






# The Central Role of Provider Training in Implementing Resource-Stratified Guidelines for Palliative Care in Low-Income and Middle-Income Countries: Lessons From the Jamaica Cancer Care and Research Institute in the Caribbean and Universidad Católica in Latin America

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Individuals in low-income and middle-income countries (LMICs) account for approximately two-thirds of cancer deaths worldwide, and the vast majority of these deaths occur without access to essential palliative care (PC). Although resource-stratified guidelines are being developed that take into account the actual resources available within a given country, and several components of PC are available within health care systems, PC will never improve without a trained workforce. The design and implementation of PC provider training programs is the lynchpin for ensuring that all seriously ill patients have access to quality PC services. Building on the Breast Health Global Initiative's resource-stratified recommendations for provider education in PC, the authors report on efforts by the Jamaica Cancer Care and Research Institute in the Caribbean and the Universidad Católica in successfully developing and implementing PC training programs in the Caribbean and Latin America, respectively. Key aspects of this approach include: 1) fostering strategic academic partnerships to bring additional expertise and support to the effort; 2) careful adaptation of the curriculum to the local context and culture; 3) early identification of feasible metrics to facilitate program evaluation and future outcomes research; and 4) designing PC training programs to meet local health system needs. **Cancer** 2020;126:2448-2457. © 2020 American Cancer Society.

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## INTRODUCTION

Of the 56.2 million deaths globally in 2015, approximately 45% of patients experienced serious health-related suffering. Of these 25.5 million individuals, >80% lived in low-income and middle-income countries (LMICs).<sup>1</sup> Of the 40 million people globally in need of palliative care (PC) or supportive care each year (see Text Box 1),<sup>2,3</sup> only 14% of patients receive it, most of whom reside in high-income countries (HICs).<sup>4</sup> This disparity is especially striking given that a much larger percentage of patients with cancer living in LMICs present with late-stage disease, and thus need PC, compared with patients residing in HICs.<sup>5,6</sup> For example, it is estimated that the percentage of patients presenting with a diagnosis of breast cancer at either stage III or stage IV in LMICs ranges from 30% to 50% in Latin America and the Caribbean to as high as 75% in sub-Saharan Africa.<sup>7</sup> Not surprisingly, patients living in LMICs also account for approximately 65% of cancer deaths worldwide, largely due to insufficient access to treatment and patients presenting with advanced stage, incurable disease.<sup>8,9</sup> Even when patients living in LMICs do present with earlier stage disease, they often have limited access to chemotherapy, radiation, and surgical interventions, leading to unnecessary suffering and untimely death.<sup>10</sup>

This immense shortage of PC services in the parts of the world that need it most has prompted several global efforts to increase access to PC. The World Health Organization (WHO) published recommendations in 1990<sup>11</sup> and 2014 (World Health Assembly Resolution 67.19)<sup>12</sup> that PC services be incorporated into all health care systems

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**Text Box 1** The terms “supportive care” and “palliative care” (PC) are sometimes used interchangeably. Supportive care is a broad term and, in the case of patients with cancer, typically refers to the prevention and management of the adverse effects of cancer and its treatment and includes the management of psychological symptoms across the continuum of cancer care.<sup>2</sup> PC refers to the holistic management of symptoms and the relief of serious health-related suffering among patients with serious illnesses as well as attending to the patient and his or her family and social context, and also includes end-of-life care. For the purposes of the current study, PC is used to encompass all of these dimensions, in keeping with the World Health Organization definition of PC, which includes the management of physical, psychosocial, and spiritual suffering for any patient with serious illness from the point of diagnosis through treatment to end-of-life care or survivorship.<sup>3</sup>

worldwide and emphasized PC as an ethical mandate. More recently, the Lancet Commission on Palliative Care and Pain Relief has proposed an “Essential Package” of PC services that is designed to be affordable even in the poorest countries. The package includes access to essential medicines, basic medical equipment, and supplies, and describes the basic minimum competencies that PC providers across the spectrum of care should achieve, clearly addressing the critical role of provider training.<sup>13</sup> Despite this increased attention regarding the importance of incorporating PC into health care systems, to the best of our knowledge as of 2016, only 20 of 234 countries globally have achieved high-level integration of PC into mainstream health care, and only 1 of these countries (Uganda) is a LMIC.<sup>14</sup>

As previously highlighted by the Breast Health Global Initiative, as well as by the National Comprehensive Cancer Network and the American Society of Clinical Oncology, a key component of the integration of resource-stratified PC services (ie, PC services that are aligned with local needs and resources to provide a strategy that is culturally and resource appropriate<sup>15</sup>) is provider education and training.<sup>16-19</sup> Several studies assessing pediatric PC in LMICs also have prioritized provider education and training,<sup>2,20,21</sup> as have several landmark guidance documents addressing the integration of PC into existing health care services.<sup>22</sup> A key theme emphasized across all of these PC studies and international recommendations is the need to integrate PC training across the entire health system, from community health workers and family caregivers up through specialty training for physicians.

It is well known that the existence of guidelines alone does not necessarily result in their uptake or implementation, especially in resource-limited settings.<sup>20</sup> Providing effective and accessible educational opportunities across the health system can be a central challenge for PC leaders in these settings. Comprehensive strategies that are based in dissemination and implementation science<sup>21</sup> need to be used to translate published

guidelines into practice, thereby effecting meaningful change in the lives of patients and their families. In addition, to our knowledge, little has been written about the role that partnerships between HICs and LMICs may play in the development and implementation of educational programs, or about the best practices for such collaborations that can help to avoid common pitfalls, grounded in a mutual commitment to health equity.

Despite the growing recognition that provider training is the lynchpin necessary to increase access to PC services, there remains a shortage of concrete guidance to support PC leaders in LMICs who want to design and implement PC training programs.<sup>22-24</sup> In this article, we have addressed this gap in the literature by synthesizing the experience of 2 successful regional efforts to develop and implement PC training programs in low-resource settings. We also summarized areas of best practice, which included the following: 1) fostering strategic academic partnerships; 2) careful adaptation of the curriculum to the local context and culture; 3) early identification of metrics to support program evaluation and outcomes research; and 4) designing PC training programs to meet local health system needs. We then grounded these insights in 2 concrete case studies from our work developing PC training curricula in Jamaica and Chile.

### ***Fostering Strategic Academic Partnerships***

The recommendations throughout this article are both grounded in the literature highlighted above and based on experiences with our own bidirectional partnerships. In our shared experience, a key component of the design and implementation of a successful PC educational program within a LMIC is the creation of a formal partnership between PC leaders in the target LMIC and a well-established academic PC program in a HIC.

There are several successful examples of medical education partnerships between LMICs in sub-Saharan Africa and academic centers in HICs. The HIC university

partnerships in Rwanda and Uganda are models of educational programs in which the transfer of skills is bidirectional and leadership remains with the host-country partner.<sup>2,20-22</sup> There have been fewer examples in Latin America and the Caribbean.

Such strategic partnerships can support the development and growth of educational interventions in several ways. For example, the few local LMIC providers with formal training in PC typically have overwhelming clinical care demands that prevent them from having the time and resources to invest in designing and administering educational programs. An academic partner will not only have experience designing, administering, and evaluating educational programs, but may also have resources that, once carefully adapted to the local context via close collaboration with the in-country leader, can provide an initial platform on which to build and expand.<sup>25</sup> In addition, if leveraged appropriately to maintain a focus on the local PC leader, such a partnership can help to enhance the local profile and international reputation of the LMIC partner. This can in turn lead to increased support for PC more broadly within the country and attract additional resources from foundations or other funders interested in improving care for those with serious illness.

