A Report on the Impact of the COVID-19 Pandemic on the Health and Social Welfare of the Pacific Islander Population in Hawai'i

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Abstract

Hawai'i's Pacific Islander (PI) population has suffered a higher burden of coronavirus disease 2019 (COVID-19) infections, hospitalizations, and deaths compared to other groups in the state. The Hawai'i Emergency Management Agency Community Care Outreach Unit conducted an assessment across the state to gain an understanding of the impact of the COVID-19 pandemic on the health and social welfare of households. Survey data was collected from individuals across the state during a period of 3 weeks (August 12-September 5, 2020). The following are resulting recommendations from the Pacific Island community to mitigate the impact and disparities of the pandemic as immediate and medium-term structural requests: (1) ensure that Pacific Island communities are proactively represented in state and county committees that develop health interventions to ensure that relevant language and culturally tailored communications and strategies are included, (2) provide consistent funding and community centered support to ensure consistent COVID-19 impact services for the Pacific Island families, (3) enhance the capacity of PI health care navigators and interpreters through increased funding and program support, and (4) engage state policy makers immediately to understand and address the systemic structural barriers to health care and social services for Pacific Islanders in Hawai'i. These recommendations were developed to address the generational inequities and disparities that exist for Pacific islanders in Hawai'i which were exacerbated by the COVID-19 pandemic.

Abbreviation List

CCO = Unit Community Care Outreach Unit
CDC = Centers for Disease Control and Prevention
CHC = Community health center
COVID-19 = coronavirus disease 2019
NH = Native Hawaiian
PI = Pacific Islander
ROP = Republic of Palau

Introduction

At the time of this publication the coronavirus disease 2019 (COVID-19) pandemic continues in the state of Hawai'i and most places across the world. Nearly all communities and countries have been adversely impacted by this historic event. The Hawai'i Emergency Management Agency Community Care Outreach Unit (CCO Unit) conducted an assessment to determine the impact of the COVID-19 pandemic on households who reside in the state of Hawai'i. This article reports on the assessment findings for the Pacific Islander (PI) population in the state. The PI group in Hawai'i represents a wide range of peoples from different PIs. The largest PI groups in Hawai'i come from American Samoa, Marshall Islands, Federated States of Micronesia, and Palau. Together the PI groups constitute about 4% of Hawai'i's resident population. In Hawai'i, PI groups categorically have the greatest COVID-19 disparities compared to other ethnic groups in the state.[1] There are multiple factors that explain the higher proportion of COVID-19 cases and worse outcomes among PIs in the state. These include dense living conditions, often crowded multi-generation homes, language and cultural barriers resulting in limited health literacy, difficultly with access to health care facilities and health insurance, and structural barriers to support services for quarantine or isolation and COVID-19 testing. In some parts of the state, PI communities lack adequate public health related infrastructure such as running water, sewage facilities, and consistent electrical power.[2]

Consistent with the rest of the US, the state of Hawai'i routinely collates and reports health data for PI groups aggregated with data for Native Hawaiians (NHs) (as NH and Other PI groups). Recognizing the severe disparities between PI groups and all other groups in the state, the CCO Unit specifically focused on gaining a better understanding of how the COVID-19 pandemic has impacted specific groups. The findings in this report are for those identifying as PI, which are drawn from the results of a larger survey (N = 7927), the Impact of COVID-19 on Individuals Health and Social Welfare, that was distributed across the state of Hawai'i to assess the impact of COVID-19.[3] Assessment data was collected from individuals across the state during a period of 3 weeks (August 12-September 5, 2020). During this time the COVID-19 pandemic in the state was at its peak and public officials and citizens were all very concerned for the health and safety for citizens of the state.

Methods

The CCO Unit worked closely with its community partners to develop an assessment survey, articulate a participant recruitment and distribution methodology, and analyze results. Key partners from the PI community were included in the assessment project team. These team members assisted with identifying key topics for the survey, crafting the questions, distributing the survey to the PI community, and interpreting results. At the conclusion of the survey, using a community-based participatory approach, leaders from each of the key groups in the state came together with their constituents, reviewed the findings, and made recommendations.

