



**DIALOGUES WITH OUR FUTURE ANCESTORS**  
*An Inquiry into the Well-Being of MA'O and Kauhale*  
*Youth Leadership Training Program Participants 2003–2020*

**PROCESS LEARNINGS & FUTURE INQUIRIES Brief**

**This brief covers the process learnings and future inquiries stemming from MA'O's *Dialogues with Our Future Ancestors* alumni survey project.** Briefs are also available for education, workforce, socioeconomic, holistic health, and community connectedness outcomes, as well as the YLT experience and attrition learnings. The YLT is a holistic program; for a thorough understanding of the program and its interrelated outcomes, we encourage you to refer to the other briefs, and to the report in its entirety, all posted on our website.

**DIALOGUES SUMMARY**

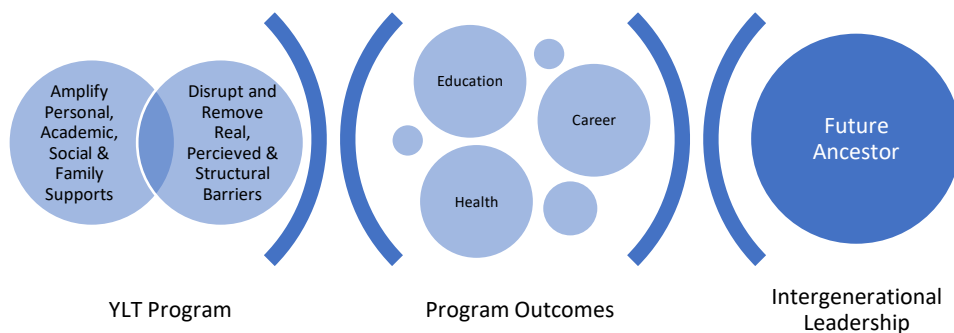
Since its founding in 2001, MA'O Organic Farms (MA'O) has witnessed that investments in the connection of youth to land and in the empowerment of youth leadership generate health, sustainability, and resilience with and for the community. In 2020 MA'O partnered with a team of evaluation experts and academic partners to develop and deploy a multi-faceted 'alumni survey' with the intention of thoroughly and systematically analyzing the effects of its core Youth Leadership Training (YLT) college internship program on participants, and by extension on the community. Our goal was to investigate the hypotheses embedded in MA'O's theory of change regarding the immediate and cascading individual and communal changes that stem from educating and empowering youth.

The Dialogues With Our Future Ancestors project was grounded in MA'O's long-held practice of inquiry, reflection, and refinement: **the feedback loop for our kuleana to our future ancestors.** It was undertaken as a community-based participatory research (CBPR) project, through which MA'O staff, evaluation experts, and academic researchers contributed their unique expertise and experience. This application of the practices of makawalu (seeing through many perspectives; literally 'eight eyes') and kilo (direct observation, generally as a practitioner) affirmed much of MA'O's experiential knowledge, while productively complicating some standing assumptions, and inviting new questions and perspectives.

**YLT INTERNSHIP PROGRAM & THEORY OF CHANGE**

MA'O's theory of change posits that a social enterprise can mimic the strengths of an 'ohana (family) by providing material, intellectual, and emotional support, educational resources, and workforce training. The YLT program helps youth find their purpose, connect with their culture and history, develop knowledge and skills, grow and mobilize personal and professional networks and partners, and pursue educational and workforce opportunities that lead them, their families, and the community toward cultural, social, economic, and spiritual resilience. This grows **future ancestors** dedicated to leadership, rooted to place, and committed to their community.

Figure A YLT Theory of Change



The YLT program encompasses two program tracks housed in separate educational and enterprise settings: MA'Ō Organic Farms (an organic farm and home to the majority of YLT interns, referred to as "MA'Ō") and Searider Productions (a digital media initiative at Wai'anae School, referred to as "DMED"). Together, these two programs are called the Kauhale. The Kauhale YLT interns from both MA'Ō and DMED receive comprehensive educational and social wrap-around services, which include counseling, academic advising, and referrals to other social services. They also receive financial support in the form of a monthly stipend and tuition waivers for University of Hawai'i, Leeward Community College (LCC). All Kauhale YLT interns in both the MA'Ō and DMED program tracks participate in a ramp-up program at MA'Ō Organic Farms and receive ongoing programmatic support from MA'Ō education staff. The overlapping two-year cohort structure is core to the program structure: an intern starts as a novice, looking up to the 'elder' interns for guidance, expertise, and proof of what is possible, after which they in turn progress into the elder role and take on kuleana (responsibility) for the success of those who follow.

### STUDY METHODOLOGY<sup>1</sup>

The MA'Ō Alumni Study comprised four components: two focus groups, an online questionnaire, one-on-one interviews, and the collection of biometric data and biospecimen samples.

The **total YLT alumni population (n=315)** is made up of YLT participants in Cohorts 1-12.5, regardless of how long they stayed in the program and whether they received their associate degree.<sup>2</sup>

The **alumni questionnaire respondents (n=62)** includes all those who provided a complete response to the online survey questionnaire. This represents **20%** of the total alumni population. The demographic differences between the sample and parent alumni groups suggest that the questionnaire results may not generalize to all YLT participants, particularly those who stayed in the program for a shorter duration, did not attain a post-secondary degree, did not elect to stay on at MA'Ō for further internship or staff opportunities, or participated in DMED.