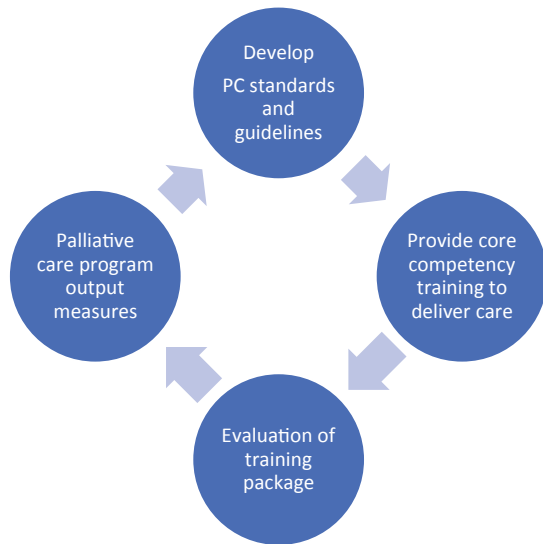
To achieve these desired outcomes while avoiding the pitfalls too often experienced by LMICs partnering with HICs, 2 key principles should be considered. First, whenever possible, an educational intervention should have the dual goal of not only meeting the learning needs of the target local audience, but also supporting the development of local PC leaders as educators. Second, there must be shared values that supersede cultural differences. In our experience, it was our collective commitment to health equity that grounded our LMIC–HIC partnership.<sup>26</sup> The expectations of each partner's internal stakeholders can be drastically different, and can also change over time. Partners from the LMIC often have immense clinical responsibilities, and their direct supervisors may not rank education or research as top priorities. In contrast, partners from HICs typically have requirements for academic scholarship that may lead them to overemphasize formal research endeavors that may not always align with the interests or goals of their local partners.<sup>27</sup> Although such misalignments are impossible to avoid completely, a shared vision of promoting health equity, along with frequent and honest communication, can help to minimize and resolve conflicting perspectives and maintain a shared focus on improving access to PC for all who are suffering unnecessarily.

### ***Adapting Programs to Local Context and Culture***

The success of PC training and educational programs often is in direct relationship with their ability to capture and reflect the local culture and particular context of a given country. Training programs must be designed sensitively to respect both cultural nuances (such as local understandings of suffering, spirituality, death, and bereavement) and institutional customs (such as behavioral and ethical norms of the ministry of health, academia, and clinical care). Therefore, even though PC educational interventions will often include the same key components across different settings, how these components are described, considered, and translated can differ drastically from country to country and culture to culture.

The importance and inherent complexity of this adaptation process is one of the primary reasons we so strongly advocate for cross-cultural PC education rooted in long-term academic and/or organizational partnerships. These partnerships provide an intuitive and effective infrastructure through which educational curricula can be continually reviewed, adapted, and improved to better reflect local culture. This review process can also help to identify and address deeper cultural differences that may present challenges in providing optimal PC, such as how culture shapes a family's likelihood of requesting that providers withhold prognostic information from the patient, how local religious traditions make sense of suffering, or how culture shapes physicians' perspectives on withdrawing or withholding interventions near the end of life. In our experience, discussions among our cross-cultural team of clinical and academic partners participating in a joint review process have not only substantially enhanced the course content but have also provided an invaluable opportunity for both partners to stretch their understanding of what "quality palliative care" means in different cultures.

Teaching PC principles not only requires a consideration of local culture, but also inherently involves a call for cultural change. For example, within contexts in which the role of medicine still is exclusively perceived as treating physical diseases, a key goal of PC training is to help shift the attitudes of learners to better recognize the psychosocial and spiritual needs of their patients. In settings in which patient care remains a guarded domain exclusively reserved for physicians, training should be structured to foster a new appreciation for the interdisciplinary nature of PC and the essential role of nurses, social workers, chaplains, and other members of the interdisciplinary team in providing quality PC to patients. Ultimately, the successful tailoring of PC



**Figure 1.** The interconnectedness of palliative care (PC) standards and guidelines, core competency training, evaluation of training, and PC output measurement.

training programs to local cultures requires a careful union between the cultural humility necessary to recognize that perceptions and understandings of suffering differ widely around the world and the courage to unequivocally state that, regardless of the local context of suffering, all providers are ethically mandated to respond to the suffering patient in front of them.

### **Collecting Data to Support Program Evaluation and Outcomes Research**

Even after rigorous planning and adaptation efforts, it is essential to identify and collect data regarding specific output measures to evaluate the effectiveness of the curriculum, identify areas in which the program can be modified to best meet the needs of local PC providers, and support future outcomes research. There is an essential interconnectedness between PC guidelines, education and training, service implementation, and PC output measures (Fig. 1). After the establishment of national standards and guidelines, Gomez-Batiste and Connor (Text Box 2)<sup>28</sup> underscored the importance of identifying and implementing indicators to measure the structure, process, and function of the PC service delivered. The Kirkpatrick model<sup>29</sup> posits that educational interventions ought to be evaluated based on 4 outputs: 1) participants' reaction to the training; 2) what participants actually learned in the training; 3) whether participants are able to transfer what they learned and implement this in practice; and 4) whether there is a measurable change in practice or

### **Text Box 2** Steps to Establish a National Education Program According to Gomez-Batiste and Connor<sup>28</sup>

1. Conduct situational analysis that would include the needs of the population at hand, the levels of palliative care (PC) development and education, and the identification of leaders and potential leaders.
2. Select and conduct initial activities focused on advocacy initiatives to key decision makers, policy makers, and relevant groups and individuals.
3. Identify and train national, clinical, and organizational leaders.
4. Build a core nucleus of PC services and PC leaders.
5. Establish methods for training, support, follow-up, and ways to accompany the leaders.
6. Design and develop a strategy for implementation in the short, medium, and long term that would begin by defining the resource-appropriate aims for PC provision, and establish a working group within a policy-making body such as a ministry of health.
7. Define the national educational standards based on national and international consensus.
8. Identify specific targets, barriers, and resistances and design specific strategies to deal with each.

service delivery as a result of the training. In considering these 4 domains, we recommend using both qualitative and quantitative components that include both formative and summative outputs. For example, we typically use knowledge assessments, before and after self-efficacy evaluations, and self-reported behaviors to achieve a multidomain assessment of the impact of our PC training courses. Quantitative assessment of knowledge gaps provides data with which to assess program success, whereas course evaluations from participants help educators continually refine course content. For example, we now include written course evaluations and post-course focus groups to help refine course content over time. These data help to ensure ongoing quality improvement and provide stakeholders with incentives for further investment. Although the second 2 domains of the Kirkpatrick model related to practice change are essential to accurately evaluating the impact of a training program, it often is infeasible within the context of a resource-limited setting to evaluate these outputs in a rigorous manner. However, we have found that before and after self-efficacy evaluations together with before and after self-reported behaviors are simple and cost-effective for estimating these outputs within the resource constraints of LMICs.

It is beyond the scope of the current article to discuss PC output measures in depth, and much has been

written in the literature regarding this area. In general, output measures are commonly categorized under 8 specific domains: 1) structure and process of care; 2) physical aspects of care; 3) psychological aspects of care; 4) social aspects of care; 5) spiritual, religious, and existential aspects of care; 6) cultural aspects of care; 7) care of the imminently dying patient; and 8) legal and ethical aspects of care.<sup>30</sup> Depending on the resources available, several output measures can be selected from each domain, and their relative importance defined prior to implementation of the PC service. Education and training then can be more specifically focused on developing core competencies, particularly at basic and intermediate levels of service provision. Education and training programs in PC themselves are considered to be quality indicators for PC delivery under the structure and process-of-care domains. Training in the practical and empirical aspects of monitoring the effectiveness of a PC program should be embedded in PC training curricula at all levels.

### ***Designing PC Training Programs to Meet Local Health System Needs***

An initial key challenge faced by PC leaders when trying to design and implement an educational or training strategy is where to direct the initial focus given the clear need for basic training courses as well as more advanced, specialized training. Within LMICs, there most often is an urgent need for a clinical workforce trained in palliative medicine, and thus a need for basic training programs. However, in our experience, we have found that it is difficult to make meaningful progress in the uptake of basic PC education that actually leads to practice change across a country without concurrently building competency, expertise, and autonomy among local leaders. Therefore, within the specific context of education in PC, we recommend that policy leaders aim to develop concurrent basic and advanced training courses, while also recognizing that the strategic decisions of where to start building PC education in a given country will be dependent on the specific needs at the population level and the resources available within the health care system.

