A Qualitative Study on Preventing Gestational Diabetes in Native Hawaiian and Pacific Islander Adolescent Females: Perspectives from an Expert Panel of Health Care Providers

Sarah A. Stotz PhD, MS, RDN, CDCES; Reni Soon MD, MPH; Kelly R. Moore MD, FAAP; Denise Charron-Prochownik PhD, CPNP, FAAN; Andrea Fischl PhD, MPH; Kim Spencer; Marjorie K.L.M. Mau MD, MS, MACP, FRCP

Abstract

The authors examined perspectives of health care providers (HCPs) who serve Native Hawaiian and Pacific Islander (NH/PI) adolescents to inform the adaption of an existing American Indian and Alaska Native-specific gestational diabetes mellitus (GDM) risk reduction and preconception counseling program entitled Stopping GDM, for NH/PI adolescents. Hawai'i-based HCPs (n=14) who care for NH/PI adolescent females volunteered for this expert panel focus group study. These HCP participants served as an expert panel specific to their experiences in providing primary care and reproductive health care/ family planning, and their perspectives regarding GDM risk reduction for NH adolescents. Several key themes emerged from these expert panel focus groups: (1) importance of multi-generational family involvement and support; (2) need to address the social determinants of health; (3) strengths-based strategies and recommendations to engage adolescents in a preconception counseling and GDM risk-reduction education program. Findings will inform the adaptation of Stopping GDM into a more holistic, multi-level, strengths-based, culturally tailored GDM risk reduction intervention that fosters empowerment and builds on the resilience of NH/PI communities.

Keywords

Native Hawaiian, adolescent health, gestational diabetes mellitus, qualitative

Abbreviations and Acronyms

Al/AN = American Indian and Alaska Native GDM = gestational diabetes mellitus HCP = health care providers NH = Native Hawaiian NH/PI = Native Hawaiian and Pacific Islander T2D = type 2 diabetes

Background

Gestational diabetes mellitus (GDM) is the most common medical complication of pregnancy, affecting 7-18% of all US pregnancies. Defined as the onset of glucose intolerance during pregnancy, GDM is associated with significant lifelong health risks for both mother and offspring. During pregnancy, mothers are at increased risk for maternal hypertensive disorders such as pre-eclampsia, and risks to the baby include macrosomia, birth injury, and metabolic disturbances. In addition, GDM increases the likelihood for both mother and baby of developing overt type 2 diabetes (T2D) during their lifetimes. Risk factors for GDM include high pre-pregnancy

weight, obesity, weight gain in young adulthood, a history of GDM or hypertension, and a family history of T2D. ¹ Race is also a risk factor for GDM, with a higher prevalence of GDM among Native Hawaiians and Pacific Islanders (NH/PI) than their White counterparts, and subsequently higher rates of pregnancy-related complications among NH/PI. ² In a study examining pregnancy outcomes in Hawai'i, GDM was diagnosed in 12.1% of NH/PI women versus 7.4% among White women.³

Despite this increased risk, few evidence-based interventions target GDM risk reduction among Native Hawaiian (NH) adolescents. Raising awareness and receiving preconception counseling early in life to reduce risk for GDM, by adopting a healthy lifestyle and maintaining a healthy weight prior to a woman's first pregnancy, could help to prevent GDM and help break the intergenerational cycle of diabetes in NH families and communities.4 Researchers at the University of Pittsburgh developed the American Diabetes Association-endorsed preconception counseling program, READY-Girls, which is a validated preconception counseling program originally developed for White adolescents with type 1 diabetes.^{5,6} READY-Girls has since been adapted to include girls with T2D and made culturally relevant for other ethnic and racial groups. 7-9 For each culturally-tailored version, it was imperative to obtain scientific knowledge and clinical experience on adolescent health and diabetes complication prevention from an expert panel of health care providers (HCP) who care for that particular cultural population.¹⁰ Panels of HCP experts representing perspectives on type 1 and 2 diabetes, adolescents, preconception counseling, and reproductive health were convened: 1 focus group for Latina adolescents (n=8),⁷ and another focus group for African American adolescents (n=9).10