The **interviewees (n=21)** did one-on-one interviews in addition to completing the online survey. They represent **7%** of total alumni population. The interviewee population was more likely to have graduated with a degree and to have stayed at MA'Ō longer, which may have skewed the interviews to reflect a generally more positive interpretation of the YLT program experience.

Comparisons are made throughout the analysis between the alumni questionnaire respondents (n=62) and a **Wai'anae peer group (n=157)**. The Wai'anae peer group aligns closely with the alumni population across the key characteristics of age, gender, household income, and household size.

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<sup>1</sup> The complete description of the study methodology can be found in the Process Brief, and in the full report.

<sup>2</sup> Some participants in Cohorts 13 and up were still active in the program at the time of the project, and as a group they could not yet be considered to have completed the YLT. Members of C13 and up who had already left the program were invited to participate.

## STUDY METHODOLOGY

Conducted in the fall of 2020, the MA'O Alumni Study comprised four components: two preliminary focus groups of five to seven alumni per session, an online questionnaire with 62 respondents, one-one-one interviews with 21 of these individuals, and the collection of biometric data and biospecimen samples from a subset of 25 alumni. The project started with a concerted effort to reconnect with as many alumni as possible, using social media and outreach through existing relationships and networks. Though we aspired to hear from every past YLT participant, we had lost touch with many alumni over the years. The effort to reconnect was substantially hampered by the limitations imposed by the COVID-19 pandemic. For example, we had intended to invite all alumni to an in-person event at MA'O to strengthen and re-establish pilina and trust in the spring/summer of 2020, ahead of inviting their participation in the study, but in person gatherings were prohibited by the State of Hawai'i for the duration of the project launch (March-October). A total of **100** alumni, or **32%** of the total 315 alumni, provided their current contact information; these individuals made up the pool of potential study participants.

Prior to deploying the survey instruments, we identified seven key attributes as critical to the ensuing analysis. These included: cohort, gender, ethnicity, duration in the YLT program, successful completion of an associate degree, YLT program track, and post-YLT participation in a further MA'O program or leadership position.

- 1) Cohorts were aggregated into three groups: C1-5, C6-11.5, and C12+. This breakdown aligns with the YLT evolution over the years (see Appendix C). Within each group interns received a similar set of programming, had access to similar resources, and participated when MA'O was at a particular scale. The cohort group also serves as a proxy for age, given that the vast majority of interns are between the age of 17-19 when they enter the two-year program.
- 2) Gender was defined as male, female, or other.
- 3) Ethnicity in this study is defined simply as native Hawaiian or not, as MA'O is in service to a majority native Hawaiian community.
- 4) Duration of participation in the YLT program is broken down into three groups: 0-1 semesters, 2-3 semesters, and 4+ semesters.
- 5) Associate degree attainment is defined as yes or no, regardless of when the associate degree was attained (during or after active participation in the YLT).
- 6) Program track is either MA'O (on farm) or DMED (digital media, at Wai'anae Seairiders Program).
- 7) Participation in a post-YLT program or leadership position MA'O is defined as yes or no. A 'yes' includes participation in the Ho'owaiwai Youth Leadership (HYLT) internship bridging into a four-year degree program, the professional Farm Apprenticeship program (previously called a Co-Managership position), or a staff position. MA'O has more purposefully retained alumni, particularly into the HYL program, since Cohort 12, which coincides with MA'O's physical and programmatic expansion, underway since 2018.

Table 1 below identifies the total participant count in each of the survey's four components (focus groups, questionnaire, interviews, and biospecimen samples from which we collected biometric data). The constituent makeup of these subgroups is compared against the total population of YLT alumni using the seven key attributes in Table 2. This comparison helps to determine how un/representative each group is of the total population, and therefore how much their responses can be generalized across the total alumni population.

Table 1 Number of YLT Alumni In Survey Groups, By Attribute

Key Attribute	Focus group N = 12	Interview N = 21	Biometrics N = 25	Alumni Survey N = 62	Population N = 315
Cohort Group					
1-5	5	6	8	22	76
6-11.5	3	6	6	25	210
12+	4	9	11	15	29
Gender					
Female	8	14	14	38	175
Male	4	7	10	21	139
Other	0	0	1	1	1
Unknown	0	0	0	2	0
Program Track					
DMED	1	2	0	5	77
MAO	11	19	25	57	238
Native Hawaiian					
NH	8	13	16	49	255
Non-NH	4	8	9	13	60
Associate Degree					
AA or AS graduate	9	13	15	33	126
Non AA or AS graduate	3	8	10	29	189
Number of Semesters in YLT					
0 or 1	1	4	2	11	92
2 or 3	2	5	5	12	97
More than 4	9	12	18	39	126
Post-YLT Role at MA'O					
Not participated	5	12	8	32	269
Participated	7	9	17	30	46
<i>*Only Population column excludes Cohort 13 and up, as several members of C13 and up who had already left the program were invited to participate in the survey as alumni.</i>					

Table 2 Comparison of Survey Group Attributes vs. Total Alumni Population

Key Attribute	Focus group N = 12	Interview N = 21	Biometrics N = 25	Alumni survey N = 62	Population N = 315
Cohort Group					
1-5	42%	29%	32%	35%	24%
6-11.5	25%	29%	24%	40%	67%
12+	33%	43%	44%	24%	9%
Gender					
Female	67%	67%	56%	63%	56%
Male	33%	33%	40%	35%	44%
Other	0%	0%	4%	2%	0%
Unknown	0	0	0	2	0
Program Track					
DMED	8%	10%	0%	8%	24%
MAO	92%	90%	100%	92%	76%
Native Hawaiian					
NH	67%	62%	64%	79%	81%
Non-NH	33%	38%	36%	21%	19%
Associate Degree					
AA or AS graduate	75%	62%	60%	53%	40%
Non AA or AS graduate	25%	38%	40%	47%	60%
Number of Semesters in YLT					
0 or 1	8%	19%	8%	18%	29%
2 or 3	17%	24%	20%	19%	31%
More than 4	75%	57%	72%	63%	40%
Post-YLT Role at MA'O					
Not participated	42%	57%	32%	52%	85%
Participated	58%	43%	68%	48%	15%
<i>*Only Population column excludes Cohort 13 and up, as several members of C13 and up who had already left the program were invited to participate in the survey as alumni.</i>					

The **total YLT alumni population (n=315)** is made up of YLT participants in Cohorts 1-12.5, regardless of how long they stayed in the program and whether they received their associate degree. The cut off at Cohort 12.5 reflects that some participants in Cohorts 13 and up were still active in the program at the time of the project, and as a group they could not yet be considered to have completed the YLT. However, several members of C13 and up who had already left the program (whether by graduating with their associate degree or because they left early) were invited to participate in the survey as alumni.

Two **focus groups (n=12)** were engaged early in the project to provide feedback on the beta questionnaire and interview questions, along with suggestions for securing widespread participation.

The **interviewees (n=21)** are those who did one-on-one interviews in addition to completing the online survey.

The **alumni questionnaire respondents (n=62)** includes all those who provided a complete response to the online survey questionnaire. This represents **20%** of the total alumni population.

The **biometric respondents (n=25)** are respondents who provided blood for an A1C test, and a smaller subset thereof (n=17) who provided a stool sample for microbiome analysis.

### **'Ohana Dialogues - Focus Groups**

Prior to deploying the survey instruments to the full alumni community, two 'ohana dialogues (focus groups) were conducted with YLT alumni via two-hour recorded Zoom sessions. Through the dialogues we gathered feedback on the beta questionnaire and interview questions to determine if any refinements were required to ensure the survey's clarity and efficacy. We also solicited alumni guidance about how to secure their peers' participation. Finally, the dialogues were used to learn about participants' experience in the YLT and their own thoughts regarding its influence and impact on their lives since; quotes from the dialogues are included in the relevant areas of the results section below.

The 'ohana dialogues were grounded in two foundational principles:

- Ho'omohala - the dialogues were established as an intentional process of sharing and learning. Participants were invited into an inclusive, open, supported, and safe space that is "becoming" (an emergent process of co-creation).
- 'Imi Na'auao - the dialogues were articulated as an intentional process to seek wisdom; participants were identified as part of a process that generates solutions for youth, families, and community.

To protect against organizational bias, a random selection process was used to identify 20 individuals from amongst the 100 current contacts to invite to participate in the focus groups; 12 of these agreed to participate. Fortunately, the random process yielded at least one participant representative of each facet of all seven key attributes (noted above p. 15), though the group did not accurately reflect the proportional makeup of the total population. Those who left the program after just 0-1 semesters, who did not successfully attain their associate degree, or participated in the DMED track were all underrepresented, though there was at least one person representing each of the categories in the focus group dialogues. Dialogue participants received a \$50 incentive in appreciation for their time.

Two separate groups were convened in order to ensure each participant had an opportunity to speak, while leaving room for robust discussion, and to mitigate for any potential personality idiosyncrasies that might affect the dynamics within a single group. Prior to the event, participants completed the beta questionnaire and reviewed the draft interview questions, and were asked to take note of any questions or concerns. The dialogues were opened by MA'O Executive Director Kukui Maunakea-Forth and Communications & Special Projects Coordinator Chelsie Onaga (also a YLT alumna, C11.5). MA'O staff then left the Zoom session and the dialogues themselves were led by MA'O's academic partners to avoid the possible chilling effect on the free expression of ideas, especially negative sentiments, of having MA'O staff members present. Lasting a total of two hours per session, the dialogues focused on survey content and process, the biometrics process, recruitment, interview questions and process, and substantive discussion about the YLT experience itself. (See Focus Group questions in Appendix D.)

Feedback shared during the dialogues was enthusiastically supportive of the intent behind administering the survey and interviews. Enthusiasm about the biometric aspect of the project varied. Constructive feedback was

used to adjust the wording of several existing questions and add several new questions in preparation for deploying the survey and interviews to the full alumni community. For example, survey wording was changed to make it clear if the survey was asking about respondents' community in the present or past tense, since a few of the focus group participants expressed belonging to multiple communities or not identifying with one in the present. Participants also pointed out where there appeared to be redundancy and additional areas lacking clarity as to whether they should respond to how YLT affected them during the program or since. They also suggested that the survey should ask where respondents find meaning in life rather than assume that they do so through employment. The questions on employment status were adjusted so that there was a question on where they find meaning in life before asking about meaningful work. Finally, participants noted that recruitment for surveys and interviews should omit the word alumni so that all felt encouraged to participate regardless if they finished the program.

