from staffing services [35]

Team-based Nursing

Description: Leverages nursing teams with different skills and experience to care for population of patients

Highlights: University of Colorado [36] established nursing teams with three roles : lead RN (critical care nurse), support RN (progressive or acute care nurse), and team assistant (RN with some critical care experience, CNAs, and ACPs)

- Team-based nursing proved the most effective approach to managing the large surge of critical care patients during COVID
- Frequency of use ebbed and flowed with fluctuations in census and was often initiated on night shifts and weekends

Patient Cohorting

Description: Grouping, or cohorting patients by acuity, status, or needs. Patients with skilled needs or behavioral health needs could be housed in separate units from patients with acute needs

Highlights: These cohorts could be overseen by an LPN at a higher ratio (e.g., 8-10:1). Infection prevention experts indicate that patients should be cohorted by vaccination status, which could lead to additional staffing challenges [37,38]

STAFFING TACTICS: **NURSE EXTENDERS**

Nurse Extenders

Description: Allow CNAs, MAs, or even physical therapy assistants to work at top of scope by completing tasks traditionally in the purview of nurses or assisting on medical/surgical units

Highlights: Nurse extenders/CNAs: In the UK, "tasks generally expected of "HCAs" include: making beds; helping patients to eat and bathe; monitoring and recording patients vitals; simple dressing changes; and escorting patients to the operating theatre," with some doing expanded clinical tasks (e.g., catheterization, injections, etc.)

- In some sites, existing FTEs were used to hire on some of these staff [39]

Students as Nurse Extenders

Description: Use nursing students to support current staff in selected functions (e.g., bathe, change dressings, read vitals, etc.)

Highlights: Yale New Haven Hospital notes that efforts to develop nurse extender staffing plans should emphasize the importance of engaging nurse leadership and frontline staff for buy-in and successful implementation of this approach [40]

- There is potential for students to use this experience towards clinical hours or pay the nurse and faculty member for oversight

Virtual Visits

Description: Nurse virtual assessments with CNA or LPN at the bedside, while RNs conduct supervisory and oversight tasks [41]

Highlights: This technology and concept is similar to tele-sitting but involves virtual nurses in 24/7 monitoring of step-down units

- A recent AHA webinar shared that one hospital is engaging an "alternative workforce" of retired or close to retirement nurses to act as preceptors and mentors to new nurses. This allowed more seasoned RNs to delegate as appropriate [40]

STAFFING TACTICS: **EXPANDING ROLES**

Expanded Patient Sitters Role

Description: Mercy Hospital Jefferson (MO) transitioned "patient sitters" into care companions and implemented a tool to determine appropriate assignment

- Care companions provided patient observation and assisted with "ADLs, vital signs, safety rounds, intake and output, and documenting care provided"

Highlights: Results included positive feedback from nurses and patient families, who cited increased patient interaction

- Total sitter hours decreased by 13% over 6 months and $34k savings, no observed increase in falls (overall downward trend) [42]

Family Members on Care Team

Description: Involves using family caregivers to carry out in-hospital tasks traditionally for CNAs/LPNs (e.g., feeding, bathing, turning)

Highlights: This approach would engage family members in in-hospital caregiving tasks

- As a newer approach, this staffing tactic would involve setting precedents for breaking down patient and national culture challenges, development of special training for family members, discussion of potential liability, and innovative thinking to develop and introduce [43]

MAs in Medical or Surgical Units

Description: Some hospitals have incorporated MAs, typically responsible for tasks such as patient communication and administrative duties, into additional clinical tasks to address the workforce shortage

Highlights: In response to the COVID-19 pandemic, CMS and CDC expanded scope of practice for MAs, calling on MAs to work in inpatient settings, including acute care

- Since then, several hospitals have explored the use of MAs to carry out support tasks commonly carried out by nurses and other health professionals (e.g., nasopharyngeal swabbing for COVID-19 testing, telemedicine), to relieve burden on nurses and NPs and explore scope of practice expansions [44]