The assessment survey contained 35 questions about demographics, household profiles, health and well-being, family finances, social welfare, personal beliefs and behaviors regarding COVID-19, and questions about emotions related to depression and anxiety.[3] The online and paper surveys were administered statewide to a convenience sample of adults ages18 years and older during the period from August 12, 2020 through September 5, 2020. The survey was voluntary and available to all individuals residing in Hawai‘i. The survey was administered in English, however, volunteer translators from the cultural and ethnic groups with English as a second language were available to help the survey respondents understand the questions, and to provide oral translation when needed. Recruitment strategies included snowball sampling via website and social media advertisements, and word-of-mouth. Return postage mailers were provided for those taking paper surveys. A detailed description of the survey is published elsewhere.[3] Descriptive analysis of the data from the respondents who self-identified as PIs is detailed in this article to provide a basic overview of the status of their COVID-19 burden in the state of Hawai‘i.

Table 1. Characteristics of Pacific Islander Respondents (N=264) Compared to All Respondents in Hawai‘i (N=7927)

	Pacific Islander Respondents		Statewide[a]
	n[b]	%[c]	%
Gender			
Male	57	21.8	25.4
Female	155	59.2	69.3
Non-binary[d]	50	19.1	5.3
Age			
18-24	49	18.9	14.8
25-34	52	20.0	16.6
35-44	58	22.4	20.1
45-54	48	18.5	17.6
55-64	32	12.4	16.8
65+	20	7.7	13.8

[a] All respondents in Hawai‘i.[3]
[b] Totals may not equal to 264 due to unanswered/missing data.
[c] Percentages may not equal 100% due to unanswered/missing data.
[d] Non-binary refers to the self-reported sexual identity of the survey respondent.

Results

Demographics

Overall, PI heritage was reported by 440 (5.6%) of respondents statewide who answered the survey question about race/ethnicity. Of those who reported PI heritage, 38.6% reported identifying with more than 1 racial/ethnic group; Caucasian, Japanese, Native Hawaiian, Filipino, and Chinese were the most frequently reported groups. When asked which ethnicity/race respondents most identified with, 264 respondents chose PI. The remainder of this analysis focuses on those 264 survey respondents who reported primary identification as PI (3.5%).

A total of 264 PI participants responded to the survey question on gender: 57 (21.8%) male, 155 (59.2%) female, and 50 (19.1%) non-binary gender. More than one-third of the PI participants were young adults (ages 18-34 years), two-fifths middle-aged (ages 35-54), and less than one-quarter were older (ages 55 and older). In general, the PI population was younger compared to all survey respondents in the state. See Table 1 for PI participant demographic data with statewide respondent percentages for comparison.

Digital Connectivity

The majority (90.4%), of the PI participants reported having internet access at home, while 97.0% of participants across the state reported having internet access. When asked about any access to the internet (home, work or other), 4.8% of PI households had no internet access, compared to less than 1% of all respondents in the state. This digital divide applies to cell phone access as well; 3.8% respondents in PI households reported not having a cell phone that works, compared to less than 1% of all respondents across the state (Table 2).

Table 2. Digital Connectivity Among Pacific Islander Respondents (N=264) Compared to All Respondents in Hawai‘i (N=7927)

	Pacific Islander Respondents		Statewide[a]
	n	%	%
Access to the internet			
At home	235	90.4	97.0
At work	106	42.6	54.4
Other	33	13.2	10.5
No access to the internet	12	4.8	0.7
Have a cell phone that works			
Yes	254	96.2	99.1
No	10	3.8	0.9

[a] All respondents in Hawai‘i.[3]

Household Profile

More than 65% of PI respondents who answered the annual family income question reported a family income of $75 000 or less (Table 3). The median household income in Hawai‘i was $83 102 in 2019, reported by the US Census Bureau.[4] More than three-fourths (77.2%) of PI respondents reported that their family income decreased due to COVID-19, and about 50% reported the decrease was moderate or large. More than 40% of PI respondents' households live in poverty. Similarly, a larger percentage (54.0%) of PI respondents' households saw their family income decrease a moderate or large amount compared to households statewide (35.8%).

About two-thirds of PI respondents reported that they or family members experienced reduced work hours (37.6%) or lost their job (31.6%) because of COVID-19. One quarter reported no change in work hours, and only 5.3% reported an increase in work hours. Respondents from the PI community experienced more job loss and reduction of work hours compared to respondents statewide. Table 3 summarizes PI family income and the impact of COVID-19 on household income and employment in Hawai‘i.