Supported by this cultural adaptation experience and the literature, *READY-Girls*' developers understood the importance of culturally adapting this program as essential to the program's acceptability by a new priority community, preventing GDM among American Indians.¹¹ Thus, the *READY-Girls* researchers sought similar expert advice from HCPs (n=16) who care for American Indian adolescents at risk for GDM.¹² These HCP focus groups contributed to the development of *Stopping GDM*,¹³ a culturally based GDM risk reduction program for American Indian adolescents, modeled after *READY-Girls*. A key difference between *READY-Girls* and *Stopping GDM* is that the latter focuses on American Indian adolescents

who do not have pre-existing diabetes but are at increased risk for GDM while *READY-Girls* is designed specifically for adolescent girls with existing type 1 and 2 diabetes. This approach, of seeking input from the HCPs who provide care for the priority community, has shown to provide valuable information on the facilitators and barriers to adopting recommended health behaviors and improves HCP engagement.^{14,15} As informed by the aformentioned HCP needs assessments, and as a first step in culturally adapting *Stopping GDM* for NH/PI adolescent females at risk for GDM, the purpose of this study was to summarize scientific knowledge and clinical experience from a HCP expert panel who serve NH/PI adolescents with elevated GDM risk.

Methods

Theoretical Framework

This study was guided by the Theoretical Framework of Health-care Intervention Acceptability, which supports the importance of exploring the attitudes/perceptions of key persons to preemptively assess how healthcare interventions may or may not work within any given community. ¹⁶ Constructs from the Theoretical Framework of Healthcare Intervention Acceptability were used to frame the moderator guide and analysis.

Study Procedure

The research team conducted remote teleconference focus group interviews with HCPs who live in Hawai'i and who care for NH/PI adolescent females. Focus groups were conducted via teleconference using Zoom 2021 (Zoom Video Communications, San Jose, CA) in April and May 2020 and all were moderated by the first author of this paper. A total of 14 HCPs participated in these focus groups. There were 6 focus groups in all, with 2-3 participants in each group, and the mean length of the focus groups was 59.8 minutes (range = 46-76 minutes). Researchers used a semi-structured moderator guide with probes to facilitate the focus groups. The moderator guide was developed in

collaboration with NH HCPs including 2 co-authors on this manuscript and can be found in **Table 1**. All participants were invited to complete an online questionnaire in Qualtrics 2020 (Qualtrics, Provo, UT) prior to their focus group interview to collect demographic information. Institutional review board approval was secured from the University of Pittsburgh Institutional Review Board (MOD20020029-001) prior to human subjects research commencing, and the protocol was determined exempt, so an information sheet was used in lieu of a signed informed consent document.

The focus group sample included 14 HCPs who have an active clinical practice in Hawai'i and who serve predominantly NH/PI patients. Researchers began recruitment using convenience sampling methods, and augmented this method with both snowball and purposive maximum variation sampling¹⁷ to ensure they recruited a variety of HCPs. The first round of recruitment (convenience sampling) included personal email invitations and word-of-mouth based on the networks of 2 coauthors. The individuals then provided recommendations for additional relevant HCP interviewees. This diverse mixture of HCPs included physicians (eg, OB/GYN, pediatricians), nurses, dietitians, and diabetes educators from a variety of settings including federally qualified health care centers and large inpatient hospitals. Further details on the HCPs can be found in Table 2. Of note, only 13 HCPs completed the survey but 14 participated in the focus group interviews.

