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# Integrating Segmentation Analysis into Sexual and Reproductive Health and Rights Programs

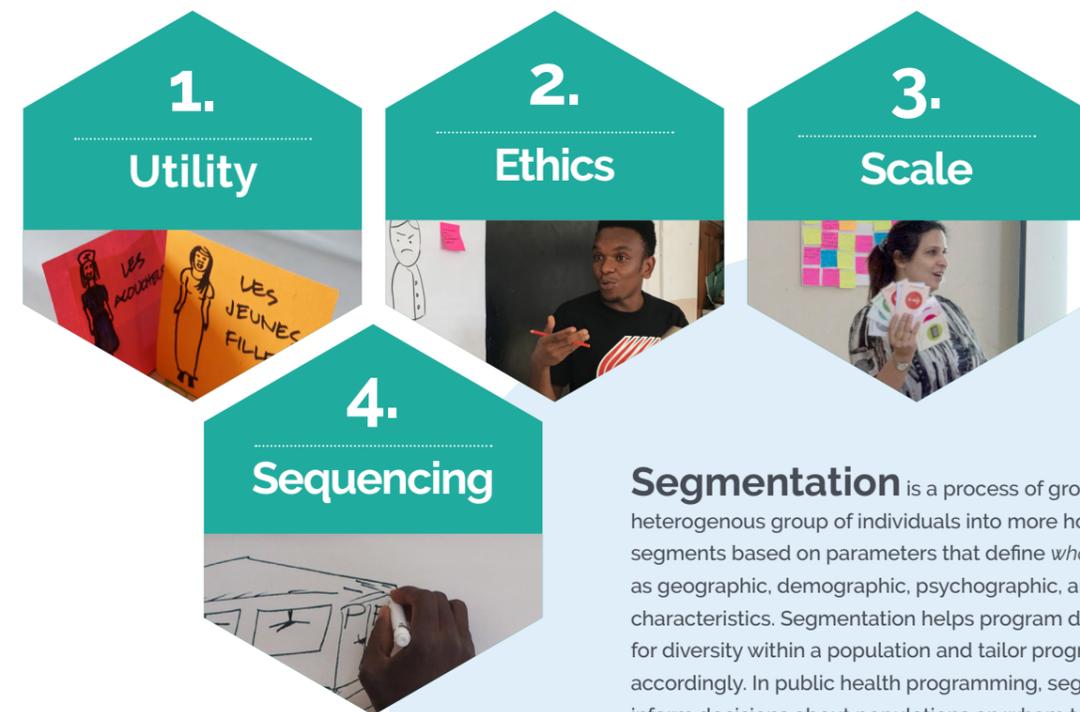
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## Introduction

While psycho-behavioral segmentation is an increasingly common approach in global health programming, there is a dearth of documentation of its application, lessons learned, and best practices.

In an attempt to bridge this gap, the [Beyond Bias project](#) identified **four critical factors** that might be helpful for future projects to consider when integrating segmentation analysis into a program:



**Segmentation** is a process of grouping a heterogeneous group of individuals into more homogenous segments based on parameters that define *who they are*, such as geographic, demographic, psychographic, and behavioral characteristics. Segmentation helps program designers account for diversity within a population and tailor program approaches accordingly. In public health programming, segmentation can inform decisions about populations on whom to focus and how best to reach them.

**Psycho-behavioral segmentation** the focus of this brief is a process of dividing people into groups based on *what they do*—in other words, their behaviors and the motivations, attitudes, beliefs, needs, and other factors that influence these behaviors. Psycho-behavioral segmentation has been shown to be superior to demographic segmentation at creating distinct, meaningful segments.

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# Introduction

This technical brief is a retroactive assessment of how Beyond Bias and three other Pathfinder International projects — IMPACT, (re)solve, and YUVAA (Table 1)—incorporated segmentation analysis and perceive the relevance and application of the four critical factors within their SRHR programs.

Camber Collective led segmentation analysis in each of the four projects, all funded by the Bill & Melinda Gates Foundation.

This brief seeks to raise broad questions and share lessons to fuel dialogue and learning in segmentation and to guide donors and implementers in considering utility, ethics, scale, and sequencing when incorporating segmentation analysis into their own global public health programming.

