

Skilled Nursing Facility and Post-Acute Care 2024 Trends

Navigating Uncertainty
and Driving Change



Healthcare continued to rebound in 2023 in the pandemic’s aftermath. Yet serious headwinds remain. While caution is the watchword for 2024, defensiveness alone will be an insufficient response to the many forces that are heightening the urgency for meaningful change.

To assist skilled nursing facilities (SNF) navigate the range of challenges and opportunities that will present themselves this year, Aria Care Partners, the leading provider of onsite ancillary medical services for SNFs, offers its inaugural Skilled Nursing Facility and Post-Acute Care 2024 Trends Report. Four high-impact trends have been synthesized from analyzing a wide array of industry data and perspectives.

The trends reflect themes that are increasingly vital to SNF progress: value-based care models, enhanced resident experience, building trust and a change culture, and opportunities in SNF ancillary care. The latter trend explores key developments in dental, hearing, vision, and podiatry services, those provided by Aria. The report also situates the trends within a planning context dominated by financial, growth, and technology imperatives that will frame and empower decisions throughout the year (Figure 1).

FIGURE 1

2024 SNF PLANNING LANDSCAPE

3 IMPERATIVES



Financial Health



Growth



Technology Investment

4 KEY TRENDS

1

Value Based Care

2

Enhancing Resident Experience

3

Building Trust & The Right Culture

4

Ancillary Care Growth

Imperative: Continuing the Search for Financial/Operational Health

Cost control and operational efficiencies are key beacons guiding 2024 SNF strategy. The overall healthcare economic environment is still very challenging. For the post-acute sector, improved financial health will hinge on addressing two stressors.

Mixed Financial Outlook

Leading financial metrics issue both positive and negative signals.

- **Profitability/Margins.** Hospital margins saw some improvement in 2023, but were still below historical averages. However, “longer-term industry dynamics continue to suggest protracted margin compression.”¹ SNFs had negative median operating margins for 2021 and 2022, excluding public funding supports.² As of mid-2023, 54% of nursing homes had negative total margins and just over one-third were in the 0% to 3% range.³ Some see SNF margins declining until 2027.⁴

1 Fitch Ratings, “2023 Median Ratios: Not-for-Profit Hospitals and Healthcare Systems,” July 25, 2023.

2 Clifton Lawson Allen, *38th SNF Cost Comparison and Industry Trends Report*, October 24, 2023.

3 American Health Care Association, “State of the Nursing Home Industry: Mid-Year 2023,” May 2023.

4 Research and Markets, *U.S. Post-Acute Market Report 2023*, August 2023.

- **Volume & Occupancy.** Moody's sees another "modest rebound" in hospital patient volumes in 2024.⁵ SNF occupancy is trending upward, with 36% in a recent survey saying they are experiencing "significant improvement" relative to pandemic levels.⁶
- **Cash Flow.** Commercial insurance prior authorization delays and denials have affected all provider cash flows. Initial inpatient claims reached a denial rate of over 3% in early 2023, with almost a third taking three months to be paid.⁷

Persistent Major Workforce Disruption

Well-documented workforce shortages are exacerbating financial pressures. A survey of skilled nursing executives placed "staffing" at the top of their concerns list.⁸ The highly-debated proposed nursing home staffing mandates only add trepidation.

The national nursing turnover rate stands at 22.5%, and the vacancy rate at nearly 16%.⁹ Almost 90% of nurses regard current shortages as worse than five years ago, while 80% foresee further deterioration over the next five years.¹⁰ SNF/Nursing Home administrator turnover is 28%, which over one-third of facilities believe will increase.¹¹ Unfortunately, improvement in the overall shortage will not come until after 2024, according to 43% of surveyed SNF leaders.¹²

The consequences are extensive. Wages across healthcare jobs increased 25% between 2019 and 2023 for workers over 25 years old.¹³ Shortages are also constraining volume growth. Forty-six percent of SNFs reported declines in admissions attributable to staffing problems (Figure 2).¹⁴

Care is also impacted. Working with less experienced and temporary staff, nurse managers cite "increases in adverse events and declining nurse-sensitive outcomes."¹⁵

Imperative: Building Sustained Growth

Generating top-line growth is an essential ingredient in achieving financial health. The "aging of America" will stimulate demand. SNFs possess competitive advantages "since certain complex post-acute care and needs-driven care will continue to be best delivered in a SNF setting."¹⁶ These positives are expected to generate 3.4% compound annual growth through 2030.¹⁷

5 L. Dyrda, "Hospital Cash Flow, Margins to Surge in 2024: Moody's," *Becker's Hospital CFO Report*, November 8, 2023.

6 Ziegler, "Future of Skilled Nursing," December 2023.

7 Crowe, *Time for a Commercial Break: Crowe RCA Benchmarking Analysis*, May 2023.

8 Ziegler, "Future of Skilled Nursing," December 2023.

9 Nursing Solutions, Inc., *2023 NSI National Health Care Retention & RN Staffing Report*, March 2023.

10 AMN Healthcare, *2023 Survey of Registered Nurses*, May 1, 2023.

11 K. Marselas, "Some AIT Candidates Go Without Placements as Turnover, Vacancies Persist in SNF Leadership," November 3, 2023.

12 Research and Markets, "U.S. Post-Acute Market Rebounds, Skilled Nursing Staffing Challenges to Improve After 2024," August 10, 2023.

13 Federal Reserve Bank of Kansas City, "Decline in Number of Workers with 'Some College' Is Boosting Healthcare Wage Inflation," December 20, 2023.

14 Ziegler, "Future of Skilled Nursing," December 2023.

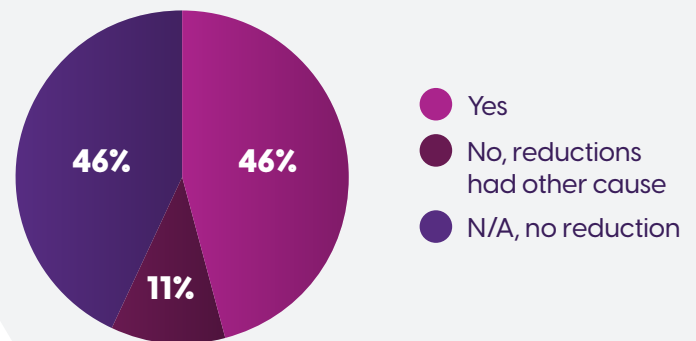
15 American Organization of Nursing Leadership, "The Role of the Nurse Manager: Evolution of the Role in High-Turnover Environments," 2023.

16 Fitch Ratings, "Fitch Affirms Omega Healthcare Investors at 'BBB-'; Outlook Revised to Stable," November 20, 2023.

17 Grandview Research, *U.S. Skilled Nursing Facility Market*, March 2022.

FIGURE 2

HAVE STAFFING ISSUES FORCED A REDUCTION IN YOUR SKILLED NURSING ADMISSIONS?