Data Analysis

All focus group interviews were recorded and transcribed verbatim by a professional transcription company. Transcriptions were reviewed for accuracy by a NH physician scientist and the first author who has doctorate-level training and expertise in qualitative methods. Transcriptions were de-identified using pseudonyms prior to analysis. Two researchers, both of whom have extensive training in qualitative data collection and analysis, independently coded all transcripts. The researchers developed

Table 1. Moderator Guide Questions and Probes used for Semi-structured Focus Groups	
Moderator Guide Question	Probes
Tell me about your role in caring for Native Hawaiian teenage girls.	length of time, type of provider, setting
Tell me about any experience you have talking about gestational diabetes with Native Hawaiian teenage girls.	weight management, nutrition, risk/susceptibility
What is it like to find education materials and resources that are meaningful and tailored for your Native Hawaiian patients?	challenges with culturally relevant, favorite resources (and why), how resources are adapted
Tell me about any successful wellness or health programs you've seen well attended by Native Hawaiian teenage girls.	topic of program, recruitment, logistics, best-practices
Sometimes it's hard to get the word out to people in the community about new programs or research opportunities. What do you think is the best way to get the word out and engagement with health or research programs?	social media, word of mouth, incentives, peer champions
What resources would help you as a provider regarding GDM risk reduction, preconception counseling, reproductive/sexual health and/or family planning with your Native Hawaiian patients?	time, materials, ancillary staff support

a codebook using Atlas.ti software Mac Version 8.1.1 (Scientific Software Development GmbH, Berlin, Germany)¹⁸ to digitize the coding process and met (via Zoom) bi-monthly to discuss codes, categories, representative quotations, and overarching themes using the constant-comparison method for qualitative data analysis.¹⁹ The first codebook included deductive codes (*a priori*) as informed by the moderator guide, research questions, published literature, and theoretical framework. After analyzing the first 2 transcripts independently with the deductive codebook, the same 2 researchers who coded added definitions of new inductive codes and did a second round of coding on the same

	Demographic Survey Responses n (%)
Age (in years)	
31-40	4 (31)
41-50	6 (46)
51-60	2 (15)
61 and older	1 (8)
Gender	
Female	13 (100)
Race ^a	
Caucasian	2 (15)
Chinese	5 (38)
Filipino	2 (15)
Indian	1 (8)
Japanese	5 (38)
Korean	1 (8)
Native Hawaiian	6 (46)
Portuguese	3 (23)
Professional Degree	
MD	9 (69)
RN	2 (15)
RDN	2 (15)
Years in Practice	
0-5	4 (31)
6-10	1 (8)
11-15	3 (23)
16-20	3 (23)
More than 20	2 (15)
Percentage of Patients who a	ire NH/PI
Less than 25%	1 (8)
25-50%	5 (38)
51-75%	7 (54)
More than 75%	0 (0)

^a Adds up to more than 100% because participants were allowed to identify more than one

first 2 transcripts by adding inductive codes (ie, transcripts were independently double-coded). After coding of all transcripts was complete, researchers met to collapse redundant codes (eg, codes "family history T2D" and "genetic diabetes" were collapsed to reduce redundancy to "GDM risk-family history"). Codes were next grouped into categories, for example "influences on food at home" and "multigenerational" were grouped together with "family" as the root category. From these categories, the key themes were constructed in collaboration with all authors on this manuscript. The research team calculated descriptive statistics to summarize the responses from the self-administered surveys using Microsoft Excel for Office 365 version 2019 (Microsoft Corp., Redmond, WA). Of note, only 13 of the 14 HCP participants completed the survey (Table 2).

Results

More than 60% of the participants (n=8) were HCPs who had been in practice for more than a decade (11-20+ years). Slightly more than half of the HCPs (n=7) care primarily for a NH patient population (more than 50-75% of patients are NH/PIs). The racial breakdown of the respondents reflects the multi-racial demographics of Hawai'i, with almost half (46%) (n=6) of this sample identified as NH themselves. Findings from this qualitative analysis reveal 3 major themes as detailed next.