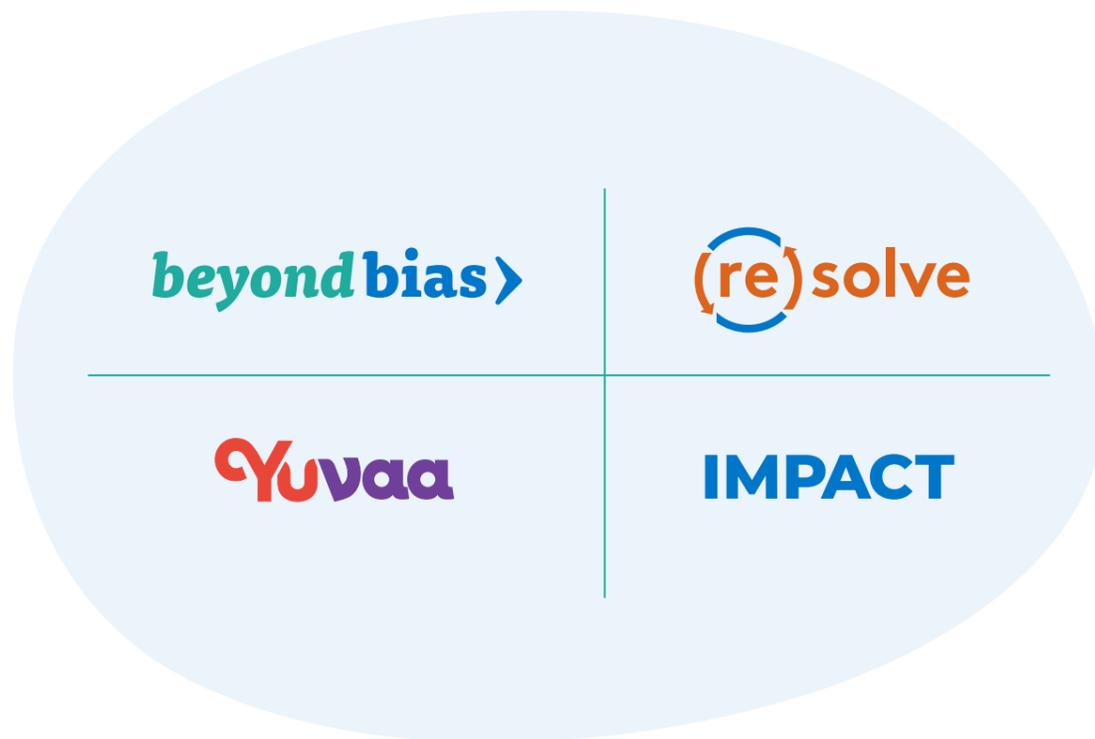


Table 1. Use of Segmentation Analysis by Four Projects\*

Project	Goal	Used segmentation analysis to...
<b>beyond bias</b> (2016–2022)	Design and test scalable, innovative solutions to address provider bias in contraceptive services for youth ages 15 to 24 in Burkina Faso, Pakistan, and Tanzania	Better understand the major drivers of bias by country: <ul style="list-style-type: none"> <li>• How do these drivers present in each context?</li> <li>• Are there trends in the appearance of these drivers in segments across regions?</li> <li>• What are the key opportunities and obstacles to shifting provider attitudes and behaviors in each context?</li> </ul>
<b>IMPACT</b> (2014–2018)	Strengthen family planning service delivery at facility and community levels in Niger, including access to injectable and long-acting reversible contraceptives	Develop and test a tailored family planning segment-based counseling guide to increase quality of family planning services among adolescents and women of reproductive age
<b>(re)solve</b> (2016–2021)	Design and test scalable and innovative solutions through use of context-specific behavioral insights to address nonuse of contraceptives in Bangladesh, Burkina Faso, and Ethiopia	Gain knowledge about the needs, attitudes, and psycho-behavioral factors that influence women's and adolescents' use or nonuse of contraceptives and develop customized solutions
<b>Yuvaa</b> (2018–2022)	Increase demand and uptake of modern reversible contraception and shift social and gender norms among young married couples and first-time parents ages 15 to 24 in 10 districts of Bihar and Maharashtra states in India	Identify distinct subgroups with varying relative propensities to change behavior, and guide the design of YUVAA program content, program deployment, and technology solutions

\* These four projects are all funded by The Bill & Melinda Gates Foundation and have been implemented by partners including Pathfinder and Camber Collective. The William & Flora Hewlett Foundation funded the original segmentation work that informed IMPACT.

# What Does Segmentation Offer Global Public Health?

Segmentation can be done using variables including demographics, behaviors, needs, aspirations, values, or perceptions of social norms (Figure 1).

Psycho-behavioral segmentation can be particularly helpful in identifying factors driving demand for products like contraceptives.<sup>1</sup> In Camber Collective's experience, psycho-behavioral segmentation methodology is often inspired by marketing science, including the psychology of consumer behavior, and by social anthropology, human development and behavioral economics, cultural and health psychology, demography, social network analysis, and gender studies.

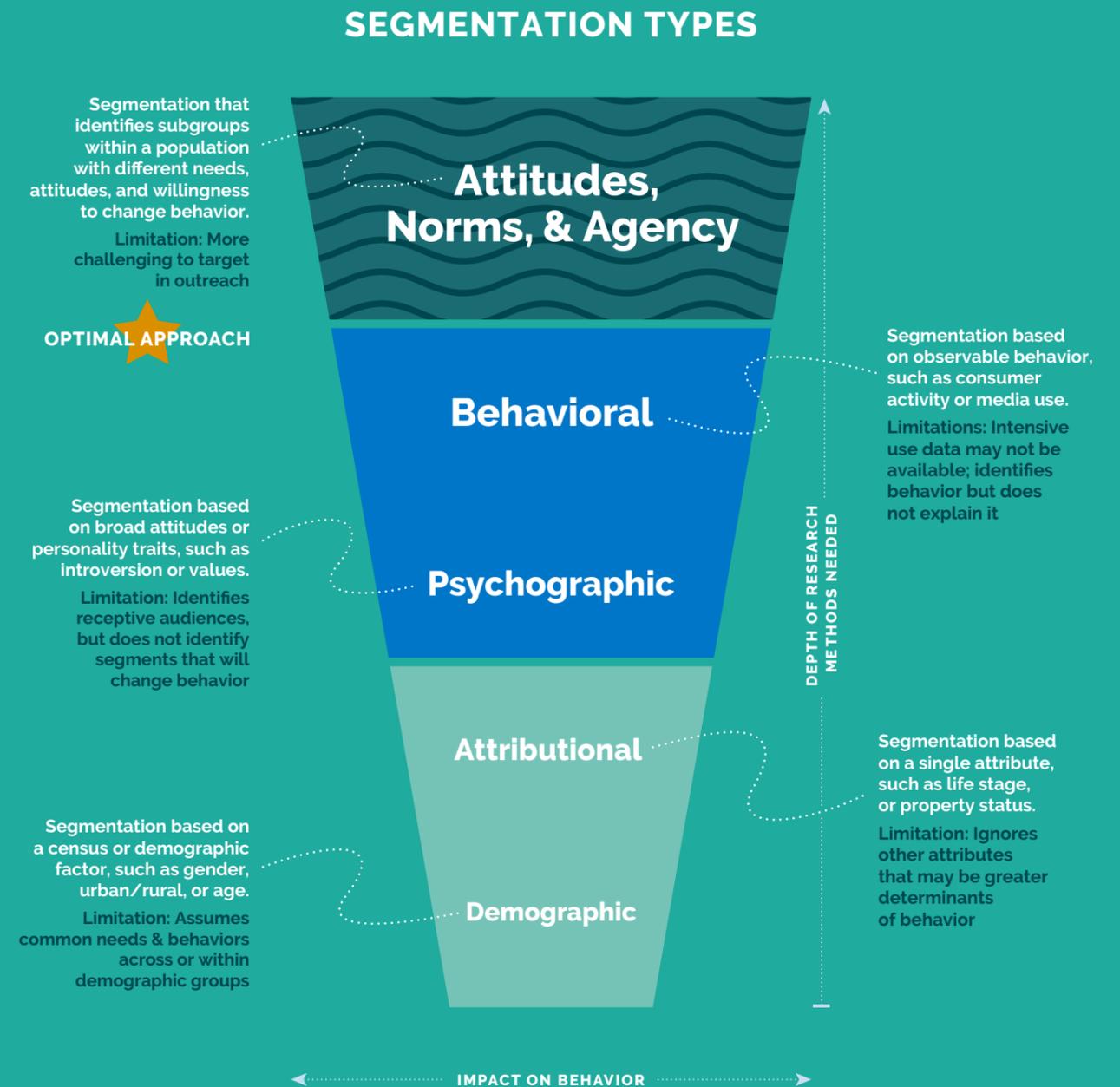
The private sector has long understood that people buy or reject products and services for diverse reasons. In the 1960s, market-research pioneer Daniel Yankelovich<sup>2</sup> noted that segmenting customers by demographic factors such as age, income, or geography is inadequate; he argued for differentiating people by their needs and behaviors, and the attitudes behind those needs and behaviors. Companies began dividing customers into groups based on *what they do* (their behaviors) and *why they behave the way they do* (the motivations, beliefs, and other factors that influence behavior). By capturing distinct, relevant, and actionable differences within populations, targeted marketing messages and interventions improved the bottom line of companies.<sup>3</sup>

Global health practitioners routinely employ a form of segmentation when tailoring or adapting services or interventions for specific groups based on demographics, geography, and other contextual factors—for example, adolescent-friendly HIV or sexual and reproductive health (SRH) services, support groups for pregnant women living with HIV, and linguistically or culturally appropriate community outreach. In recent years, donors, motivated by the desire for greater impact on health outcomes, have called for global health implementers to deepen this approach by

adopting psycho-behavioral segmentation principles.<sup>4</sup> The idea is to better understand the underlying beliefs, practices, motivations, and biases of the people programs seek to serve and to classify them into segments in order to better prioritize and tailor services, interventions, and messages and to help predict the individuals or groups who may be more receptive to changing their behaviors. Knowing which groups are more receptive to behavior change makes it possible to better prioritize groups of focus, and to decide on the required intensity of interventions.<sup>5</sup> While public health education and behavior change communication, including in low- and middle-income settings, have long employed different types of segmentation to hone message or select communication channels, the psycho-behavioral approach (referred to as "segmentation analysis" hereafter in this brief) remains a relatively new approach in other global health domains, and there is a dearth of documentation or supported evidence or validation for using it.



Figure 1. Behavioral and Attitudinal Segmentation Most Predictive of Populations' Future Behavior

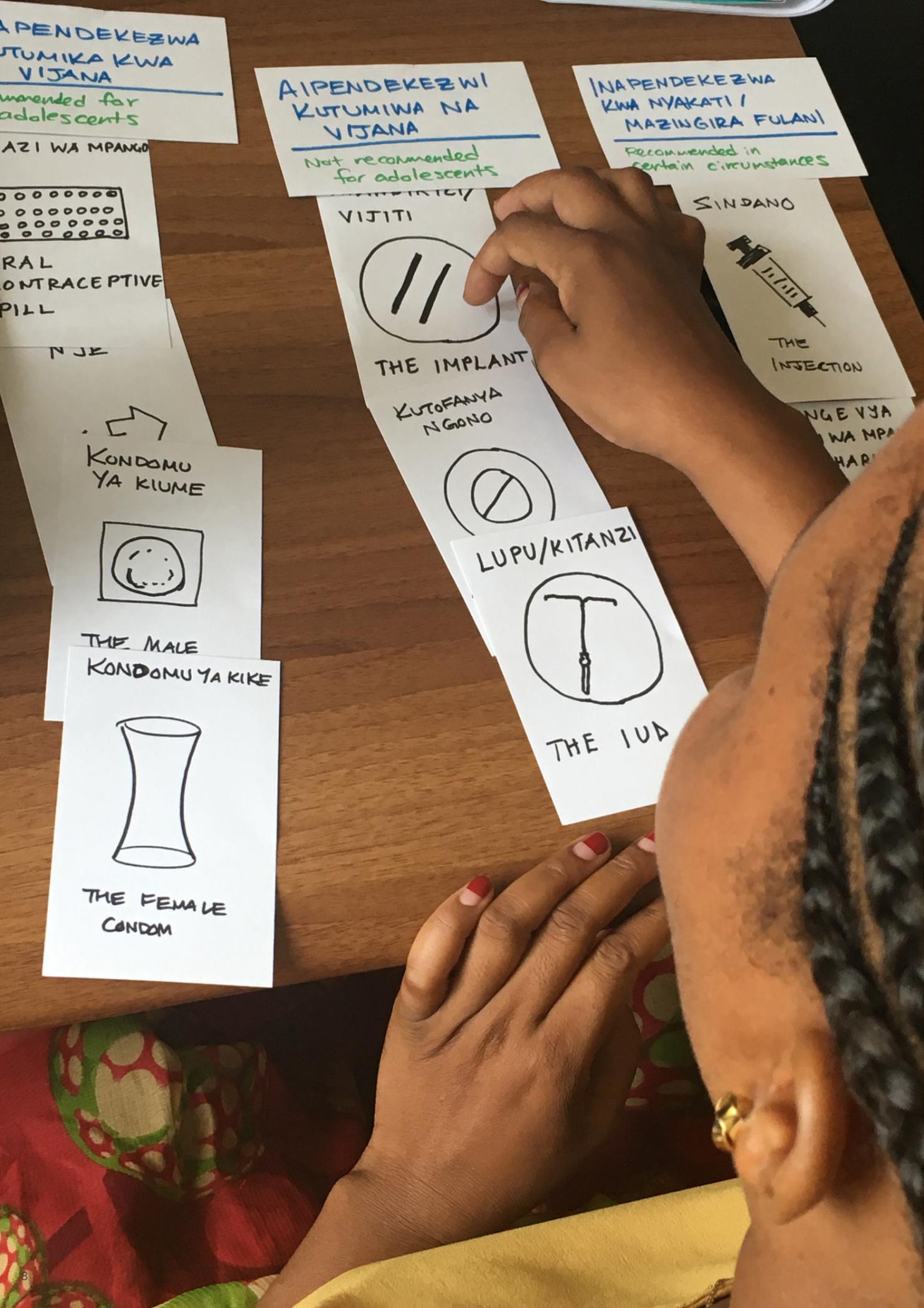


<sup>1</sup> Daniel Yankelovich and David Meer, "Rediscovering Market Segmentation," *Harvard Business Review*, February 2006, <https://hbr.org/2006/02/rediscovering-market-segmentation>