Source: B.C. Ziegler and Company

In addition to core services expansion, additional growth avenues to watch this year and beyond include:

- **M&A.** Operators with the resources are likely to seek non-organic growth through the well-established M&A channel. “Skilled nursing operators are sitting on capital reserves and are poised to pursue deals,” notes an analysis.¹⁸ Ten percent of hospitals plan to acquire SNF or long-term care facilities over the coming year.¹⁹
- **Telehealth.** The pandemic stimulated a jump in virtual healthcare encounters. The percentage of SNFs conducting telemedicine visits spiked to 90% in 2020, settling back to 61% in 2022.²⁰ Adoption has been strong in mental health and in rural settings. Broader use in SNFs is uncertain, with the near-term likely to see selective use for nurses to triage residents before admission or to provide some supplementary procedures.
- **SNF-at-Home.** Mirroring the budding Hospital-at-Home movement, SNF-at-Home offerings are appearing. The model combines various technologies with remote nursing to deliver services in the home rather than the facility. Competitive and reimbursement issues need to be resolved, but exposure to SNF-at-Home could be a logical step for some, possibly through partnership with a home health agency or a hospital.

Imperative: Investing in Technology

Healthcare is undergoing digital transformation, and SNFs are part of the dynamic. In 2023, 38% of them said they were investing in new technology.²¹ Healthcare seeks many returns on this investment, led by better consumer experiences (Figure 3).²²

FIGURE 3

CRITICAL OUTCOMES SOUGHT BY DIGITAL INVESTMENTS (TOP THREE SELECTED)

Excel in Customer Experience	73%
Improve Operating Margins	57%
Increase Human Capital Effectiveness	52%
Ensure Compliance / Minimize Risks	42%
Generate Revenue	35%
Accelerate Corporate Development	19%
Optimize Asset Utilization	17%

Source: Gartner



Two among many information technologies are garnering high priority.

18 A. Stulick, “SNF Outlook: REITs to Play Offense as Private Buyers ‘Partially Sidelined,’ Operating Trends Improve,” *Skilled Nursing News*, August 22, 2023.

19 HealthLeaders, “Intelligence Report: What’s Driving M&A,” July-August 2023.

20 A. Ulyte, A. Mehrotra, A. Wilcock, et. al., “Telemedicine Visits in U.S. Skilled Nursing Facilities,” *JAMA Network Open*, August 18, 2023.

21 Research and Markets, *U.S. Post-Acute Market Report 2023*, August 2023.

22 Gartner, “Webinar: The 2024 Gartner Predictions: Healthcare & Life Science Risks and Opportunities,” December 19, 2023.

Cybersecurity

There has been no letup in healthcare's security threats. In a recent poll, 78% of respondents said they had experienced at least one security incident over the past year with attacks occurring across asset types such as IT systems, medical devices and building management systems.²³ Attacks are costly. Healthcare leads all industries in data breach costs, averaging nearly \$11 million per incident in 2023 with costs escalating 53.3% over the past three years.²⁴

There have been a number of publicized incidents in SNFs in recent years. Many operators may feel less vulnerable due to their smaller size. But cross-industry analysis shows that the average breach cost for organizations with 500 or fewer employees jumped 13.4% in 2023 to \$3.3 million.²⁵ SNF investment in cybersecurity is a necessity.

Artificial Intelligence (AI)

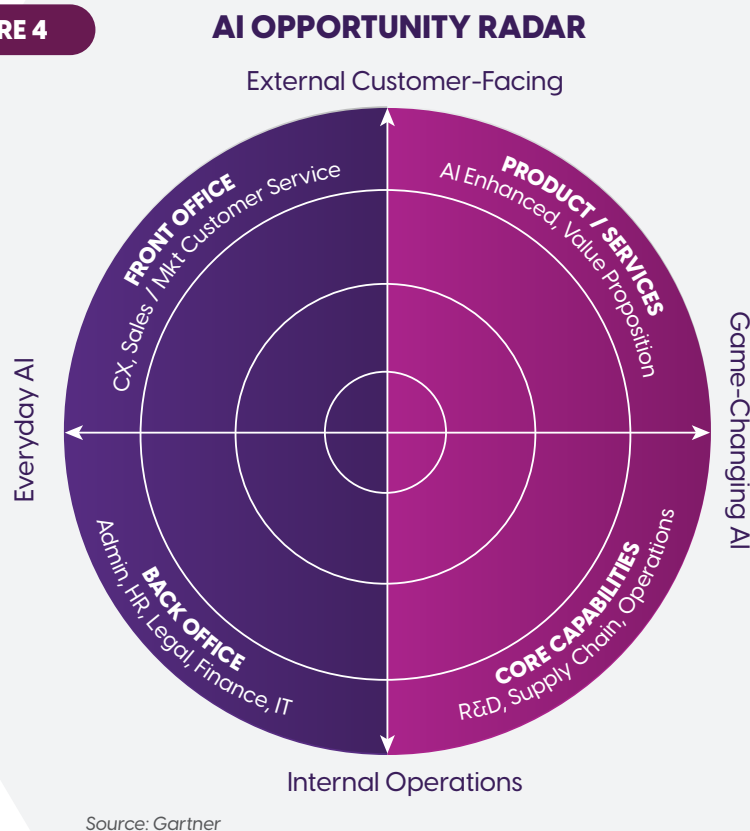
Perhaps no technology has received more attention over the past twelve months than AI, which has been in use in healthcare for some time. The U.S. healthcare market is projected to grow 36.1% compounded annually through 2030.²⁶

Expectations have soared with the emergence of "generative AI" which processes large volumes of unstructured data to output original text or images. Three-quarters of surveyed health system executives believe "generative AI has reached a turning point in its ability to reshape the industry," though only 6% have a strategy in place.²⁷

Gartner's Opportunity Radar framework offers leaders a way to identify AI applications across their operations (Figure 4).²⁸

One example in SNFs is strengthening regulatory compliance by analyzing internal data to create "tools that automate processes or provide administrators with crucial notifications."²⁹ Aria Care Partners is monitoring myriad uses in its medical specialties and will spotlight a few of these in the fourth trend discussion.

FIGURE 4



23 J. Lagasse, "Almost 80% of Healthcare Organizations Experienced Cyber Incidents in the Past Year," *Healthcare Finance*, August 30, 2023.

24 IBM, *Cost of a Data Breach Report*, July 2023.

25 Ibid.

26 Grandview Research, *Artificial Intelligence In Healthcare Market Size Report*, November 2023.

27 Bain & Company, "Beyond Hype: Getting the Most Out of Generative AI in Healthcare Today," August 7, 2023.

28 Gartner Research, "We Shape AI, AI Shapes Us," October 16, 2023.

29 A. Dorman, "AI can be Co-Pilot to Help SNFs Manage Regulatory Burdens, Healthtech CEO Says," *McKnight's Senior Living*, October 20, 2023.