Theme 1: Immediate and extended family (eg, siblings, aunts/uncles, grandparents) should be involved and supportive of making healthy lifestyle behavior changes to increase the likelihood the intervention would have positive behavioral impact. Participants shared the importance of including their immediate and extended family to support healthy behaviors among adolescents. They emphasized the expansive diversity of NH families and how family is often defined as broader than the western concept of a nuclear family. One participant shared:

And a lot of times they live in a big, extended family with not just mom and dad but maybe grandma, grandpa, brother, sisters in their families, too. So I think having the message that this is a good thing for everybody and not just for you, so that everybody's... focused on being supportive or trying to make some changes.

Many participants pointed out that most adolescents do not make the household decisions, such as what foods to purchase or what meals to prepare. But participants explained that even beyond these pragmatic considerations, 'ohana, or family, is central to NH culture and is a powerful influence on values and behavior. Participants also suggested beyond extended family, wider community support (eg, schools, neighborhoods, community organizations) should be solicited to better support the adolescent girls' healthy behavior choices.

Theme 2: Interventions need to directly seek ways to improve the social determinants of health linked to healthful nutrition and physical activity (eg, food insecurity, access to healthful food, and neighborhood safety for safe physical activity). Beyond individual behavior change and individual/family-level education, almost all HCP participants mentioned influences of health at the community and environmental level. Most HCPs were familiar with the concepts of social determinants of health and used this language in their responses to moderator guided questions related to their experiences with NH girls and healthy weight management. Participants discussed lack of access to healthful foods and safe places to engage in physical activity as part of the built environment, a particularly daunting barrier to healthful behavior – especially in contrast to the more well-off communities in Hawai'i. One HCP who was NH herself shared:

I feel like Hawai'i is a perfect example of your social determinants of health. (...) People are outdoors, you can go to certain neighborhoods and there will be gyms, there will [be] sidewalks, parks, there will be really beautiful outdoor spaces, there will be clean beaches (...) you're always going to see people jogging outside, or doing yoga out in the park and everything. So there are certain neighborhoods that are going to be like that and they have Whole Foods and they have farmers market[s] and they have healthy food choices and then there are other neighborhoods where you don't have any of that. You don't have sidewalks (...) not a lot of parks, gorgeous beaches but some of them aren't really the safest places to be. Then you've got the 7-Elevens and the liquor stores going all along that stretch of highway, (...) I mean every block will have one, there'll be a mini market kind of thing. So I think for young people, it just depends on where you're growing up also, where you are.

Participants emphasized that individual or family-based education will only go so far to lead to behavior change when seemingly unsurmountable barriers such as lack of physical or financial resources exist.

Theme 3: Successful programs by-design need to integrate culturally relevant and strengths-based engagement strategies specific to NH adolescents and their families. This includes, for example, verbal education and communication opposed to written materials, and healthy eating education based on traditional Native Hawaiian foods. As prompted by the moderator guide questions which focused on strategies to engage this priority audience in health education, health care, and research, participants shared their own experiences with challenges and facilitators to program engagement. First, they discussed methods of providing education and suggested written information may not resonate culturally with the priority audience. One HCP shared:

Traditionally, Hawaiians have been very verbal in terms of their communication. Originally Hawaiian was not a written language.... A lot of us in the community, we really [honor] the value of a Talk Story Session where you sit down and chat with someone...that might be a more effective way of having some sort of communication, face-to-face. Whether it's on the phone or in person, rather than just passively reading a written pamphlet.

HCPs suggested that culturally tailoring health education programs, specifically those involving something as personal as food preference, needs to consider what life is truly like at home and what foods are typically consumed. One participant shared:

I feel like an obstacle...is the obesity problem here and trying to get them to switch to foods that are for their diabetes but yet still being culturally sensitive to what their habits are. So I've seen dietitians tell patients well, how about quinoa, have you tried that? And they're like "well, I don't eat quinoa. She doesn't understand what my life is like."