<sup>2,3</sup> Yankelovich and Meer, "Rediscovering Market Segmentation"

<sup>4</sup> In addition to the Bill & Melinda Gates Foundation-funded projects mentioned in this brief, examples of donor-funded health and development interventions using segmentation include: Accelerating Family Planning Demand Through Advanced Audience Segmentation (supported by the William & Flora Hewlett Foundation), the SBC-focused Transform/PHARE project (USAID), and pharmaceutical partnerships and social marketing with the private sector in SHOPS Plus and PSP-One projects (USAID). USAID projects also have used segmentation for reproductive health supply and broader commodity supply chain management. USAID includes segmentation in its discussion of social marketing as a high-impact practice (HIP) for family planning. Market segmentation principles also inform some USAID-funded projects in the Democracy, Human Rights, and Governance and Economic Growth sectors.

<sup>5</sup> Yankelovich and Meer, "Rediscovering Market Segmentation"



## Four Critical Factors to Consider When Using Segmentation Analysis in Global Public Health

1.

Utility



2.

Ethics



3.

Scale



4.

Sequencing



Learn how Beyond Bias and other Pathfinder projects used these four factors on the following pages.



# 1.

## Utility



### Definition of utility: the effectiveness of the segmentation analysis approach (versus no segmentation or standard segmentation based solely on demographics)

### Key question: How much value did psycho-behavioral segmentation add to the design process, beyond what demographic variables would normally provide?

For more than three decades, health communication researchers have called for the development and testing of more sophisticated segmentation techniques to capture and address the diverse nature of audiences.<sup>6</sup> Psycho-behavioral segmentation has been shown to be superior to demographic segmentation at creating distinct, meaningful segments.<sup>7</sup> When segmentation captures clear, discrete, relevant, and actionable differences within populations, targeted messages or interventions have the best chance of success.<sup>8</sup> However, the utility and feasibility of psycho-behavioral segmentation is largely dependent upon the ability to strike a balance between providing information that offers valuable nuances for use in programming (for example, developing tailored health messages or differentiated service delivery) and providing information that overwhelms already-overburdened health providers. With its roots in private sector consumer marketing, segmentation analysis provides rich information to enable identification and understanding of subpopulations with different behavioral drivers. While the private sector often has sufficient resources to target multiple sub-groups, the public health sector's more limited resources often require practitioners to prioritize some interventions or subpopulations over others. (See Ethical Considerations.)

#### Utility of Segmentation Analysis in the Projects

**Beyond Bias** used a literature review, expert interviews, and a provider survey to identify primary behavioral and attitudinal drivers of provider bias, identifying six segments (provider profiles) across the three project countries. The project distilled eight key insights about provider and youth behavior and motivation from more than 300 qualitative interviews and

subsequent analysis of qualitative and quantitative findings. These segments and insights were significantly more detailed and nuanced than sociodemographic indicators alone. They deeply informed subsequent programming, particularly the human-centered design (HCD) concept prototyping, testing, and refinement phases led by partners<sup>9</sup> and the country-specific tailoring of the final interventions implemented and evaluated. YLabs and Camber Collective collaboratively developed a Beyond Bias segment profiling tool—a 5-to-10-question version of the much longer segmentation survey. Pathfinder country office teams used the simple tool during participant recruitment to ensure that the provider pool recruited for prototype testing represented the larger segment pools in the country. While the overall Beyond Bias strategy is uniform across the three countries, the project tailored interventions for each country by segments to increase sustainability and the likelihood of behavior change impact.

**IMPACT** found that segmentation analysis findings (e.g., level of trust in health providers, importance of decision making in collaboration with husband, preference for traditional versus modern methods) were more specific than sociodemographic characteristics. The segmentation analysis findings helped IMPACT prioritize segments by their likely propensity for behavior change and better adapt provider counseling cards to key segments. These adapted counseling tools help the provider to quickly “place” a client into a segment and adapt the counseling session and messaging accordingly.

**(re)solve** used segmentation analysis as a foundation upon which to build a behavioral economics approach, and to generate more nuanced insights into key behavioral barriers of the different segment groups. (re)solve cross-analyzed behavioral bottlenecks—for example, husband's disapproval

of contraceptive use or perceived risk of infertility by segments to prioritize them, and to inform the design of project solutions that addressed specific bottlenecks. Tailored solutions included a board game that promotes SRH information seeking and contraceptive decision making (Burkina Faso), a pregnancy risk assessment card for use by health extension workers (Ethiopia), and visual reminder stickers with oral contraceptive pill packs (Bangladesh).

In Bangladesh, the (re)solve team also explored interesting and contradictory insights among findings from the segmentation analysis and findings from the behavioral diagnosis (behavioral science-informed qualitative interviews that used the segmentation classification tool to further analyze behaviors and motivations). The contradictions and discrepancies between segmentation and behavioral diagnosis, found in some capacity in all three countries, raised methodological questions and generated discussions about which information to rely on when designing programs or interventions: the quantitative results from segmentation or the qualitative findings from behavioral diagnosis.

**YUVAA** used segmentation analysis results to identify distinct subgroups with varying relative propensities for behavior change. The project found that while two segments might share similar demographic characteristics and levels of knowledge, they could still fall under different segments based on their propensity for behavior change. This information helped the project to identify priority populations and refine program design. YUVAA used segmentation analysis to design tailored, effective, efficient interventions that focused on those more likely to change behavior but left no one behind. YUVAA also applied segmentation in the following aspects of the project:

- **Development of social and behavior change (SBC) content:** Content was tailored to address the specific triggers and barriers faced by the identified segments
- **Selection of technology platforms:** Variation among segments regarding smartphone access and literacy, including use of apps, texts, and audio content, informed the determination of appropriate communication channels for reaching each segment
- **Program deployment:** YUVAA planned strategic outreach efforts, beginning in districts with a higher concentration of segments with the highest propensity for behavior change. By reaching for the low hanging fruit first, the project might have a smoother initiation and a solid foundation on which to ramp up.