A Final Word on Technology

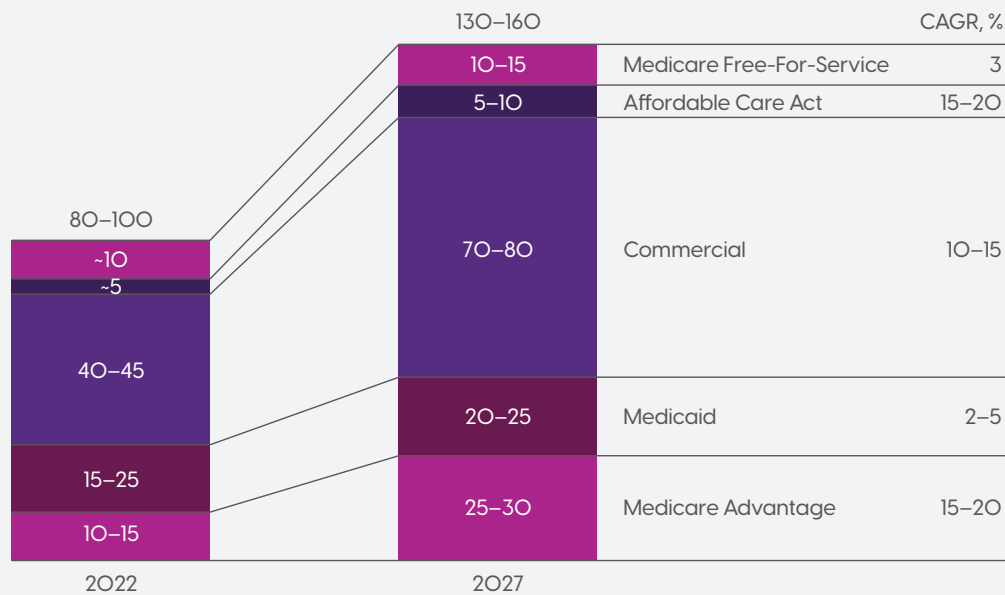
Understanding the challenges in effective advanced technology implementation in the post-acute sector is important. While 44% of nursing homes expanded information technology adoption between 2019 and 2021, 28% failed to “scale up, spread and sustain” those investments.³⁰

Trend: Value-Based Care Models Gathering Momentum In Skilled Nursing Industry

Value-based care (VBC) is increasingly recognized as a cornerstone of healthcare’s long-term strategic and financial wellbeing. VBC models bind reimbursement tightly with quality outcomes rather than with volume of services provided. Adoption to date has been modest, but analysts foresee growth to 130-160 million lives covered by value-based insurance programs in 2027 on the heels of double digit increases from commercial, Medicare Advantage, and Affordable Care Act plans (Figure 5).³¹

FIGURE 5

VALUE-BASED CARE MODELS ARE EXPECTED TO GROW ACROSS ALL LINES OF BUSINESS LIVES IN ALL VALUE-BASED CARE MODELS,¹ MILLION LIVES



¹ includes pay-for-performance or quality to full capitation.

Source: McKinsey & Company

The pandemic revealed the financial risks associated with heavy reliance on volume reimbursement. In addition, the federal government aggressively aims to have value-based care arrangements in effect for all Medicare beneficiaries and the majority of Medicaid beneficiaries by 2030. The federal SNF Value-Based Purchasing Program, which today ties incentives to hospital readmissions, is also likely to be expanded.

Aria Care Partners believes that SNFs should view value delivery in the broadest sense. Most healthcare stakeholders regard an integrated care ecosystem as increasingly necessary. Multi-level coordination is required:

³⁰ K. Powell, M. Farmer, J. Liu, and G. Alexander, “A Survey of Technology Abandonment in U.S. Nursing Homes,” *Journal of the American Medical Directors Association*, October 11, 2023.

³¹ McKinsey & Company, *Investing in the New Era of Value-Based Care*, December 2022.

FIGURE 6

- **Across care sites.** One analyst captures the relationship, “What happens in the post-acute setting has a direct impact on the hospital setting and vice versa – so improving patient outcomes requires a holistic cross-continuum approach.”³²
- **Among care teams.** An example of current gaps in collaboration comes from a survey of ambulatory physicians which found that 75% lack relationships with post-acute facilities and only 63% receive notification when individuals are discharged from those facilities.³³
- **Between information systems.** Electronic Health Record systems (EHR) have proliferated in SNF and post-acute communities, and these systems are foundational to service providers such as Aria Care Partners as well. EHRs provide the automation, data sharing, and analytics that underpin VBC. Integration with external information systems has been challenging for SNFs, who report “significant shortcomings in the completeness, timeliness, and usability of information provided by hospitals to support patient transitions.”³⁴

Trend: Consumer Demands, Competition Driving Need to Enhance Resident Experience

“Consumerist” attitudes are on the rise. Patients want their healthcare experiences to be more convenient, coordinated, and personalized. Current and prospective SNF residents and their families can be expected to bring more specific demands for how they will be treated, sometimes influenced by prior negative encounters with the healthcare system. SNF communities are elevating their efforts on resident experience and delivering person-centered care to “support the resident in making their own choices and having control over their daily lives.”³⁵

The complex set of motivations for positive experiences requires SNFs to make improvements throughout the resident journey (Figure 6).³⁶

WHY IS HAVING A GOOD PATIENT EXPERIENCE IMPORTANT TO YOU?

- 67% My health and wellbeing are important to me
- 60% I want to know my physical needs are being taken seriously
- 49% Good patient experience contributes to my healing / good healthcare outcomes
- 49% I want / deserve to be treated with respect
- 44% I want to be addressed as a person, not as a symptom, diagnosis or disease
- 36% It will influence how I make healthcare decisions in the future
- 35% I spend my money on this
- 33% My time matters
- 20% I see myself as a customer

Source: Beryl Institute Ipsos



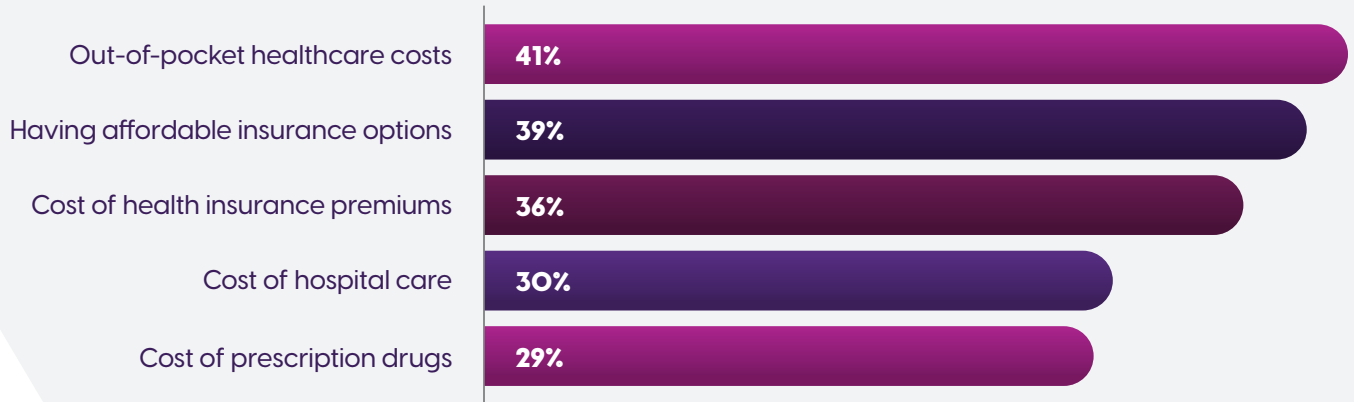
32 WellSky, “The WellSky 2023 Evolution of Care Report Reveals Critical Changes to Care Delivery In the Past Year,” July 25, 2023.

33 WellSky, “WellSky Survey Finds Physicians Struggle to Connect with Post-Acute Care Providers, Need Better Technology to Succeed in Value-Based Care,” December 6, 2023.

34 J. Adler-Milstein, K. Raphael, T. O’Malley, et. al., “Information Sharing Practices Between U.S. Hospitals and Skilled Nursing Facilities to Support Care Transitions,” *JAMA Network Open*, January 14, 2021.