REFERENCES

1. Maryland Nursing Workforce Study. Global Data. June 2022.
2. Maryland Hospital Association Workforce Survey. February 2022.
3. Maryland Board of Nursing– Maryland Nursing Workforce Shortage Survey December 2021.
4. American Hospital Association. 2021. 2022 Health Care Scan Talent. Retrieved from https://www.aha.org/system/files/media/file/2021/10/AHA-Health-Care-Talent-Scan-2022.pdf.
5. Maryland Association of Community Colleges (MACC) Survey. 2021.
6. U.S. Census Bureau. Demographic Turning Points for the United States: Population Projections for 2020 to 2060. Retrieved from https://www.census.gov/library/publications/2020/demo/p25-1144.html.
7. DataUSA. Maryland. 2021. Retrieved from https://datausa.io/profile/geo/maryland#:~:text=Non%2DEnglish%20Speakers&text=19.4%25%20of%20Maryland%20citizens%20are,1.24%25%20speak%20Chinese%20(Incl.
8. Nancy Elkins. Failure to Complete BSN Nursing Programs: Students' Views. 2019. Retrieved from https://files.eric.ed.gov/fulltext/EJ1252119.pdf.
9. American Association of Colleges of Nursing (AACN). 2021. Student Enrollment Surged in U.S. Schools of Nursing in 2020 Despite Challenges Presented by the Pandemic. Retrieved from https://www.aacnnursing.org/News-Information/Press-Releases/View/ArticleId/24802/2020-survey-data-student-enrollment.
10. University of Maryland School of Nursing– Maryland Nursing Workforce Center. Analysis of COVID-19's Impact on Maryland Nursing Workforce. December 2021. Retrieved from https://www.nursing.umaryland.edu/media/son/mnwc/MD-survey-of-post-COVID-workforce.pdf
11. The National Institute for Occupational Safety and Health (NIOSH). Bureau of Labor Statistics, Department of Labor. 2021.Retrieved from https://wwwn.cdc.gov/WPVHC/Nurses/Course/Slide/Unit1_6#:~:text=In%202020%2C%20health%20care%20and,21.8%20(BLS%2C%202021
12. US Bureau of Labor Statistics – Fact Sheet: Workplace Violence in Healthcare, 2018. April 2020. Retrieved from https://www.bls.gov/iif/oshwc/cfoi/workplace-violence-healthcare-2018.htm
13. Alliance for Connected Care. (May 4, 2022). Telehealth State of Play. Slides presented at the Maryland State of Reform Health Policy Conference, Linthicum, MD
14. American Nurses Association – New York. Simulation in New York State Nursing Education. 2020. Retrieved from https://ananewyork.nursingnetwork.com/nursing-news/177706-simulation-in-new-york-state-nursing.
15. Free Scrubs Online Program Gives Students, Grads, Peek at Health-Care Fields. 2020. Retrieved from https://www.news8000.com/free-scrubs-online-program-gives-students-grads-peek-at-health-care-fields/.

REFERENCES

16. Albarran, J. Nurse-led care definitions. BMJ 2005;330:682. https://www.bmj.com/rapid-response/2011/10/30/nurse-led-care-definitions.
17. Boivin, J. Case study: Patient centered staffing. American Nurse. Oct. 2019. https://www.myamericannurse.com/case-study-patient-centered-staffing/
18. Gordon, K. Et. Al. Nursing research nurse-led models of care for patients with complex chronic conditions: A scoping review. Longwoods.Com. 32(3) September 2019 : 57-76. Https://www.Longwoods.Com/content/25972/nursing-leadership/nurse-led-models-of-care-for-patients-with-complex-chronic-conditions-a-scoping-review.
19. Donnelly, G. Conceptualizing an expanded role for rns. January 2014 open journal of nursing 04(02):74-84. Doi:10.4236/ojn.2014.42011. Https://www.Researchgate.Net/publication/269793882_conceptualizing_an_expanded_role_for_rns.
20. MHA member interviews, 2021.
21. Advocate aurora health raises minimum wage to $18/hour. Advocate aurora health. Nov. 2021. Https://www.Advocateaurorahealth.Org/news/advocate-aurora-health-raises-minimum-wage-to-18-hour
22. Kushemererwa, D., Davis, J., Moyo, N., Gilbert, S., & Gray, R. (2020). The association between nursing skill mix and mortality for adult medical and surgical patients: protocol for a systematic review. International journal of environmental research and public health, 17(22), 8604. Https://doi.Org/10.3390/ijerph17228604.
23. Griffiths P, ball J, bloor K, et al. Nurse staffing levels, missed vital signs and mortality in hospitals: retrospective longitudinal observational study. NIHR journals library, southampton (UK); 2018. Pmid: 30516947.
24. Nurse staffing levels, missed vital signs and mortality in hospitals: retrospective longitudinal observational study. Health services and delivery research, no. 6.38. Griffiths P, ball J, bloor K, et al. Southampton (UK): NIHR journals library; 2018 nov.
25. Virkstis k, herleth a, langr m, rewers l, fennell E. Nursing's staffing mandate: build a more flexible workforce. J nurs adm. 2021 apr 1;51(4):177-178. Doi: 10.1097/nna.0000000000000993. Pmid: 33734174.
26. Remote patient monitoring. Center for connected health policy. 2021. Https://www.Cchpca.Org/what-is-telehealth/?Category=remote-patient-monitoring.
27. Siwicki, B. The benefits and future of remote patient monitoring. April 2021. Healthcare IT news. Https://www.Healthcareitnews.Com/news/benefits-and-future-remote-patient-monitoring.
28. Krasniansky, A. Telesitters are entering hospital rooms. How will they change patient care? Harvard law. Mar. 2020. Https://blog.Petrieflom.Law.Harvard.Edu/2020/03/10/telesitters-are-entering-hospital-rooms-how-will-they-change-patient-care/.
29. Artificial intelligence automating processes for professionals. American hospital association. Feb. 2020. Https://www.Aha.Org/system/files/media/file/2020/02/workforce-case-study-artificial-intelligence-automating-processes-for-professionals-2-2020.Pdf.
30. Schnur, M. Is blockchain the new pathway to credentialing? Lippincott nursing center. Mar. 2020. Https://www.Nursingcenter.Com/ncblog/march-2020/blockchain-credentialing.

REFERENCES

31. Liu, Y. Et. Al. Detecting cancer metastases on gigapixel pathology images. Google brain. Https://drive.Google.Com/file/d/0b1t58bz5vya-qlr0qljta2dpwvk/view?Resourcekey=0-y7uvtflcnqjsjiiccxtz_a
32. Smith, T. To succeed with telehealth, know your "webside manner." American medical association. Sept. 2020. Https://www.Ama-assn.Org/practice-management/digital/succeed-telehealth-know-your-webside-manner.
33. Leveraging Flex Pools to Address Shifts in Labor Demand. Shiftboard.com. 2022. https://www.shiftboard.com/resource-center/covid-resource-center/flex-pools-labor-demand/.
34. Correia, A. et. al. Creating an Intermediate Float Pool to Meet the Demands of Rising Acuity. J Pediatr Nurs. 2021 May-Jun;58:107-109. doi: 10.1016/j.pedn.2021.02.026. Epub 2021 Mar 31. PMID: 33810933.
35. Webinar, Value Break: Restructuring Staffing Models to Value the Workforce, 2022.
36. Moorer, A. et. al. Feature: Staffing Solutions Special. SOS in a pandemic: Staffing strategies for COVID-19. Nursing Management (Springhouse): April 2021 - Volume 52 - Issue 4 - p 22-30. https://journals.lww.com/nursingmanagement/Fulltext/2021/04000/SOS_in_a_pandemic__Staffing_strategies_for.5.aspx.
37. Considerations for Cohorting COVID-19 Patients in Post-Acute Care Facilities. New Jersey Department of Health Communicable Disease Service. Nov. 2021. https://www.nj.gov/health/cd/documents/topics/NCOV/COVID_Cohorting_PAC.pdf.
38. MHA Member Interviews, 2021.
39. An Independent Review into Healthcare Assistants and Support Workers in the NHS and social care settings. The Cavendish Review. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/236212/Cavendish_Review.pdf.
40. Webinar, Value Break: Restructuring Staffing Models to Value the Workforce, 2022.
41. MHA Member Interviews, 2021.
42. Vancil, B. et al. Improving patient sitter use with care companions. Nurs Manage. 2020 Nov;51(11):47-53. doi: 10.1097/01.NUMA.0000719400.30792.a2. PMID: 33116049. https://pubmed.ncbi.nlm.nih.gov/33116049/.
43. MHA Member Interview, 2022.
44. Balasa, D. What tasks are delegable to—and performable by—medical assistants? CMA Today - American Association of Medical Assistants. Nov. 2020. https://www.aama-ntl.org/docs/default-source/other/cmatoday-nd-2020-pa.pdf?sfvrsn=2.