The majority of PI survey respondents (93.3%) reported having other people living in their home as opposed to living alone. About one-quarter (26.5%) had at least 1 elder >65 years (mean 1.2 elders) in the household, while statewide, 32.7% of the survey participants reported having at least 1 elder in the household. More than one-half (57.6%) of PI households reported having 1 or more persons younger than 18 in their household (mean 2.2 children), while the statewide percent was about one-third (36.4%).

Chronic Disease Burden

More than two-thirds (68.2%) of PI respondents reported that at least 1 person in the household had at least 1 chronic disease. Diabetes, asthma, obesity, heart disease, followed by mental health were the most frequently reported diseases (Table 4**).**

Usual Source of Health Care

Less than half of PI respondents (47.4%) reported that they went to a family doctor's office for health care, followed by a community health center (CHC) (29.7%), and hospital-based clinic (25.5%). A larger percentage of the PI respondents utilized CHCs for their usual health care compared to all respondents in the state (12.4%). Furthermore, 6.1% of PI respondents reported no usual source of health care, and 10.5% used an emergency department (ED) when care was needed (Table 5).

Mental Health

The survey included 4 questions from the Patient Health Questionnaire 4 (PHQ-4**)** to assess respondents' feelings of nervousness, worry and depression (emotion level).[5] An emotion score was computed by assigning points for the level of each emotion (nervous/anxious on edge, not able to stop/control worrying, little interest/pleasure, feel down/depressed). The stronger the negative emotion, the higher the score reported.

About 50% of all PI respondents reported being bothered by feelings of being nervous, worried, having little pleasure, or feeling down at least several days over the past 2 weeks**.** About one-third (31.4%) reported feeling nervous for at least half of the time on a daily basis for the 2 weeks prior to the time they took the survey. About one-fourth (28.7%) reported feeling worried more than at least half of the time on a daily basis for the prior 2 weeks.

A personal health emotion score was computed by assigning points for the level of each emotion. About one-fourth had a moderate or severe negative emotion score (Table 6). The emotional impact of COVID-19 on the PI respondents seems to be similar to the impact on statewide respondents.

Table 3. Comparison of the Estimated Income and Impact On Employment and Work Hours Among Pacific Islander Respondents (N=264) Compared to All Respondents in Hawai‘i (N=7927)

	Pacific Islander Respondents		Statewide[a]
	n[b]	%[c]	%
Income range			
Less than $40,000	112	42.6	17.2
$41,000 - $75,000	60	22.9	20.7
$76,000 - $125,000	31	11.8	26.3
$126,000+	23	8.8	22.1
Choose not to answer	37	14.0	13.7
Impact on employment or work hours			
No effect	67	25.5	37.0
Increased work hours	14	5.3	11.2
Reduced work hours	99	37.6	32.2
Lost job	83	31.6	19.6
Impact on income			
No	60	22.8	39.9
Yes, a little	61	23.2	24.4
Yes, a moderate amount	61	23.2	18.1
Yes, a large amount	81	30.8	17.6

[a] All respondents in Hawai‘i.[3]
[b] Totals may not equal to 264 due to unanswered/missing data.
[c] Percentages may not equal 100% due to unanswered/missing data.

Table 4. Chronic Disease Burden Among Pacific Islander Respondents (N=264) Compared to All Respondents in Hawai‘i (N=7927)

	Pacific Islander Respondents		Statewide[a]
	n	%	%
Chronic disease			
Diabetes	100	39.2	19.1
Heart disease	40	16	12.5
Asthma	82	32.7	25.5
Lung disease	8	3.2	3.25
Kidney disease	24	9.6	3.8
Mental health illness	37	14.9	15.0
Obesity	69	27.4	18.8
Cancer	24	9.6	5.3

[a] All respondents in Hawai‘i.[3]

Table 5. Usual Source of Health Care Among Pacific Islander Respondents (N=264) Compared to All Respondents in Hawai'i (N=7927)

	Pacific Islander Respondents		Statewide[a]
	n	%	%
Usual source of health care			
Family doctor office	120	47.4	70.9
Community Health Center	75	29.8	12.4
Hospital based clinic	64	25.5	17.6
Emergency Department	26	10.5	4.0
Have no usual source of health care	15	6.1	4.4
Other	15	6.1	4.8

[a] All respondents in Hawai'i.[3]

Table 6. Personal Health Emotion Scores Among Pacific Islander Respondents (N=264) Compared to All Respondents in Hawai'i (N=7927)

	n[a]	%[b]	Statewide[a]
PHQ-4 Score			
Normal (0-2)	113	43.2	45.5
Mild (3-5)	72	27.5	27.6
Moderate (6-8)	45	17.2	15.5
Severe (9-12)	32	12.2	11.5

[a] Totals may not equal to 264 due to unanswered/missing data.
[b] Percentages may not equal 100% due to unanswered/missing data.

Housing Arrangements

Participants were asked to report where they live now, and where they were likely to live in 3 months. About one-third of PI respondents (32.3%) own the home they live in, compared to 58.2% of respondents statewide. Far more PI respondents reported renting (63.4%) rather than owning their place of residence compared to respondents statewide (38.1%). Compared to statewide respondents, fewer PI respondents expected to be living in the same place in the next 3 months, and compared to statewide respondents, a higher percentage of PI respondents were currently houseless (4.0%) while an even higher percentage expected to become houseless in the next 3 months (6.0%) (Table 7).

Problems with Paying for Essentials

In every category of essentials, the percentage of PI families who expected to experience difficulty paying for essentials was at least 2 to 3 times higher compared to statewide respondents. More than 40% of the PI respondents expected to have difficulty paying for food, rent, auto expenses, utility bills, and cell phones by December 2020 (Table 8).

Challenges with School

More than one-half of the PI respondents (n=191) expected to have someone in the household enrolled in school in fall 2020. Expected challenges for returning to school reported by respondents included a lack of funds to purchase school supplies (n=87; 33.7%), and lack of face covering (n=35; 13.9%).

Table 7. Housing Situation Today and Likely In 3 Months Among Pacific Islander Respondents (N=264) Compared to All Respondents in Hawai'i (N=7927)

Housing arrangement	Pacific Islander Respondents		Statewide[a]	
	TODAY where do you live	Where are you most likely to live in 3 MONTHS?	TODAY where do you live	Where are you most likely to live in 3 MONTHS?
	n[b] (%)[c]	n[b] (%)[c]	n (%)	n (%)
A home, condo, or apartment that you OWN.	81 (32.3)	65 (25.9)	4588 (58.2)	3803 (48.2)
A home, condo, or apartment that you RENT.	163 (63.4)	119 (46.7)	3005 (38.1)	2578 (32.8)
Houseless, live with others that you know, in their home or apartment.	15 (6.1)	18 (7.2)	272 (3.5)	317 (4.0)
Houseless, live in a public shelter.	8 (3.2)	6 (2.4)	22 (0.3)	32 (0.4)
Houseless, live in a tent, car, or outside.	2 (0.8)	9 (3.6)	13 (0.2)	70 (0.9)

[a] All respondents in Hawai'i.[3]
[b] Totals may not equal to 264 due to unanswered/missing data.
[c] Percentages may not equal 100% due to unanswered/missing data.

Language Spoken Most Frequently in the Home and Translation Needs

About two-thirds of the PI respondents (n=161; 64.9%) reported English was the language most spoken in the home (compared to 92.4% of statewide respondents). Thirteen PI respondents expressed that their translation needs for health (n=8), social services (n=8) and educational services (n=7) were not met.

Use of Statewide Assistance Hotline Number 211[6]

PI respondents reported higher utilization of Hawai'i's Assistance Hotline 211; 7.3% (n=19) of PI respondents reported that they had ever called 211 for social service assistance, compared to 4.0% of statewide respondents. Of these 19 individuals, only 21.1% (n=4) reported that they received the assistance that they requested, 42.1% (n=8) reported they did not receive the assistance that they requested, and 36.8% (n=7) reported that they were directed to an internet site.

Attempt at Applying for Benefits Among PI Respondents

Participants were asked about success with any application for benefits in the areas of finance, food, or health services. Securing financial and rental assistance was a more challenging task; one-fourth (24.3%) of PI respondents were not able to complete the financial application and about one-third (36.7%) were unable to complete the rental assistance application. Health insurance and health benefits applications were easier to complete as over 80% could complete these applications. The most common reasons for having difficulty with completion of applications included: the applicant could not figure out how to complete the form, did not have all the documents, or tried to call and could not get through (Table 9).

Table 8. Current and Expected Future Difficulties With Having Enough Money To Pay for Essentials Among the Pacific Islander Respondents (N=264) Compared to All Respondents in Hawai'i (N=7927)

Essential	Pacific Islander Respondents		Statewide[a]	
	Today n (%)	In 3 months n (%)	Today n (%)	In 3 months n (%)
Food	88 (34.8)	103 (40.6)	979 (12.5)	1821 (23.1)
Rent or mortgage	106 (41.4)	115 (44.9)	1142 (14.5)	2222 (28.2)
Auto expenses (e.g., gas, insurance, car payments)	104 (40.5)	104 (40.3)	1099 (14.0)	1942 (24.7)
Medicines	56 (22.4)	67 (26.8)	657 (8.4)	1206 (15.4)
Utility bills (e.g., electric, water, cable, internet)	112 (43.4)	115 (44.2)	1090 (13.9)	1839 (23.4)
Cell phone, internet, cable bill	107 (41.2)	106 (40.5)	1055 (13.4)	1741 (22.1)
Childcare/ elder care	36 (14.3)	51 (20.3)	416 (5.3)	720 (9.2)
Healthcare	52 (20.7)	67 (26.7)	816 (10.4)	1437 (18.3)
Public transportation	39 (15.7)	52 (20.8)	312 (4.0)	536 (6.8)
Other debts	76 (30.3)	88 (35.1)	1244 (15.8)	1966 (25.0)

[a] All respondents in Hawai'i.[3]

Table 9. Summary of Outcomes When Applying for Assistance Among Pacific Islander Respondents (N=264)

Type of Assistance[a]	If YES, applied for assistance, were you able to complete the application?		If you could not complete the application: Reason(s) [Check all that apply][b]				
	Yes	No	No internet access	Could not figure out how to navigate the form	Did not have all the documents	Do not understand questions in English	Tried to call on phone but could not get through
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Prequalification for financial hardship relief	28 (75.7)	9 (24.3)	0 (0)	4 (44.4)	4 (44.4)	1 (11.1)	3 (33.3)
Rental assistance	19 (63.3)	11 (36.7)	0 (0)	4 (36.4)	5 (45.5)	2 (18.2)	7 (63.6)
Food stamps	53 (88.3)	7 (11.7)	0 (0)	1 (14.3)	4 (57.1)	2 (28.6)	0 (0)
Health insurance	49 (83.1)	10 (17.0)	1 (10.0)	4 (40.0)	6 (60.0)	3 (30.0)	2 (20.0)
Healthcare benefits (e.g., Quest or WIC)	44 (89.8)	5 (10.2)	1 (20.0)	3 (60.0)	4 (80.0)	3 (60.0)	3 (60.0)

Abbreviation: WIC, Special Supplemental Nutrition Program for Women, Infants, and Children.
[a] Type of assistance applied for in Hawai'i between August 12, 2020, and September 5, 2020.
[b] Some participants reported being able to complete the application but later reported barriers that prevent them from completing the application.

Personal Beliefs and Activities Regarding COVID-19 Prevention

Among PI participants, there was a low level of knowledge about which groups are at most risk for contracting severe COVID-19. Less than half (41.2%) reported knowing the elderly and those with chronic diseases are at high risk of severe symptoms of COVID-19. About two-thirds (64.1%) reported the ability to recognize if a family member with COVID-19 needed to go to the hospital, and similarly, two-thirds (63.7%) reported knowing where to go for COVID-19 testing. Less than half of the PI participants (40.5%) reported knowing how to provide care for someone in their family with COVID-19.

About two-thirds (62.0%) of PI participants reported that they practice social distancing usually or all of the time, and 78.8% said they wear a face covering usually or all of the time. The majority (82.6%) reported that their family members wash their hands the same or more often since the start of the COVID-19 pandemic. Less than one-half of the PI participants (46.6%) reported that they have a working thermometer at home.

There were many resource barriers identified for caring for a family member with COVID-19. More than two-thirds (65.7%) said there is a lack of space in their home for isolation. Almost half (48.6%) reported they would not have enough cleaning supplies. And slightly more than half (52.8%) reported that if they got COVID-19 there would be a family member available to care for them. Table 10 provides a summary of factors that influence household preparedness for COVID-19 among PI respondents.

Using the percentages of responses to the attitude, knowledge, behavior, and resource questions, a household preparedness for COVID-19 score was computed. Among PI respondents, there is a strong sense of the seriousness of the COVID-19 pandemic, but a low level of knowledge about the disease and its prevention, a moderate level of compliance with prevention efforts, and a very high need for supportive resources. Table 11 provides a summary of the degree of PI respondents' household status for prevention, preparedness, and response for COVID-19.

Table 10. Factors for COVID-19 Preparedness and Response Among Pacific Islander Respondents (N=264)

	Pacific Islander Respondents		Statewide[a]
	n[a]	%	%
Attitude Question			
Perceived Severity of COVID-19			
Not serious	4	1.5	1.7
Low level	11	4.2	3.7
Moderate level	16	6.1	12.4
High level	71	27.0	29.9
Very high level	161	61.2	52.4
Knowledge Questions			
Know vulnerable populations (elderly and chronic disease)	109	41.3	66.3
Know where to go for COVID-19 testing	167	63.7	64.8
Know how to provide medical care for someone at home with COVID-19	107	40.5	38.7
Able to recognize when a family member with COVID-19 would need to go to the hospital	168	64.1	69.4
Behaviors Questions			
Usually or Always practice social distancing by staying at least 6 feet away from others when not at home	163	62.0	96.1
Usually or Always wear a face-covering when outside of your home	208	78.8	97.1
Family members wash hands the same frequency or More frequently since COVID-19	218	82.6	99.8
Have a thermometer that works at home	123	46.6	75.8
Resources Questions			
Problems the household would face if a member had COVID-19			
Lack of space for isolation	169	65.8	55.6
NO face mask	27	10.8	2.4
NO hand sanitizer	46	18.3	5.7
Not enough cleaning supplies	124	48.6	31.2
Have someone be available to care for you if you got COVID-19	138	52.9	53.8

[a] Totals may not equal to 264 due to unanswered/missing data.

Best Source of Accurate Information

While many sources of information were reportedly used, for reliable information the majority of PI respondents used the Centers for Disease Control and Prevention (CDC) website (33.2%), followed by the Hawai'i State Department of Health website (22.1%), television news (17.6%), and community leaders/organizations (14.8%). It is notable that a larger percentage of PI respondents rely on community-based sources of COVID-19 information compared to statewide respondents (Table 12).

Table 11. Overall Household Preparedness for COVID-19 Among Pacific Islander Respondents (N=264)

	n[a]	%[b]
Attitude - Perceived Severity of COVID-19 (total 1 question)		
Low (none-low)	15	5.7
Moderate (moderate)	16	6.1
High level (high-very high)	232	88.2
Knowledge (total 4 questions)		
Low level of knowledge (0-2)	158	59.9
Moderate level of knowledge (3)	71	26.9
High level of knowledge (4)	35	13.3
Behaviors – compliance with measures (total 4 questions)		
Low level of compliance (0-1)	31	11.7
Moderate level of compliance (2-3)	169	64.0
High level of compliance (4)	64	24.2
Resources Needed (total 6 questions)		
None (0)	30	11.4
Low level of needs (1)	76	28.9
Moderate level of needs (2-3)	103	39.2
High level of needs (4-6)	54	20.5

[a] Totals may not equal to 264 due to unanswered/missing data.
[b] Percentages may not equal 100% due to unanswered/missing data.

Table 12. Usual Source of Health Care Among Pacific Islander Respondents (N=264) Compared to All Respondents in Hawai'i (N=7927)

	Pacific Islander Respondents		Statewide[a]
	n	%	%
Source of information			
Church leader	8	3.0	0.5
Community leader	21	8.0	1.6
Local community organization	10	3.8	1.2
Department of Health website	58	22.1	19.1
Centers for Disease Control and Prevention website	87	33.2	52.4
TV News Reports	46	17.6	11.6
Other source	32	12.2	13.7

[a] All respondents in Hawai'i.[3]

Discussion

Based on the information provided by PI respondents to the COVID-19 impact survey, it is evident that Hawai'i's PI residents are encountering significant challenges. Many of these challenges may explain their higher incidence and worse outcomes for COVID-19. Prior to COVID-19, PI populations in Hawai'i were more socially, economically, and medically disadvantaged compared to other ethnic populations.[7] Key survey findings include lower baseline household income and a higher impact of COVID-19 on work hours and household income. In addition, pre-COVID-19, PI respondents had a higher proportion of family members with 1 or more chronic conditions, with especially high prevalence of diabetes and kidney disease. Compared to all state respondents, the PI respondents reported higher rates of diabetes, kidney disease, obesity, and cancer. This high prevalence of serious chronic disease coupled with the financial inequities fuels the vulnerability of this group for the negative effects of COVID-19. Many more PI respondents rent, rather than own, compared to respondents statewide, and a higher proportion reported a risk of not being able to stay in the home where they lived at the time of the survey. Across the board, the PI group reported greater challenges with paying for all essentials compared to respondents across the state.

Immediate action to address the overall social determinants of health for this aggregate population in the state should be initiated. It is highly likely that the social determinants of health are associated with the disparate and high rates of COVID-19 in the PI populations in Hawai'i. Access to basic living essentials requires redress. Internet and cell phone connectivity services are needed in all communities and locations, especially in remote areas across the state. Affordable or subsidized services should be made available for those who cannot afford the high costs of internet and cell phone access. Also, recognizing that PI families frequently live in multi-generational homes, affordable housing that can adequately accommodate multi-general families must be accessible and available. As a social determinant of health, educational attainment should be a priority and aligned to the educational and learning needs of the PI children. Higher educational attainment will lead to higher earning potential and better work stability. To increase success in the job market, work training markets are needed immediately.

The CHCs and health system EDs that provide care for the PI community are frequently utilized. These CHCs are essential and EDs serve as a safety net for this vulnerable group. Sustainable funds should be identified and provided to CHC and community-based health systems to enhance care for the PI population. This will ensure resources are provided to include additional language translation services and the services of cultural brokers (individuals who are able to effectively communicate in particular cross-cultural settings). Case management programs for chronic disease management must be implemented and provided by case managers who come from the PI community

and speak the language of the people they serve. Community health navigators need to be hired and trained from local PI communities to provide general health knowledge and services suited to the needs of the PI people in the state.

The process for seeking assistance to gain access to services needs to be re-visited. Assuring internet access, multi-language online instructions, and hotline services provided by personnel who are proficient in PI languages needs to be developed and put into place, not only for COVID-19, but all services going forward. Considering the significant housing, health, and economic challenges experienced by the PI population, only 7.3% called the 211 Assistance Hotline for services. Recognizing that the 211 assistance is used largely by individuals who are already at risk, designers of such systems should evaluate these systems to ensure appropriate language access, customer friendly service, high capacity throughput, and attention to follow-up.

Preparedness for COVID-19 among PI respondents is negatively impacted by low levels of knowledge about the disease. The lack of resources for COVID-19 home care (working thermometer in the home, space for isolation, and cleaning supplies) is greater among PI compared to other groups. Specific outreach to the PI community to assure that every household has sufficient knowledge about COVID-19 and supplies for prevention, detection, and treatment of family members (masks, gloves, cleaning supplies, thermometer, anti-pyretics, and space for isolation) is essential.

The findings from this survey also suggest that a greater percentage of the PI community relies on community-based resources for reliable information compared to other groups in the state. Governmental agencies and public health agencies should recognize this pattern and assure that public health messaging is developed with and channeled through PI community groups in addition to traditional sources.

Recommendations

Table 13 summarizes the recommendations from the PI team members of the project.

Limitations

A convenience-sampling frame was used; all responders were self-selected and there is no way to determine an actual response rate. Therefore, the report results must be viewed within the context of potential self- selection bias. In addition, while the survey was available in both paper form and online, the vast majority of respondents participated online. Thus, there is a chance that those with no access to the internet and hidden groups, such as the houseless, may not be adequately represented in the sample. In addition, all data were self-reported and not verified. However, there are consistent trends in responses across respondents from all of Hawai‘i counties, which lends credence to the findings. To mitigate some of these concerns, the community partners reviewed and corroborated the results.

