
Community Health Workers in Health-related Missouri Agencies: Role, Professional Development and Health Information Needs

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Abstract

Community Health Workers (CHWs) serve an indispensable but often misunderstood and unrecognized role in public health. These individuals constitute the frontline of health care in many communities and are relied upon to provide an assortment of services. Unfortunately, the full extent to which CHWs are utilized is unknown and there is little information about their specific training needs. Further, extensive research on the common tasks performed by CHWs is limited. In order to better understand the specialized role of CHWs in public health, a statewide assessment of existing CHWs and those who employ CHWs was conducted in Missouri. A sample of 155 employed or volunteer CHWs and representatives from 36 health-related agencies completed a questionnaire assessing the professional roles of CHWs, as well as their perceived value in public health and professional development necessities. The results indicated that CHWs operate all over Missouri and commonly serve uninsured and low income populations by connecting people with needed health services. Participants cited diabetes, hypertension, nutrition, and physical activity as frequently addressed health concerns even though many have not been formally trained on these topics. Free and easily accessible educational materials will be needed to address the deficiencies in training among CHWs in the future.

Key words: Community Health Workers; Diabetes; Hypertension

Introduction

The American Public Health Association (APHA) (2017) defines Community Health Workers as “frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served” (para. 2). Through outreach, education, and support, they

attempt to impact the social determinants of health and connect communities to health and social service delivery systems (US Centers for Disease Control and Prevention [CDC], 2013). Historically, in the United States, CHWs have been working as volunteers on grant-funded programs or in grassroots community initiatives for over half a century and have been increasingly recognized as important members of the health care workforce (Balcazar et al., 2011). CHWs primarily exist to provide culturally appropriate care “to low-income, minority, or other underserved populations” (Snyder, 2016, p. 1).

Data from the US Bureau of Labor Statistics (2017) indicates that over 50,000 CHWs are employed in the United States. Both paid and volunteer, CHWs work in a variety of settings including: “hospitals and clinics, health departments, federally qualified community health centers, and community-based organizations” (University of Arizona, 2014, p. 5). While the specified job titles and duties performed by CHWs are vast (APHA, 2014), generic responsibilities include: “cultural mediation, providing culturally appropriate health education and information, care coordination, case management, system navigation, coaching and social support, advocating for individuals and communities, building individual and community capacity, providing direct service, implanting individual and community assessment, conducting outreach, and participating in evaluation and research” (Rosenthal, Rush, & Allen, 2016, p. 9). From the Migrant Health Act and Indian Health Service programs that mandated community health representatives to bridge service gaps in those populations in the 1960’s to today’s national databases to document programs and workers, CHWs have linked communities to health care systems to attempt to improve health outcomes (CDC, 2013). How agencies select and train their CHWs, specifically hiring qualities and training content, varies greatly (O’Brien, Squires, Bixby, & Larson, 2009). The educational backgrounds of CHWs range from having a high school diploma to a graduate degree (Minnesota Department of Health [MDH], n.d.; University of Arizona, 2014; US Department of Health and Human Services, 2007). However, employers will frequently mandate a minimum of a high school diploma (MDH, n.d.; US Department of Health and Human Services, 2007).

Landers and Levinson (2016) noted that widespread assessments of the impact of CHWs on health-related outcomes have only recently come to fruition (past 6 years). An initial review of over 50 studies, conducted by Viswanathan et al. (2009), revealed that the impact of CHWs on health outcomes is inconclusive. While programs utilizing CHWs can improve health-related knowledge, the effectiveness of such programs in changing health-related behaviors is disputed (Viswanathan et al., 2009). In a more recent review of studies assessing the effectiveness of CHWs by Kim et al. (2016), CHWs were demonstrated to be effective in the areas of “cardiovascular

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disease risk reduction, cancer screening, and cognitive function” (p. 13). Further, CHWs may contribute to positive health outcomes in chronic disease care, child health, and treatment adherence (Balcazar et al., 2011). It is suggested that positive benefits may be seen for the health care system when utilizing CHWs to address health disparities (Gibbon & Tyus, 2007). Community health workers used specifically in the care of diabetes with Hispanic, African-American, Brazilian, and American Indian populations noted some improved outcomes (CDC, 2013). When used to support self-management skills in persons with hypertension, a systematic review reported the community health worker strategy as promising for underserved populations (Brownstein et al., 2007). Overall, the CHW model is a popular and promising model for diabetes and hypertension disease management in vulnerable populations, consensus on community health worker roles and health outcomes using this strategy needs to be examined further (Cherrington et al., 2008).

Although there are barriers and challenges, the CDC recommends stronger support and education for CHWs, appropriate policy support, utilization of the core competencies to guide their role, and evaluation of diabetes-related CHW models (CDC, 2013). It is also recommended that CHWs be integrated in to the inter-professional health care team for diabetes (CDC, 2013), hypertension (Institute of Medicine, 2010), and other health concerns to address access to care and health disparities (Balcazar et al., 2011). Barriers to integration into a coordinated care model, though, include lack of understanding of the specified roles and expertise of the community health worker and a national research agenda for the field (Balcazar et al., 2011). Rosenthal, Rush, and Allen (2016) identified the need for continued assessment of “roles and skills” of CHWs, the development of a “core knowledge base”, and methods to assess skill aptitude among CHWs (p. 30).

Snyder (2016) anticipates that there will be a greater need for CHWs in the future due to rising numbers of chronic diseases that disproportionately impact certain racial and ethnic populations. Snyder (2016) goes on to state “given their strong bonds with communities and ability to facilitate access, coordination, capacity building, and service delivery, CHWs are seen as one potential solution...” (p. 4). Landers and Levinson (2016) also forecast a future need for CHWs to help mitigate a burdened health care system and to potentially reduce health care costs. Unfortunately, most community health centers have not taken full advantage of using CHWs in a coordinated care strategy in a current health care climate that emphasizes patient-centered medical homes and accountable/coordinated care. State and federal initiatives are starting to address workforce development in this area around scope of practice, infrastructure, rules and standards, and financing (Rush, n.d.). In a health care system pressured to improve access and reduce disparities, examination of the characteristics of CHWs utilized in Missouri public health agencies for diabetes and hypertension management as well as investigation of the education and training needs of those workers will lay the foundation for the state to meet the CDC’s Diabetes Goals and Recommendations (CDC, 2013).

Methods

Sample

Key informants and agencies. Missouri Department of Health and Senior Services representatives created a list of all agencies, organizations, and departments in the state of Missouri most likely to use CHWs in some capacity. Upon Institutional Review Board (IRB) approval, pre-contact was made with the leaders of each of those agencies through email. Agency leaders were asked if they would forward the survey to all key informants; those most knowledgeable about the use, deployment, and networks of CHWs in their agency. The Key Informant Survey and accompanying consent form was sent to all leaders who volunteered their agencies to participate in the study. Leaders then forwarded the survey and accompanying consent form to those in their agency viewed as key informants. A follow-up reminder email including the survey and consent form was sent to non-respondents. Of the 209 key informants invited to participate in the survey, 98 (47%) agreed to participate, representing 36 agencies.

CHWs. Agency leaders and key informants who volunteered to participate in the survey were also sent an envelope with copies of the paper-pencil Community Health Worker Survey and accompanying consent form to distribute to those CHWs in their agencies who wished to participate in the Survey. A follow-up email was sent to agency leaders encouraging them to remind their key informants to ask their CHWs to complete the CHW Surveys. Also included with the CHW Survey was a separate card for name and contact information so that an incentive for participation could be sent to a respondent’s home address. After completion of the consent form, address card, and CHW Survey, the respondent placed them in the business reply envelope included with the survey. When the business reply envelopes were received by the researchers, the card was separated from the survey to ensure confidentiality. An incentive was then sent to the first 100 respondent’s contact address. A total of 155 CHWs from 54 disclosed agencies agreed to participate in the survey.

Instruments

Key Informant Survey. A modified version the Community Health Worker Programs Inventory was used for this study (US Department of Health and Human Services, 2007; Wilder Research, 2012). The present survey did not utilize all of the original questions and options for each question. The original layout and format was also changed to maintain consistency of the items. The survey was designed to evaluate employee compensation and hours worked among CHWs, common tasks performed, populations served, and health issues addressed by CHWs. Further, the instrument assessed perceived skills necessary for CHWs to perform their duties as well as perceived support and resources needed by CHWs. All variables were measured from the viewpoint of the administration with a series multiple choice items. Furthermore, administration attitudes toward CHWs, including role perception, training needs, evaluation, and future need for CHWs were assessed using a series of 5-point, Likert-type items. Face validity was established by review of three doctoral trained health educators and a representative from the Missouri Department of Health and Senior Services.

Community Health Worker Survey. Another modified version of the Community Health Worker Programs Inventory

(US Department of Health and Human Services, 2007; Wilder Research, 2012), which was modified in a similar format to the Key Informant Survey, captured the viewpoints of the individual CHWs. The instrument consisted of multiple choice items designed to measure professional role delineation, perceived skills, populations served, health issues commonly addressed among priority populations, training needs/support, and selected demographics. Face validity was also established by review from three doctoral trained health educators and a representative from the Missouri Department of Health and Senior Services.

Analysis

Descriptive statistics, including means, frequencies, and percentages, were computed for all items on both the Key Informant Survey and the Community Health Worker Survey using the Statistical Package for the Social Sciences (SPSS).

Results

Participant Profile

A total of 98 participants completed the Key Informant Survey. Of those 98 participants, they reported a total of 1,304 CHWs who worked under their supervision or for their organization. Most key informants (68.37%; n = 67) reported having five or fewer CHWs at their agency. A total of 23 key informants (23.47%) reported having 6-20 community health workers, and four key informants (4.08%) reported having 21-100. Three key informants (3.06%) reported having more than 100 CHWs. A total of 155 participants completed the Community Health Worker Survey. Nearly half of the participants (46.45%; n = 72) indicated they work 40 or more hours per week, the majority reported being paid full-time employees (69.03%; n = 107), and most (57.42%; n = 89) were in permanently funded positions. Demographic characteristics pertaining to employment status and compensation are displayed in Table 1.

Table 1.

Employment and Compensation of Community Health Workers as Reported by Community Health Workers (n = 155)

Employment or Compensation Variable	Number of CHWs Reported for Each Category*
Weekly hours worked	
Less than 10 hours/week	21
11-19 hours/week	6
20-29 hours/week	17
30-39 hours/week	36
40 hours/week	54
More than 40 hours/week	18
Employment status	
Paid full-time employees	107
Paid part-time employees	21
Volunteers (unpaid)	16
Compensated through non-monetary means	6
Hourly pay	
Usually not paid	17
Paid less than \$14/hour	68
Paid \$14-17.99/hour	35
Paid \$18 or more/hour	24
Prefer not to answer	8
Position funding	
Unfunded	14
Short-term and/or grant funded	25
Permanently funded	89
I don't know	18

*Totals not summing to 155 reflect missing data

Tasks and Skills of CHWs

The assessed tasks in this study refer to the job-related responsibilities of CHWs whereas skills are the desired personal attributes possessed by CHWs that are necessary to carry out the tasks (Rosenthal, Rush, & Allen, 2016). Regarding common tasks performed by CHWs, key informants identified providing health education (67.35%; n = 66), connecting people with medical services or programs (63.27%; n = 62), and connecting people with non-medical services or programs (61.22%; n = 60) as primary tasks. Similarly, CHWs' top answers included connecting people with medical services or programs (68.39%; n = 106), connecting people with non-medical services or programs (67.74%; n = 105), and providing health education (64.52%; n = 100).

Regarding the perceived skills that are necessary for CHWs, as reported by key informants, top responses included providing verbal communication (90.82%; n = 89), written communication (82.65%; n = 81), and relationship building (68.57%; n = 77). In a corresponding question for CHWs, the top two responses matched the top two key informant responses, providing verbal communication (85.81%; n = 133) and written communication (73.55%; n = 114). However, the third most common response differed with teaching (67.74%; n = 105).

Populations Served and Health Issues Addressed

The results from the Key Informant Survey indicated that CHWs provide services to a variety of different priority populations. Key informants identified White/Caucasian (87.76%; n = 86) and Black/African American (71.43%; n = 70) as the most commonly served racial/ethnic groups. Further, low-income groups (93.88%; n = 92) and the uninsured (90.82%; n = 89) were identified by key informants as the most common social and/or economic groups served by CHWs. Community health workers' responses mirrored the key informants' responses. CHWs most commonly served White/Caucasians (94.19%; n = 146) and Black/African Americans (82.58%; n = 128) compared to other racial/ethnic groups. CHW's further reported low-income groups (92.90%; n = 144) and uninsured (84.52%; n = 131) as the most common social and/or economic groups to receive their services.

Key informants consistently reported a variety of health issues that were addressed by CHWs. At least half of key informants noted each of the following health issues as being addressed by CHWs: asthma (87.76%; n = 86), diabetes (74.49%; n = 73), nutrition (69.39%; n = 68), obesity (68.37%; n = 67), hypertension (67.35%; n = 66), physical activity (64.29%; n = 63), and mental health (54.08%; n = 53). Community Health Workers reported addressing a variety of health issues as well. At least half of the CHWs reported addressing five specific health issues: diabetes (62.58%; n = 97), nutrition (61.29%; n = 95), physical activity (61.29%; n = 95), asthma (59.35%; n = 92), and hypertension (50.32%; n = 78).

Support Needed by CHWs to Address Diabetes and Hypertension

Community health workers responded to items about previous training on diabetes and hypertension awareness and prevention, their desire for more training, and additional support they would need to add prevention messages into their work. Most CHWs indicated they had not or did not know if they had received previous diabetes training (54.19%; n = 84), and most

were interested in receiving free training if available (61.29%; n = 95). Regarding hypertension training, CHWs indicated they had not or did not know if they had received previous training (74.19%; n = 115), and most were interested in receiving free training if available (58.71%; n = 91).

For both diabetes and hypertension, CHWs indicated age appropriate training materials (60.65%; n = 94 and 52.26%; n = 81, respectively) and training/educational resources (54.19%; n = 84 and 47.10; n = 73, respectively) support would be necessary to add diabetes and hypertension awareness and prevention messages into their work. For similar items, key informants indicated training/educational resources (58.16%; n = 57 and 57.14%; n = 56/98, respectively) and age appropriate training materials (58.16%; n = 57 and 54.08%; n = 53, respectively) support would be necessary for CHWs to add diabetes and hypertension awareness and prevention messages into their work, respectively.

Key Informant Perceptions

Regarding key informants' insights on CHWs professional role, participants indicated that while CHWs play an essential role in health care (86.67%; n=78), funding CHWs is difficult (70.00%; n=63). Key informants further noted that the role CHWs play in health care is misunderstood (64.44%; n=58). Table 2 describes additional key informant attitudes regarding CHWs.

Discussion

A statewide sample of key informants and CHWs completed surveys assessing the professional roles and training needs of CHWs. The responses of the key informants consistently echoed those of the CHWs. Both groups indicated that CHWs were primarily responsible for providing health education and connecting people with essential services. The primary health concerns addressed by CHWs included Diabetes, Nutrition, Physical Activity, Asthma, and Hypertension. However, CHWs indicated a lack of training or did not recall specific training in Diabetes and Hypertension. While this lack of training is certainly a major point of concern (to be discussed further), Snyder (2016) and the US Department of Health and Human Services (2007) reminds us that the primary value and desirable asset of CHWs is their existing integration into the communities they serve and the ability to reach vulnerable populations in need. Thus, while methods for effective education and training should certainly be explored, the lack of existing training among CHWs should not diminish the unique and valuable role they bring to an integrated health care model. Further, while CHWs serve a multitude of individuals, data from the present study indicates that the populations most commonly served by Missouri CHWs were White/Caucasians, Black/African Americans, low socioeconomic status groups, and the uninsured. Because the present study shows that CHWs work with underserved population, their ability to provide culturally competent services and work with "hard-to-reach populations that had been avoided by other health workers" provides further justification for their value in health care (US Department of Health and Human Services, 2007, p. ix). Individual responses from key informants revealed that CHWs are valued members of the health care community. Unfortunately, key informants noted multiple barriers to using CHWs in their settings, including financial and time constraints for hiring and training CHWs.

Table 2.

Frequencies and Means for Key Informants' Work with and Opinions of Community Health Workers (n = 90)

Item	SD	D	N	A	SA	Mean
Securing sustainable funding for CHWs is challenging.	1	3	23	31	32	4.00
The services of CHWs are often not reimbursable.	3	3	30	30	24	3.77
It is difficult to identify the training needs of CHWs.	6	38	23	17	6	2.77
Training CHWs is challenging due to limited funding.	2	11	18	38	21	3.72
Training CHWs is challenging due to time restraints.	3	11	33	43	20	3.73
Because CHW turnover is high, it is not a good use of resources to spend much time or money training them.	24	35	20	6	5	2.26
The role of CHW is not well understood by other medical and health service personnel.	2	13	17	35	23	3.71
CHWs are often not as effective as possible because other health care providers do not understand or underestimate the value of CHWs.	4	23	24	29	10	3.20
Quantifying or measuring the success/value of CHWs is challenging.	4	15	31	29	11	3.31
I anticipate needing greater numbers of CHWs within the next 1-3 years.	2	8	32	35	13	3.54
CHWs have a vital role in health care.	1	1	10	45	33	4.20
Favorable CHW program evaluation would likely allow me to hire more paid CHWs.	4	12	38	23	13	3.32

Note: 1 = SD = Strongly Disagree; 2 = D = Disagree; 3 = N = Neutral; 4 = A = Agree; 5 = SA = Strongly Agree

Key informants also indicated that the services provided by CHWs are often not reimbursable. The Society of Behavioral Medicine emphasized that these barriers can be diminished with a greater understanding of how CHWs contribute to an integrated health care model and with implementation of recognized standards for the profession (Hynes, Buscemi, & Quintiliani, 2015). Further exploration of professional CHW "roles and skills" has also been recommended by Rosenthal, Rush, and Allen (2016, p. 29).

The results of this study are consistent with the existing literature on the function and role of CHWs. The noted health concerns addressed by CHWs in the present study are not unique to Missouri. Other studies have shown that CHWs have addressed similar health issues, and evidence suggests that their efforts have made a positive impact on those they serve (Brownstein et al., 2007; Costa, Guerra, dos Santos, & Florindo, 2015; Norris et al., 2006; Parker et al., 2008). Inadequate knowledge regarding professional responsibilities of CHWs by

other members of the health care community was also noted by Kangovi, Grande, and Trinh-Shevrin (2015), who stated that this may be a barrier in funding CHWs.

Implications

The present study indicates that CHWs are utilized throughout the state of Missouri, they address a variety of health concerns among populations in need, and connect people with crucial health services. As the health care professions continue to explore ways to better address the needs of underserved populations, there is no doubt that there will be a greater need for CHWs in the future (Landers & Levinson, 2016; Singh & Chokshi, 2013; Snyder, 2016). The Society of Behavioral Medicine, in a recent position statement, has also called for greater incorporation of CHWs in the "patient-centered medical home [model]" (Hynes, Buscemi, & Quintiliani, 2015, para. 1).

Consequently, for the health and safety of the populations they serve, it is essential that CHWs are properly equipped to

perform their duties and accurately address health concerns. Perhaps one of the most crucial findings in this study is the discrepancy between the health issues/areas addressed by CHWs and the amount of training (or lack thereof in this case) they have received. Community Health Workers identified both Diabetes and Hypertension as health issues they commonly address; however, over half of the participants either have not received training in these areas or could not recall if they had received training. Both of these conditions are life-threatening and therefore, it is vital that accurate information and personal care plans are presented to the individuals in need. This is especially important as the use of CHWs expands in the future (Landers & Levinson, 2016; Singh & Chokshi, 2013; Snyder, 2016) and the potential magnitude of their impact increases. In addition, both key informants and CHWs declared a need for age appropriate training and training/educational resources to add diabetes and hypertension awareness and prevention messages into their work. Without such support in place, segments of the priority population will remain underserved.

Recommendations

Results from key informants show that they believe CHWs play a critical role in health care. However, sustainable funding for hiring and training CHWs combined with time constraints for training and a general lack of understanding of the role CHWs inhibit their use. It is recommended that researchers and employers continue to assess the impact of CHWs on the community. Such evaluation endeavors could increase opportunities for the funding and hiring of CHWs. Furthermore, while generic roles of CHWs have been documented, further studies should be done to continue the process of “role delineation” (Rosenthal, Rush, & Allen, 2016, p. 31), thus impacting usability of CHWs. Upon further examination of the specified roles and responsibilities of CHWs, an educational campaign aimed at educating health care providers about the role and function of CHWs is recommended.

In regards to addressing training needs among CHWs operating in Missouri, the majority of the participants in this study indicated they would be interested or may be interested in receiving training. Because of the reported financial constraints of those who employ CHWs, conducting expensive in-person trainings is unrealistic. Electronic, printed, and web-based trainings would provide an easier and cost-effective way to address the noted gaps in health-related knowledge and skills among CHWs. A lack of universal training standards for CHWs also complicates training and health education endeavors (Rosenthal, Rush, & Allen, 2016). While methods for addressing gaps in health-related knowledge among current CHWs should be explored and properly evaluated, the development of nationwide standards and training protocols will also help address any future gaps in knowledge before a CHW enters the field (Rosenthal, Rush, & Allen, 2016). This would also allow for universal assessments and measurements of success to be created. Lest we forgot however that CHWs are highly valued because of their position and ability to work with underserved population (US Department of Health and Human Services, 2007), there needs to be careful consideration taken in mandating stringent, expensive, and time consuming standardized training among CHWs that may deter some individuals from entering the field. Dissemination of educational material would be made significantly easier with the development of a database of

employed CHWs, which is also recommended. In the future, a formal association or organization of CHWs may also allow for the profession to become better recognized and provide a venue for continuing education. However again, due to financial constraints and the unsystematic nature of the CHW profession at this time, the formation of such an organization is not feasible nor recommended.

Limitations

Since no database of employed CHWs within the state of Missouri exists, and the total number of agencies who employ CHWs is unknown; determining the representative nature of the data within this study is problematic. Further, as previously stated, the training of CHWs across the United States is not standardized, and many places that employ CHWs only require the applicant to have successfully graduated high school (MDH, n.d; US Bureau of Labor Statistics, 2015; US Department of Health and Human Services, 2007). Thus, the training needs and training disparities of CHWs operating in Missouri may differ from other CHWs employed in the United States. Future researchers should not only continue to examine where CHWs are typically employed, but also examine the titles under which they work in order to better understand the total extent to which CHWs are utilized in health care. Given that there will be a greater need for CHWs in the next few years (Landers & Levinson, 2016; Singh & Chokshi, 2013; Snyder, 2016) future studies should also focus upon the training needs of CHWs employed in other states until a universally accepted training protocol is developed. This would allow others to better plan training and education strategies designed to address gaps in health-related knowledge and skills among CHWs. Having a centralized database of employed CHWs would also allow for easy dissemination of education materials and the ability to communicate continuing education opportunities. For the small number of participants who were uninterested in free trainings, it is unknown why they rejected the prospect. This certainly needs to be investigated further to determine more appropriate and acceptable venues for education and training for CHWs who are not interested in free trainings. In regards to the instrument, while it has been used in previous research (US Department of Health and Human Services, 2007; Wilder Research, 2012), and face validity was established for the present study, greater forms validity and reliability have not been documented. Further studies should assess the properties of this instrument.

Conclusion

While their role in health care is poorly understood, the present study shows that CHWs are being utilized across the state of Missouri and need for more CHWs is expected to increase. To prepare for the influx of new CHW professionals and to better address health concerns among priority populations, effective training and educational strategies are desperately needed.

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**This article may provide one
Continuing Education Contact Hour Opportunity for CHES (Approval Pending)
Instructions and self-study questions may be found on page 39**

Editor's Notes

Hello Gammans,

“Research is formalized curiosity. It is poking and prying with a purpose” Zora Neale Hurston

A research study often starts with a basic curiosity, asking the question “What would happen if.....” This issue of *The Health Educator* includes research articles that discuss the roles of Community Health Workers in Missouri (Visker, Rhodes & Cox) and an article by Ball et al that describes the barriers to exercise for adults. A paper authored by Wallace reviews the use of text messages in an obesity prevention initiative. All three manuscripts provide Gammans with strategies to replicate in their own communities to facilitate health behaviors. I hope reading these articles will trigger your own curiosity for improving the health status in your communities.

Please also consider submitting a manuscript for publication in a future issue of *The Health Educator* (see page 18) or if you are an experienced practitioner or research, please consider lending Eta Sigma Gamma your expertise as an Editorial Associate (please see page 37).