The in-person counseling version of YUVAA was implemented in two lab districts, after which scale-up was virtual due to COVID-19-related restrictions. House-to-house outreach

and in-person counseling ceased, and YUVAA Corps members had to be retrained as digital counselors. Therefore, full scale-up to the 10 selected districts has been delayed. Given this context, the segmentation analysis, while theoretically useful, has not been fully evaluated. The COVID-19-related delays and pivots have made it hard to measure the relative advantage of segmentation analysis over standard practices such as demographic analysis and audience engagement tactics for SBC programming.

#### Considerations: Utility of Segmentation Analysis

Ultimately, it seems that the greatest utility of segmentation is to inform program design, including decisions about whom to target and how. Segmentation can have a wide range of additional applications, however. Given the vast potential applicability, projects should carefully consider what they are looking to gain from segmentation analysis in their specific context before embarking on the path. Segmentation analysis can be a resource-intensive process. Conclusive proof of its value and impact is not always available, so having clarity early on about the desired utility of segmentation analysis in a specific context is critical. Consider the following questions:

- What does the donor or implementer hope to learn from segmentation analysis? What are the variables of interest?
- How does the donor or implementer intend to apply segmentation analysis findings in project implementation?
- Would other, less resource-intensive means of engaging with target audiences (for example, demographic segmentation) yield similar findings?
- How will segmentation analysis and findings add value to project interventions or tools? Will that positively affect project outcomes, effectiveness, and/or efficiency?
- People's knowledge, attitudes, motivators, and behaviors shift over time; as such, they may move into different segments. Is there a risk that, during the project lifecycle, a critical mass of individuals will change segments, making tailored tools and interventions less relevant or effective? How could the project realistically adapt to such a shift, technically or managerially?
- Does the project have, or can it obtain, the necessary time, technical, and financial resources to conduct segmentation analysis and apply the findings?

<sup>6</sup> V. S. Freimuth and W. Mettger, “Is There a Hard-to-Reach Audience?,” *Public Health Reports (Washington, D.C.: 1974)* 105, no. 3 (June 1990): 232–38; Edward W. Maibach et al., “Translating Health Psychology into Effective Health Communication: The American Health Styles Audience Segmentation Project,” *Journal of Health Psychology* 1, no. 3 (July 1996): 261–77, <https://doi.org/10.1177/135910539600100302>; M. W. Kreuter, “Tailoring: What's in a Name?,” *Health Education Research* 15, no. 1 (February 1, 2000): 1–4, <https://doi.org/10.1093/her/15.1.1>

<sup>7</sup> Sarah E. Boslaugh et al., “Comparing Demographic, Health Status and Psychosocial Strategies of Audience Segmentation to Promote Physical Activity,” *Health Education Research* 20, no. 4 (August 1, 2005): 430–38, <https://doi.org/10.1093/her/cyg138>.

<sup>8</sup> Sema K. Sgaier, Elizabeth Engl, and Steve Kretschmer, “Time to Scale Psycho-Behavioral Segmentation in Global Development,” *Stanford Social Innovation Review*, Fall 2018, [https://ssir.org/articles/entry/time\\_to\\_scale\\_pscho\\_behavioral\\_segmentation\\_in\\_global\\_development#](https://ssir.org/articles/entry/time_to_scale_pscho_behavioral_segmentation_in_global_development#)

<sup>9</sup> The Beyond Bias experience using HCD is documented in a series of technical briefs, <https://www.pathfinder.org/beyond-bias-human-centered-design/>.

## 2.

### Ethics



## Definition of ethics: the potential unintended consequences or moral decision points that arise through segmentation analysis or application of its findings

### Key question: What ethical considerations, if any, might the project have to consider as a result of incorporating segmentation analysis or its findings into project design and/or implementation?

In a private-sector marketing or consumer context, segmentation is frequently used to maximize sales by targeting consumers who are most likely to buy a product. Similarly, in public health, segmentation can be used to identify subgroups with the highest propensity for behavior change, or the highest interest in a certain public health good. In contrast to the private sector, however, the public health sector often has limited resources and cannot necessarily reach everyone who may have an interest. Limited resources must be carefully allocated; choices must be made with regard to which subgroups are prioritized (for example, those most vulnerable versus those most likely to take up the good or service) and what kinds of approaches to use with different subgroups to maximize the chances of uptake. These decisions can be difficult for project teams.

#### Ethics of Segmentation Analysis in the Projects

**Beyond Bias** sought to reduce provider bias that hindered delivery of quality adolescent and youth sexual and reproductive health (AYSRH) services. Therefore, across the three countries, the project deliberately prioritized the five segments of providers who were more likely to change their behaviors, omitting one segment of providers present only in Pakistan who appeared to be very set in their ways and unlikely to change behavior. (These "paternalistic clinicians" comprised 13% of providers in Pakistan). While this approach should generate more change for clients over a longer period of time by reducing bias early in providers' careers, in the immediate term, the project had to accept that it would not directly help clients who, by happenstance, were seeing a member of a provider segment deemed unlikely to change.

**IMPACT** identified a segment of women with high awareness of family planning methods and strong beliefs, including religious, that prevented them from considering family planning use, and who reported passivity when it came to health information seeking and decision making. In some situations, this segment might be deprioritized as difficult to reach, and resources might be allocated for other segments. However, such an exclusion did not feel appropriate to the Ministry of Health in Niger, whose mission is to reach all women, especially those who are more difficult to reach, and the project opted to neither exclude nor deprioritize this group.

When segmentation is applied in the context of public health, potential misuse and oversimplification of data can have unintended ethical consequences. During the development and initial pilots of IMPACT's segment-specific family planning counseling cards, the team worried that their five-segment model might prevent providers from supplying a more personalized approach to counseling and could influence providers to recommend certain methods over others (in opposition to the concept of fully informed choice). After some discussions and observation of the current counseling approach, it became apparent that providers were already struggling with time constraints and the pressure to provide all information to all clients, leading to rushed and impersonal client-provider conversations. The segmentation tool helped to improve the quality of counseling overall. However, to help ensure that the segmentation tool did not undermine informed choice, the project emphasized to providers that while segmentation could provide a better starting point for client-provider conversations, it should not be used to skip or minimize important conversations and decisions about method choice.