Overall, the facilitators noted that respondents were eager to share their mana'o (thoughts and insights) and they suggested providing more of an opportunity to do so on the surveys. This led to the addition of several open-ended questions to the questionnaire to provide all respondents the opportunity to share additional details and to explain their responses to the close-ended questions, as well as to express any dissatisfaction with the program. This resulted in the addition of one open-ended question at the end of each survey section.

The primary suggestion for the interviews that stemmed from the focus groups was to simplify the question about food sovereignty. This was accommodated by breaking up the inquiry into several distinct questions about particular aspects of food sovereignty, including access and cost. The suggestions for the survey noted above were also incorporated into the interview questions – including the wording regarding meaningful work, and clarification of the tense used when asking about YLT impact and community identification.

Focus group discussion regarding the biometrics process revealed that participants thought the compensation for participation in this aspect of the study should be increased in order to drive more participation. We accordingly increased the biospecimen sample compensation from \$25 to \$50 per person. The participants also expressed their discomfort with producing samples, their fear that they would make errors, and a general sense that the effort felt cumbersome. However, those who expressed their willingness stated that they would do so to support MA'O's programming. Those who had already participated in the Maui Ola study in particular expressed comfort with the process, as they knew what was expected. Several participants noted that stress and "quarantine weight" should be accounted for in the biometric portion of the study. One helpful suggestion that we pursued was to create a video to demonstrate the relationship between individual and community health and biometrics, to increase the alumni's motivation to contribute biospecimen samples.

The final portion of the focus groups was devoted to questions about participants' YLT experience, which they had also referenced and discussed throughout the session. Commonly discussed YLT impacts included: applying growing knowledge to their gardens, the ability to connect to others through a sense of community, the interpersonal skills and work ethic they gained, and becoming more effective communicators.

Many participants also explained that they had attended the focus groups in order to connect with their peers, and they were enthusiastic about the possibility of MA'O hosting a reunion so that alumni can connect with each other.

The dialogue participants' initial responses to the beta questionnaire were recorded and included in the total responses (n=62), along with their responses to a subsequent short supplemental questionnaire comprising the newly added items.

## Questionnaire

We developed items for the questionnaire to solicit data relevant to alumni outcomes in the core program component areas of *education attainment, socioeconomic status, health and well-being, and community connectedness*, as well as the YLT experience itself. The full Questionnaire is available on the MA'O website.<sup>3</sup>

The individual questionnaire items were developed in collaboration with the project team subject matter experts. We also integrated existing questions from two prior studies: the previously discussed Maui Ola health inquiry, and Imi Na'auao, a survey instrument for current YLT participants that we developed in 2018 through a prior partnership with the University of Hawai'i West O'ahu. This was intended to facilitate longitudinal analysis now and in the future. While this was generally productive, we identified weaknesses in the wording of several 'legacy' questions after the survey was complete. When possible, questions were crafted to allow for comparison with the existing data sets from these studies, as well as external data sets from the US Census and State of Hawai'i.

We deployed the questionnaire to the alumni using Qualtrics software. Respondent anonymity was assured by buffering the survey results from direct access by MA'O staff. Primary data was accessible only to our external partners, who provided de-identified data and analysis to MA'O staff. Statistical significance levels noted throughout the analysis were set at \* (P<0.1), \*\* (P<0.05), and \*\*\* (P<0.01) using the students t-test where appropriate comparisons between groups/data sets were made.

We invited all (100) YLT alumni for whom current contact information was available to participate in the online questionnaire, and encouraged all alumni to extend the invitation further through their own networks. We shared context for the project and our aspirations for the study, and offered a \$20 incentive for completing the questionnaire. For six weeks, MA'O staff conducted a concerted communications effort to encourage alumni to complete the questionnaire, including emails, social media posts, texts, and direct phone calls. Current and past MA'O staff followed up with the individual alumni with whom they have strong bonds of trust. This culminated in **62** alumni providing complete questionnaire responses, which represents **62%** of current contacts, and **20%** of the total alumni population.

Compared to the total alumni population (N=315), the questionnaire respondents (N=62) had a very similar gender (63% vs. 56% female) and native Hawaiian (79% vs. 81%) makeup. However, the questionnaire respondents differed from the total alumni population in ways that may have limited the ensuing analysis: the respondent group had a higher percentage of those who achieved an associate degree (53% vs. 40%), participated in 4 or more semesters in the YLT (63% vs. 40%), and participated in a post-YLT internship or staff position at MA'O (48% vs. 15%). Compared to the total alumni population, the respondent group was under-representative of Cohorts 6-11.5 (40% vs. 67%) and the DMED program track (8% vs. 24%). **These demographic differences between the sample and parent alumni groups suggest that the questionnaire results may not generalize to all YLT participants, particularly those who stayed in the program for a shorter duration, did not attain a post-secondary degree, did not elect to stay on at MA'O for further internship or staff opportunities, or participated in the DMED track.** To mitigate this weakness, further analysis was done to illuminate potential differentiation of outcomes across these attributes.

In future inquiries, additional effort must be made to connect with participants who left MA'O before completing the program, those who have not (yet) received an associate degree, and those who perhaps do not feel positively about their YLT experience. Feedback from these individuals is particularly critical to ongoing program refinement, as well as recommendations to MA'O's education partners and policy makers. We are hopeful that this broader participation will also be facilitated by the alumni who did participate in this inaugural effort, thereby strengthening

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<sup>3</sup><https://static1.squarespace.com/static/5cc8cd5d65019fb4eca037be/t/60dcc1c847eb272b3b3e2bf0/1625080265936/YLT+Alumni+Survey+Qualtrics+Questionnaire.pdf>



their pilina with MA'O and each other. We also intend to further deepen these rekindled connections through post-survey events as COVID-19 restrictions are lifted.

### Interviews

To complement the questionnaire data, we conducted one-on-one interviews with **21** respondents (**34%** of the questionnaire respondents and **7%** of total alumni population). The interviews were intended to elicit nuanced and in-depth information and self-reflection about participant outcomes, as well as to clarify the relationship between alumni's personal capacity, YLT program impact, and environmental factors (largely immutable structural, geographic, and relational realities). The interview questions were designed to gather information about alumni well-being in the four outcome areas outlined above, as well as their experience within the YLT and reflections about its impact on their lives since leaving the program. See Appendix E for the interview script.

Interviewees were initially selected from the 100 current contacts using a stratified random selection process; however, the random selection process did not yield a group sufficiently representative of the variation across the seven key attributes. Several attempts were made to control for this, including repeated randomization of the pool and dropping of individuals who skewed the interviewee group. However, when it became clear how challenging it was to secure participation in the questionnaire itself, we abandoned the random selection approach and elected to use a convenience sampling approach by opening up the interview opportunity to all current contacts. This was done to increase the number of interviewees in order to gain as much as insight as possible. Purposeful selection of interviewees by key attributes was not implemented due to the importance of assuring anonymity for participants so that they would know MA'O staff would not be able to link their responses to them as individuals.

Twenty-one alumni volunteered for the one-on-one interviews, with at least one individual representative of each characteristic across the seven key attributes. However, the group was not representative of the makeup of the total alumni population. It was slightly under-representative of males (33% vs. 44%), native Hawaiians (62% vs. 81%), and DMED track participants (10% vs. 24%). The interviewee group was over-representative of participants from cohorts 12+ (43% vs. 9%), those who stayed in the program for 4+ semesters (57% vs. 40%), those who achieved at least an associate degree (62% vs. 40%), and those who pursued post-YLT MA'O internships or positions (43% vs. 15%). As with the survey groups, this reflects the greater propensity of recent cohorts to be in contact with MA'O, and to have pursued one of the increasing number of post-YLT opportunities that have opened up at the organization since 2018. We expect that this may have skewed the interviews to reflect a generally more positive interpretation of the YLT program experience. We undertook further analyses of subgroups of particular interest – e.g. those who did not complete their associate degree – to ensure that we learned as much as possible from the interviewees.

Our UHWO partners oversaw and conducted the interview process.<sup>4</sup> The interview questions and protocol were developed in partnership with the full project team, and refined based on feedback from the focus groups. We also did a test run interview to fine tune the process before deploying to the full group of 21 interviewees. The interviews each lasted one to three hours, yielding a rich set of content and insights. They were conducted online via Zoom, recorded, and professionally transcribed for later analysis. Participants were assured of the anonymity of their responses, in hopes of encouraging them to be as open as possible, including with constructive feedback for MA'O about their experience in the YLT program. Primary analysis was undertaken by our external partners using the qualitative data analysis software NVivo to code the transcripts and develop themes, which was then followed by more in-depth analysis to interrogate the themes, relationships across themes, and the relevance of key attributes. Our partners de-identified quotes prior to sharing them with MA'O staff.

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<sup>4</sup> The interviews were conducted by an undergraduate student who was supervised by Christy Mello, PhD, Professor of Applied Cultural Anthropology at UHWO.

## Biometric Data

Finally, the survey included the analysis of biometric/biospecimen data to assess the alumni's physical health outcomes, beyond their tenure as members of the YLT. This was an extension of the ongoing Maui Ola health study, to determine the persistence of the improved clinical outcomes observed in interns during their time in the program and compared to the general Wai'anae population. Data gathered included self-reported measures of food security, diet/nutrition, health-related behaviors, self-esteem, and body mass index (BMI). A subset of alumni also donated blood and fecal samples; the former was used to assess for diabetes risk as measured by the blood biomarker hemoglobin A1C (HbA1C) and the latter was used to corroborate self-reported vegetable intake scores using agnostic gut microbiome results.

The general methodology for the biometric analysis included a comparative analysis of health metrics of MA'O YLT alumni respondents (n=62) and an age/gender-balanced non-MA'O peer control group (n=157) in the same community (Wai'anae moku). In addition, variability between alumni participants was evaluated according to their respective cohort; as noted above, we grouped the separate cohorts into three groups based on how recently these individuals participated in the YLT, from "old" (cohorts 1-5), to "medium" (cohorts 6-11.5), and "young" (cohorts 12+). Comparative statistical analyses (i.e. t-test) were employed using a cross-sectional study design. Comparisons between the alumni and peer data potentially indicate residual effects attributed to the MA'O YLT program, whereas comparisons between cohorts within the alumni group potentially indicate the persistence over time of effects attributed to the YLT.

Ultimately, a subset of the alumni respondents (**n= 25**) provided blood samples for A1C analysis, a slightly smaller subset of whom (**n=17**) also elected to donate fecal samples from which their gut microbiome composition was evaluated as a means to validate self-reported nutrition metrics. The 25 individuals represent 40% of the 62 survey participants and 8% of the 315 total alumni pool; the 17 represent 27% of the study participants and 5% of the total alumni. **While the relatively small number of biometric participants precludes broad generalizations based on A1C and microbiome analysis, this data is used to corroborate the self-reported health metrics (BMI, diet, etc.) from the questionnaire. The data also provides the opportunity for further analysis into the persistence of health outcomes for individual alumni who participated in prior Maui Ola studies.**

See Tables 1 and 2 (pp. 16-17) for a detailed comparison between the subset of participants who contributed physical samples and the total alumni population. The biometric participants were reflective of the gender makeup of the total alumni pool (56% female in both groups), but slightly lower in terms of native Hawaiian representation (64% vs. 81%). **There were no DMED track biometric respondents (0% vs. 24% of total). All biometric analysis is therefore specific to MA'O programming.** As with the questionnaire respondents and interviewees, the biometric respondents were over-represented by those with an associate degree (60% vs. 40%), those who spent 4+ semesters in the YLT program (72% vs. 40%), and those who took on post-YLT roles at MA'O (68% vs. 15%). It was particularly enriched for those in Cohort 12+ (44% vs. 9%). This was not surprising, given that members of Cohort 12.5 and up had participated in earlier data collection for the Maui Ola Study (2017-ongoing) and so have a contextual understanding of and firsthand experience with the collaborative health research process. The majority of these individuals are also currently in the MA'O space in some form or another – as Ho'owaiwai Youth Leadership Training (HYLT) interns who are bridging from the YLT into four-year baccalaureate programs, members of the professional Farm Apprenticeship program, or staff members. As such they have strong bonds of trust, existing pilina with the HI'A staff, and a sophisticated awareness of the Maui Ola Study intention, process, and outcomes. By contrast, this was the first time that MA'O had asked members of YLT cohorts 1-12 for personal health data and biospecimen samples.

Securing biospecimen samples was always going to be difficult, and the pandemic greatly exacerbated this process. Through our experience with the Maui Ola Study (2017-ongoing) we learned that substantial efforts are required to build pilina, trust, and a sense of reciprocity sufficient to overcome the individuals' reluctance to share their personal health data, particularly physical samples. Pandemic-related restrictions on gatherings precluded

the MA'O and HI'A team from holding in person events during the March-October leadup to the biometric data gathering. Instead, MA'O staff communicated this complicated and nuanced topic through written communications and using a video created by a YLT alumna (a current HYLt intern) who is pursuing her bachelor's degree in Hawaiian and Indigenous Health and Healing at UHWO. These communications focused on what MA'O, the interns, and the community have been learning through the Maui Ola Study, the opportunity for participants to learn about their own health, the significance of their data to facilitating positive community health outcomes, and a (\$50) incentive provided to participants to compensate for their time.

**The difficulty we experienced in securing alumni's physical samples for biometric analysis underscores the critical role of pilina and trust building for future collaborative health inquiries and community-based participatory research (CBPR) efforts.** Based on our experience with both the Maui Ola and alumni study efforts, we know that this must encompass not only MA'O youth and MA'O staff, but also the medical/research team, who are traditionally anonymous and nearly invisible to research "subjects." We have found that it is vital to establish direct relationships between the youth and the research team prior to engaging in sample gathering, and that this is best accomplished through interactive discussions about the underlying health issues to be examined. This builds a shared understanding of the personal relevance of the health data to be gathered, trust in the process and people involved, and the salience of the research for the community.

Reflecting our commitment to using the project to develop the alumni community's empowerment and agency, personal health information (including A1C metrics and gut microbiome composition) was shared directly with individual survey participants, along with resources available to address any health-related needs that were revealed through the study. MA'O staff and a HYLt intern partnered with HI'A staff to develop an online dashboard for this purpose, which we hope will serve as a template for our ongoing collaborative health research efforts with the YLT interns and other community members.<sup>5</sup>

### Peer Comparisons

Comparisons are made throughout the following analysis between the alumni questionnaire respondents (n=62) and a Wai'anae peer group (n=157). The Wai'anae peer group was selected to align as closely as possible with the alumni population across the key characteristics of age, gender, household income, and household size. See Table 3 for a comparison of the two groups. The peer data was gathered through the Maui Ola study between 2017-20, and was accessible to the HI'A researchers. It was scrubbed to ensure that there was no duplication of individuals between the MA'O alumni and peer groups.

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<sup>5</sup> <https://www.hia.llc/mao-dashboard>

Table 3 Comparison of Alumni Questionnaire Respondents & Wai‘anae Peer Group

Characteristic	Alumni Questionnaire Respondents N = 62	Waia‘ane Peer Group N = 157	Alumni Questionnaire Respondents N = 62	Wai‘anae Peer Group N = 157
<b>Gender</b>				
Female	38	97	63%	62%
Male	21	59	35%	38%
Other	1	0	2%	0%
Unknown	2	1	2	1
<b>Age Group</b>				
average age	27.2	29.6	27.2	29.6
Variance	4.07	8.81	4.07	8.81
<25	20	49	32%	31%
25-44	42	108	68%	69%
>45	0	0	0%	0%
<b>Total Family Income</b>				
Less than \$25,000	10	46	19%	47%
\$25,001 to \$50,000	5	21	9%	21%
\$50,001 to \$75,000	12	14	23%	14%
\$75,001 to \$100,000	10	8	19%	8%
\$100,001 to \$125,000	6	6	11%	6%
More than \$125,000	6	3	11%	3%
Decline to respond	4	0	8%	0%
Unknown	9	59	9	59
<b>Household Size</b>				
0	0	1	0%	1%
1	2	9	3%	6%
2	7	14	11%	10%
3	10	22	16%	15%
4	16	17	26%	12%
5	7	11	11%	8%
6	2	22	3%	15%
7	5	14	8%	10%
8	4	11	7%	8%
9	3	4	5%	3%
More than 10	6	14	10%	14%
Unknown	0	11	0	11

## PROCESS LEARNINGS

Though we aspired to hear from every past YLT participant, MA'O had lost touch with many alumni over the years. The effort to reconnect was substantially hampered by the limitations imposed by the COVID-19 pandemic, particularly the fact that we could not convene for in-person events. Outreach efforts require a substantial commitment of resources, most notably staff time. Recruitment into the survey was most successful when MA'O staff followed up with the individual alumni with whom they have strong bonds of trust.

Demographic differences between the sample and parent alumni groups suggest that the questionnaire results may not generalize to all YLT participants, particularly those who stayed in the program for a shorter duration, did not attain a post-secondary degree, did not elect to stay on at MA'O for further internship or staff opportunities, or participated in the DMED track.

In future inquiries, additional effort must be made to connect with participants who left MA'O before completing the program, those who have not (yet) received an associate degree, and those who perhaps do not feel positively about their YLT experience. Feedback from these individuals is particularly critical to ongoing program refinement, as well as recommendations to MA'O's education partners and policy makers.

While we presume that the promise of anonymity facilitated increased alumni participation, the resulting data has limited utility for individualized longitudinal analysis, as it cannot be joined up with individual participants' in-program experience and/or subsequent data points.

The focus groups provided constructive feedback that improved the subsequent survey and interviews. They also generated substantive discussion amongst participants about the YLT experience. The inclusion of alumni representing different facets of the population contributed to the quality of the conversation. Focus groups should be deployed in future studies to learn about alumni experiences.

The questionnaire was too long, discouraging some alumni from participating or completing the survey and complicating subsequent analysis. Our partners' support in the statistical analysis was invaluable and their access to the Wai'ane peer data was crucial. In future research, it may be preferable for MA'O to have direct ownership of the Qualtrics tool and subsequent data.

The interviews yielded excellent qualitative and contextual information about the YLT participants' experience during and since the YLT. Working with our partners was helpful to ensure anonymity and support in the coding and analysis was very helpful.

The difficulty we experienced in securing alumni's biospecimen samples for biometric analysis underscores the critical role of pilina and trust building for future collaborative health inquiries. Substantial efforts are required to build pilina, trust, and a sense of reciprocity sufficient to overcome the individuals' reluctance to share their personal health data, particularly biospecimen samples. This should include interactive discussions with MA'O youth, staff, alumni, and researchers about the underlying health issues to be examined to build a shared understanding of the personal relevance of the health data, trust in the process, and the salience of the research for the community. The online dashboard through which participants can access their personal data is a critical element of genuinely engaged health research.

## KŪLIA I KA NU'U - LEARNING FROM & BUILDING ON THE DIALOGUES

Our goal at the outset of this project was to deepen and formalize MA'O's learning philosophy and practices in service of youth, family, and community outcomes. We aimed to develop an initial model for ongoing evaluation, research, and inquiries into post-YLT program impact, and to inform our emerging organizational evaluation strategy. Our work was grounded in MA'O's long-held practice of kūlia i ka nu'u, the continuous pursuit of excellence through inquiry, reflection, and refinement: **the feedback loop for our kuleana to our future ancestors.**

Our intention in using a community-based participatory research approach was to grow our knowledge and understanding of the YLT program and its outcomes through the application of our partners' expertise, while grounding the inquiry in our lived experience as community practitioners. This application of the practices of makawalu (seeing through many perspectives; literally 'eight eyes') and kilo (direct observation, generally as a practitioner) has affirmed much of our experiential knowledge, while productively complicating some of our assumptions and inviting us to look at our work with (k)new eyes and a (k)new perspective.

By leading this research partnership ourselves, rather than outsourcing the evaluation work, we undertook an organizational learning journey. We believe that what we may have sacrificed in terms of objectivity, we gained in internal capacity. We also ensured the salience of the inquiry to our current programming, ongoing expansion work, and future aspirations.