Conclusions

The COVID-19 pandemic produced an extreme and disproportionate burden of infections, hospitalizations, and deaths in the PI community in Hawai‘i. Such stark consequences could have been prevented and mitigated with a strong system in place to support the social determinants of health. This includes early planning and advocacy for appropriate linguistic and culturally knowledgeable community-based health workers, COVID-19 education materials available in PI languages, and culturally relevant community health care navigators. Addressing the needs of the PI communities necessitates the need for agencies to provide cultural, linguistic, intellectual, and human assets at the beginning of any emergent situation, which necessitates that representatives from these populations are present and central to all health planning. Many PI response teams have initiated ongoing COVID-19 work through their own grass roots efforts and resources, this includes the Micronesian Ministers & Leaders Uut (term from Chuuk meaning gathering), Marshallese Community Organization of Hawai‘i, Micronesian Health Advisory Coalition, the Marshall Islands COVID-19 Task Force, We Are Oceania, Nations of Micronesia, and Native Hawaiian & Pacific Islander Hawai‘i COVID-19 Response, Recovery & Resilience Team (NHPI 3R). The PI communities require much stronger support and advocacy from Hawai‘i’s state and county governments, as many majority-only health strategies create structural challenges, are discriminatory and need re-design.

Addressing the COVID-19 pandemic now and in the future is not only a health care, health institution and Hawai‘i State Department of Health response, it is essentially an immediate societal, community, and government responsibility.

Table 13. Recommendations from the Pacific Islander Community Project Members
SHORT-TERM RECOMMENDATIONS
Disseminate findings to key policy makers and others in the state:
1. Governor's office, county mayors' offices, legislature, DHS, DOE, health service organizations and social media release
2. Wide Social Media release
Hire PI community members to serve in positions:
1. Permanent compensated seat in the HI Department of Health and County emergency response teams;
2. Hire COVID-19 and Community Health Navigators and Educators fluent in respective PI languages, hired in each county, and provided required training.
Maintain COVID-19 support measures for the PI community:
1. Maintain support for free community-based COVID-19 screening; quarantine and isolation measures and food and hygiene wrap-around services
Address the digital divide:
1. Provide 2 laptop computers, 1 printer, and broadband internet connectivity to every Pacific Islander Church or Congregation
2. Provide technical and monetary support to Pacific Islander churches so they can provide assistance to members for on-line registration, on-line classes, and use of the computers; Provide support for a mobile computer – internet van for wide Pacific Islander community use
MEDIUM-TERM RECOMMENDATIONS
Housing Security
1. Meet with each of the Pacific Islander Churches and Communities regarding housing security needs and available services
2. Provide on-site assistance to sign up for available services
Health Care
1. Meet with each of the Pacific Islander Churches and Communities regarding health care needs and available services
2. Provide on-site assistance to identify, sign up, and register for available health services/insurance
Job Security
1. Meet with each of the Pacific Islander Churches and Communities regarding job security needs and services; provide on-site assistance to sign up and attain available job assistance services
LONG-TERM RECOMMENDATIONS
Community Education
1. Promote and Subsidize English Classes for the Pacific Islander communities
2. Job Skills: Promote and subsidize job skill classes for the Pacific Islander communities
Pacific Islander Community Planning
1. Initiate COVID-19 vaccine distribution planning
2. Initiate Strategic Planning for Community Emergency Response for Pacific Islander communities
3. Initiate Strategic Planning for Civic Engagement and Community Development for Pacific Islander communities.
State and County Policy Planning
1. Evaluate all policies likely to affect health in terms of their impact on inequalities
2. Federal and state governments should restore Medicaid for COFA citizens to ensure everyone has access to health care insurance
3. State Government should take steps to reduce income inequalities by increasing minimum wage across the board, provide affordable housing, create job opportunities, fair employment and hiring practices, and support workforce training programs and relevant work skills
4. Ensure a healthy standard of living for all and create and develop healthy and sustainable places and communities

Abbreviation: DHS, Department of Human Services; DOE, Department of Education; COFA, Compact of Free Association

Conflict of Interest

None of the authors identify a conflict of interest.

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