INNOVATIONS IN CARE: COMPENDIUM OF CARE INNOVATIONS AND STRATEGIES

Workforce vacancies across the healthcare continuum are straining bed availability and creating capacity bottlenecks, leading providers to implement new and innovative strategies that can help maximize the talents of their caregivers. These approaches work in tandem with broader workforce development efforts, and allow healthcare professionals to provide safe, high-quality, and empowered care.

As the volume of these strategies continues to grow, MHA's Continuum of Care Council created this compendium to document both short- and long-term strategies and care models that may aid in patient care during this crisis and beyond.

While the compendium is not exhaustive, it pulls from the latest trends to showcase strategies that fit a range of settings and resource capabilities. Each strategy and care model has a brief description, linked resources to learn more, and surface barriers to implementation. MHA will also use this listing to guide our advocacy efforts to increase access to care and to empower the workers who make care possible.

Care Innovations and Strategies Across the Care Continuum

Strategy/Care Model	Description*	References	Barriers/Challenges
Models and Strategies for Staffing in Care Settings			
On-Site Float Pools	On-site float pools (group of clinicians who float across multiple care units or settings by specialty within their scope of practice and competency and licensure) can be a useful strategy to fill in gaps in staffing without needing to use additional agency staff. This is particularly useful for staff who have been cross trained in multiple specialties and/or unit types. Consider a float pool comprising nonclinical staff for surges, as was leveraged successfully during the COVID-19 pandemic.	Nurse Staffing Think Tank: Priority Topics & Recommendations (ANA, AONL, AACN)	Need to cross-train staff to be able to work on multiple types of units or patient care areas.
Seasonal and surge PRN/Per-Diem to Full-Time Float Pool	Expansion and contraction of clinical and non-clinical workforce as needed to accommodate predictable seasonal fluctuations (i.e., seasonal trends, geography, demographics of patient population served) can be an efficient way to maintain appropriate staffing. Consider the following potential solutions: • Retired workforce picking up assignments based on demand • Per diem/part-time workforce picking up full-time assignments • 0.6 FTE staff who work an additional 0.3 FTE during the summer and increase to total 0.9 FTE • Bringing back retirees to support the newer staff RNs with difficult/challenging patients/cases • Offer alternative "Baylor" shifts to fill weekends o E.g., nurses work two 12-hour weekend shifts but are paid for 36 hours	Nurse Staffing Think Tank: Priority Topics & Recommendations (ANA, AONL, AACN) Baylor Shift: What Does it Mean? (NurseMoneyTalk)	Passage of the Nurse Licensure Compact would make this strategy more effective, providing a larger pool of nurses from which to pull.

*Note: Some descriptions have been taken directly from the resources provided, while others have been condensed or augmented.

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Change in Shift Lengths	Allowing flexibility in shift lengths can increase the pool of staff available to hospitals and can increase staff retention. (E.g., offer 4 and 6-hour shifts in addition to the traditional 8 and 12-hour shifts.) Shorter shift lengths may be appealing to nurses who may otherwise choose to leave the workforce altogether, such as older nurses near retirement age, nurses of all ages with family caregiving responsibilities, and/or nurses seeking to continue their education.	Challenges and Solutions to the Nursing Workforce (ONL)	Would require changes in staffing protocols and potential need to modify scheduling software.
Scheduling Using Artificial Intelligence (AI)	Use of AI-based scheduling has been shown to increase clinician engagement by creating schedules that support work-life balance.	Unique AI tool helps Sanford Health schedule nurses (Sanford Health) Using AI to create work schedules significantly reduces physician burnout (Am. Society of Anesthesiologists)	Investment in technology/programming Integration with current technology (EMR).
Internal Travel Programs	Internal travel programs can decrease hospital needs on external travel nurses, while reducing costs. Internal travel programs include providing staff the benefits of floating between units and among hospital sites and receiving more flexible hours.	Health Systems Integrating Internal Travel Programs (Becker's Hospital Review) Allegheny Health Network Internal Travel Program (Health Leaders) Internal Travel Pool Helps Address Staffing Challenges (HFMA)	Passage of the Nurse Licensure Compact would make this strategy more effective, providing a larger pool of nurses from which to pull.
Multi-hospital System Float Pool	Similar to the single-site float pools, multi-site enterprise float pools involve multiple facilities/organizations in a defined geographical region for daily or long-term placement where a group of clinicians float by specialty within their scope of practice, competency and licensure. This strategy takes advantage of highly skilled staff cross trained and oriented to multiple units.	Nurse Staffing Think Tank: Priority Topics & Recommendations (ANA, AONL, AACM)	Passage of the Nurse Licensure Compact would make this strategy more effective, providing a larger pool of nurses from which to pull.

Full Utilization of Care Teams in Care Settings

Strategy/Care Model	Description*	References	Barriers/Challenges
Use of Licensed Practical Nurses (LPNs) in all Care Settings	The addition of LPNs in acute care settings allows RN & LPN roles to be reexamined and redesigned to most effectively meet patient care workload needs and for both roles to work to top of license.	Workforce Well-Being Collaborative Presentation (Press Ganey)	Lack of LPNs in Massachusetts; need to balance use in acute care with need in post-acute care (prevent over-utilization of LPNs in acute care that would further deplete the post-acute workforce); lack of LPN training programs.
Provider/Advanced Practice Provider-Only Patients	Triage physicians/nurses can identify low acuity patients that can be seen in non-clinical space (e.g., not take up an emergency department bed) by providers/advanced practice providers (APPs) to reduce patient load on nurses and decrease time spent in emergency department (ED). This process leads to faster discharge of patients with low acuity and saves ED beds for higher acuity patients.	Provider-Only Patient Usage in ED (NEJM)	
Incorporate Exercise Physiologists, other Non-Traditional roles into the Care Team	Partner with rehab/physical therapy departments to train exercise physiologists and mobility techs to perform mobility tasks, EKGs, vital signs, walk tests, and documentation of tasks performed [tasks typically completed by certified nursing assistants (CNAs)].	Beyond COVID-19: Best Practices for Supporting Nurses and Healthcare Teams (Press Ganey)	
Hire RN Scribes to Assist with Documentation	RN scribes can document the majority of patient care provided by RNs, leaving more time for RNs to complete higher level tasks and spend more time working at the top of license or taking breaks. The job qualifications required to be a medical scribe are minimal and include a high school diploma. CNAs and Patient Care Technicians (PCTs) could fill this role.	Beyond COVID-19: Best Practices for Supporting Nurses and Healthcare Teams (Press Ganey) Nurse Scribes (ScribeAmerica)	
Incorporate Unlicensed Assistive Personnel (UAPs) to Complete Tasks not Required to be Completed by RN	The use of mobility techs, clinical support associates, and other UAPs for lower-level tasks can free up RNs and LPNs to perform higher level work; UAPs could also serve as	Beyond COVID-19: Best Practices for Supporting Nurses and Healthcare Teams (Press Ganey)	

	a pipeline source for future CNAs/LPNs/RNs.		
Allow Basic Medical Care Currently Allowed Under Public Health Emergency (PHE) to Continue Permanently in Assisted Living Residences (ALRs)	Allowing services such as medication administration, use of oxygen, and injections to continue in assisted living residences after the public health emergency can allow residents to stay in ALRs who otherwise may not be suited for these living spaces.	An Act Authorizing Common Sense Health Services in Assisted Living (2021-2022 session legislation) An Act Directing the Administration to Amend the Frail Elder Home and Community-Based Waiver to Permit Eligible Older Adults to Choose to Reside in Certified Assisted Living Residences (2021-2022 session legislation)	Passage of the Common Sense Health Services bill, which would permanently allow several basic services to be delivered to residents by nurses in assisted living residences; passage of the frail elder waiver bill would allow the state to enter into a waiver with CMS to allow individuals qualifying for Medicaid and at risk of entering a nursing home to reside in a certified assisted living residence.
APRNs (Advanced Practice RNs) as Clinical Leaders	The addition of APRNs as clinical leaders is a strategic planning model to better use staff resources and create care teams that are best suited for specific patient populations.	Implications of the Rapid Growth of the Nurse Practitioner Workforce in the US (Health Affairs). Strategic Planning for a Very Different Nursing Workforce (Nurse Lead) Leveraging Advanced Practice Providers (KaufmanHall)	Credentialing can be a barrier at the organizational level; some organizations may not allow APRNs to practice independently/to the top of license.
Ambulatory Integration of the Medical and Social Model of Social Work Consultation and Care Coordination (AIMS Model)	The AIMS Model addresses current fragmentation between provision of social and medical services by integrating a master's prepared social worker to primary and specialty teams who can address social factors (e.g., substance use, depression, anxiety) and financial concerns that patients may be facing that can inhibit their ability to receive and adhere to their medical plan.	The AIMS Model – Ambulatory Integration of the Medical and Social (AIMS) Model of Social Work Consultation and Care	May require changes to reimbursement structures.
Interdisciplinary Care Team to Assist with Surges and Staff Breaks	Interdisciplinary care teams for shift-based tasks (e.g., resource nurses, ancillary staff, admissions and discharge staff, medication pass nurse, break nurses, weekend coverage. etc.). Staff in this category follow non-traditional hours and shifts to support peak volume and tasks, and they can be hired into float or non-float departments.	Nurse Staffing Think Tank: Priority Topics & Recommendations (ANA, AONL, AACN)	Passage of the Nurse Licensure Compact would make this strategy more effective, providing a larger pool of nurses from which to pull.

	Consideration is also given to use of support provided through virtual roles and resources.		
Certified Medication Aide (CMAs)	CMAs can administer medications in long-term care facilities after successful completion of training and competency testing developed by the Department of Public Health.	An Act Relative to Certified Medication Aides (2021-2022 session legislation)	New legislation will be filed for 2023-2024 legislative session and need to pass the legislature and be signed by the Governor.
Blended Nursing	A care model that utilizes a multi-disciplinary team comprised of RNs, LPNs, and PCTs to deliver high quality care.	Beyond COVID-19: Best Practices for Supporting Nurses and Healthcare Teams (Press Ganey)	
Expansion of Hospital Navigation Programs and Wrap-Around Services	Expansion of navigation programs can help provide more comprehensive care by linking patient information from primary care to the acute/outpatient settings. These programs can aid patients with complex medical conditions navigate their care plans and reduce recurrent ED use.	Basics of Patient Navigation and Care Coordination (Patient Engagement HIT) Improving Care Coordination and Reducing ED Utilization Through Patient Navigation (Am. Journal of Managed Care)	Resources for staffing and training patient navigators.

Innovative/Alternative Care Settings			
Strategy/Care Model	**Description***	**References**	**Barriers/Challenges**
EmPATH (Emergency Psychiatric Assessment, Treatment, and Healing) Units	EmPATH units with calming environments and trained support staff that are more conducive to treating high-acuity mental health patients. These units can reduce hospitalizations and average length of stay for patients with acute psychiatric needs.	EmPATH Units: Improving Psychiatric Emergency Care (BWBR) EmPATH Units as Solution for Psychiatric Boarding (Psychiatry Advisor) EmPATH Units in ED (Bloomberg)	Would require up-front investment to repurpose/redesign space in hospitals.
Camden Core Model	The Camden Core Model provides community-based care management to patients with complex medical needs to reduce recurrent hospital use.	Care Interventions - Camden Coalition (Camden Health)	May require changes to reimbursement structures.
Mobile Integrated Health and Community Paramedicine Programs	Mobile Integrated Health Care (MIH) and Community Paramedicine are new programs that utilize mobile resources to deliver care and services to patients in an out-of-hospital environment in coordination with healthcare facilities or other healthcare providers.	An Act relative to insurance coverage of mobile integrated health (H.1083) (2021-2022 session legislation) An Act relative to insurance coverage of mobile integrated health (S.732) (2021-2022 session legislation)	Would require to reimbursement policies at state level; legislation pending (see references).

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	The primary goal is to increase care access and decrease the number of non-emergent cases in the ED.	Learn about MIH and Community EMS (Mass.gov) SmartCare Mobile Integrated Health (Cataldo) Collaborating with Mobile Resources to Care for Patients in the Community (HPC)	
Virtual Hospitals	With capacity constraints in hospitals, an alternative option is to provide virtual care to patients in their homes, similar to Hospital at Home programs. Clinicians can use technology to monitor and communicate with patients, accompanied by in-person visits by various members of the care team.	Atrium Health Virtual Hospital (AHA)	Resources for investment in technology/programming and staffing
Micro-hospitals	Micro-hospitals can increase patients' access to care by creating small care settings that can address non-acute patient care needs as well as give patients more affordable and convenient options.	What are Micro-hospitals? (Patient Engagement HIT) Micro-hospitals in Communities (US News) Perspective of Micro-hospitals (ERDMAN)	Can be expensive to set up, and patient education is key, so patients go to the right setting for their needs; more than urgent care.
Virtual Visit Track (VVT) in EDs	In the system, patients with lower-acuity concerns are seen by a remote physician supported by VVT-trained staff and relevant technology.	ED Virtual Visit Track (NEJM)	Investment in technology, need to develop new procedures/policies, access to remote physicians.
Dialysis Dens	Creation of dialysis dens in nursing homes can eliminate the need to transfer patients to other facilities to receive dialysis. This increases efficiency and reduces the need for staff to leave their facilities.	Home Dialysis in Nursing Homes (Mass.gov)	A dialysis facility providing home dialysis services to nursing home residents must do so under a written agreement with the nursing home. The dialysis facility must maintain direct responsibility for the dialysis related care and services provided to the nursing home residents. A dialysis facility seeking an initial license must complete the health care facility initial licensure process, including suitability review in order to obtain special project approval.

Teaching Nursing Home Care Model	Revives a past model that utilizes nursing facility staff, students, and academics to improve care for nursing home residents and foster careers in long term care and geriatrics.	Pennsylvania Teaching Nursing Home Pilot Aims to Transform Care Model - Jewish Healthcare Foundation News - JHF	Need funding and academic and practice partnerships.
Hospital at Home (HAH) Programs	Hospital at Home HAH programs allow patients to receive hospital level care for acute illnesses from the comfort of their homes. These programs are aided by technologies such as remote patient monitoring and virtual consultations. HAH programs have been proven to reduce readmission and provide high quality care to patients.	Technologies for Hospital at Home Programs (MGH)

Home Hospital Reduces Costs and Improves Care (BWH)

AHA Hospital at Home Resources

Hospital At Home Users Group

Hospital at Home at UMass | Current flexibilities have now been extended through the end of 2024 after President Biden signed the recent Omnibus legislation at the end of 2022. Permanent changes to reimbursement policies will be necessary beyond 2024 from CMS and/or Congress. |
| SNF At Home Program | SNF at Home programs allow patients who need short-term SNF services to access these services in the home setting. Using technology and support personnel, SNF at home programs can increase patient outcomes and decrease medical costs. | Skilled Placement Program (UMass)

Setting Up SNF at Home (Home Healthcare News) | Need changes to reimbursement; program needs to be better defined in terms of care provided and by whom; needs direction from federal government, specifically around CMS (reimbursement and regulations/guidelines). |
| Expansion of Long-Term Care Options | Expansion of long-term care options in place of traditional nursing homes; small home-based care settings can increase patient satisfaction and outcomes. Examples include expansion of Senior Care Options plans, Area Agency on Aging programs, and use of rest homes and similar residencies. | Administration for Community Living – Area Agencies on Aging

Senior Care Options (Mass.gov) | Eligibility criteria. |
| Expansion of PACE (Program of All-Inclusive Care for The Elderly) Programs | PACE models involve incorporation of a comprehensive care team to provide quality for the elderly. Expansion of these programs can provide quality care to a wider variety of qualifying patients. | MassPACE Resources and Links

Understanding the PACE Model of Care (NPA) | Increasing Medicaid/MassHealth reimbursements for providers might help promote PACE and encourage organizations to consider offering the PACE model. |

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Adoption of New Technologies			
Strategy/Care Model	**Description***	**References**	**Barriers/Challenges**
Digital Transformation and Front Door	The digital front door is a strategy for engaging patients at every major touchpoint of the patient journey using technology that patients have already adopted for everyday use. A strong digital front door strategy doesn't hinge on any single product but leverages technology to expand patient access, improve productivity, and drive higher patient satisfaction and increased revenue.	A Digital Front Door Strategy: What It Is, Isn't, and Why You Need One (Relatient) Digital Transformation in Healthcare in 2022 (Digital Authority) Digital Transformation Can Improve Hospitals' Operation Decisions (Harvard Business Review)	
Natural Language Processing	With the unstructured nature of clinical data in healthcare organizations, important information can be hidden within clinical notes and lab reports. Natural language processing technology can navigate these data sources to pull useful information quickly and accurately for clinicians to improve the quality of patient care.	Natural Language API (Cloud Healthcare) Role of Natural Language Processing in Healthcare (Health IT Analytics)	
Artificial Intelligence (AI) in EMR Systems (Decision Support)	Clinical decision support systems (CDSS) provide clinicians additional information using EMR data and current patient physiology to provide a predictive analysis of the patient condition. These analyses are not meant to replace clinician diagnosis but rather provide clinicians an efficient way to see more patient information using AI.	AI for Clinical Decision Support (Kantify) Machine Learning in Clinical Decision Support Systems (Health IT Analytics)	
Remote Patient Monitoring (RPM)	RPM is a healthcare delivery method that uses technology to monitor patient health within a variety of settings. This allows clinicians to monitor the condition of patients using wearable technology, live devices, and/or implementation of ambient computer vision.	Benefits of Remote Patient Monitoring (Insider Intelligence) How Remote Patient Monitoring is Moving into the Mainstream (Healthcare IT News) UMass Memorial Health proves RPM virtual sitting is as effective as in-person care	Healthcare IT News	Coverage and Reimbursement from Medicaid, Medicare, and commercial payers is still evolving and undefined in some cases.

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Robotics	Robotics in the healthcare setting can aid clinicians in performing repetitive tasks such as sanitation or sitting in patient rooms. Robotics can also be utilized in more clinical settings to aid in patient recovery.	How Robots are Redefining Health Care (Robotics Tomorrow) Types of Medical Robots Today and in the Future (Brainlab)	
Speech-to-Text Documentation	Recent advances to speech-to-text technology, opens the ability to dictate clinical documentation with less error than typed documentation. This technology allows clinicians to spend less time completing administrative tasks and include more information in clinical documentation.	Speech recognition for medical documentation: an analysis of time, cost efficiency and acceptance in a clinical setting (British J. of Healthcare Mgmt) Speech Recognition Technology for Acute Nurses (Am. Nursing Informatics Assoc.)	Investment in technology/programming/training Integration with current technology (EMR).

Additional Resources

AHA 2023 Healthcare Workforce Scan

AHA Market Insights Report: AI and the Health Care Workforce

AHA Report "Strengthening the Health Care Workforce: Strategies for Now, Near and Far"

AONL Nursing Leadership Workforce Compendium

MHA Workforce Toolkit

Nurse Staffing Think Tank: Priority Topics and Recommendations