35 ECRI, “Person-Centered Care in Aging Services,” *Continuing Care Risk Management*, June 6, 2019.

36 The Beryl Institute and Ipsos, *Consumer Perspectives on Patient Experience in the U.S.*, July 2023.

FIGURE 7**WHICH HEALTHCARE ISSUES ARE MOST IMPORTANT TO YOU?****(TOP THREE SELECTED)**

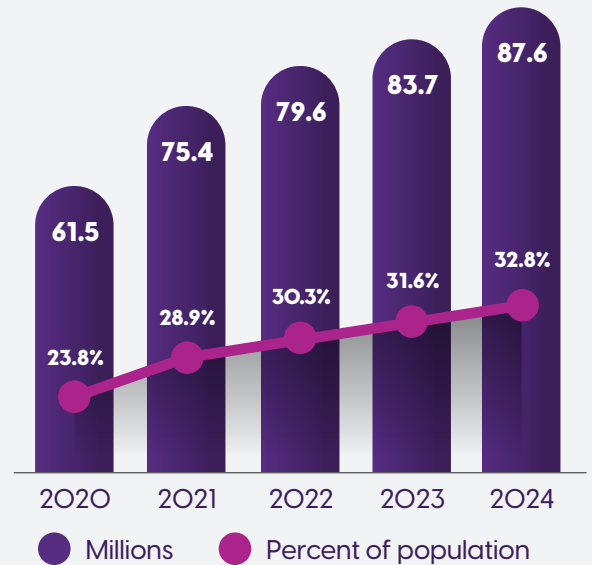
Source: Beryl Institute Ipsos

Affordability issues are a concern for many from the outset of the process, notably for those likely to exceed Medicare maximums. Individuals worry about care costs and their out-of-pocket obligations (Figure 7).³⁷ Government forecasts envision “significant increases in both overall and out-of-pocket costs for home care, nursing facilities, and continuing care communities (CCRCs) through this decade.”³⁸

Non-traditional providers coming from retail, technology, health insurance, and other industries are fueling the rising consumerism. Powerful companies such as Amazon, CVS, and Walmart are using their formidable consumer understanding and technological savvy to create alternative “retail health” in primary, urgent, home, and specialty care. Americans’ exposure to these “disruptive” services is increasing (Figure 8).³⁹

These providers tout their convenience, access, and affordability, establishing expectations that are sure to extend to SNF and other post-acute settings. This retail segment is also seen as a potential engine for VBC growth. Optum Health boasts four million patients enrolled in “fully accountable value-based arrangements.”⁴⁰

The upshot for SNFs is that significant advantages accrue to optimizing the end-to-end resident experience. Technology is part of the solution. As Figure 3 depicted, patient experience is a leading digital investment

FIGURE 8**RETAIL CLINIC PATIENTS****US, 2020–2024**

Note: Ages 18+; adults who visit retail clinics in-person at least once during the calendar year; examples include CVS MinuteClinic, Walgreens Healthcare Clinic, Kroger’s The Little Clinic, Walmart Care Clinic, etc.

Source: eMarketer

37 Ibid.

38 H. Gleckman, “The U.S. Predicts Big Increases In Skilled Nursing And Long-Term Care Costs,” *Forbes*, April 4, 2023.39 R. Leventhal, “Primary Care Practices Lose Patients to Alternative Sites of Care,” *Insider Intelligence*, December 1, 2022.40 UnitedHealth Group, *Investor Conference Book*, November 29, 2023.

priority. The market for various engagement solutions is large with an anticipated growth rate of 17.2% to attain nearly \$70 billion by 2030.⁴¹ SNFs will want to select appropriate tools and generally bolster their online presence. Some will find a viable path in alliances with the retail health providers.

However, technology must be paired with the human element to provide consistently personalized SNF experiences. Comprehensive onsite care that stresses prevention as well as treatment and is delivered by professionals who understand the unique aspects of the resident experience will foster engagement and better health.

Trend: Building Trust and a Change Culture Becoming Critical Success Factors

Another trend gaining currency – and one that reinforces the value and resident experience trends – is development of an organizational culture well-suited to meeting today’s demands. Two cultural emphases have come to the fore: building a broad base of trust and fostering change and agility.

Trust is unquestionably important for post-acute providers. The industry has suffered its share of reputation problems and skepticism from various quarters. SNFs and nursing homes are not alone. Americans’ attitudes and beliefs about the entire healthcare system have been turning increasingly negative. In 2022, over half rated U.S. healthcare quality fair or poor (Figure 9).⁴² Sixty percent believe healthcare prioritizes profits over patient care.⁴³

Staff also value a culture of trust and support. Consider these findings:

- Almost two-thirds of nurses feel that the industry does not prioritize their wellbeing, and one-third are dissatisfied or very dissatisfied with the support their organization offers.⁴⁴
- Health workers exhibited “decreased odds of burnout if they trusted management ... and felt that the workplace supported productivity.”⁴⁵
- For SNFs, “Employee retention is not always a simple issue of pay and benefits. Open lines of communication and respect are often equally, or even more, significant to workers.”⁴⁶

41 SNS Insider, *The Patient Engagement Solutions Market*, May 2023.

42 Trilliant Health, *Value for Money: Trends Shaping the Health Economy*, 2023.

43 P. Keckley, “Keckley Poll: The Public is Fed Up with the Health System ... So What Else is New?” *The Keckley Report*, November 20, 2023.

44 Trusted Health, *2023 Frontline Nurse Mental Health and Well-being Survey*, June 2023.

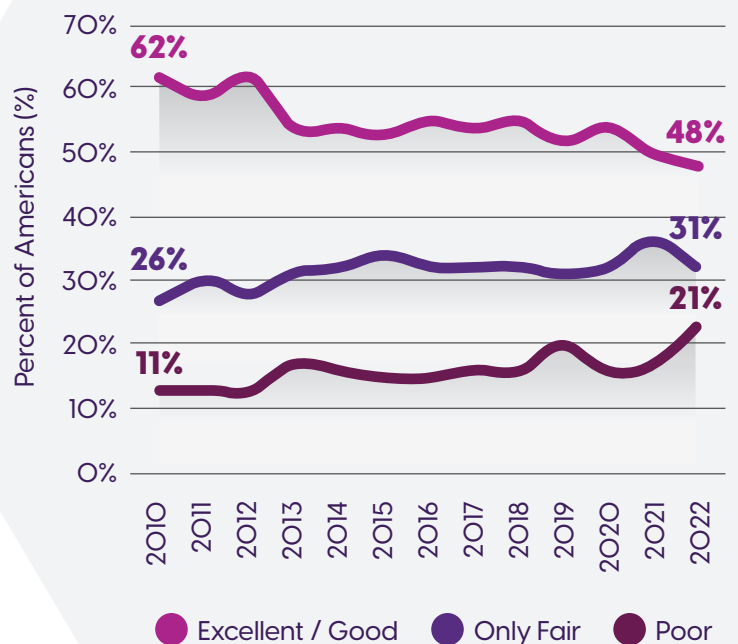
45 Centers for Disease Control and Prevention, “Vital Signs: Health Worker-Perceived Working Conditions and Symptoms of Poor Mental Health – Quality of Worklife Survey, United States, 2018-2022,” *Morbidity and Mortality Weekly Report*, October 24, 2023.

46 J. Henreckson, “Younger SNF Workers More Likely to Get Out than ‘Stick It Out’ Expert Says. Here’s How to Keep Them,” *McKnight’s Long-Term Care News*, November 9, 2023.

FIGURE 9

AMERICA’S VIEWS OF U.S. HEALTH QUALITY

2010–2022



Source: Trilliant Health

Given the many stresses and rapidly shifting industry dynamics, SNF operators are also being pressed to bring a flexible, change-oriented approach to their communities. Leadership everywhere is tasked with “transforming and evolving personal mindsets and behaviors, transforming teams to work in new ways, and transforming the broader organization by building new levels of agility, human-centeredness, and value creation.”⁴⁷

It is often difficult to look past urgent day-to-day concerns. But post-acute facilities are approaching the same strategic crossroads as all providers. Trust and cultural alignment are critical. External partners can be a source of help. For example, the American Health Care Association offers a Building Trust Leadership Academy geared to the issues described in this trend.

Trend: Ancillary Care Offering Growth and Holistic Care Opportunities

Aria Care Partners’ active surveillance of the dental, hearing, vision, and podiatry disciplines affirms their mounting importance in the elderly’s overall health profile and the value of an expanded focus on ancillary care in SNFs. A brief look at the leading directions in care and technology in each discipline adds important understanding for all SNF communities.

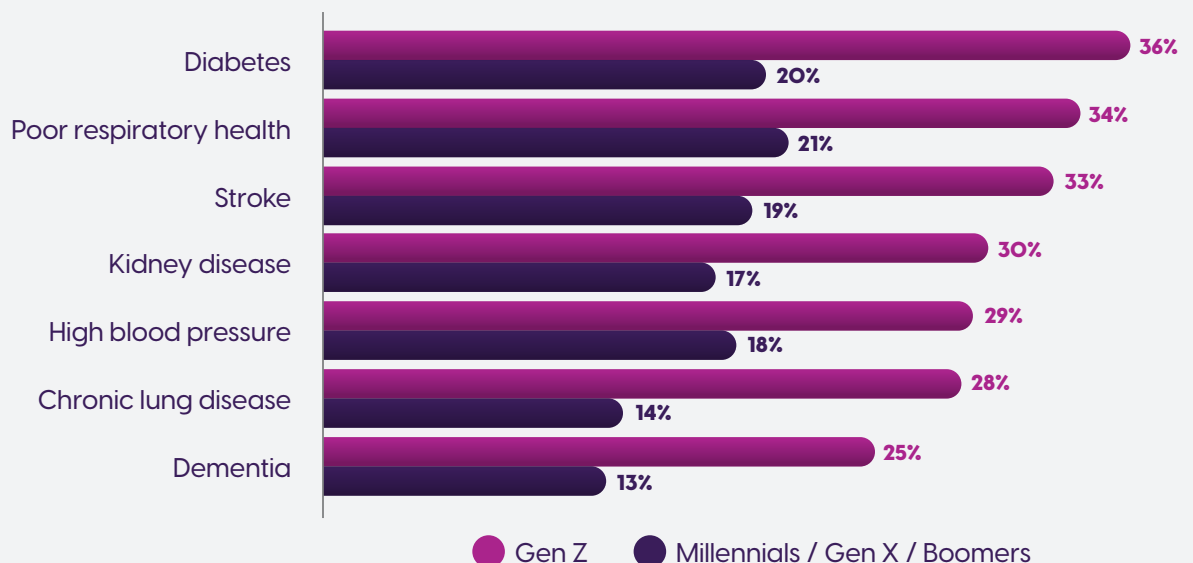
Dental

Care Issues and Trends

Many seniors face dental problems. About two in three adults aged 65 and older have gum disease.⁴⁸ Untreated tooth decay plagues 19% of older adults, and another 19% have complete tooth loss.⁴⁹ Studies have linked oral issues with a host of serious conditions. Yet older adults exhibit relatively low awareness of these connections (Figure 10).⁵⁰

FIGURE 10

THE PERCENTAGE OF ADULTS WHO UNDERSTAND THE CONNECTION BETWEEN ORAL HEALTH AND SPECIFIC HEALTH CONDITIONS:



Source: Delta Dental

47 McKinsey & Company, *What is Leadership?* August 2022.

48 Centers for Disease Control and Prevention, “Older Adult Oral Health.”

49 A. Willink, N. Reed, B. Swenor, et. al., “Dental, Vision, and Hearing Services: Access, Spending, and Coverage for Medicare Beneficiaries,” *Health Affairs*, February 2020.

50 Delta Dental, *The 2023 State of America’s Oral Health and Wellness Report*, May 10, 2023.

FIGURE 11**THE VICIOUS CYCLE OF DENTAL ANXIETY OF BERGGREN**

Source: *Medical Principles and Practice*

Many SNF residents have not had a dentist visit in some time. In 2021, 50% of seniors 65+ had seen a dentist in the previous 12 months.⁵¹ Insurance is one factor, with coverage pegged at 59% of adults and studies showing fewer visits among the uninsured.⁵²

Dental anxiety is another factor. Despite understanding the risks, 81% of adults hesitate to commit and 31% refuse any treatment until their pain is too great.⁵³ These attitudes may trigger what a psychologist has posited is a vicious cycle of dental anxiety (Figure 11).⁵⁴ SNFs can make a real difference in resident health outcomes and satisfaction by offering onsite care through experienced dentists with the “human touch.”

Current dental care trends meriting particular attention:

- **Growing interest in prevention.** The evidence suggests that people are more attuned to preventive maintenance, prodded in part by the pandemic. Fifty-nine percent of surveyed adults said their oral care habits improved during the COVID-19 period.⁵⁵ Analysts expect prevention to power growth in dental visits over the next few years.⁵⁶ SNFs should anticipate resident demand for more preventive dentistry.
- **More teeth to address.** Better self-care is manifesting itself in older people retaining more of their teeth than in the past. An analysis of adults over age 50 covering a decade determined that the proportion keeping all their teeth rose from 14% to 21% while those having complete tooth loss decreased notably from 17% to 11%.⁵⁷ While dentures remain an essential element in elder dental care, regular cleaning and maintenance activities on a fuller set of teeth are equally critical.
- **Medical-dental integration.** There is growing impetus to integrate medical and dental care more closely. Dentists can perform screening for some related medical issues while primary physicians can spot a number of dental concerns. This trend supports SNFs pursuit of more holistic care.

Dental Technology Trends

The profession is benefiting from several technologies:

- **AI.** The long reach of AI extends to dental care. AI promises interpretation of dental images with higher accuracy than humans. Individualized treatment can be executed based on AI analysis of wide-ranging patient data. Surveyed consumers are favorably inclined to AI if it can produce less invasive treatment (44%); cost savings (37%); avoidance of false overdiagnosis (32%); and prevention of systemic disease (31%).⁵⁸

51 American Dental Association Health Policy Institute, “National Trends in Dental Care Use, Dental Insurance Coverage, and Cost Barriers,” November 2023.

52 Delta Dental, *The 2023 State of America’s Oral Health and Wellness Report*, May 10, 2023.

53 Videa Health, “Poll: More than 90% of Americans Know Dental Disease Can Increase Potential Risk for Disease, and Yet Nearly 1 out of 2 Have Declined or Delayed Treatment.” December 11, 2023.

54 L. Beaton, R. Freeman, and G. Humphris, “Why are People Afraid of the Dentist? Observations and Explanations,” *Medical Principles and Practice*, December 20, 2013.

55 Delta Dental, *The 2023 State of America’s Oral Health and Wellness Report*, May 10, 2023.

56 C. Meyerhoefer, I. Panovska, and R. Manski, “Projections Of Dental Care Use Through 2026: Preventive Care To Increase While Treatment Will Decline,” *Health Affairs*, December 2016.

57 National Institute of Dental and Craniofacial Research, “Older Americans Are Keeping More of Their Teeth,” January 30, 2019.

58 Videa Health, “Poll: More than 90% of Americans Know Dental Disease Can Increase Potential Risk for Disease, and Yet Nearly 1 out of 2 Have Declined or Delayed Treatment.” December 11, 2023.

- **3D Printing.** Dentures, veneers, and crowns created by 3D printing can enable highly customized fit. This technology builds layers of material to the specification of a computer-generated 3D model (Figure 12).

The market will increase at nearly a 26% compound annual clip between 2024 and 2030.⁵⁹ Growth is being fueled by the wide range of dental applications as shown in a 2021 segmentation in Figure 13.⁶⁰

FIGURE 12

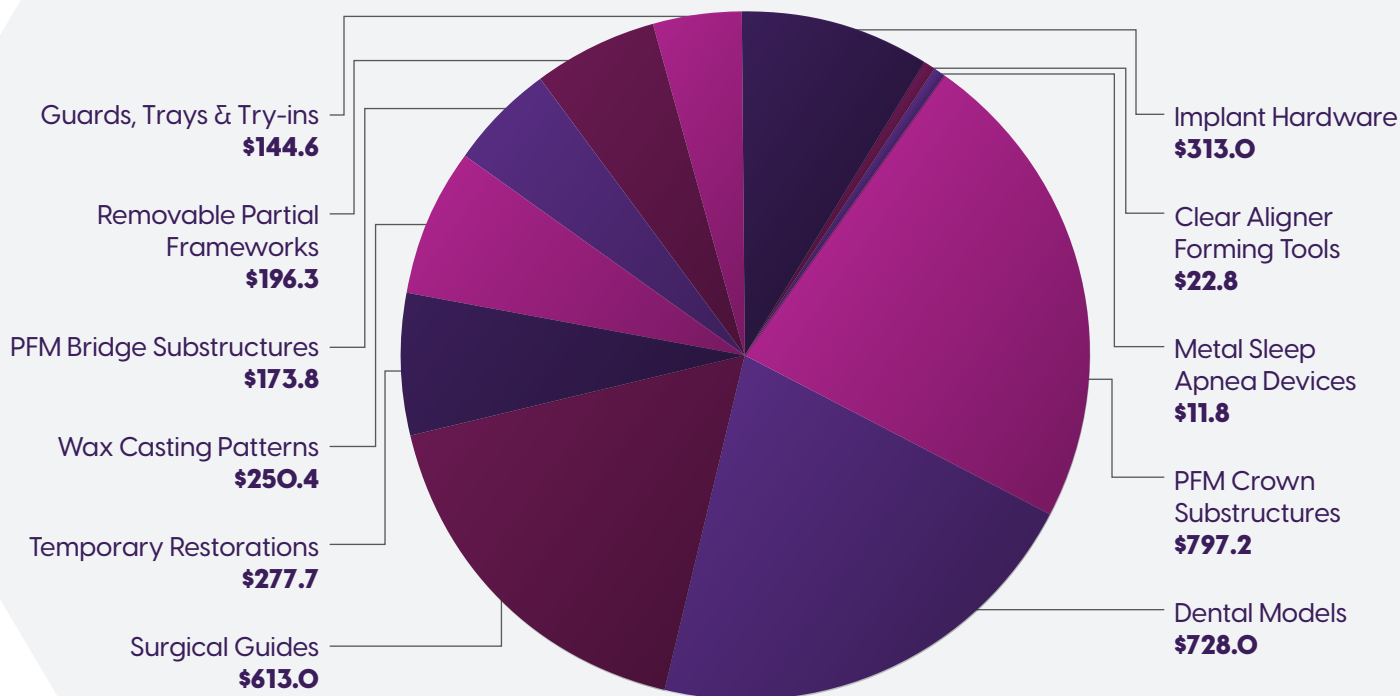


Source: Formlabs

- **Dental lasers.** As an alternative to drills and conventional tools, more dentists are using lasers to work on tissue, cavities, fillings, and other interventions. Lasers can also speed the tooth whitening process. Advantages include greater patient comfort, effectiveness, and cost savings in some cases. The global market is forecasted to increase 5.7% yearly.⁶¹
- **Virtual Reality.** Virtual reality technology offers potential value in helping patients visualize and understand dental procedures and in distracting them to reduce anxiety. Dental education uses are also being explored.

FIGURE 13

TOTAL PROJECTED DENTAL 3D PRINTING APPLICATION MARKET VALUE BY TYPE, 2021 (\$US MILLIONS)



Source: McKinsey & Company

59 Grandview Research, *Dental 3D Printing Market*, November 2023.

60 SmarTech Publishing, *3D Printing In Dentistry 2016: A Ten-year Forecast And Opportunity Analysis*, August 2016.

61 Allied Market Research, *Dental Lasers Market*, April 2023.

Hearing

Care Issues and Trends

Hearing issues are also prevalent among seniors:

- 45% of Medicare beneficiaries have trouble hearing even with a hearing aid.⁶²
- Two-thirds of those over 70 have bilateral hearing loss and almost three-quarters report single ear loss.⁶³
- Through 2060, the percentage increase in the population developing moderate to severe hearing loss is projected to be 157% for those over 80 years old, 38% for those 70-79, and 23% for the 60-69 cohort (figures rounded).⁶⁴

Hearing issues correlate with several chronic health conditions. Recently, investigators found that the odds of hearing loss jumped by 92% in individuals with two or more of the cardiovascular disease risk factors of diabetes, smoking, hypertension, and high cholesterol or statin use.⁶⁵ Scientists believe high blood glucose damages hearing-related nerves and blood vessels. Hospital readmission risk is another concern. A study of Medicare beneficiaries showed individuals with trouble communicating with medical personnel had an average 32% greater odds of hospital readmission.⁶⁶

As with dental issues, many admitted SNF residents will have had minimal prior audiology care. A journal article summarized the findings of several studies:

- “A significant proportion of people with hearing loss does not seek help for their hearing problems and does not acquire hearing aids.”
- The average time lapse before seeking help is 9 years.
- 32% of U.S. adults with hearing difficulty have avoided seeing a physician, and 28% never had a hearing test.⁶⁷

Audiology practice is moving toward greater person-centered care in response to consumer preferences. Results of a survey and focus groups suggest people want hearing care to be:

- Personalized and flexible.
- Focused on the emotional and psychological aspects of hearing loss.
- Based on trust, partnership, and shared decision-making between the care provider and receiver.⁶⁸

These desires clearly resonate with the themes in this report. Person-centered care is gaining adherence because it “takes a holistic overview” of each person’s hearing situation (Figure 14).⁶⁹

62 A. Willink, N. Reed, B. Swenor, et. al., “Dental, Vision, and Hearing Services: Access, Spending, and Coverage for Medicare Beneficiaries,” *Health Affairs*, February 2020.

