Strengthening the Primary Care Clinician Workforce in Rural California

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August 2026

Overview

California's rural communities face persistent shortages of primary care clinicians, including physicians, nurse practitioners (NPs), and physician associates (PAs).[1] This threatens access to preventive services, chronic disease management, and timely treatment for millions of residents. Recruitment and retention challenges are driven by a combination of educational, regulatory, financial, personal and professional support, and health system and infrastructure factors.[2] Strengthening recruitment and retention of California's rural primary care workforce is therefore vital to improving the lives of millions of rural Californians and reducing the growing burden on our health care system overall. This issue brief examines the factors contributing to recruitment and retention challenges and highlights evidence-based solutions to strengthen California's rural primary care workforce.

Why it matters

Rural communities face disproportionate health challenges

Health inequities between rural and urban populations have long existed in California and in the United States (US) at large. Rural communities consistently experience poorer health outcomes than statewide averages and face significant barriers to accessing care.[3] Californians living in rural communities experience a 17% increase in all-cause mortality rate compared to those living in urban areas.[4]

Primary care access improves health outcomes

Access to primary care is crucial for disease prevention, early diagnosis, chronic disease management, and care coordination. Stronger primary care systems are associated with lower mortality, improved population health outcomes, and lower health care spending.[5,6] When access to primary care is limited, patients are more likely to delay care, experience preventable complications, and rely on emergency departments for care.[5]

Interactive Map of California's Primary Care Shortage Areas

Explore the interactive map developed by the California Department of Health Care Access and Information (HCAI) to see primary care shortages areas across the state.

HCAI is currently working on populating annual Primary Care Snapshots with updated data across several domains including workforce, access, quality, equity, and investment.[9]

Workforce shortages threaten rural health system sustainability

Persistent shortages of primary care clinicians place undue strain on rural clinics, hospitals, and the broader health care system, as these systems struggle to maintain services and meet the health needs of their communities. Rural communities also have shortages of other critical health workers such as oral health and behavioral health providers, adding additional stress on existing primary care and hospital systems. In California, over 2.2 million people live in a rural census block and over half of rural communities are in a Primary Care Health Professional Shortage Area (HPSA), indicating that existing clinician supply falls well below

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population need.[7] Rates of primary care providers per 100,000 people are lower in California's rural regions than in urban areas[8] and study tracking family physicians over a seven-year period showed a net 11% decline in family physicians in rural areas nationally.[9]

Recent federal policy changes compound rural workforce challenges

Rural communities face an even more dire outlook with the enacting of House Resolution 1 (H.R. 1), which introduced restrictive immigration policies that threaten physician pipelines, imposed new limits on federal borrowing for graduate and professional students, and cut nearly $1 trillion from Medicaid across the country.[10–12] In California, Medi-Cal (the state's Medicaid program which covers roughly a third of the state's population) is expected to cut $30 billion a year in federal funding resulting in loss of coverage for up to 3.4 million residents across the state.[13] Although Congress created a $50 billion Rural Transformation Fund to offset the impact of these cuts for rural communities, these funds will not mitigate the existing challenges that rural hospitals face.[13] These changes come amid broader federal immigration policy shifts that threaten physician pipelines that rural and underserved communities disproportionately rely on.[14] Rural workforce investments cannot succeed without existing infrastructure that sustains these clinics and hospitals.

Within this constrained policy environment, California is directing its share of the Rural Transformation Fund toward strengthening rural health systems and workforce capacity in California's Rural Health Transformation Program (CalRHT). CalRHT's multifaceted initiatives align with the evidence that long-term retention depends on creating supportive and sustainable rural practice environments.

Evidence-based practices and policies

While rural recruitment and retention strategies address distinct workforce challenges, they inherently overlap, and coordinated long-term investments across educational, regulatory, financial, support, and health system domains are more effective at strengthening the rural primary care workforce than standalone or short-term initiatives. Accordingly, this brief highlights the evidence-based strategies, practices, and policies for both recruitment and retention across these interconnected policy domains.

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Education: Strengthen rural workforce training pathways

Prioritizing training programs that attract clinicians with roots in rural California may be one of the most effective long-term strategies for improving recruitment and retention. Research consistently shows that clinicians from rural communities are more likely to practice in similar environments.[15–17] For those who complete their training in rural settings or have a background in rural communities, the transition to working in a rural environment is easier. Existing programs that could be expanded and strengthened include:

- University of California (UC) Programs in Medical Education (PRIME): Rural PRIME at UC Davis, Rural Accelerated Competency-based Education in Primary Care (Rural ACE-PC) at UC Davis, Tribal Health PRIME at UC Davis, PRIME San Joaquin Valley (SJV PRIME) through UC San Francisco (UCSF)/UCSF Fresno, and SJV PRIME+ (combined BS/MD) through UC Merced/UCSF Fresno/UCSF all focus on the health needs of rural communities, particularly fostering lasting relationships between physician leaders, hospitals and clinics in rural areas. PRIME students form tight-knit bonds with those in rural communities and with each other, instilling a sense of belonging to the communities they practice in.
- The California Medicine Scholars Program builds structured educational pathways from community colleges to medical schools to support students committed to practicing in rural, low-income, and medically underserved communities.
- Healthy Rural California runs a Healthcare Professions Pathways Program that includes paid summer internships for high school, college, and health professional students, as well as family medicine and psychiatry residency programs, which medical students can also rotate with.
- Area Health Education Centers (AHECs): AHEC Scholars programs recruit physician trainees who have an interest in rural and/or systematically underserved areas by offering training and education opportunities in rural hospitals. Many programs also provide stipends as an additional incentive to attract students.[18]
- The California Oregon Medical Education & Training (COMET) Collaborative: Building on the former COMPADRE initiative,[19] COMET connects medical schools, residency programs, community health centers, health systems, public health organizations, and community partners across California and Oregon to strengthen physician education and training in rural and underserved communities.
- Expanding community-based and rural clinical training experiences and residency (Graduate Medical Education [GME]) slots:[20–23]

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- Song-Brown Healthcare Workforce Training Program slots for rural primary care training in California (state program).
- CalMedForce and CalMedForce+ funding for residency programs to retain and expand GME programs in primary care and emergency medicine (state program).
- Teaching Health Centers GME for rural, primary care, community-based training (federal program).
- Rural Residency Planning and Development Program, funded by the Health Resources and Services Administration (HRSA), to support Rural GME/Rural Track Programs to create new rural residency programs (federal programs).

Regulation: Expand workforce capacity

One critical reason for primary care clinician shortages in the US is the fact that primary care specialties are some of the least popular specialty choices for medical students.[24] Given the high cost of medical education, more students opt for higher paying specialties. Combined with high administrative burden and excessive time demands, interest in primary care specialties has steadily declined.[25] Addressing these shortages will require strategies that both strengthen training pathways and maximize the contributions of other qualified primary care clinicians.

Leveraging international medical graduates (IMGs) is an opportunity to expand the primary care workforce. IMGs play a critical role in serving rural and systematically underserved communities, filling positions that would otherwise remain vacant.[26] The J-1 Visa Waiver Program offers participating states, including California, a limited number of slots for IMGs who can waive the requirement that J-1 visa holders return to their home country for 2 years after they complete their training. Additional spots (up to 10) are allocated for those who choose to practice in federally designated shortage/underserved areas for three years via the Conrad 30 Waiver Program.[18,27] While an important and successful recruitment strategy and many participants remain in underserved areas beyond their required service commitments, long-term retention varies, highlighting the need to pair recruitment strategies with strong long-term retention efforts.[18] Policy opportunities to further leverage IMG recruits in rural areas include:[18]

- Expanding the federal limit on the number of J-1 visa waivers per state and reducing immigration barriers that impede long-term retention of participating physicians.
- Prioritizing California's waivers for primary care placements in rural HPSAs with dedicated allocations, streamlining application requirements for rural employers, and providing technical assistance to rural facilities recruiting J-1 physicians.

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California can also build on its Licensed Physicians from Mexico Program, which provides temporary licensure for qualified physicians trained in Mexico to practice in underserved community clinics without requiring them to repeat training in the US.[28] Policymakers could prioritize applicants intending to practice in rural clinics, expand the number of physicians authorized to participate in the Program, offer the Program to other qualified IMGs outside of Mexico, and create a pathway from provisional 3-year licenses to unrestricted licensure.[29]

Although physicians remain the majority of primary care clinicians, NPs constitute a larger share of the primary care workforce in rural regions,[8] California's NP workforce has grown rapidly (more than doubling between 2010 and 2023),[30] and the number of PA programs and graduates in California has expanded in recent years.[31] However, growth in the NP and PA workforce does not necessarily translate into equivalent growth in primary care capacity: nationally, fewer than half of NPs practice in primary care, despite most being trained in primary care, with market demand and higher compensation drawing NPs into specialty and acute care instead.[32] These trends point to an opportunity for California to better align the growth of the NP and PA workforce with rural primary care needs by supporting high-quality clinical training and preceptorships (including funding for clinical preceptors and rural, community-based placements), strengthening pathways into rural and safety-net practice (including rural postgraduate training and employment pathways), and leveraging California's new pathway to NP independent practice to increase the supply of NPs in rural areas.[30,32]

Finance: Incentivize rural primary care

Financial incentives to practice primary care in rural settings are one of the most used recruitment and retention strategies,[18] and include both the upfront costs of entering rural practice and the long-term financial realities of remaining there. HCAI offers a number of loan repayment programs targeted towards primary care clinicians practicing in qualifying shortage areas. These programs have been shown to attract clinicians as the cost of medical training continues to rise and can also offset the typically lower salaries offered to clinicians in rural areas. However, currently, many of the programs offered through HCAI have low repayment caps that cover only a fraction of the cost of training health professionals, and there are eligibility restrictions. State policy opportunities include:

- Increasing repayment caps to more accurately reflect the rising cost of health care training programs.
- Expanding eligibility to include a broader range of primary care clinicians.
- Creating tiered loan repayment programs that reward long-term rural practice beyond initial service obligations.

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- Adding scholarship programs tied to rural service and training: HCAI does not currently offer a rural-specific scholarship program. Adding scholarship programs for students from rural backgrounds, tying them to service in rural HPSAs, and linking them to rural residency and rural training tracks are other opportunities to support rural training pathways.
- Adjusting scoring mechanisms for workforce development programs, including loan repayment and scholarship applications, to prioritize applicants from rural Medical Service Study Area zip codes or other rural identifier (may require amendments to authorization statutes to consider rural location).[23]

Federal policy opportunities include expanding existing programs such as the HRSA-funded National Health Service Corps (NHSC) scholarship and loan repayment programs, including the NHSC Rural Community Loan Repayment Program. As with all recruitment and retention strategies, financial incentives are most effective when paired with supportive long-term retention strategies to keep clinicians in rural practice after their service obligations are complete.[33]

Support: Personal and professional development opportunities

Personal and professional support are critical but often underutilized components of rural workforce policy.

Common personal barriers to clinicians choosing to practice in rural settings are lack of adequate housing and childcare options that accommodate schedules of health professionals.[34] Health systems and local governments can consider investing in programs to expand housing in rural areas and initiatives that provide childcare to medical professionals could be considered to alleviate these constraints. Additional personal support opportunities include relocation stipends, down-payment assistance, and spousal employment assistance programs.

Professional isolation, burnout, limited opportunities for career advancement, and inadequate workplace supports frequently contribute to workforce turnover in rural communities.[33,34] Evidence-based policy opportunities to support professional development include:[2,33,35]

- Mentorship and peer support networks.
- Continuing education opportunities.
- Protected time for professional development.

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- Regional specialty consultation networks (described in more detail in the health system and infrastructure section).

Although this brief focused on primary care clinicians, workforce shortages in critical services such as dental and mental health, and among support staff can contribute to clinician burnout and turnover.[35] Inadequate staffing, administrative burden, and limited workplace supports increase strain on clinicians and may reduce retention in rural practice settings. Supporting careers of those who may hold other roles in primary care (such as medical and nursing assistants, technicians, and administrative staff) may be a way to strengthen primary care teams, improve workforce stability, and alleviate burnout across the health care system.[36] Creating opportunities for community health workers, pharmacists, paramedics, and other supportive staff to operate in expanded roles in rural settings, can alleviate the burden on primary care clinicians to manage all aspects of a patient's health care needs.

Especially in rural communities, high-quality jobs in these supporting roles are limited, further straining the health care system overall. Innovative programs such as CalGROWs, which provided funding and curriculum resources to enhance direct care worker skillsets along with pathways for professional development, can be impactful in allowing workers to enhance their skills and incentivize remaining within the health care system.[37,38] Similar programs can be explored to strengthen the health care workforce across the system and motivate individuals to remain invested in their communities.

Health system and infrastructure: Invest in sustainable rural practice environments

Workforce initiatives are unlikely to succeed without strong and sustainable health systems. As rural health systems face growing fiscal uncertainty, workforce shortages and financial instability can reinforce one another: staffing shortages make it more difficult to maintain services, while financially strained clinics and hospitals may struggle to recruit and retain clinicians. Workforce investments alone cannot succeed without financially sustainable sites of care where clinicians can practice and patients can access services.

Sustainable practice environments also require the infrastructure, technology, and organizational support clinicians need to provide high-quality care. However, many rural health systems and clinics lag behind in adopting advancements in electronic health records, telehealth tools, and mobile health technologies. These infrastructure gaps can limit access to care, increase administrative burden, and make rural practice less attractive to clinicians. Rural communities often benefit the most from telehealth, mobile clinics, and hub-and-spoke

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regional consultation systems like Project ECHO, as transportation and access to specialty care in the region can be limited.[39]

Programs like the Agency for Healthcare Research and Quality Digital Healthcare Research have supported modernization of health IT for rural health systems for over 20 years.[40] As the landscape of health IT continues to change, especially with advancements in artificial intelligence, further investments in similar programs to bring necessary education, training, and infrastructure to rural health care should be explored.

Additionally, lack of broadband access in rural communities poses a major barrier to telemedicine usage. Programs to improve broadband infrastructure and provide reliable, affordable internet access to rural communities, such as Project THOR in Colorado, allow health care institutions maintain connectivity in case of outages and service disruptions which are more common in rural communities.[41]

Taken together, these challenges underscore the need to pair workforce investments with policies that strengthen the financial and operational sustainability of rural health systems. Long-term rural health sustainability strategies include:[13,42]

- Protecting Medi-Cal funding for rural communities.
- Establishing enhanced payments for clinicians practicing in rural HPSAs, Federally Qualified Health Centers, and Rural Health Clinics.
- Ensuring reimbursement parity for telehealth services.
- Increasing rural infrastructure and workforce grants.
- Supporting regional partnerships between urban and rural health systems.

Conclusion

California's rural primary care workforce shortages cannot be solved through any single intervention. The most effective recruitment and retention strategies combine investments in rural training pathways, workforce capacity, financial incentives, personal and professional support, and sustainable health systems. As rural communities face persistent health professional shortages and growing financial pressures, strengthening the primary care workforce will be essential to improving access to care, reducing health inequities, and supporting the long-term viability of rural health systems.

Many of the evidence-based strategies discussed in this brief are already reflected in CalRHT, which centers on workforce development through investments in community-based recruitment, training and career advancement opportunities, team-based care models,

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technology-enabled care, and broader health system transformation. Continued investment, implementation, and evaluation of these efforts will be important to ensure that rural Californians have access to high-quality primary care close to home.

Acknowledgements

The evidence synthesis presented in this brief was supported by The California Endowment. We would like to thank Dr. Janet Coffman for her expert review.

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References

1. Primary Care Shortage Areas in California - California Health and Human Services Open Data Portal. Accessed August 28, 2025. https://data.chhs.ca.gov/dataset/primary-care-shortage-areas-in-california
2. World Health Organization. *Retention of the Health Workforce in Rural and Remote Areas: A Systematic Review*. World Health Organization; 2020. https://iris.who.int/server/api/core/bitstreams/bbba4f18-068a-4b8e-ac35-c39fc9e1854c/content
3. California Health Interview Survey (CHIS). 2022. Accessed July 9, 2026. https://healthpolicy.ucla.edu/our-work/california-health-interview-survey-chis
4. California Department of Public Health. California State of Public Health Report, 2026. Published online 2026. https://www.cdph.ca.gov/Programs/OPP/CDPH%20Document%20Library/California-State-of-Public-Health-Report-2026.pdf
5. Phillips RL, Bazemore AW. Primary Care and Why it Matters for US Health System Reform. *Health Aff (Millwood)*. 2010;29(5):806-810. doi:10.1377/hlthaff.2010.0020
6. Basu S, Berkowitz SA, Phillips RL, Bitton A, Landon BE, Phillips RS. Association of Primary Care Physician Supply with Population Mortality in the United States, 2005-2015. *JAMA Intern*

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Med. 2019;179(4):506-514. doi:10.1001/jamainternmed.2018.7624

7. Department of Health Care Access and Information (HCAI). Rural Health Transformation Program Improving Access, Quality and Sustainability of Rural Healthcare. September 2025. Accessed October 10, 2025. https://hcai.ca.gov/wp-content/uploads/2025/09/Rural-Health-Transformation-Program-Kickoff-1.pdf

8. Coffman J, Fix M. *California Physicians Almanac — 2025 Edition*. 2025. Accessed July 8, 2026. https://www.chcf.org/resource/california-physicians-almanac/

9. Fogarty CT, Byun H, Huffstetler AN. Family Physician Workforce Trends: The Toll on Rural Communities. *Ann Fam Med*. 2025;23(6):535-538. doi:10.1370/afm.240549

10. Jacobs JW, Booth GS. Federal Student Loan Limits and Implications for Physician Workforce Diversity. *JAMA*. 2025;334(12):1055-1056. doi:10.1001/jama.2025.13120

11. Howren MB, Hansen JR. The One Big Beautiful Bill Act—Implications for Rural Health Care. *JAMA*. 2025;334(13):1143-1144. doi:10.1001/jama.2025.13518

12. Lam S. Federal Student Loan Changes: Impact on Medical and Dental Education Access for Underrepresented Students. Published online 2025.

13. Goldstein A. How Massive Federal Cuts Will Create Unprecedented Challenges for Medi-Cal Patients and Providers. California Health Care Foundation. October 3, 2025. Accessed October 10, 2025. https://www.chcf.org/resource/how-massive-federal-cuts-will-create-unprecedented-challenges-medi-cal-patients-providers/

14. Immigration Policy, US Medical Training, and Patient Care | JAMA | JAMA Network. Accessed August 7, 2026. https://jamanetwork.com/journals/jama/fullarticle/2839311

15. MacQueen IT, Maggard-Gibbons M, Capra G, et al. Recruiting Rural Healthcare Providers Today: A Systematic Review of Training Program Success and Determinants of Geographic Choices. *J Gen Intern Med*. 2018;33(2):191-199. doi:10.1007/s11606-017-4210-z

16. Kueakomoldej S, Turi E, McMenamin A, Xue Y, Poghosyan L. Recruitment and Retention of Primary Care Nurse Practitioners in Underserved Areas: A Scoping Review. *Nurs Outlook*. 2022;70(3):401-416. doi:10.1016/j.outlook.2021.12.008

17. Patterson DG, Shipman SA, Pollack SW, et al. Growing a Rural Family Physician Workforce: The Contributions of Rural Background and Rural Place of Residency Training. *Health Serv Res*. 2024;59(1):e14168. doi:10.1111/1475-6773.14168

© 2026 Healthforce Center at UCSF

18. Arredondo K, Touchett HN, Khan S, Vincenti M, Watts BV. Current Programs and Incentives to Overcome Rural Physician Shortages in the United States: A Narrative Review. *J Gen Intern Med*. 2023;38(Suppl 3):916-922. doi:10.1007/s11606-023-08122-6

19. Tran-Reina ML, Hollander-Rodriguez J, Fancher TL, Roberts C, Co JPT, Coe CL. Training More Physicians for Medically Underserved Communities: The Power of Regional Medical Education Collaboratives Across the Training Continuum. *J Grad Med Educ*. 2025;17(2s):19-23. doi:10.4300/JGME-D-24-00476.1

20. Russell DJ, Wilkinson E, Petterson S, Chen C, Bazemore A. Family Medicine Residencies: How Rural Training Exposure in GME is Associated with Subsequent Rural Practice. *J Grad Med Educ*. 2022;14(4):441-450. doi:10.4300/JGME-D-21-01143.1

21. Davis CS, Roy T, Peterson LE, Bazemore AW. Evaluating the Teaching Health Center Graduate Medical Education Model at 10 Years: Practice-Based Outcomes and Opportunities. *J Grad Med Educ*. 2022;14(5):599-605. doi:10.4300/JGME-D-22-00187.1

22. Hawes EM, Fraher E, Crane S, et al. Rural Residency Training as a Strategy to Address Rural Health Disparities: Barriers to Expansion and Possible Solutions. *J Grad Med Educ*. 2021;13(4):461-465. doi:10.4300/JGME-D-21-00274.1

23. Rittenhouse D, Coleman K, Coffman J, Muratore R, Mogk J, Fix M. *Strengthening California's Primary Care Team Workforce: Data and Recommendations for Action*. California Health Care Foundation; 2026. Accessed October 1, 2026. https://www.chcf.org/resource/2026/02/17/strengthen-california-primary-care-team-workforce/

24. California's Primary Care Workforce: Supply, Characteristics and Pipeline. Healthforce Center at UCSF. Accessed March 17, 2025. https://healthforce.ucsf.edu/publications/californias-primary-care-workforce-supply-characteristics-and-pipeline

25. Hoffer EP. Primary Care in the United States: Past, Present and Future. *Am J Med*. 2024;137(8):702-705. doi:10.1016/j.amjmed.2024.03.012

26. Braga B, Khanna G, Turner S. Migration Policy and the Supply of Foreign Physicians: Evidence from the Conrad 30 Waiver Program. *J Econ Behav Organ*. 2024;226:106682. doi:10.1016/j.jebo.2024.106682

27. Rural J-1 Visa Waiver Overview - Rural Health Information Hub. Accessed May 9, 2025. https://www.ruralhealthinfo.org/topics/j-1-visa-waiver

28. Bone A. New Law Expands and Extends the Successful Physicians from Mexico Pilot Program. Medical Board of California News. 2025. Accessed October 4, 2026. https://www.mbc.ca.gov/News/Newsletter/2025-Vol170.aspx#10

© 2026 Healthforce Center at UCSF

29. Singer. California's Opportunity to Expand Access to Care Through IMG Reform. Cato Institute. May 27, 2026. Accessed October 4, 2026. https://www.cato.org/blog/californias-opportunity-expand-access-care-through-img-reform

30. Muench U, Quan A, de Lisser R, Bates T, Spetz J. Nurse practitioner race and ethnicity and interest in independent primary care practice and serving Medicaid enrollees. *Health Aff Sch*. 2024;2(12):qxae153. doi:10.1093/haschl/qxae153

31. *Physician Assistant Board Sunset Review Report 2025*. Physician Assistant Board. https://pab.ca.gov/forms_pubs/sunset_2025.pdf

32. O'Reilly-Jacob M, Auerbach D, Hoyt A, et al. *Rapid Growth, Uncertain Impact: Nurse Practitioners and the Future of Primary Care Access*. The Milbank Memorial Fund; 2026. Accessed October 1, 2026. https://www.milbank.org/publications/rapid-growth-uncertain-impact-nurse-practitioners-and-the-future-of-primary-care-access/

33. Russell D, Mathew S, Fitts M, et al. Interventions for Health Workforce Retention in Rural and Remote Areas: A Systematic Review. *Hum Resour Health*. 2021;19:103. doi:10.1186/s12960-021-00643-7

34. MacDougall H, Woldegerima S, Henning-Smith C, Fritsma T, Olson APJ. Recruitment and Retention of Rural Health Professionals in Minnesota. *Health Serv Res*. 2025;60(3):e14453. doi:10.1111/1475-6773.14453

35. National Academies of Sciences, Engineering, and Medicine. *Taking Action Against Clinician Burnout: A Systems Approach to Professional Well-Being*. The National Academies Press; 2019. Accessed June 5, 2026. https://www.nationalacademies.org/projects/HMD-HCS-17-09/publication/25521

36. California Health Care Foundation. Bridging the Care Gap: Addressing California's Health Care Workforce Needs. California Health Care Foundation. February 20, 2024. Accessed October 16, 2025. https://www.chcf.org/resource/bridging-the-care-gap/

37. Cal Grows - Providers & Partners | California Department of Aging - State of California. Accessed October 16, 2025. https://aging.ca.gov/providers_and_partners/cal_grows/

38. Miller J, Bates T, Mendez X, Spetz J. Evaluation of the CalGrows Innovation Fund Direct Care Training and Stipends Program. *Innov Aging*. 2025;9(Suppl 2):igaf122.1834. doi:10.1093/geroni/igaf122.1834

39. Howe G. Using Project ECHO to Deliver Specialty Care in Rural Areas. Center for Health Care Strategies. Accessed June 5, 2026. https://www.chcs.org/resource/using-project-echo-to-deliver-specialty-care-in-rural-areas/

© 2026 Healthforce Center at UCSF

40. Valdez RB, Dymek C, Chaney K, Lomotan EA. AHRQ's Digital Healthcare Research Program: 20 Years of Advancing Innovation and Discovery. *J Am Med Inform Assoc*. 2024;31(11):2766-2771. doi:10.1093/jamia/ocae251

41. Project THOR | NWCCOG. February 9, 2021. Accessed October 15, 2025. https://www.nwccog.org/programs/broadband-program/project-thor/

42. National Rural Health Association. Rural Health Policy Documents. National Rural Health. Accessed June 5, 2026. https://www.ruralhealth.us/advocacy/rural-health-policy-documents

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