**(re)solve** initially considered prioritizing client segments who had the greatest propensity to change but, after discussion with the donor and project partners including ICRW and ideas42,

**(re)solve** decided that the behavioral diagnosis, to be conducted by ideas42, should not be limited to just a few segments. Rather, the project chose to focus the behavioral diagnosis (qualitative interviews to further analyze cognitive biases, behaviors, and motivations) broadly so that all segments could be further developed and explored. In addition, the **(re)solve** project was initially leaning toward an ultimate output in the form of a package of interventions that reached *all* segments, while also addressing segment-specific drivers identified through segmentation analysis. Having additional information about all segments was useful in the project's attempt to leave no one behind. Ultimately, the additional information helped to inform the design of solutions and interventions specifically in Burkina Faso where the project focused on unmarried girls. After mapping behavioral bottlenecks against segments in Burkina Faso, **(re)solve** found that unmarried girls experienced many more bottlenecks than their married peers. Overall, the project prioritized certain groups for interventions but did not do so until after both segmentation and qualitative research, or behavioral diagnosis, were both completed for all segments.

**YUVAA** made a deliberate decision to not exclude marginalized or otherwise difficult-to-reach groups and instead adjusted interventions for them. For example, YUVAA delivered family planning or other health messages via frontline workers rather than WhatsApp if the intended recipient did not have access to mobile phones or internet.

#### Considerations: Ethics of Segmentation Analysis

These examples reflect familiar tensions in global public health programming namely, how to allocate limited resources for optimal benefit. Projects considering segmentation analysis should be ready to answer questions such as those below and should include "pause points" in design and monitoring processes for self-reflection and engagement with local partners to identify and address unintended consequences or ethical decision points. In addition, they should put in place mechanisms that promote inclusion of a broad range of groups (for example, translation of tools to local languages for counseling sessions) so that subpopulations are not unintentionally excluded. For example, IMPACT worked closely with local NGO Animas Sutra and the Ministry of Health to pilot test the segmentation tool. The project translated its counseling cards into the Hausa and Zarma dialects for providers working with family planning clients from different backgrounds. Activities like these can and should be incorporated into project monitoring and adaptive management systems and structures. Consider the following questions:

- Does the project seek to narrow or prioritize some interventions or subpopulations over others?
- Will such prioritization do harm to deprioritized groups or spark conflict within communities? Are there other projects or interventions in the implementation area that serve the deprioritized groups?
- Does the project have (or intend to develop) monitoring and adaptive management mechanisms to detect and address harmful unintended consequences or ethical quandaries surfaced by segmentation analysis or application of its findings?



### 3. Scale

**Definition of scale: the ability to generalize segmentation results to other geographies or contexts, or to implement programs with broad geographic reach**

**Key question: How will the project balance the priorities of tailoring interventions for specific segments, expanding the reach of solutions, and maximizing the impact of limited resources?**

Segmentation deliberately examines distinctive characteristics within a subgroup whereas scaling requires generalization, typically putting the two priorities at odds. If a segmentation analysis is conducted using nationally representative data with a large enough sample size, the segments could be relevant for national- and regional-level programming (as in IMPACT),<sup>10</sup> but might require more careful planning and resources than a narrower segmentation analysis. The tension between tailored versus scalable or generalizable interventions is familiar for global public health practitioners. Segmentation analysis is an area in which donors and implementers must acknowledge this tension and decide what is appropriate for each situation.

#### Scale and Segmentation Analysis in the Projects

**Beyond Bias** conducted one pooled segmentation for Burkina Faso, Tanzania, and Pakistan, but with a consistent sample of nurses and physicians providing family planning services. The project identified six segments and then prioritized dominant segments and segments where the project had the potential to shift behavior in each country. This allowed the project team to compare findings across countries, to simplify implementation, and to increase potential for scale within and across regions. The trade-off, however, was a loss in nuance of the segmentation at the country level.

Within the three countries where **Beyond Bias** conducted the segmentation, each segmentation should be representative at a national level, with the caveat that the providers came from a pool

of Pathfinder contacts and therefore may not fully represent providers at all public facilities. However, the variables used to segment the providers should generally hold across all providers in the country. Generalization to surrounding regions should begin with a discussion among local stakeholders about whether local partners feel that segmentation is relevant for their country. Time and resource permitting, it would be ideal for them to follow the process used by the Agir-PF project—namely conducting light qualitative research to identify the segments in new geographies and discussing nuances that may be important to consider for each geographic area.

**IMPACT** used segmentation analysis findings from Niger to tailor approaches and tools for scale-up within that geography. **IMPACT**'s family planning counseling guide, which was tailored to different segments, is being scaled up nationally in Niger. **IMPACT** developed the segmentation used for its model based

on nationally representative data of women of reproductive age in Niger. The project has shared its learnings with other regional actors for potential adaptation or adoption. In fact, the EngenderHealth Agir-PF project used this segmentation to test its relevance in other West African countries including Togo, Burkina Faso, and Côte d'Ivoire. Qualitative testing has shown the segmentation to be generalizable and relevant for women of reproductive age in Togo and Burkina Faso, although the size of the segments differed among countries. In Côte d'Ivoire, the segmentation was less relevant, most likely due to the higher proportion of women engaging in premarital sex in Côte d'Ivoire, and a new segmentation analysis was conducted, resulting in two segments who were engaging in pre-marital sex segments that did not exist in the Niger dataset.

In contrast, **(re)solve** conducted separate segmentations among specific populations in each of the three project countries (for example, married and unmarried urban adolescents in Burkina Faso, rural postpartum women in Ethiopia, and urban garment workers in Bangladesh). The project then used segmentation findings to pivot, focus, and design contextualized solutions that addressed behavioral problems, drivers, and bottlenecks. This approach allowed for a greater level of nuance and specificity in the segment descriptions. It is unclear the extent to which these segmentations or solutions are generalizable to other geographies without identifying opportunities for replication in other countries. **(re)solve** successfully advocated for the replication of its Ethiopia-specific solutions for postpartum women in Bangladesh; success would suggest potential to scale up interventions across geographic boundaries if results are comparable.

Like **IMPACT**, **YUVAA** used segmentation analysis findings from two states in India to tailor approaches and tools for scale-up within that geography. **YUVAA** designed a wide range of project elements (including SBC, counseling, group meetings, and the criteria for selecting project change agents) for at-scale implementation in both Bihar and Maharashtra states. **YUVAA** developed its segmentation based on data from men and women of reproductive age in India and decided to combine the male and female responses and segment irrespective of gender to allow for broader generalizability. Having a gender-neutral segmentation helped to ensure that both the development and deployment of materials would be relevant to the whole population. In addition, having one set of segments for both men and women made it easier to explain segments to **YUVAA** Corps Members

and increased their ability to remember and internalize the specific characteristics of each of the four gender-neutral segments. Ultimately, the decision to limit the total number of segments was useful for implementation but required a trade-off in terms of specificity. That is, if the data had been used to develop a segmentation among women and men separately, it likely could have provided more nuanced segment profiles. This might have made it possible to address specific norms and attitudes with more depth using a gender lens. To date this segmentation has not been tested for its relevance in neighboring geographies.

#### Considerations: Scale and Segmentation Analysis

There is an inherent tension between developing a segmentation that can be generalizable to a broader group or geography and one that is highly customized and context specific, allowing for more precision. Knowing the programmatic goals and aspirations for scale can aid decision making about how generalizable or customized a segmentation should be. Consider the following questions:

- Do project objectives or outcomes seek highly tailored interventions or tools, impact at scale, or the scalability of interventions or tools?
- Does the project aim to address an issue that is specific to context (for example, contraceptive access among urban garment workers in Bangladesh) or more prevalent in a region (for example, attitudes toward contraception among religious conservatives in East Africa)?
- How can the project place parameters on the segmentation analysis to make findings more generalizable (for example, by prioritizing or limiting the granularity of segmentation variables of interest)? Conversely, how can the project limit the extent of expected scale (for example, to other regions or countries with similar demographic, geographic, or cultural contexts)?
- Could the interventions or tools theoretically be adapted to other contexts? Does the project have the mandate and resources to adapt them or to provide guidance for adaptation?



<sup>10</sup> W. A. Kukull and M. Ganguli, "Generalizability: The Trees, the Forest, and the Low-Hanging Fruit," *Neurology* 78, no. 23 (June 5, 2012): 1886–91. <https://doi.org/10.1212/WNL.0b013e318258f812>

## 4.

### Sequencing



**Definition of sequencing: the timing of segmentation relative to other phases of the project, such as design research, ideation, intervention design, or HCD (The projects referenced in this brief conducted segmentation analysis relatively early in the project lifecycle; however, there are distinct differences in the approaches used that can be helpful in thinking about how to sequence segmentation analysis with other project activities.)**

**Key question: For the purposes of my project, at what point should we conduct segmentation analysis?**

#### Sequencing of Segmentation Analysis in the Projects

Beyond Bias employed segmentation at the research stage to inform solution development through a rigorous HCD process that included idea generation, selection, and refinement. The team used expert interviews and a literature review to inform the creation of a quantitative segmentation survey of AYSRH providers. Information from this research helped the team to identify 11 primary behavioral and attitudinal drivers of provider bias and define 6 provider profiles, or segments. Beyond Bias also conducted qualitative design research interviews and focus group discussions with providers, youth, and community members across all three countries. Based on the analysis of the qualitative and quantitative data, Beyond Bias distilled eight key insights about provider and youth behavior and motivation. These segments and insights informed solution exploration and development.

Beyond Bias conducted the segmentation survey and design research work in parallel. While design research findings fed into the earliest stages of idea generation, survey findings were not yet available. As a result, the project could not triangulate data from the two sources at the early solution development stages. Contradictions between qualitative design data and segmentation results were not identified until the design process was underway. At this point, the Beyond Bias partners incorporated targeted brainstorming around two provider segments that were not yet well-represented in the pool of ideas into an existing workshop. Ideally, to optimize

the segmentation analysis for solution design, Beyond Bias would have first conducted qualitative design research and then developed a segmentation survey approach based on the literature review and primary qualitative research results. This would have allowed adequate time for review and triangulation after both qualitative and quantitative work were complete but before idea generation began. Overlap between the qualitative research and segmentation survey development teams would likely have facilitated this process.

IMPACT adapted and implemented a segment-based AYSRH counseling guide with tailored messages for providers using findings from a national-level segmentation analysis that Camber completed in Niger prior to IMPACT's AYSRH engagement with providers. Preliminary results suggest that the segmentation tool may be able to improve the quality of communication and care among family planning clients.

(re)solve conducted two major types of analysis: 1) segmentation (done by Camber Collective), and 2) a behavioral diagnosis (done by ideas42). Given that each of the analyses were to be done by a different partner, it made more logistical sense to carry them out in sequence rather than in parallel. The conceptual thinking was that segmentation results would feed into behavioral diagnosis seamlessly. Segmentation involved gathering quantitative data for a high-level view of population needs across segments, while the behavioral diagnosis focused on using qualitative interviews to understand behavioral bottlenecks that inhibit a person from taking certain actions, and using those insights to begin intervention design.

From the outset this sequencing of activities proved challenging, because it had not been done or tried before. Starting the behavioral design process with segmentation analysis findings (suggesting types of interventions to consider) was antithetical to behavioral diagnosis, which starts with developing behavioral hypotheses without predetermined boundaries or limits. The team adapted both the segmentation methodology and the behavioral design methodology to work together, integrating the two processes. This ensured that segmentation findings informed behavioral diagnosis, idea selection, user testing, and piloting decisions, and that relevant findings from both processes informed the design and implementation of final interventions. Ultimately, segmentation findings helped to focus diagnosis, solution, and intervention design, but the tangible methodological hurdles were challenging to reconcile because of their distinctiveness. In addition, because (re)solve conducted segmentation activities prior to the behavioral diagnosis, instead of after it, the project was somewhat limited in its ability to quantify the size of the behavioral bottlenecks identified in each context. Behavioral diagnosis is a qualitative exercise; without quantitative data collection (of the type that occurred during the segmentation), it is hard to say how large specific bottlenecks truly were. Ultimately, we do not know what better sequencing between segmentation and behavioral diagnosis could have looked like and if a different sequencing order would have produced different insights, solutions, or results.

In contrast with the other projects, YUVAA defined the type of intervention the project would implement before segmentation was initiated. The project was predicated on interventions being carried out through a network of social entrepreneurs. As such, segmentation findings were meant to help tailor and refine—rather than define—project interventions. Sequencing segmentation after initial intervention conceptualization allowed Camber to carefully tailor recommendations and analysis to be relevant to the social entrepreneurship model. This approach had advantages, yet it is unclear given the lack of counterfactual, if YUVAA might have chosen a different type of intervention if the segmentation had been conducted prior to the intervention conceptualization stage. The timing of segmentation and the degree to which project parameters should or should not be set by the time segmentation happens is an ongoing question that necessitates serious consideration.

#### Considerations: Sequencing Segmentation Activities

The projects applied segmentation analysis findings in different ways, at different points in the project life cycle, for different purposes, and alongside other complementary methodologies like HCD and behavioral economics. There is not a clear right or wrong time to conduct

segmentation, but donors and implementers must consider the purpose of segmentation analysis and the application of segmentation findings in each project and sequence activities accordingly. Consider the following questions:

- Does the project prefer open ideation or use of parameters or other guidance for the intervention design process? To what extent?
- To what extent will more sophisticated means of targeting audiences with the programmatic intervention be possible?
  - If the intervention will allow for more precise targeting, and/or if the means of targeting outreach (for example, community outreach, provider consultations, social media) are known, conduct segmentation earlier in the project.
  - If precise targeting is not possible, or if the means of targeting are unknown, it may make sense to wait until intervention design is somewhat known such that segmentation can cater to the complexity of the intervention.
- Does the project aim to integrate multiple methodologies (for example, segmentation with HCD in Beyond Bias, or with behavioral economics in (re)solve)? To what extent? Use of multiple methodologies requires a clear shared understanding early in the project lifecycle of those methodologies and how they will be integrated.
- What does the project expect as a result of such integration? Layering methodologies does not necessarily yield more or even the sum of its parts. Each approach has theories and limitations and may or may not be synergistic. The project should understand and carefully examine and weigh each approach's inputs, methods, outputs, and value—as well as the time and resources required to integrate and implement multiple methodologies.

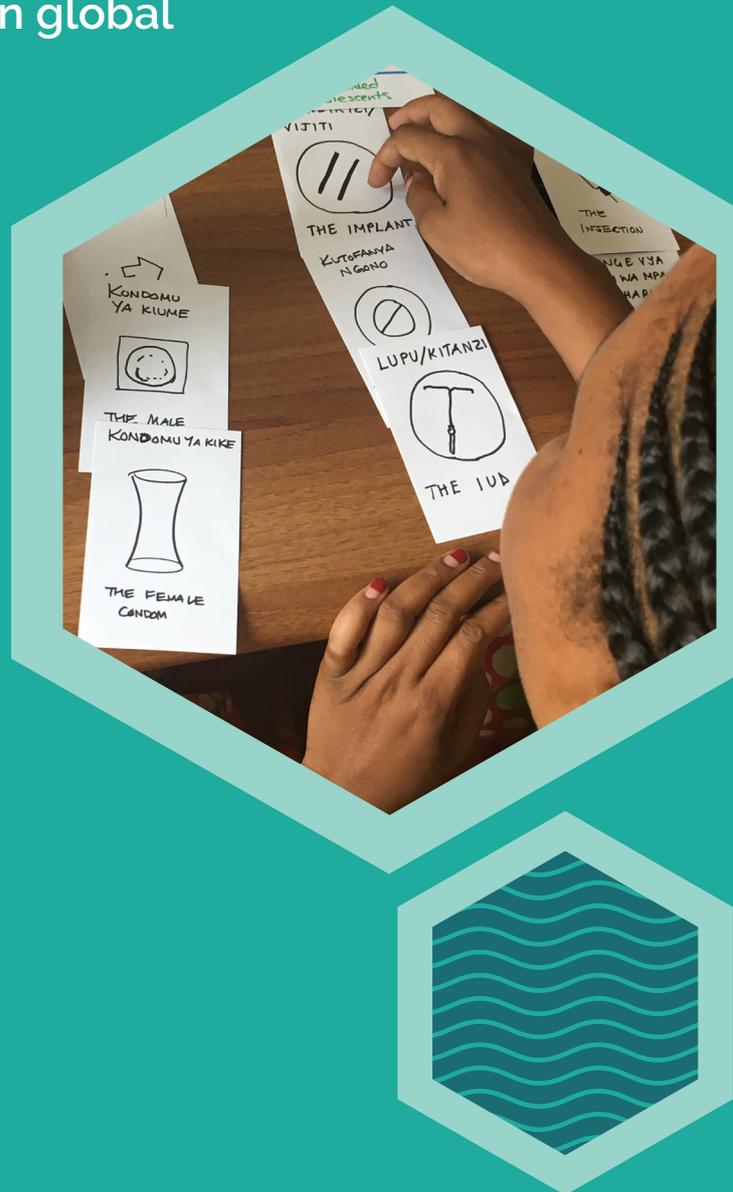


# Conclusion

Effective identification and subsequent tailoring of interventions to populations are two prime examples of the many potential uses for segmentation in global public health.

With a nuanced understanding of what segments exist within a population, an implementer can tailor interventions to those segments. The generally accepted rationale for this practice is that improved targeting and prioritization of segments can help projects better allocate limited resources and increase their likelihood of influencing behavior change. However, a clear purpose and application of the findings is essential to optimize segmentation.

The examples and considerations presented in this brief aim to help global public health donors and implementers and segmentation experts working in global public health to recognize when and how segmentation analysis may enrich project interventions or tools and help achieve project outcomes. There are tradeoffs among the different ways of applying and integrating segmentation analysis in global health, but documentation of these is limited. We hope that this brief sparks ongoing discussion, documentation, and knowledge sharing among global public health stakeholders.



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