63 A. Goman and F. Lin, “Prevalence of Hearing Loss by Severity in the United States,” *American Journal of Public Health*, October 2016.

64 A. Goman, et al. “Addressing Estimated Hearing Loss in Adults in 2060,” *JAMA – Otolaryngology Head & Neck Surgery*, July 2017.

65 R. Baiduc, J. Sun, C. Berry, et al., “Relationship of Cardiovascular Disease Risk and Hearing Loss in a Clinical Population,” *Scientific Reports*, January 30, 2023.

66 J. Chang, B. Weinstein, J. Chodosh, and J. Blustein, “Hospital Readmission Risk for Patients with Self-Reported Hearing Loss and Communication Trouble,” *Journal of the American Geriatric Society*, November 2018.

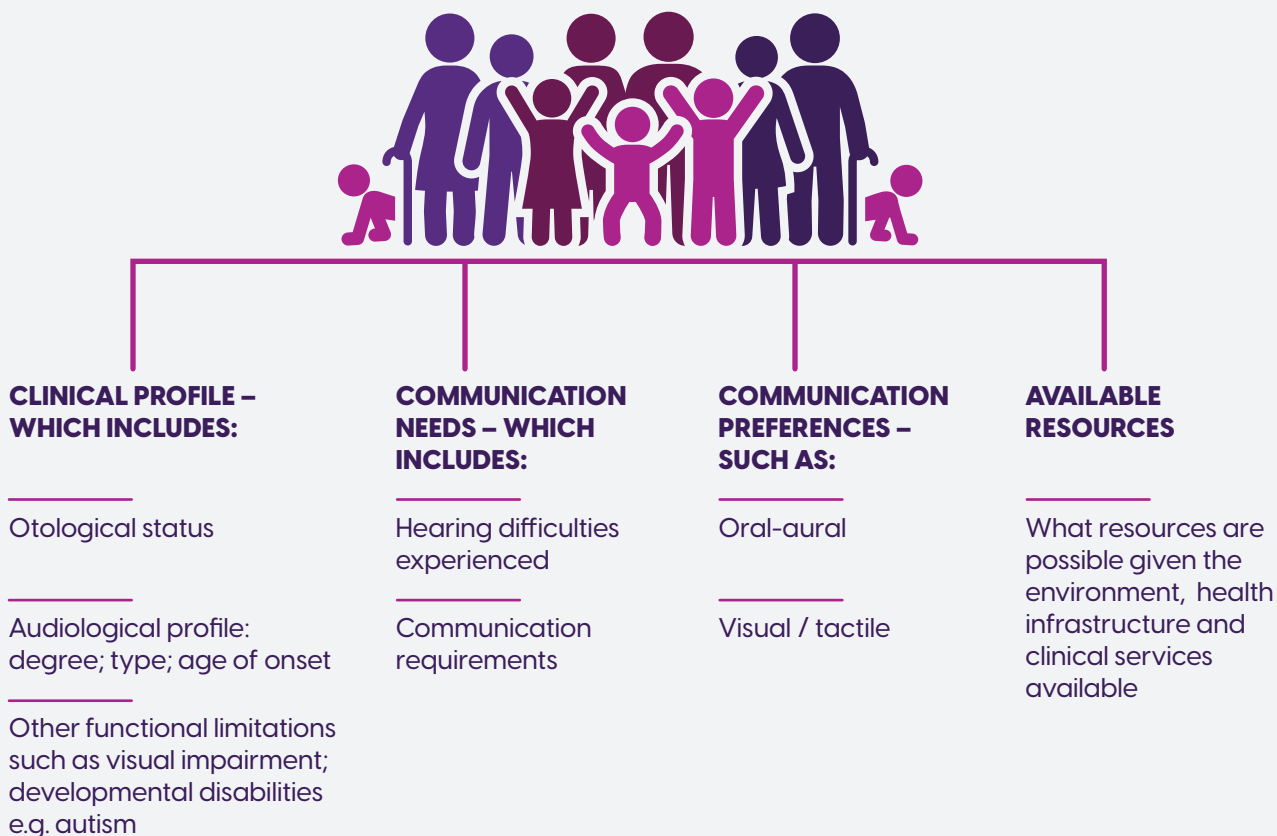
67 M. Knoetze, V. Manchaiah, B. Mothemela, and D.W. Swanepoel, “Factors Influencing Hearing Help-Seeking and Hearing Aid Uptake in Adults: A Systematic Review of the Past Decade,” *Trends in Hearing*, February 16, 2023.

68 Ida Institute, *Future Hearing Journeys Report*, April 2021.

69 World Health Organization, *World Report on Hearing*, March 2021.

FIGURE 14

PERSON-CENTERED EAR AND HEARING CARE



Source: World Health Organization

Hearing Technology Trends

- **Digital hearing aids.** The global digital aids market is growing at a 7.3% compound annual rate through 2029.⁷⁰ The category encompasses Bluetooth-enabled aids that can be used with smartphone apps, feature the popular “earbud” design, and incorporate new types of speakers delivering higher sound quality.
- **Invisible hearing aids.** Models exist that can be located completely in the ear canal, removing an appearance barrier for many adults.
- **Various types of wearables from leading consumer technology companies are gaining adoption.** These devices can track bodily signals, and some integrate noise reduction technologies. Experiments are underway to combine hearing aids with glasses.
- **AI.** In conjunction with digital devices, AI can analyze the audio environment, input signals, and user variables to make helpful hearing adjustments. AI also portends significant advancements in diagnosis and construction of personalized auditory care.

⁷⁰ Data Bridge Market Research, *Digital Hearing Aids Market*, November 2022.

Vision

Care Issues and Trends

One-fourth of Americans over the age of 80 suffer vision loss, and 7% of those over 65 are considered to have a vision-based disability.⁷¹ The chief eye problems are macular degeneration, glaucoma, diabetes mellitus-related issues, and cataracts. With the worldwide aging trends in place, vision loss is forecasted to increase by 55% over the next 30 years.⁷²

The implications of vision deterioration for SNF resident quality of life are substantial:

- **General health and mobility decline.** A study of seniors concluded that those with self-reported moderate/severe visual impairment displayed higher frequency of “physically unhealthy days, mentally unhealthy days, and activity limitation days” in a 30 day study window compared to those with minimal impairment.⁷³
- **Cognitive problems.** “Worsening vision in older adults may be adversely associated with future cognitive functioning.”⁷⁴
- **Fall risk.** Published results have shown that cataracts, AMD, or glaucoma increase risk of falls and fractures across the parts of the body.⁷⁵

Vision is so central to overall health that a leading trend is targeting care to people without evident eye problems. “In asymptomatic patients, comprehensive routine optometric eye examinations detect a significant number of new eye conditions and/or result in management changes,” observed one analysis, adding that “the number detected increases with age and assessment interval.”⁷⁶ Vigilance is essential because people are often unaware of early-stage impairment that can affect balance, posture, and gait.⁷⁷

Vision Technology Trends

- **Smart glasses and contact lenses.** Essentially computers as eyewear, these devices can monitor pressure and other variables to produce alerts or make real-time adjustments. Next-generation smart glasses may incorporate augmented reality technology to further enhance the wearer’s vision. The global market is already viewed as growing over 20% annually.⁷⁸
- **Materials.** Various advanced materials – some based on nanotechnology – are being investigated for their ability to improve dramatically the convenience and durability of lenses. New forms of synthetic corneas are also emerging.
- **Robotics.** A growing tool in the arsenal is robotic-assisted microsurgery that allows high-precision, minimal invasiveness, and ability to overcome the surgeon’s natural human movement limitations.
- **AI.** Many see breakthrough potential in AI-based detection of conditions like diabetic retinopathy. Another promising application is AI conversion of images to audio output describing them for the sight impaired.

71 A. Pelletier, L. Rojas-Roldan, and J. Coffin, “Vision Loss in Older Adults.” *American Family Physician*, August 1, 2016.

72 International Agency for the Prevention of Blindness, “Projected Change in Vision Loss 2020 to 2050.”

73 J. Crews, C-F. Chou, X. Zhang, M. Zack, and J. Saadinne, “Health-Related Quality of Life Among People Aged ≥ 65 Years with Self-Reported Visual Impairment: Findings from the 2006–2010 Behavioral Risk Factor Surveillance System,” *Ophthalmic Epidemiology*, October 2014.

74 D. Zheng, B. Swenor, S. Christ, et. al., “Longitudinal Associations Between Visual Impairment and Cognitive Functioning: The Salisbury Eye Evaluation Study,” *JAMA Ophthalmology*, September 2018.

75 J.Y. Tsang, A. Wright, M. Carr, et.al., “Risk of Falls and Fractures in Individuals with Cataract, Age-Related Macular Degeneration, or Glaucoma,” *JAMA Ophthalmology*, December 28, 2023.

76 E. Irving, J. Harris, C. Machan, et. al., “Value of Routine Eye Examinations in Asymptomatic Patients,” *Optometry and Vision Science*, July 2016.

77 J.Y. Tsang, A. Wright, M. Carr, et.al., “Risk of Falls and Fractures in Individuals with Cataract, Age-Related Macular Degeneration, or Glaucoma,” *JAMA Ophthalmology*, December 28, 2023.

78 Goldstein Market Intelligence, *Global Smart Glasses Market Analysis*, June 2019.

Podiatry

Care Issues and Trends

Eight in ten elderly patients are said to have some foot pathologies.⁷⁹ A third of older adults suffers from foot pain, stiffness, or aching feet.⁸⁰ Experts delineate pain, neuropathy, and deformities as the three main categories of foot issues.⁸¹ Left unattended, these problems can precipitate consequences from restricted mobility to amputation at the most extreme. A small selection of the many problems SNF residents may exhibit includes:

- Bunions
- Hammertoe
- Foot and ankle arthritis
- Foot sores that heal slowly
- Loss of feeling

Injury, nerve damage, diabetes, and arthritis are leading causes. Researchers and practitioners also zero in on inappropriate footwear. A report explains that “ill-fitting shoe wear affects plantar pressure, thus exacerbating weak balance.”⁸² Podiatrists counsel older adults to use wider toe box shoes, foot inserts for better balance, better fitting shoes, and slip-resistant soles.

Three care developments carry significance for the profession and for SNF communities:

- **Growing demand.** The podiatry services market is growing at a nearly 5% annual clip.⁸³ Surveys suggest that few people have ever visited a podiatrist. The profession has stepped up its education efforts, especially regarding chronic conditions and the fact that many amputations are preventable with early treatment.
- **Potential insurance expansion.** Medicare covers some foot conditions, but generally not routine care. The value-based care trend discussed earlier is likely to spur broader commercial coverage as insurers seek decreased costs through preventive foot and ankle care. One analysis concludes that “podiatric care will become more accessible providing steady demand for podiatric services.”⁸⁴
- **Podiatry-Wound Care integration.** There is a clear trend to cross-disciplinary treatment of wounds. Podiatric medical experts bring particular expertise to the identification of ulcers and related wounds, and they take a fourfold perspective on patient examination: vascular, dermatologic, orthopedic, and neurological.⁸⁵ Collaboration between podiatrists and other professionals is very beneficial to SNFs as prevailing wound care standards require them to perform head-to-toe resident evaluations.

Podiatry Technology Trends

- **3D Scanning and Printing.** Convenient digitizing of measurement and construction enables rapid creation of highly customized shoes, insoles, and orthotics. Expansion of uses in prosthetics and orthotics will keep the overall market expanding steadily at 9% yearly through 2030.⁸⁶

79 T. Ikpeze, A. Omar, and J. Elfar, “Evaluating Problems with Footwear in the Geriatric Population,” *Geriatric Orthopedic Surgery and Rehabilitation*, 2015.

80 Health in Aging, “Foot Problems: Basic Facts.”

81 A. Muchna, B. Najafi, C. Wendel, et. al, “Foot Problems in Older Adults,” *Journal of the American Podiatric Medical Association*, March 2018.

82 T. Ikpeze, A. Omar, and J. Elfar, “Evaluating Problems with Footwear in the Geriatric Population,” *Geriatric Orthopedic Surgery and Rehabilitation*, 2015.

83 Reports and Data, *Podiatry Services Market*, March 2023.

84 Cutting Edge Laser Technologies, *2024 Podiatry Market Outlook*, 2023.

85 J. Volchok, “The Role of Podiatry in Skilled Nursing Facilities Amid COVID-19 Pandemic,” *Present Podiatry*, May 28, 2020.

86 Exactitude Consultancy, *3D Printing Prosthetics and Orthotics Market*, December 2023.

- **Smart Wearables.** Pressure-sensitive insoles and a variety of other sensors and devices have been developed that can measure gait, temperature, pressure and other motion and environmental variables. The resultant data can be used to alert or help correct foot problems.
- **Pain management.** As physicians seek alternatives to opioids and medications, new tools to reduce pain are taking advantage of laser, ultrasound and pressure wave technologies. Techniques such as peripheral nerve stimulation allow physicians to target individual nerves to combat chronic foot and ankle pain.
- **AI.** AI can help determine “wound etiology, if a wound has stalled, if there’s signs and symptoms of bacterial infection” – all of which are difficult to spot through visual inspection.⁸⁷

87 W. Cole, “Exploring the Potential of AI in Lower Extremity Wounds,” *Podiatry Today*, August 9, 2023.

Conclusion

Value-based care, resident experience, trust-building, and realizing the benefits of developments in ancillary care are gaining velocity because they offer paths to progress for SNF communities and for healthcare more broadly. In 2024’s uncertain environment, SNFs will seek to capitalize on these trends while heeding the imperatives of achieving financial health, growth, and effective technology implementation. As this report makes clear, the forces driving change are powerful and accelerating. Aria Care Partners will continue to monitor industry developments to help skilled nursing facilities realize the tremendous upside potential embedded in successful change.



Aria Care Partners is the leading provider of onsite ancillary medical services for skilled nursing facilities. With more than 20 years of partnership with over 3,000 skilled nursing facilities, Aria Care Partners remains on the leading edge of innovative care delivery and understanding the connection between dental, vision, hearing, and podiatry services to resident health and well-being. With a unique combination of turnkey insurance solutions and innovative service delivery, Aria Care Partners is passionate about enriching every resident’s quality of life and ensuring that every family knows their loved ones are well cared for and safe.