The Dialogues have brought us up to date with a snapshot of the current status of a substantial number of the YLT alumni, and insight into their reflections on how the YLT experience served them at the time and what it has meant to them since. This lays the groundwork for ongoing engagement and dialogue, through which we are committed to pursuing the complications, confusions, wonderings, and further inquiries that emerged from this initial effort. We anticipate that this will include a longitudinal and/or periodic ongoing inquiry, to be designed through our current (2021) evaluation strategy work.

As we translate the process learnings from this effort, we plan to develop a more systematic method of engaging with the YLT participants after they complete the program, and are currently exploring ideas for ongoing support, mentorship, and mutual learning opportunities. We are also refining existing survey tools to allow for the continuous tracking of program effects, including administering a trimmed pretest of the ongoing alumni the questionnaire to every future YLT participant. Finally, we are retooling our exit interview for all interns, including those who attrition out of the program prior to graduation, to better gather and analyze interns' mana'o about best practices and areas for improvement.

In the next chapter of this work we look forward to ongoing pilina building with and amongst the alumni community. We hope that this will enable us to hear and learn from additional alumni, including those who didn't stay in the program as long, or get their degree, or who were not happy with their YLT experience. Most vitally, we look forward to hearing the alumni's reactions to this report, and welcome their feedback about how it reflects or deviates from their own perspectives about how to gauge the impact of the YLT and its outcomes in their lives, their families, and the community.

We anticipate that this broader reach will be facilitated in part by the alumni who did participate in this inaugural effort, thereby strengthening their pilina with MA'O and each other. We intend to further deepen these rekindled connections through in person events (once COVID-19 restrictions are lifted) that ground alumni in their connection with the Wai'anae 'āina, as well as online events that include alumni who no longer reside on O'ahu. We hope that this will also strengthen the mutual trust and shared curiosity required for future collaborative, longitudinal inquiries.

The work ahead is to honor the voices of our future ancestors by translating this research into meaningful individual, program, and community impact. To this end, it is now our kuleana to return this learning to the system to evolve and refine our programming, and to share it with our education, employment, community, and funding partners and with policy makers to elevate our collective knowledge and capacity to grow the health and well-being of the youth, their families, and community.

## FUTURE INQUIRIES

**Individual-structural interplay** - the study raised questions regarding the complex interplay between youth's experience *within* the YLT program and their structural, environmental, and familial context, which can impinge upon and/or bolster individual experiences and outcomes. We are keen to use future inquiries to further explore the role of structural, systemic, and environmental factors, how they impinge upon and/or enhance opportunities for individual youth during and after participation in the YLT, and what programming most effectively and constructively intervenes in these cycles. In particular, we want to learn more about why, how, and when programmatic support is strong enough to balance or outweigh these countervailing challenges, and why and when it is not.

**Social networks** - the role of youth as influencers in their social networks arose repeatedly throughout our analysis. These findings reinforce the promising early findings of the Maui Ola Study that indicated a YLT multiplier effect that amplifies the benefits of program to participants' social networks. Future inquiries should delve further into how youth exert an influence on their families and broader networks.

**Meaningful work** - the discussions and insights regarding alumni work outcomes stemming from this project have constructively problematized our understanding of 'sustaining careers' and 'meaningful work,' causing us to re-examine our assumptions and perspectives about the acquisition and application of skills, opportunities to lead and mentor regardless of title or position, aspirations to do work that serves community, the imperative for financial stability, and the complex personal and structural challenges that can enhance or impede access to opportunities and career mobility. These learnings (and the resulting new questions) regarding alumni's leadership, career, and wage outcomes are of particular salience during the Mā'ona expansion effort, as MA'O works with youth, educational institutions, and employers to forge clearer and stronger college to career pathways within the MA'O 'auwai, at MA'O as an employer, and in the broader community.

**Health** - the analysis yielded a complicated, sometimes conflicting picture of alumni health outcomes. We learned that alumni maintain healthier behaviors than their peers (less smoking and drinking of alcohol), that they are at a lower risk of obesity than their peers, and that they continue to consume vegetables at a higher variety, volume, and frequency than their peers. We also confirmed that microbiome data is a constructive method for corroborating self-reported vegetable consumption. This veggie outcome appears to be grounded in alumni's commitment to the principles and practices of food sovereignty. However, we also learned that many alumni continue to be at a high risk of being diagnosed with type-2 diabetes, even more so than their peers. We are left with more questions than ever about if, why, and how diabetes risk plays out for the alumni over time. We are keen to continue build on the alumni data and the data from the Maui Ola Study to conduct further longitudinal research to further interrogate persistence of positive health behaviors across time for discreet individuals.

**Avoided societal costs** - Our exploration of several health and socio-economic indicators, including the use of public benefits and experience with incarceration, ties in with the potential for using social impact bonds or other policy mechanisms that measure societal cost avoidance to justify investing in youth capacity building and education. We initiated this analysis with caution, given the mixed picture that has emerged from early efforts with social impact bonds. Our experience has underscored the difficulties of measuring avoided societal costs on a timeframe that is relevant to the investment made in youth capacity.