



Change agents in the oncology workforce: Let's be clear about community health workers and patient navigators

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Despite efforts of professional organizations and government agencies to solidify the professional identities of community health workers and patient navigators in the oncology workforce, the scientific literature perpetuates wide variation in the nomenclature used to define these natural change agents, who have proven efficacy in improving access to quality cancer care for historically marginalized populations. To disseminate, sustain, and scale-up these life-saving roles in cancer care, the oncology field must come together now to adopt clear and consistent job titles and occupational identities. **Cancer 2022;128:2664-2668.** © 2022 American Cancer Society.

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SCOPE OF THE PROBLEM: WHO'S WHO?

It is well recognized that scientific advances in cancer care have resulted in increasing complexity in care delivery in the United States, such that populations that were historically marginalized because of systemic racism and social injustice are denied access to timely, quality care—and ultimately suffer higher mortality.¹⁻⁹ To address this pattern of inequity, innovations in care delivery over several decades have focused on linkage programs to support patients who have been socially/economically marginalized in accessing available services in their own communities.¹⁰⁻²⁰ *Natural helpers*, defined as members of the community to whom others naturally turn for help,²¹ or *change agents*, community members who are perceived as making changes in their community,²² are historically among the most promising approaches for moving toward equitable health care delivery in the United States. Such community-centric individuals have been increasingly integrated into the oncology workforce to assist in linking members of under-resourced communities with cancer providers and services—bridging the community and clinical settings.^{12,13,15,16,23-25} The scientific literature is now replete with evidence of improvements in care across the continuum, from screening, to diagnosis, to treatment, and into survivorship, in part as a result of these change agents, who strive to increase access to care for the medically underserved.^{10,11,17,26-30} Although this mounting evidence base is dominated by the job titles of *Community Health Worker* (CHW) and *Patient Navigator* (PN), other similar position titles commonly described in the literature include Health Education Specialist, Community Health Representative, Lay Health Advisor, Lay Health Worker, and Promotor(a) de Salud,¹⁰⁻²⁰ to name a few.

Several foundational principles are common to these cancer care support roles. First and foremost, each was developed in an effort to achieve equity in health care access by focusing on populations in the community who are underserved. Through an authentic understanding of the community, these change agents provide cultural linkages between the community members and the health system.^{11-13,17-19,23,24,31-37} Second, each is designed to offer patient-centered support by addressing individual-level and community-level barriers or obstacles to accessing evidence-based cancer care and teaching patients to practice more positive health-related behaviors, often by connecting patients with available community resources and supports. Third, each can adapt interventions and care-connection processes to meet the specific needs of

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We thank and gratefully acknowledge the support of partnering organizations that share a commitment to reducing disparities and the American Cancer Society for their dedication to patient navigation and the National Navigation Roundtable (NNRT). The National Navigation Roundtable is a collaboration of navigation stakeholders and field experts dedicated to establishing patient navigation as a recognized and valued part of the health care system to assure optimal health outcomes for cancer patients. Thank you to the steering committee of the NNRT for helping lead the direction of this supplement and the hundreds of organizations and patient navigators who provided input and time to help inform this supplement.

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each community, such that specific activities are tailored to accommodate the existing community and/or health care delivery systems.

An inherent challenge to these evolving approaches of addressing a common problem is confusion about the unique role of each of these types of personnel in the cancer care workforce. A lack of clearly defined roles and responsibilities for each specific supporting job title creates a major roadblock to greater integration of these roles in a sustainable cancer care support workforce. We note, for example, that, among the commonly accepted core roles of CHWs is *care coordination*, which bears some resemblance to the functions of PNs and/or clinical care managers. This activity is billable to Medicaid in several states. One important path to sustainability includes clear occupational identity and classification to ensure a viable workforce and reimbursement. Despite the emergence of several professional organizations and associations to support these roles of patient support, there remains confusion in role responsibility, definition, and certification and payment models. Here, we summarize the existing scope of practice for the most common change agents and then suggest a call to action on next steps toward addressing this confusion.

EXISTING OCCUPATIONAL IDENTITIES

For decades, CHWs have played important roles in low-income and middle-income countries, with expansion to high-income countries like the United States, as a means to meet population health needs, improve access to health services, address health inequities, and improve health system performance. CHWs were introduced into federal policy in 1962 as part of the Migrant Health Act, and their roles were expanded under federal antipoverty legislation in 1968. CHWs are nonclinical, frontline, public health workers who are trusted members and/or have an unusually close understanding of the community served. They work in the community and function in part to bridge the gap between individuals and the health care system.^{12,13} A major role of CHWs is to increase health knowledge and self-efficacy generally through a range of activities, such as outreach, community education, social support, and advocacy efforts.²⁶ The success of CHWs along the cancer continuum is commonly attributed to the reality that they are members of the community in which the outreach is being conducted, they are intimately linked to social networks within the community, and they are trusted members of the community and steeped in its culture.²⁶

The literature describes CHWs variously using numerous other position titles: Community Health Educators, Promotoras/Promotores, Community Outreach Specialists, Lay Health Advisors, Lay Health Workers (LHWs), Lay Health Educators, Community Health Representatives, Outreach Workers, Health Navigators, and Research CHWs.³⁸ Health educators provide culturally tailored educational interventions to meet community needs.^{14,15,39,40} They are described as CHWs who are well versed in cultural norms or who recognize and address community-specific barriers^{14,15,39} and are selected based on their involvement in their community as well as their existing knowledge of certain cancers and diseases.⁴⁰ LHWs have been defined as members of the community who have received some training to promote health or to perform some health care services but who are not health care professionals.^{16,36,41-43} LHWs potentially could assist in symptom screening, transportation coordination, distress screening, and leading health discussions.^{16,41,42} Lay Health Educators are members of the community and are qualified as community connectors because they live in the communities in which they work, understand what is meaningful to those communities, communicate in the language of the people in their community, and recognize and incorporate social buffers.²⁴ Lay Health Educators provide informational, emotional, and instrumental support by virtue of having life experiences and/or community affinity.^{31,44-47} Promotoras/Promotores are recognized as culturally distinct CHWs who deliver health-promotion education among Latina populations aimed at reducing health disparities.^{17,48} They are nonlicensed Hispanic/Latino community members who are familiar with the local community culture and values, have interest in health improvement for their community,^{17,25,27,48,49} and support the continuum of cancer care from prevention to survivorship.^{17,27,28}

The Standard Occupational Classification (SOC) system is a federal statistical standard used by federal agencies (mainly the Census Bureau and the Bureau of Labor Statistics) to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. SOC code 21-1094, *Community Health Workers*, is a final level code of the Major Occupation Category *Community and Social Service Occupations*. According to the definition associated with this SOC code, CHWs promote health within a community by assisting individuals in adopting healthy behaviors; they serve as advocates for the health needs of individuals by assisting community residents in effectively communicating with health care providers or social service agencies; they act as liaisons or advocates

and implement programs that promote, maintain, and improve individual and overall community health; they address barriers to care and provide referrals for needs such as food, housing, and mental health services; and they may work in a variety of health settings, including hospitals, nonprofit organizations, and government agencies. It is notable that this SOC code explicitly excludes *Health Education Specialists* (SOC code 21-1091), who provide and manage health education programs that help individuals, families, and their communities to maximize and maintain healthy lifestyles. The Certified Health Education Specialist designation signifies that an individual has met eligibility criteria and passed a national competency-based examination sponsored by the National Commission for Health Education Credentialing.

At this time, credentialing CHWs exists at the state level in about 20 states in the form of a voluntary certification, such that there is no restriction on the individual use of the title *CHW* or the hiring of noncertified individuals to work as CHWs. In 2019, the National Association of Community Health Workers (NACHW) was launched to unify the voices of CHWs and strengthen the profession's capacity to promote healthy communities, but the NACHW is not considering the creation of a national CHW credential.

Patient navigation was designed as a community-based service delivery intervention specifically to promote access to timely diagnosis and treatment of cancer by eliminating barriers to care.³⁵ Since the first navigation program at Harlem Hospital in New York City recruited lay community workers to link patients to care, which demonstrated improvements in mortality among Black women with breast cancer,^{33,34} patient navigation has been the subject of extensive investigation to determine the best practices. Patient navigation serves to integrate a fragmented health care system for the individual patient. Patient navigation programs promote integrating navigators into care delivery teams with a scope of work that prioritizes a 1-on-1 relationship between a navigator and a patient, with the explicit goal of identifying and addressing barriers to care. Specific services often include locating free or low-cost screenings, making transportation arrangements, assisting in finding physicians and scheduling appointments, providing tailored education, and helping to overcome personal beliefs in accessing the continuum of cancer care.^{10,11,29}

In 2010, the Oncology Nursing Society, the Association of Oncology Social Work, and the National Association of Social Workers published a joint position

statement on the role of oncology nursing and oncology social work in patient navigation.⁵⁰ They defined patient navigation as individualized assistance offered to patients, families, and caregivers to help overcome health care system barriers and facilitate timely access to quality health and psychosocial care from prediagnosis through all phases of the cancer experience. This joint statement was instrumental in solidifying patient navigation as a process, not a person. Navigation services target barriers to specific challenges in accessing care. In terms of the PN as a person or role, the joint statement clearly states that optimal outcomes occur when a social work navigator, nurse navigator, and lay navigator (trained nonprofessional or nonlicensed) function as a team to support the patient. The literature describes patient navigation activities within the scopes of practice of social work, nursing, and CHWs.^{10,37,51-57} Although several organizations offer a certificate of completion for a navigation course, there is no national certification requirement for PNs.

Established in 2009, the Academy of Oncology Nurse and Patient Navigators has emerged as the premiere professional organization to lead the way toward defining core competencies for Oncology Nurse Navigators and PNs by offering networking, education, and certification programs.⁵⁸ In 2017, the National Navigation Roundtable launched a collaboration of organizations and individuals dedicated to achieving equity across the cancer continuum by ensuring that all patients in need have access to evidence-based navigation services. By leveraging the voices of many organizations in the patient navigation field to take collective action, the National Navigation Roundtable seeks to support the creation of a sustainable model for oncology patient navigation. Most recently, the Professional Oncology Navigator Taskforce created a document *Oncology Navigation Standards of Professional Practice*, with clear information regarding the standards of professional practice for oncology nurse navigators, social work navigators, and PNs.³⁰ This includes the common knowledge and skills all professional navigators should possess to deliver high-quality, competent, and ethical services to people affected by cancer. To date, there is no independent occupational identity or SOC code for PNs.

A CALL TO ACTION

Despite efforts of professional organizations and government agencies to solidify professional identities in the oncology workforce, the scientific literature perpetuates

wide variability in the nomenclature used to define natural change agents with proven efficacy in improving access to quality cancer care for historically marginalized populations. To disseminate, sustain, and scale-up these life-saving roles in cancer care, the oncology field must come together now to adopt clear and consistent job titles and occupational identities. Although this may look different across diverse communities, *we must use consistent language in job titles that reflect expected competencies when employing these different change agents*. A first step requires elevating and endorsing the foundational work already done to classify workers into occupational categories in cancer care.

Although professional organizations like the Academy of Oncology Nurse and Patient Navigators, the Professional Oncology Navigator Taskforce, and the National Association of Community Health Workers have made great strides in creating such recommendations and offering training and educational opportunities, there is much work to be done to move toward the professionalization of each of these positions and to classify workers into occupational categories in cancer care. This will require additional efforts to ensure that oncology programs nationwide understand and endorse the foundational principle that patient navigation services may be delivered within the scopes of practice of nursing, social work, and lay/professional navigators. Further dialogue is necessary to clearly differentiate CHWs, community health representatives, promotoras/promotores, and health educator professionals from PNs in the cancer care setting. There are many questions that remain as a result of the variation that exists across diverse communities with unique needs. Although this commentary focuses on cancer care, these principles can be related to all other disease conditions.

We endorse the convening of stakeholders, including but not limited to academics, oncology and primary care health care providers (including physicians, nurses, licensed social workers), professional associations (the NACHW, the Academy of Oncology Nurse & Patient Navigators, the National Navigation Roundtable, etc), CHWs and PNs, accreditation and professional societies, and state and national policy makers, *to collaboratively develop a joint statement that further delineates the professional identities of oncology CHWs and PNs. This call to action is the responsibility of both state-level and national-level agencies, allowing for the integration and development of state-based models*. Ultimately, this is a necessary step toward achieving our collective goal of reducing inequity across the cancer care continuum for those communities most at risk for poor outcomes.

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AUTHOR CONTRIBUTIONS

Tracy A. Battaglia: Conceptualization, writing—original draft, and writing—review and editing. **Xiaochen Zhang:** Conceptualization, literature review, writing—original draft, and writing—review and editing. **Andrea J. Dwyer:** Conceptualization, writing—original draft, and writing—review and editing. **Carl H. Rush:** Conceptualization, writing—original draft, and writing—review and editing. **Electra D. Paskett:** Conceptualization, writing—original draft, and writing—review and editing.

REFERENCES

- Bradley CJ, Given CW, Roberts C. Race, socioeconomic status, and breast cancer treatment and survival. *J Natl Cancer Inst.* 2002;94:490-496.
- Bustamante AV, Chen J, Rodriguez HP, Rizzo JA, Ortega AN. Use of preventive care services among Latino subgroups. *Am J Prev Med.* 2010;38:610-619.
- Bernstein A, Bilheimer LT, Makuc DM. Health, United States, 2011; With Special Feature on Socioeconomic Status and Health. DHHS Publication No. 2012-1232. National Center for Health Statistics; 2012.
- Crosby RA, Wendel ML, Vanderpool RC, Casey BR. Rural Populations and Health: Determinants, Disparities, and Solutions. John Wiley & Sons; 2012.
- Clarke AR, Goddu AP, Nocon RS, et al. Thirty years of disparities intervention research: what are we doing to close racial and ethnic gaps in health care? *Med Care.* 2013;51:1020-1026.
- Valderrama AL, Gillespie C, Mercado C. Racial/ethnic disparities in the awareness, treatment, and control of hypertension—United States, 2003-2010. *MMWR Morb Mortal Wkly Rep.* 2013;62:351-355.
- Purnell TS, Calhoun EA, Golden SH, et al. Achieving health equity: closing the gaps in health care disparities, interventions, and research. *Health Affairs (Millwood).* 2016;35:1410-1415.
- Agency for Healthcare Research and Quality. Fiscal Year 2016. Justification of Estimates for Appropriations Committees. Department of Health and Human Services; 2016.
- Williams DR, Cooper LA. Reducing racial inequities in health: using what we already know to take action. *Int J Environ Res Public Health.* 2019;16:606.
- Wells KJ, Battaglia TA, Dudley DJ, et al. Patient navigation: state of the art or is it science? *Cancer.* 2008;113:1999-2010.
- Bernardo BM, Zhang X, Beverly Hery CM, Meadows RJ, Paskett ED. The efficacy and cost-effectiveness of patient navigation programs across the cancer continuum: a systematic review. *Cancer.* 2019;125:2747-2761.
- Roland KB, Milliken EL, Rohan EA, et al. Use of community health workers and patient navigators to improve cancer outcomes among patients served by federally qualified health centers: a systematic literature review. *Health Equity.* 2017;1:61-76.
- Attipoe-Dorcoo S, Chattopadhyay SK, Verugheese J, Ekwueme DU, Sabatino SA, Peng Y. Engaging community health workers to increase cancer screening: a community guide systematic economic review. *Am J Prev Med.* 2021;60:e189-e197.
- Samaras AT, Murphy K, Nonzee NJ, et al. Community-campus partnership in action: lessons learned from the DuPage County Patient Navigation Collaborative. *Prog Community Health Partnersh.* 2014;8:75-81.

15. Kamaraju S, Olson J, DeNomie M, et al. Community breast health education for immigrants and refugees: lessons learned in outreach efforts to reduce cancer disparities. *J Cancer Edu.* 2019;34:1092-1096.
16. Patel MI, Ramirez D, Agajanian R, Agajanian H, Bhattacharya J, Bundorf KM. Lay health worker-led cancer symptom screening intervention and the effect on patient-reported satisfaction, health status, health care use, and total costs: results from a tri-part collaboration. *JCO Oncol Pract.* 2020;16:e19-e28.
17. Cheun ASA, Loomis J. A culturally sensitive approach to cervical cancer prevention in the Latina population using the promotora model. *Nurs Womens Health.* 2018;22:338-345.
18. Kim K, Choi JS, Choi E, et al. Effects of community-based health worker interventions to improve chronic disease management and care among vulnerable populations: a systematic review. *Am J Public Health.* 2016;106:e3-e28.
19. Sabatino SA, Lawrence B, Elder R, et al. Effectiveness of interventions to increase screening for breast, cervical, and colorectal cancers: nine updated systematic reviews for the guide to community preventive services. *Am J Prev Med.* 2012;43:97-118.
20. Winterfeld A. National prevention strategy. *NCSL Legisbrief.* 2012;20:1-2.
21. Bishop C, Earp JA, Eng E, Lynch KS. Implementing a natural helper lay health advisor program: lessons learned from unplanned events. *Health Promot Pract.* 2002;3:233-244.
22. Eng E, Young R. Lay health advisors as community change agents. *Fam Community Health.* 1992;15:24-40.
23. Scott K, Beckham SW, Gross M, et al. What do we know about community-based health worker programs? A systematic review of existing reviews on community health workers. *Hum Resour Health.* 2018;16:39.
24. Pinto R, Flynn S, Jorge F, Virani T. Lay health educator role in improving cancer screening rates in underserved communities. *Health.* 2014;6:43106.
25. Fleming K, Simmons VN, Christy SM, et al. Educating Hispanic women about cervical cancer prevention: feasibility of a promotora-led charla intervention in a farmworker community. *Ethn Dis.* 2018;28:169-176.
26. Brandford A, Adegboye A, Combs B, Hatcher J. Training community health workers in motivational interviewing to promote cancer screening. *Health Promot Pract.* 2019;20:239-250.
27. Koskan AM, Hilfinger Messias DK, Friedman DB, Brandt HM, Walsemann KM. Program planners' perspectives of promotora roles, recruitment, and selection. *Ethn Health.* 2013;18:262-279.
28. Larkey LK, Herman PM, Roe DJ, et al. A cancer screening intervention for underserved Latina women by lay educators. *J Womens Health (Larchmt).* 2012;21:557-566.
29. Paskett ED, Harrop JP, Wells KJ. Patient navigation: an update on the state of the science. *CA Cancer J Clin.* 2011;61:237-249.
30. Strusowski T, Sein E, Johnston D. Academy of Oncology Nurse & Patient Navigators announces standardized navigation metrics. *J Oncol Navig Surviv.* 2017;8:62-68.
31. Correa A, Brownstein J, DeBruyn L, Diaz-Kenney R, Hosey G, Kelly J. CDC's Division of Diabetes Translation Community Health Workers/Promotores de Salud: Critical Connections in Communities. Centers for Disease Control and Prevention; 2015.
32. Dohan D, Schrag D. Using navigators to improve care of underserved patients: current practices and approaches. *Cancer.* 2005;104:848-855.
33. Freeman HP. A model patient navigation program. *Oncol Issues.* 2004;19:44-46.
34. Freeman HP, Muth BJ, Kerner JF. Expanding access to cancer screening and clinical follow-up among the medically underserved. *Cancer Pract.* 1995;3:19-30.
35. Freeman HP, Rodriguez RL. History and principles of patient navigation. *Cancer.* 2011;117(15 suppl):3539-3542.
36. Nguyen BH, Stewart SL, Nguyen TT, Bui-Tong N, McPhee SJ. Effectiveness of lay health worker outreach in reducing disparities in colorectal cancer screening in Vietnamese Americans. *Am J Public Health.* 2015;105:2083-2089.
37. Schwaderer KA, Itano JK. Bridging the healthcare divide with patient navigation: development of a research program to address disparities. *Clin J Oncol Nurs.* 2007;11:633-639.
38. Nebeker C, Giacinto RE, Pacheco BA, Lopez-Arenas A, Kalichman M. Prioritizing competencies for "research" promotores and community health workers. *Health Promot Pract.* 2021;22:512-523.
39. Wolff M, Bates T, Beck B, Young S, Ahmed SM, Maurana C. Cancer prevention in underserved African American communities: barriers and effective strategies—a review of the literature. *WMJ.* 2003;102:36-40.
40. Padela AI, Killawi A, Heisler M, Demonner S, Fetters MD. The role of imams in American Muslim health: perspectives of Muslim community leaders in Southeast Michigan. *J Relig Health.* 2011;50:359-373.
41. Patel MI, Sundaram V, Desai M, et al. Effect of a lay health worker intervention on goals-of-care documentation and on health care use, costs, and satisfaction among patients with cancer: a randomized clinical trial. *JAMA Oncol.* 2018;4:1359-1366.
42. Patel MI, Moore D, Milstein A. Redesigning advanced cancer care delivery: three ways to create higher value cancer care. *J Oncol Pract.* 2015;11:280-284.
43. Hou SI, Sealy DA, Kabiru CW. Closing the disparity gap: cancer screening interventions among Asians—a systematic literature review. *Asian Pac J Cancer Prev.* 2011;12:3133-3139.
44. Webel AR, Okonsky J, Trompeta J, Holzemer WL. A systematic review of the effectiveness of peer-based interventions on health-related behaviors in adults. *Am J Public Health.* 2010;100:247-253.
45. Hoey LM, Ieropoli SC, White VM, Jefford M. Systematic review of peer-support programs for people with cancer. *Patient Educ Couns.* 2008;70:315-337.
46. Skea ZC, MacLennan SJ, Entwistle VA, N'Dow J. Enabling mutual helping? Examining variable needs for facilitated peer support. *Patient Educ Couns.* 2011;85:e120-e125.
47. Legg M, Occhipinti S, Ferguson M, Dunn J, Chambers S. When peer support may be most beneficial: the relationship between upward comparison and perceived threat. *Psychooncology.* 2011;20:1358-1362.
48. Koskan AM, Friedman DB, Brandt HM, Walsemann KM, Messias DK. Preparing promotoras to deliver health programs for Hispanic communities: training processes and curricula. *Health Promot Pract.* 2013;14:390-399.
49. Moralez EA, Rao SP, Livaudais JC, Thompson B. Improving knowledge and screening for colorectal cancer among Hispanics: overcoming barriers through a PROMOTORA-led home-based educational intervention. *J Cancer Educ.* 2012;27:533-539.
50. Oncology Nursing Society; Association of Oncology Social Work; National Association of Social Workers. Oncology Nursing Society, the Association of Oncology Social Work, and the National Association of Social Workers joint position on the role of oncology nursing and oncology social work in patient navigation. *Oncol Nurs Forum.* 2010;37:251-252.
51. Ell K, Padgett D, Vourlekis B, et al. Abnormal mammogram follow-up: a pilot study women with low income. *Cancer Pract.* 2002;10:130-138.
52. Jandorf L, Gutierrez Y, Lopez J, Christie J, Itzkowitz SH. Use of a patient navigator to increase colorectal cancer screening in an urban neighborhood health clinic. *J Urban Health.* 2005;82:216-224.
53. Nguyen TT, McPhee SJ, Bui-Tong N, et al. Community-based participatory research increases cervical cancer screening among Vietnamese-Americans. *J Health Care Poor Underserved.* 2006;17(2 suppl):31-54.
54. Seek A, Hogle WP. Modeling a better way: navigating the healthcare system for patients with lung cancer. *Clin J Oncol Nurs.* 2007;11:81-85.
55. Rahm AK, Sukhanova A, Ellis J, Mouchawar J. Increasing utilization of cancer genetic counseling services using a patient navigator model. *J Genet Couns.* 2007;16:171-177.
56. Wilcox B. How do you make a difference in patients' lives through your role as a nurse navigator? *ONS Connect.* 2007;22:12.
57. Ferrante JM, Chen PH, Kim S. The effect of patient navigation on time to diagnosis, anxiety, and satisfaction in urban minority women with abnormal mammograms: a randomized controlled trial. *J Urban Health.* 2008;85:114-124.
58. Academy of Oncology Nurse and Patient Navigators (AONN). Defining the Role of the Oncology Nurse and Patient Navigator 2021. Accessed January 5, 2022. <https://aonnonline.org/expert-commentary/aonn-blog/3609-defining-the-role-of-the-oncology-nurse-and-patient-navigator>