Among the 8 steps involved in developing a national PC education program as outlined by Gomez-Batiste and Connor (Text Box 2),<sup>28</sup> the first 2 critical steps stress the importance of undertaking a situation analysis to identify and prioritize local needs, and to engage clinical decision makers and national policy makers before developing a PC program. For example, developing a cadre of clinicians with advanced training in palliative medicine who then return to a health care system that does not support

or recognize the value of PC will undermine efforts to advance PC. It is essential to work with national health policy and health administration leaders to ensure that the PC leaders developed through successful training programs are returning to health care settings that support and value their newly acquired expertise.

### ***Case Studies***

The following 2 case studies from our joint experiences have been offered to provide tangible examples of both the challenges faced, and opportunities found, when attempting to apply the above noted principles of partnership, adaptation, and evaluation. We begin with our experience in Chile, where there is broad support and financing for PC, and then report on our experience in Jamaica, where efforts to train providers in PC and finance PC services are at an earlier stage of development.

#### **Universidad Católica**

Chile is a nation of 17.5 million individuals located along the western edge of South America. Approximately 100,000 people die each year in Chile, and nearly 26% of these deaths are from cancer.<sup>31</sup> Since 2003, the Ministry of Health in Chile has mandated that both public and private health insurance programs must include coverage for PC among patients with cancer.<sup>32</sup> For many patients with cancer who reside within the urban sectors, this includes access to inpatient, outpatient, and home-based PC services. However, in the more rural parts of northern and southern Chile, access to even basic PC services remains limited. Beyond the creation of policies that support PC as well as the implementation of clinical services across the country, PC leaders in Chile have also successfully secured access to opioids for patients with cancer, thus increasing the availability of opioids throughout the country. With regard to PC education, leaders continue to promote the inclusion of PC as a part of the undergraduate curriculum for medical students, and the first subspecialty fellowship in PC for physicians was established at the Pontifical Universidad Católica of Chile in 2017. The Chilean Palliative Care Medical Society was founded in 2018, with one of its goals being the certification of palliative medicine as a formal medical specialty.

To further expand formal PC training Chile, a partnership first was formed between the Universidad Católica of Chile (UC) and Massachusetts General Hospital (MGH)/Harvard University in 2018. After an initial needs assessment of PC education in Chile, it was decided to create a basic course in the fundamentals of PC. This particular format was selected due to the



unique context of PC in Chile, wherein many providers had been practicing within a PC context for many years, yet very few had received any formal training in PC. In addition, due to the clinical experience of the local UC PC team, as well as the formal education infrastructure available, the training was offered as a formal accredited course within the continuing education department at UC. The course content initially was based on the general format of the MGH/Harvard Medical School PC curriculum, and was adapted to the local context and culture by 10 different UC faculty members together with MGH/Harvard University faculty. MGH/Harvard University faculty also provided mentorship, feedback, and support to all UC teaching staff before, during, and after the course to help enhance their teaching effectiveness and confidence. The inaugural basic course was delivered in October 2018, and included 12 physicians and nurses as well as 1 physical therapist. The 5-day, in-person course was supplemented with monthly virtual case review sessions using video conferencing technology, and measured course outputs included a knowledge assessment and a retrospective before and after self-efficacy evaluation.

After reviewing the course evaluations and conducting an internal group reflection process with participating faculty, it was decided to create a second, more advanced diploma course. This was chosen both because of the growing teaching confidence of the UC faculty as well as the shared recognition that many seasoned PC providers in Chile also had a demonstrable interest in receiving more formal training. For this more advanced course, the basic structure of the Harvard Medical School Palliative Care Education and Practice course was used as an initial template. Key informant interviews were subsequently conducted with PC leaders and key stakeholders from across Chile to evaluate the qualitative fit of the Palliative Care Education and Practice curriculum to the learning needs of providers in Chile. Results from these interviews were then used to create a quantitative target audience survey that was delivered to 55 PC clinicians across Chile. The course content was then adjusted based on these results, and further adapted to the clinical and cultural context of Chile via collaborations between UC and Harvard University faculty. The course structure included 10 days of in-person training (2 sessions of 5 days each separated by 5 months, with monthly video case reviews in the interim). Learning domains for the course included communication, symptom management, psychosocial and ethical issues, program development, and education.

### Jamaica Cancer Care and Research Institute

Jamaica is a Caribbean island nation of just under 3 million individuals. Approximately 20,000 people die in Jamaica every year, with approximately 17% of these deaths resulting from cancer, which is the second leading cause of death behind cardiovascular disease.<sup>33</sup> Unlike Chile, where PC has been a mandated component of health care services since 2003 and there is broad institutional support, PC in Jamaica is at an earlier stage of development. Just as in most other LMICs, the vast majority of patients with cancer in Jamaica do not have access to basic PC services. PC services in Jamaica are primarily hospital based and are provided in the public sector through inpatient care and outpatient hospital-based clinics in only a few locations. To our knowledge to date, PC is provided almost exclusively for patients with cancer. PC is not yet recognized as a medical specialty in Jamaica, although the need to incorporate PC into a comprehensive health service is acknowledged in the country's cancer plan. Community-based PC services are delivered through a few, very small, private initiatives. Despite the limited reach of PC in Jamaica, PC leaders have achieved significant policy changes to support improved PC. These include changing national opioid policies to improve access to opioids, creating a PC rotation for medical students at the University of the West Indies, and expanding a public sector combined PC/oncology care service into a thriving clinical practice. However, there remains an urgent and widespread need to train the medical workforce in palliative medicine.

To address this unmet need for PC training at the regional level in Jamaica, PC clinicians and researchers from the Hope Institute Hospital and Surgipath and Cytology Lab in Kingston joined forces in 2016 with the Harvard/MGH Center on Genomics, Vulnerable Populations, and Health Disparities to found the Jamaica Cancer Care and Research Institute (JACCRI).<sup>34</sup> Established in 2011, the Palliative Care Association of Jamaica works alongside JACCRI to broaden the reach of PC both nationally and regionally. JACCRI is working with the University of the West Indies to incorporate robust PC training into the medical school curricula and to establish palliative medicine as a medical specialty in Jamaica. JACCRI is also working with the Ministry of Health to create PC posts within Jamaica's public hospital system.

With regard to the development of PC education via an academic partnership, a very different approach was used in Jamaica, where PC is not yet recognized as a formal specialty. Until 2016, only 2 providers in all of Jamaica had formal training in PC. Educational initiatives

in Jamaica needed to be aimed at new learners interested in providing basic levels of PC in hospitals, outpatient clinics, and primary care settings. Although periodic short introductory workshops had been held over the previous 10 years, to the best of our knowledge no formal structured course had been available previously. In the initial development stages, JACCRI held a consensus development conference in partnership with local business, philanthropic, and health leaders to identify priorities for improving cancer care for Jamaicans. This consensus process not only established training in PC as a national priority, but persuaded many in the private sector to partner with JACCRI in making participation in such trainings affordable for low-wage providers.

As described above, JACCRI leadership developed and delivered 2 comprehensive, 5-day PC training programs in October 2017 and November 2018, drawing on the curricula and expertise of the MGH/Harvard Medical School PC program. The programs provided a basic introduction to PC principles, with the goal of building a formal diploma program in collaboration with the University of the West Indies that would be recognized by the Ministry of Health. The workshops were open to health care practitioners from across the region, and approximately 100 attendees from 6 Caribbean countries attended. Participants' knowledge of PC and PC guidelines before and after the courses was assessed, alongside other qualitative evaluations. These data were useful for refining and adapting the course material further. One challenge in getting community-based primary care physicians to participate in the training was the opportunity cost of missing a week's worth of clinics. Nurses and allied health providers faced even greater hurdles. By raising funds through philanthropic donations and contributions from Jamaica's business community, JACCRI was able to offer the training at a subsidized rate for many health care professionals, and to provide a small number of scholarships to facilitate a broader attendance.

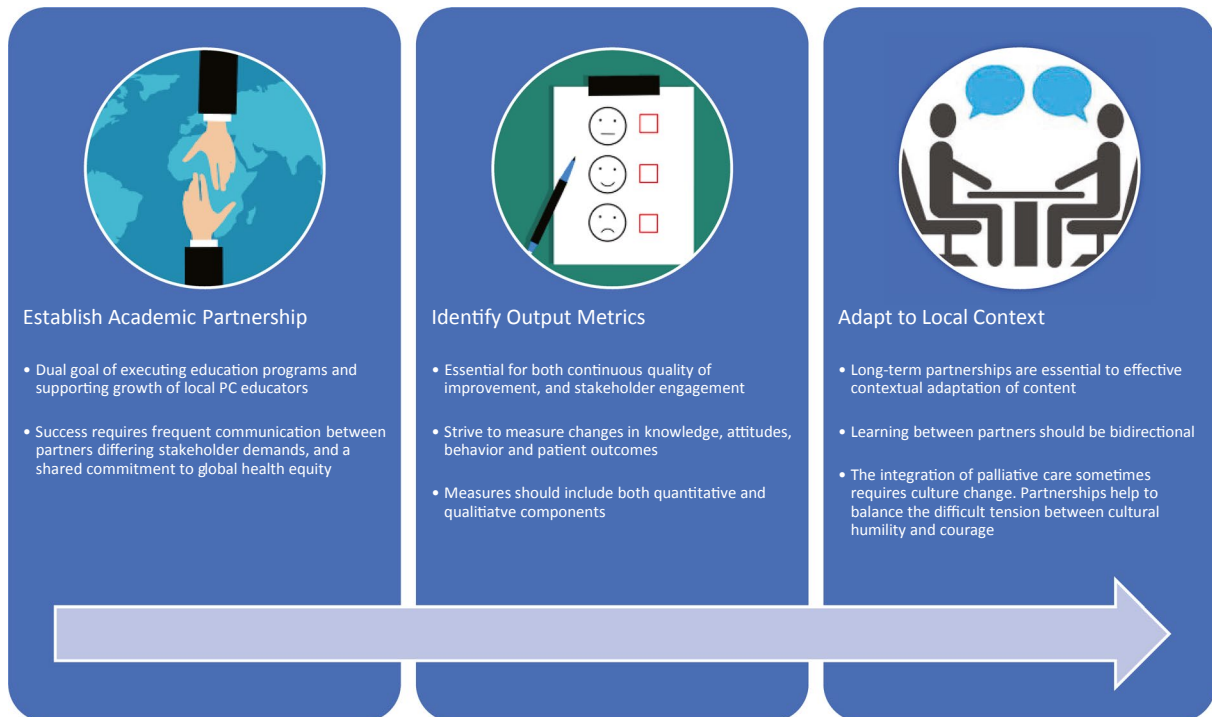
JACCRI is committed not only to providing PC training to all levels of health care providers in the region, but also to developing PC leaders who soon could become PC educators themselves. For example, JACCRI made it possible for 2 junior faculty members from Jamaica to participate in the advanced PC training course at Harvard University that focused on improving communication and teaching skills. Participants also received mentoring in conducting PC research, and were able to shadow PC physicians to learn more about a long-established hospital PC service. These junior faculty from the LMIC then returned home and served as faculty for the next JACCRI

training in Jamaica, teaching alongside the Kingston-based and Boston-based JACCRI faculty. Current efforts are focused on working with the Ministry of Health to develop a plan to create posts for PC providers in hospital and community settings, and on developing an advanced diploma program in collaboration with the University of the West Indies.

### **Conclusions and Future Directions**

PC is an essential component of care for all patients facing serious illness. This is especially true within the context of patients with breast cancer in LMICs, in which many women present with late-stage disease and therefore are in need of PC services. An essential building block for delivering effective PC services is the development and integration of culturally adapted training programs that include both basic and more advanced training opportunities. Longitudinal partnerships between PC education leaders in LMICs and HICs provide an effective structure with which to deliver successful PC educational interventions at multiple levels of specialization. This can be accomplished via bidirectional learning between partners, collecting output measures to refine curricula and encourage investment from stakeholders, and carefully adapting educational curricula to the local context (Fig. 2). The educational strategies highlighted in the examples above were chosen as areas in which stakeholder interest and human resources were already established and could be drawn upon in developing PC training opportunities in Latin America and the Caribbean.

There are limitations to our reported experience and recommendations that should be acknowledged. First, our experience represents relatively new efforts to develop and implement PC training programs in 2 specific regions. The generalizability of our experiences and conclusions is unknown. On a related matter, the initiatives herein included persons of Caribbean and Latin American ancestry only, and did not include many cultures and populations comprising the broader LMIC community. We also want to emphasize that the regions of the Caribbean and Latin America are not monolithic, but represent a vast array of cultures, only a small sliver of which are represented in the current analysis. Last, the PC training initiatives we reported on are very young, and further experience may lead us to prioritize other critical strategies in developing successful PC training programs in the future. Despite these limitations, this article has provided important insights into the kinds of challenges faced "on the ground" by PC leaders trying to develop and implement a new PC



**Figure 2.** A phased implementation strategy for longitudinal, culturally adapted palliative care (PC) education programs.

training program in a LMIC, and offers strategies that have helped these initiatives supersede expectations in their initial phases. We hope they might be useful to those seeking to develop and implement similar programs, and encourage others to do so.

In looking to the future, there are several considerations in advancing PC training and access to essential PC services. A crucial component of any PC educational intervention should be integration into the undergraduate curricula in all health care specialties. Particularly in countries in which PC may be a less familiar concept to practitioners, early exposure to this model of care can lead to a clinical workforce that is far more positively disposed to PC than those without such exposure. Another important component of PC education is continuing education for current health care professionals across all disciplines. Primary PC, or PC provided by nonspecialists, is crucial in any setting, but particularly in LMICs, in which PC specialists are scarce. In addition, we advocate for the training of nonclinical personnel such as community health workers and family caregivers. After receiving training for as little as a few hours, these individuals can play a crucial role, extending the reach of busy PC providers by offering home visits, providing emotional support, recognizing

uncontrolled symptoms, and reporting findings to a supervising professional.<sup>35</sup>

In many settings, another obvious initial step may be to integrate PC into primary care. Because both practices share a common mission and goal, synergy is gained by investing in them simultaneously. Together, PC and primary care providers can prioritize movement toward a central goal, that of integrated universal health care for all in accordance with the 2018 WHO guidance document on integrating PC and symptom relief into primary health care.<sup>35</sup>

Another key consideration is the need to link training programs with service delivery and practice change. In this respect, another potential challenge is “brain drain,” or human capital flight, which refers to the emigration of health professionals once they have received advanced training in their home country. One important way to respond to this challenge is to connect training with future employment opportunities. In many settings, pursuing additional PC training is financially burdensome and time-consuming, and thus it is crucial to provide incentives such as formal recognition of participants’ new expertise and new job opportunities for those who have completed supplemental PC training. These incentives may be developed via partnerships with ministries of health or local hospitals and universities.



Another important strategy for providing ongoing PC training and support to a broader number of clinicians is to leverage technology to provide remote learning and community support. One such platform is Project ECHO, which can be used to supplement formal educational training programs or continuing education courses. Video technology connects groups of community providers with specialists (who can teleconference in from other locations) in ongoing, collaborative sessions, thereby enabling local providers to gain skills and confidence, thus expanding the capacity of the local workforce.<sup>36</sup> Beyond the dissemination of knowledge, these groups can also provide a meaningful source of support for PC providers in LMICs, who may often return to practices in which they are the only provider with PC expertise. This connection to a broader PC community can help to make these providers feel more supported, and potentially minimize the risk of burnout and/or emigration.

Ultimately, our experiences with JACCRI in the Caribbean and the Pontifical Universidad Católica de Chile in Latin America are meant to provide 2 examples with which to guide others interested in taking initial steps in PC educational partnerships. Our suggested methods regarding where to start and how to make concrete achievements through such strategic partnerships are framed within the broader strategies of resource-stratified guidelines from the WHO, Lancet Commission, National Comprehensive Cancer Network, Breast Health Global Initiative, and American Society of Clinical Oncology, with a shared goal of bringing basic PC services to all.

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