This participant continued to share how healthy traditional foods should be emphasized:

I mentioned some earlier projects that promote working the land and growing and eating kalo. That's our staple food, traditionally. A lot of my patients would love to eat more of that rather than the rice in the plate lunch, but it's becoming more scarce. It's really expensive nowadays. It's not really something that you can grow in your backyard, especially for someone that doesn't have a yard, who lives in housing or whatnot. But back in the day, our diet was just plants and even fish was eaten on rare occasions. Meat was eaten on even more rare occasions and culturally and traditionally, way back in the day, pre-contact, our diet consisted mainly of plants.

Further expanding on how to engage adolescents, participants discussed use of social media both for recruitment, preconception counseling, and health education. They recommended leveraging communication platforms and technology that are popular with adolescent girls. Participants recognized how quickly social media changes, and that right now, video technology, including TikTok, is very popular among adolescents. Participants shared that some HCPs have capitalized on this trend for their own health education messages.

Finally, participants emphasized the importance of including family and community to recruit, retain, and engage adolescent females. Participants suggested recruitment should focus on the mothers and grandmothers of at-risk for GDM adolescent females. In particular, mothers and grandmothers who had previous personal experience with living with GDM or T2D, would be especially effective. They suggested that adolescents often don't consider themselves at risk for future diseases or health problems, but may be more motivated if their own adult female family member personalizes this risk. Participants also said that adolescent girls would be motivated to hear that they can reduce the risk of diabetes in their whole community, by decreasing their own risk of GDM. This concept could empower girls to feel a sense of responsibility and connection to the future of their wider community. One participant shared:

...Having the whole family be involved in something (...) [it's] about the wellbeing of the whole community and the health of the community and the future of their own lineage and legacy and such.

Discussion

These themes can serve as a first step in guiding cultural tailoring of a GDM risk reduction and preconception counseling program for NH adolescents. Seeking the opinions of HCPs who serve members of the priority audience is an important step in developing healthcare-based education programs. Other studies have used the same strategy and included HCPs who care for the priority audience. Examples include studies focusing on Latina adolescents, ⁷ African American adolescents, ¹⁰ American Indian adolescents, 12 pregnant women with GDM who experience low income,14 and children for outdoor physical activity "prescriptions."22 The Theoretical Framework of Healthcare Intervention Acceptability suggests healthcare interventions should be informed by multiple key stakeholders, including HCPs, across design, evaluation, and implementation phases. 16 Based on the demographics of the respondents, the authors feel confident the HCPs included in this sample have professional expertise in serving NH/PI patients and, in many cases, personal cultural context expertise as a NH person.

The key themes which emerged from these findings are distinct vet interwoven, and theoretically supported. The first theme focuses on the importance of including extended family to support making healthy lifestyle behavior changes and ties in with the third theme of strategies to increase recruitment and engagement. The Expanded Health Belief Model, which supports READY-Girls²³ and Stopping GDM, ¹¹ suggests that increasing perceived risk is a key factor in promoting behavior change.²⁴ By including adult females who may have personal experience with GDM or T2D during their pregnancy, perceived risk may be elevated and better leveraged to increase engagement.²⁴ In addition, participants suggested for an effective GDM risk reduction program, educators should be adult NH/PI women, from the same communities as the adolescents, who have had personal experience with GDM. Further, as supported by the literature, cultural tailoring of health education programs can increase engagement and facilitate knowledge more easily translated into behavior change. This is especially true with communities who are family-centric, Indigenous, and for interventions focusing on minors.^{25–27} Minors do not have the same sovereignty over their food choices as they are traditionally not the primary food purchasers, and parental role models are exceedingly important in modeling healthy food and nutrition choices. 28 Participants in this study stressed how important it is to consider family beyond a western concept of a nuclear family and articulated that the frequency of multi-generational families living together, or in close proximity, is very common in NH/PI culture. This future NH/PI-focused GDM risk reduction program will consider the application of the Ancestral Knowledge System conceptual framework, which values and focuses on family and community and storytelling as a keyway of knowing.²⁹ Participants in this study highlighted concepts from the Ancestral Knowledge System²⁹ as important elements for recruitment, retention, engagement, and cultural-relevance

of an effective and sustainable GDM risk reduction intervention program.

