Avoiding One and Done: Development and Application of a Model to Sustain Interprofessional Practice and Education Initiatives

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Abstract: This article presents the development of the Kennedy Model of Sustainability (Kennedy Model), a research-based model of sustainability, and its subsequent application to interprofessional practice and education (IPE) initiatives. The national mixed methods, multiple case study of Geriatric Education Centers that led to the development of the model and resulting four core components of sustainability and related strategies is described. The model is discussed in the context of implementation science and the know-do gap and applied to an IPE initiative and center. Finally, implications for further research are presented including opportunities to incorporate the model as a valuable tool in implementation science. Application of the Kennedy Model to IPE initiatives has provided opportunities for model testing, supporting the model's core components, and providing additional strategies to foster sustainability of IPE initiatives.

Keywords: Implementation science, interprofessional practice and education, IPE, knowdo gap, sustainability

The nearly fifty-year long and winding road of *interprofessional practice and education (IPE)* has been paved with good intentions and worthy grant-funded projects and initiatives that have not been sustained (National Center for Interprofessional Practice and Education [National Center], 2017). Numerous barriers to sustainable IPE efforts persist (Brandt, 2015; Djukic et al., 2012; Lawlis et al., 2014). Ideally, "sustainability must be prepared in advance, concomitantly with implementation" (Pluye et al., 2004, p.121), yet planners of IPE projects and initiatives lack a research-based model and tested strategies to successfully pursue sustainability.

This article describes the Kennedy Model of Sustainability (Kennedy Model), a practical, research-based model of sustainability originally developed through a national mixed methods, multiple case study of Geriatric Education Centers (GECs). A brief description of the original GEC research and resulting four core components of sustainability and related strategies are explained, followed by a discussion of the model in the context of implementation science and the know-do gap. The model is then applied to the development of an IPE initiative and center. Finally, opportunities and implications for further research embracing an implementation science perspective is presented. The Kennedy Model was officially adopted by the National Center for Interprofessional Practice and Education (National Center) in 2017 to support the sustainability of national IPE initiatives (Brandt et al., 2019; National Center, 2017).

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Background

The Kennedy Model of Sustainability had its origins in a doctoral dissertation exploring Geriatric Education Centers (GECs) and their pursuit of sustainability (Kennedy, 2008), and was later published as a book (Kennedy, 2009). GECs were established to promote and deliver interdisciplinary geriatric education and training for more than 35 health profession disciplines including social work, nursing, pharmacy, medicine, and dentistry (Kennedy, 2008), and charged with the goal of becoming self-sustaining beyond the initial period of funding. The Health Resources and Services Administration (HRSA), which funded the national initiative, required grantees to provide a plan for sustainability. This requirement was notably unique among federally funded programs of the time.

The goal of sustainability was to maintain the structure and activities of GECs beyond the period of HRSA funding. Despite this charge, there was no established model for GECs to successfully plan for sustainability. Further, health professions education did not prepare GEC faculty for the entrepreneurial activities that might facilitate sustainability (L. Phillips, personal communication, June 16, 2004). Directors of new GECs sought guidance through mentoring with directors of more experienced centers (Kennedy, 2008), yet those directors similarly lacked a research-based model of sustainability to guide their efforts.

A national mixed methods, multiple case study of GECs sought to define and explore the concept of *sustainability* and examine GECs' pursuit of sustainability over time (Kennedy, 2008). After obtaining human subjects' approval from the doctoral-granting university and assuring compliance with standards for informed consent, structured interviews were conducted to explore the definition and concept of sustainability with 13 administrators, business and fiscal officers, faculty, and advisory board members of seven publicly funded GEC sites across three regions. Interviews included leadership representing two national GEC organizations: the National Association of Geriatric Education Centers (NAGEC) and the National Association of Geriatric Education (NAGE). In addition to interviews, GECs' pursuit of sustainability was explored through on-site observations; in-depth document analysis of publicly available uniform HRSA longitudinal and fiscal data, and related programmatic reports, and financial analysis of changes in GEC administrative structure, managerial capacity, and revenue streams.

A multiple case study approach facilitated concentration on sustainability as a specific condition and identification of interactive processes essential to the success or failure of an initiative (Bell, 1999). Grounded theory, utilizing both qualitative and quantitative data, fostered examination of a phenomenon about which little was known at the time and generated data-grounded results (Tie et al., 2019). This deductive process facilitated a thematic content analysis of the topic of sustainability informed by open and axial coding techniques to move from concept to categories (Strauss & Corbin, 1998).

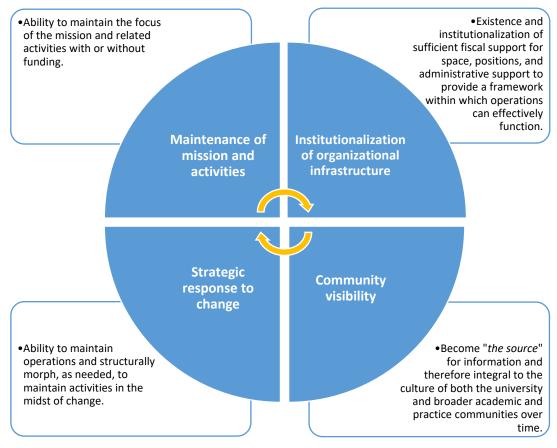
The content analysis resulted in the identification of a sustainability model containing four core components and related strategies. The components included maintenance of mission and activities, institutionalization of organizational infrastructure, community visibility, and strategic response to change. Each component is defined below and presented along with related strategies to foster sustainability. The model is then considered in relation to implementation science and the know-do gap.

Kennedy Model of Sustainability

Four Components and Related Strategies to Foster Sustainability

Each of the four components of sustainability resulting from the study of GECs is defined in Figure 1. Importantly, sustainability is not just about a stable funding base, but involves a comprehensive approach that creates a culture, structure, network, and environment to support sustainability of initiatives.

Figure 1. Kennedy Model of Sustainability



(Kennedy, 2008)

It is essential to think of the four components of the Kennedy Model not as isolated parts but as a suite of interrelated, multiple paths toward sustainability. Additionally, the study of GECs identified specific strategies related to each component designed to foster sustainability of geriatric education initiatives (see Table 1).

Each core component and related strategies will be briefly summarized, with specific examples derived from the study of GECs. The relevance of each of the four core

components and related strategies to interprofessional practice and education (IPE) initiatives can begin to be understood by substituting *interprofessional* or *IPE* with references to geriatric education in the original model. To facilitate this transition in thinking, specific references to geriatrics are removed. Instead, the following descriptions will focus generically on educational content and initiatives.

Table 1. Core Components of the Kennedy Model and Strategies to Foster Sustainability

Core Components of Sustainability	Strategies to Foster Sustainability
Maintenance of mission and activities	 Administrative support Institutional infusion efforts Decentralizing involvement of faculty, staff, and students Infusion/embedding activities at the level of the culture (acculturation)
Institutionalization of organizational infrastructure	 Fiscal/administrative support Maintain basic operations Cobbling staff time/positions Co-location of programs Symbiosis between programs/units Diversify funding streams
Community visibility	 Creation of markets/circuits of knowledge Attract consumers through relationship building Lead the market by creating demand
Strategic response to change	 Maintain stability of mission and purpose amidst changing conditions Respond to changing environments Proactive response to change (anticipate change) Respond to changing priorities

(Kennedy, 2008)

Maintenance of mission and activities

Maintenance of mission and activities, the first of four core components of sustainability, is the ability to maintain the focus of the mission and related activities with or without funding. Related strategies include administrative support; institutional infusion efforts; decentralizing involvement of faculty, staff, and students; and infusing and embedding activities at the level of organizational culture.

Administrative support, including the presence of leadership at various levels, can assure continuation of initiatives with or without external funding. Institutional infusion involves weaving desired content into competencies, assignments, and activities within a discipline and department at the course or overall curriculum level.

Decentralizing the involvement of faculty, staff, and students involves the co-creation of shared competencies, assignments, and activities across disciplines and departments, thereby weaving change across programs and curriculum. Such change efforts can be effective if planned intentionally and co-created with support from interdisciplinary faculty and practice partners, with academic and practice leadership as a guardrail against sudden

change. While preserving the distinctions central to each discipline's unique knowledge, practices, and identity, it is crucial to avoid developing content with a siloed approach and important to build a deep bench of support across faculty and practitioners.

Acculturation explains the process and changes resulting from two or more disciplinary cultures working in collaboration to co-create and infuse shared competencies, assignments, and activities, and develop a culture of interdisciplinary collaboration. The ultimate goal is for an initiative to become part of the DNA of the organization.

Institutionalization of organizational infrastructure

Institutionalization of organizational infrastructure, the second of four core components of sustainability, is the existence and institutionalization of sufficient fiscal support for space, positions, and administrative support to provide a framework within which operations can effectively function. Related strategies include fiscal and administrative support; maintenance of basic operations; cobbling staff time and positions; co-location of programs; and symbiosis between programs and units.

Fiscal and administrative support within the organization assures a baseline of resources to address critical needs required to maintain the viability of initiatives. This can include support for indirect costs and the institutional match for operational costs. Cobbling staff time and positions involves combining portions of faculty and staff time across programs and funding and leveraging summer salary. Co-location of a program, such as a center and office working collaboratively and sharing fiscal and human resources, supports the infrastructure of each unit. Finally, symbiosis between programs and units is a condition in which each unit benefits from the resources, skills, experience, and end-users of the other.

It is important to diversify funding streams, with the goal of reducing dependence on a single source of support. Notably, there is no one-size-fits-all structure to support the success of an initiative. Form must fit culture. The existence of a center or office does not guarantee the sustainability of initiatives, as centralization can work to coalesce the authority of a leader and can suppress creativity and collaboration in the name of quality control outside of its boundaries. To be sustained, an initiative is ideally everyone's purview.

Community visibility

Community visibility, the third of four core components of sustainability, involves becoming "the source" for information and therefore integral to the culture of both the university and broader academic and practice communities over time. This includes whether the initiative is known within its own institution and community as the place to go for information (i.e., internal visibility), in addition to whether the initiative is known nationally due to dissemination through conferences and publications (i.e., external visibility). Examples of related strategies include the creation of markets and circuits of knowledge, attracting consumers through relationship building, and leading the market by creating demand.

An example of markets and circuits of knowledge is the development of content and activities that address initiative-specific competencies across disciplines for students and the current workforce. Essentially, it translates to developing a product or service that others could benefit from and creating need by demonstrating the importance of the work to the organization and community.

Just as in marketing, educational initiatives attract new and repeat consumers. Strategies to attract and retain customers focus on building and maintaining relationships, networking, and responding to demand for educational and practice needs. While it is necessary to respond to demand, it is not sufficient.

It is also important to lead consumer demand by being on the forefront of initiatives, demonstrating their value through research, and sharing expertise with the current and future workforce. As the visibility and value of educational initiatives increase, consumer demand pulls supply. Students who participate in initiatives central to their educational experience seek employment with, and are sought out by, employers who value the knowledge, skills, and competencies they have achieved.

Strategic response to change

Strategic response to change, the fourth and final of the core components of sustainability, is the ability to maintain operations and structurally morph, as needed, to maintain activities even in the midst of change. Related strategies include maintaining the stability of mission and purpose amidst changing conditions, responding to changing environments, maintaining a proactive response to change, and responding to changing priorities.

Maintaining the stability of mission and purpose amidst changing conditions includes sustaining activities through changes in leadership and funding, as well as the ability to respond to changing environments whether market, funding, or political in nature. This requires initiatives to be nimble, and sometimes requires organizations to let go of a specific program structure in which they have been invested. In such instances, organizations must be willing to structurally morph, including significant restructuring or downsizing, to maintain mission focus through changing landscapes. In extreme cases, it may require an initiative or organization to dissolve, with the potential of rising from the proverbial ashes in a different form like the mythological Phoenix bird.

Developing a proactive response to change is accomplished by building institutional and community capacity through networks and consortia. This can be facilitated by developing or joining local, statewide, or regional networks and consortia that can provide an additional bulwark of support for training and educational initiatives across academic and practice sectors. Finally, while being proactive, it is crucial to be aware of the changing priorities of funders, academic institutions, policy-makers, and employers. As organizations seek out funding that supports the core values of the initiative, they must remain mission focused.

Implementation Science and the Know-Do Gap

Following its development in the context of interdisciplinary geriatric education, the Kennedy Model was subsequently applied to IPE initiatives, consistent with implementation science that seeks to utilize and apply knowledge in new situations. *Implementation science* refers to "the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices" (Eccles & Mittman, 2006, p. 1). Stated succinctly, "implementation matters" (Durlak & DuPre, 2008, p. 327) and the quality of the implementation is as important as the quality of the program (Dubrowski et al., 2018). A major barrier to implementation is referred to as the *know-do gap*, "the gap between what is known and what gets done in practice" (Pablos-Mendez & Shademani, 2006, p. 81). This gap is widened by overly complex models and practices that are difficult to disseminate and scale, difficult to reproduce, or do not apply across settings.

The know-do gap can be effectively bridged by models that focus on core features common across sustainability models and that can be easily implemented and tailored across programs and settings. The Kennedy Model serves as a research-based, "practical model of sustainability" (National Center, 2017, para. 2), with four core components reflecting features found in the sustainability literature (Hooyman, 2006; Scheirer, 2005; Schell et al., 2013; Shediac-Rizkallah & Bone, 1998), that can be leveraged as a suite and tailored to support the sustainability of programs and initiatives across settings.

Application of the Kennedy Model of Sustainability

The Macy Project and CAIPER: Transitioning from IPE Initiative to Center

The first formal application of the Kennedy Model of Sustainability to IPE occurred in 2015, in tandem with the strategic planning efforts of the Interprofessional Primary Care Curriculum: Implementation and Evaluation (Macy Project) team in the College of Nursing and Health Innovation at Arizona State University (ASU). Funded by the Josiah Macy Jr. Foundation, the project brought together faculty, students, and preceptors in nursing, social work, medicine, and pharmacy from ASU and the University of Arizona-Phoenix to advance interprofessional primary care practice and education.

Using examples directly relevant to the sustainability of IPE mined from strategic planning sessions with the Macy Project team (Kennedy, 2015), session note content was reviewed for categories and sorted by theme. The results fit effortlessly into the four core components of sustainability resulting from the original GEC research and yielded IPE-related strategies (see Table 2). Application of the Kennedy Model and a description of sustainability strategies specific to the Macy Project and subsequent development of the Center for Advancing Interprofessional Practice, Education and Research (CAIPER), follows.

Maintenance of mission and activities

Specific to the Macy Project, strategies to foster maintenance of mission and activities included developing interprofessional learning modules and infusing them within existing courses, initiatives, and events. Ultimately, eight eLearning modules, four foundational

interprofessional modules, and four interprofessional primary care modules were created and disseminated between 2015 and 2017. These eLearning modules were designed to be open-access and "easily integrated in classroom and clinical rotations" (CAIPER, 2020, para. 5) and have since been translated into Mandarin Chinese (CAIPER, 2021).

Embedding IPE content across faculty and preceptor development activities was addressed in part through the development and publication of a guide to support interprofessional preceptors for health professions students and teams. In addition to preceptors, the guide was designed to help clinicians and healthcare organizations interprofessionalize their organizational culture. This guide also served as a resource for educators to better understand and infuse IPE content into health professions courses and curriculum (CAIPER, 2018).

The strategy of harnessing student participation in governance demonstrated valuing "the unique voice" of students in the development and delivery of IPE (Senecal et al., 2016, para. 1). This strategy translated into student involvement in the review and revision of interprofessional eLearning module content to gain the perspective of end-users.

Table 2. Application of the Kennedy Model to The Macy Project and CAIPER

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Core Components of Sustainability	Strategies to Foster Sustainability
Maintenance of mission and	• Infusing IPE modules within existing courses,
activities	initiatives, and events
	Embedding IPE content across faculty and preceptor
	development activities
	Harnessing student participation in IPE governance
Institutionalization of organizational	Achieving critical mass (e.g., center)
infrastructure	Centralizing core functions
	Identification of stakeholders and teams
	Inviting interested collateral partners
Community visibility	Branding
	Dissemination
	Outreach
Strategic response to change	Noting and tracking ripples
	Assessing and responding to readiness

(Kennedy, 2015)

Institutionalization of organizational infrastructure

Strategies to advance institutionalization of organizational infrastructure included achieving a critical mass of IPE initiatives through a gradual evolution from an externally-funded initiative to a university-recognized center. As the Macy Project leadership and team pursued the university designation of a formal center, garnering administrative support at college, campus, and university levels became a key strategy to foster the development and sustainability of IPE initiatives. The dean of the ASU College of Nursing and Health Innovation offered to serve as the host site for the new center. The director of the ASU School of Social Work agreed to share a portion of a position with the center to advance interprofessional academic-practice partnerships. The dean of the College of

Public Service and Community Solutions supported a partnership with nursing and the promise of increased community-based practice and research collaborations.

Centralizing core functions under the Macy Project involved bringing together representatives from discipline-specific curriculum committees to map and identify gaps in interprofessional content, as well as explore joint strategies to collect interprofessional competency-based outcome measures from graduates. Evaluation of project outcomes was centralized under a project co-investigator. The emergence of CAIPER facilitated further streamlining of roles and functions including the creation of leads for evaluation, clinical partnerships, faculty development, and marketing communications, thereby reducing redundancies and supporting efficiencies.

Identification of stakeholders and teams involved recognizing academic and practice representatives essential to the goal of advancing IPE in education and healthcare. During the Macy Project phase, faculty members and practice sites were identified and recruited to collaborate in a faculty coaching model designed to facilitate intersections between students' classroom and clinical experiences. Core to the model was embedding a faculty coach with an interprofessional perspective within a specific practice site and included online educational "bursts" (i.e., concise presentations of applied IPE content), in-person internship site-specific meetings, concept- and case-based student gatherings (i.e., educational events offered in-person and virtually, recorded and archived on the website for later viewing), and interprofessional coach team meetings (Bonifas et al., 2015).

A distinct, yet parallel and equally important, strategy involved inviting interested collateral partners to participate in a range of activities. The new CAIPER team was gradually formed with a combination of select members of the Macy Project team and newly invited members. The Macy Project team members offered the strength of shared knowledge and experience to inform strategic planning and sustainability. Newly invited team members offered the benefit of new experiences, skills, approaches, networks, and ways of thinking about IPE.

Community visibility

The importance of community visibility was pursued by the Macy Project team through intentional branding efforts. Branding is a "marketing practice of creating a name, symbol or design that identifies and differentiates a product from other products" (Entrepreneur, n.d., para. 1). In this case, the official project name (Interprofessional Primary Care Curriculum: Implementation and Evaluation) was shortened to the moniker, The Macy Project, and a project logo was developed to serve as a branding symbol on all communications, products, and presentations developed by the team. The same strategy was later employed by the center substituting Center for Advancing Interprofessional Practice, Education and Research for the moniker, CAIPER, and developing a consistent branding symbol. More recently, the CAIPER team officially registered their brand, now known as CAIPER Interprofessional by Design ® (CAIPER, n.d.).

The Macy Project team pursued a targeted dissemination strategy through conference presentations at national (i.e., Nexus Summit) and international (i.e., All Together Better Health and Collaborating Across Borders) IPE-focused conferences. The eLearning

Modules developed under the project were widely distributed through the CAIPER website and the online resource center of the National Center for Interprofessional Practice and Education. Additionally, the Macy Project team led and convened a statewide academic-practice collaborative, the Arizona Nexus, facilitating state and regional dissemination efforts by the CAIPER team through the 2018 inaugural Arizona Nexus conference (Lamb et al., 2018).

Outreach was achieved through a concerted focus on externally-facing communication strategies. The Macy Project team included two members specializing in instructional design who supported development of a website, webinars of concept- and case-based student gatherings, and online access to eLearning modules. This facilitated a successful external messaging campaign publicizing project initiatives and accomplishments.

These efforts were significantly accelerated through the establishment of CAIPER, which included members specializing in instructional design, communications, and marketing. Website features expanded over time to include CAIPER's vision and mission, team member profiles, news and events, collaborative team practice initiatives, educational resources, education and training services, research, blog posts, and a resource hub which included archived webinars, reports, videos, curricula, tools, and presentations. In 2018, CAIPER launched a new podcast series branded as CAIPER Confabs designed to facilitate national and global IPE connections and dissemination.

As the Macy Project was winding down and transitioning into the establishment of CAIPER, the strategy of identifying and inviting university and community stakeholders was essential to advancing sustainability through community visibility and the broadening of academic-community partnerships. These efforts culminated in a three-day training event in 2016, Educating Health Professionals in Interprofessional Care (ehpic), in Phoenix, Arizona. Fifty university and healthcare representatives were identified and invited in a highly intentional team process that sought a balance between university and healthcare participants representing leadership, mid-level administrators with supervisory roles, educators, practitioners, and students. Training was collaboratively planned, designed, and tailored by members of the CAIPER and University of Toronto Centre for Interprofessional Education teams (Senecal et al., 2017).

Strategic response to change

Strategic response to change requires a proactive approach to anticipating and responding to change and a focus on mission and continuation of activities in the midst of change. As part of its evaluation process, The Macy Project team regularly utilized a process of noting and tracking unanticipated program outcomes referred to as "ripples" (Hall, 2004, p. 345).

Assessing and responding to readiness was another strategy employed by the Macy Project team, utilizing a developmental evaluation framework. "This framework enhanced capacity for sensing undulating tides of rapid-cycle change while riding the…waves of its IPE/IPCP interventions and allowed the capture of small ripple actions with the resultant capacity to catalyze large reactions and impact" (Saewert et al., 2015, p. 1).

The Macy Project director and team recognized the usefulness of the Kennedy Model, adopting it as a framework to support sustainability planning and program evaluation for this IPE initiative. "We discovered that we were inadvertently attending to each of these factors since the inception of this project. We now are systematically planning for each...[using the model as a] framework to guide...[the] analysis and evaluation of our sustainability efforts" (Lamb, 2015, p. 9).

The 2016 annual program report for ASU's Macy Project stated:

From the inception of this project, our team recognized the importance of planning for sustainability with a shared goal that the integrated interprofessional curriculum endure and advance beyond the period of grant funding. We have adopted a framework to guide the analysis and evaluation of our sustainability efforts that identifies four key factors associated with sustainability of grantfunded initiatives...We evaluate our key accomplishments contributing to sustainability through this lens. (Lamb, 2016, p. 13)

The Macy Project final report noted, "We have used the Kennedy sustainability model to guide and benchmark progress in expanding and sustaining learning and impact. Each component of this model...has been embedded in the DNA of this project" (Lamb, 2017, p. 9).

Discussion

Since its emergence in 2008, the Kennedy Model of Sustainability has been extended well beyond its interdisciplinary Geriatric Education Center origins. Since its first application to interprofessional practice and education initiatives, the Kennedy Model has demonstrated resonance and relevancy to support the sustainability of IPE initiatives and address their related challenges (Bonifas, 2017; Brandt et al., 2019; Dinkel & Tucker, 2020; Harrell & Saewert, 2016; Lamb, 2015, 2016, 2017).

In 2012, the National Center for Interprofessional Practice and Education (National Center) was established as a unique public-private partnership and continues to serve as a neutral convener addressing micro, meso, and macro conditions that foster and hinder cross-sector practice, education, policy, and research collaborations to advance IPE (Kennedy et al., 2022). National Center leadership is well-aware of the littered path of unsustained initiatives along the nearly fifty-year long road to IPE (National Center, 2017), and has a vested interest in identifying models and tools to support the development and sustainability of IPE initiatives. To avoid the one-and-done phenomenon, the National Center announced formal adoption of the Kennedy Model to support sustainability of a 16 site national academic-practice initiative, the Accelerating Community-Based Interprofessional Education and Practice Initiative (Accelerating Initiative) (National Center, 2016). "The Kennedy Model...provides a practical way to address sustainability to support strategic planning" (National Center, 2017, para. 2).

In 2018, the National Center formally adopted the Kennedy Model of Sustainability as part of their Nexus Learning System and included it as one of a collection of 11 NexusIPE© Learning System tools selected and tested during the Accelerating Initiative (Brandt et al.,

2019, slide 14). An introduction to the Kennedy Model is available as a featured National Center webinar (Kennedy, 2017) and the model is featured as one of 11 tested tools in the Accelerating Initiative webinar series (Dinkel & Tucker, 2020). The Kennedy Model is currently planned for inclusion in a book and related resources under development through the National Center, designed to support the sustainability of interprofessional academic-community (Nexus) partnerships.

Implications for Research

A perennial challenge to the study of sustainability is limited funding for program monitoring following initial implementation. While use of the Kennedy Model with the 16 site Accelerating Initiative supported the four components of the original model, provided useful examples of additional strategies to foster sustainability, reinforced the usefulness and fit of the Kennedy Model, and supported its extension to IPE initiatives, it is important to revisit these sites to evaluate sustainability beyond the completion of initial program funding.

To meet this challenge head-on, the National Center plans to embark on a follow-up study of the 16 Accelerating Initiative sites, to include a review of the status of each site's program sustainability. Follow-up interviews with site participants will offer additional opportunities for model testing and generate additional data through a national, multiple case study approach to explore application of the Kennedy Model of Sustainability as a tool in implementation science. Application of the Kennedy Model to the Accelerating Initiative, including additional case examples and strategies, will be explored in future publications.

Conclusion

IPE holds promise to advance the Triple Aim, improving the experience of people and care of populations while reducing the price of care (Berwick et al., 2008); the Quadruple Aim, improving the experience of providers (Bodenheimer & Sinsky, 2014) and increasing resilience and retention of the healthcare workforce (Advisory Committee on Interdisciplinary, Community-Based Linkages [ACICBL], 2019); and the Quintuple Aim, focusing on achieving health equity (Itchhaporia, 2021), which translates as social justice in health (see Figure 2). While progress is being made in research supporting the value of IPE, the use of standardized, validated instruments and pooled data tied to Triple and Quadruple Aim outcomes demonstrating the science of interprofessional teams is a critical strategy to sustain IPE initiatives (Brandt et al., 2014; Lutfiyya et al., 2017) and advance the Quintuple Aim. Ultimately, while a promising and popular initiative, IPE requires evidence to survive.



Figure 2. *Ultimate Aims of IPE*

(Adapted from Itchhaporia, 2021, p. 2263)

Conditions at the national level have shifting steadily, sometimes dramatically, towards fostering IPE initiatives including the harmonization of IPE accreditation (Health Professions Accreditors Collaborative, 2019), national data collection strategies (Lutfiyya et al., 2017), and coordination by the National Center to advance and sustain IPE nationally with academic, practice, policy, and research leaders. Barriers to IPE continue to exist in the form of reimbursement mechanisms. However, payment reform efforts are beginning to move in the right direction, including shifts from volume to value and meaningful measures (ACICBL, 2019).

Concepts and language have shifted over the past fifty years from interdisciplinary education, to interprofessional education (IPE), to interprofessional education and collaborative practice (IPE/CP), and more recently to interprofessional practice and education (the new IPE) (National Center, 2015). Amidst these changes, the Kennedy Model of Sustainability has accounted for the dynamic interplay between health professions disciplines, between economic sectors, between academic institutions and the broader practice community, and within academic-community partnerships.

Coming full circle, the exhortation that "sustainability must be prepared...concomitantly with implementation" (Pluye et al., 2004, p. 121) affirms the significance of *implementation science*. In this spirit, the Kennedy Model serves as a practical, research-based model that can be leveraged and tailored to bridge the know-do gap and support the goal of "optimizing program implementation and achieving maximum impact" (Dubrowski et al., 2018, p. 104) in support of the sustainability of interprofessional practice and education programs and initiatives.

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