These HCPs also emphasized the impact of social determinants of health as they pertain to the community and environment in which these adolescent females live. They focused on the need to actively address social determinants of health associated with GDM risk reduction such as food insecurity and neighborhood safety for physical activity. Social determinants influence the ability to access healthful food for weight management30 and the health of a pregnancy. 14,31 Food insecurity has been shown to increase risk for GDM32 and lack of access to safe outdoor spaces is detrimental impacts on children's physical activity levels.³³ Participants especially highlighted the vast disparity between the wealthy and low-income communities and emphasized that Hawai'i may be the "perfect example of social determinants of health" - given the remarkable differences in access to healthful food and beautiful natural spaces for physical activity (eg. beaches) in wealthy communities vs. the food deserts, and lack of a built environment that supports healthy behavior in lower income communities. Participants shared the importance of considering environmental and communitylevel barriers to healthful GDM risk reduction behaviors, and again, the importance of including the wider community in a comprehensive GDM risk reduction program to support the NH adolescent females. Similarly, American Indian-serving HCPs (n=16) also noted the importance of considering the socioeconomic context when considering GDM risk reduction programs for AI/AN adolescent females at disparate risk for GDM. They suggested such a program needs to consider economic and social factors as well as trauma that may impact the lives of the priority audience.12

Finally, participants suggested culturally relevant and strengths-based approaches to health promotion are particularity important to ensure engagement among the priority audience of NH adolescents and their families. As supported by the literature and specific to diabetes prevention and health promotion among Indigenous communities, a strengths-based approach assumes solutions to health disparities often lie within the community and privileges the power and wisdom of the community to identify feasible and appropriate solutions. ³⁴ Participants in this study provided examples of how traditional food and physical activity are healthful cultural strengths of NH/PI communities.

Expert panels are an important component when developing culturally relevant healthcare programs. The sample of HCPs in this focus group (n=14) was similar in size to in previous HCP needs assessment studies on the topic of diabetes and adolescent reproductive health. ^{7,10,12} Qualitative literature suggests that adequate sample sizes for interview-based qualitative studies vary widely. ³⁵ Because of redundant occurring codes and categories with the last several interviews, the authors feel confident that saturation was reached with this sample. A key strength is that almost half (46%) of the participants were themselves NH and

thus provided an insider's perspective to the myriad of social determinants that exist among any NH communities. A study limitation is that no social worker or case manager professionals were interviewed and given that 1 key theme focused on social determinants of health, these professionals may have had unique perspectives to expand on this topic.

The themes presented in this paper will guide the next steps in culturally adapting and expanding an existing GDM risk reduction program, *Stopping GDM*, for another US-based Indigenous population, Native Hawaiians and Pacific Islanders. These themes will guide qualitative interview questions for subsequent needs assessment interviews with additional stakeholders such as NH/PI women with history of GDM, NH/PI adolescent girls at risk for GDM, their adult caregivers, and other multi-level key shareholders related to social determinants of health (eg, food retail leadership). Together, cross cutting themes from all aforementioned key informants will inform the cultural adaptation of *Stopping GDM* for the unique needs of NH/PI adolescent females. Like *Stopping GDM*, the newly adapted program for Native Hawaiians will be offered at no cost after program evaluation.

Conflict of Interest

None of the authors identify a conflict of interest.

Disclosure Statement

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Authors' Affiliations:

- Centers for American Indian and Alaska Native Health, Colorado School of Public Health, University of Colorado Anschutz Medical Campus, Aurora, CO (SAS, KRM)
 John A. Burns School of Medicine, University of Hawai'i, Honolulu, HI (RS, KS, MM)
- Department of Health Promotion and Development, School of Nursing, University of Pittsburgh, Pittsburgh, PA (AF, DC-P)

Corresponding Author:

Sarah A. Stotz PhD, MS, RDN, CDCES; Email: Sarah.stotz@cuanschutz.edu

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SPOTLIGHT ON NURSING

Transforming the Future of Health Care Today with Interprofessional Education

Lorrie Wong PhD, RN, CHSE-A; Robin Arndt MSW, LSW; Alan R. Katz MD, MPH; Joanne R. Loos PhD; Kamal Masaki MD; Sheri Tokumaru PhamD; Katherine Finn Davis PhD, RN, APRN, CPNP, FAAN

The Spotlight on Nursing is a recurring column from the University of Hawai'i at Mānoa Nancy Atmospera-Walch School of Nursing (NAWSON). It is edited by Holly B. Fontenot PhD, APRN, WHNP-BC, FAAN, FNAP; Research Director for Department of Nursing, Frances A. Matsuda Chair in Women's Health, and Professor for NAWSON, and HJH&SW Contributing Editor; and Joanne R. Loos PhD, Science Writer for NAWSON.

Surfing the HIPE Line is a recurring column produced by the HIPE working group. The column will rotate among the Nancy Atmospera-Walch School of Nursing (NAWSON), the John A. Burns School of Medicine (JABSOM), the Office of Public Health Studies, the Myron B. Thompson School of Social Work, and the Daniel K. Inouye College of Pharmacy.

Acronyms

CHS = University of Hawai'i Council of Health Sciences
HIPE = Hawai'i Interprofessional Education workgroup
HMSA = Hawai'i Medical Service Association
HPAC = Health Professional Accreditors Collaborative
IPE = Interprofessional Education
IPEC = Interprofessional Education Collaborative
JABSOM = John A. Burns School of Medicine
NAWSON = Nancy Atmospera-Walch School of Nursing
UHM = University of Hawai'i at Mānoa

It is imperative for health care professionals from various fields to work together to advance the health of patients and populations. The formation of collaborative practice teams "is a key step in moving health systems from fragmentation to a position of strength (p. 10)." Therefore, health care educators have been charged with implementing interprofessional education (IPE) and practice into their curriculum. Competency in IPE is a requirement for nearly all health professional students endorsed by Health Professional Accreditors Collaborative (HPAC) and supported by accrediting bodies.²

The Foundation

In 2014, answering the call for IPE, the leadership of the University of Hawai'i Council of Health Sciences (CHS) indicated interest in actively expanding cross-school collaboration. At the time, faculty and students within the health-related schools engaged informally and/or for limited projects. The Deans/Directors of the CHS strongly supported more collaborative efforts for IPE to grow as a priority. They designated a workgroup of

12 faculty members, which included faculty from University of Hawai'i at Mānoa (UHM) Nancy Atmospera-Walch School of Nursing (NAWSON), the UHM John A. Burns School of Medicine (JABSOM), the UHM Office of Public Health Studies, the UHM Thompson School of Social Work & Public Health, and University of Hawai'i at Hilo Daniel K. Inouye College of Pharmacy. This workgroup was named the Hawai'i Interprofessional Education workgroup (HIPE).

HIPE's mission was to prepare all health professional students to collaborate in providing a safe, effective, and sustainable patient/consumer-centered and community/population-oriented health care system. Achieving this mission meant designing curriculum to help students achieve core competencies set forth by the Josiah Macy Foundation (2011) and the Interprofessional Education Collaborative (IPEC).^{3,4} The 4 competency domains included: (1) values and ethics, (2) roles, responsibilities, and leadership within the interprofessional team, (3) interprofessional communications, and (4) interprofessional teamwork and team-based care. The competencies were updated in 2016,⁵ and HIPE evolved to incorporate those updates.

Defining IPE

What IPE is: IPE "occurs when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes (p. 10)." IPE prepares students for interprofessional collaborative practice, where health professionals work together to effectively deliver patient-centered care and improve population health in an affordable and efficient manner, resulting in stronger health systems and improved outcomes.

What IPE is not: The act of learning to communicate with other professions alone does not encompass IPE. The following list encompasses common acts associated with professional education, ⁶ but each of these items on their own does not qualify as IPE: