

Final Report

A360 Summative Report

Date: June 2022

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Submitted by Itad

In association with Avenir Health and London School of Hygiene & Tropical Medicine



Acknowledgments

We are very grateful for the cooperation of all the A360 Consortium organizations in providing us with the information used to generate this report, and for their valuable contributions to the data collection and analysis process. We would also like to thank all the interviewees, particularly the adolescent girls, who engaged with us through interviews, focus group discussions and participatory research, for sharing their perspectives and experiences.

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With thanks to colleagues who supported data collection and provided valuable insights into country context: Isabellah Luhanga (Cremes International, Tanzania), Hafsat Aboki (Independent Consultant, Nigeria), Honey Hassan (MMA Consultancy, Ethiopia) and Peter Stegman (Avenir Health).

Disclaimer

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List of acronyms

ASRH	Adolescent Sexual and Reproductive Health
A360	Adolescents 360
BMGF	Bill & Melinda Gates Foundation
CI	Confidence Interval
CEA	Cost-Effectiveness Analysis
CIFF	Children's Investment Fund Foundation
CYP	Couple-Years of Protection
DALY	Disability-Adjusted Life Year
FP	Family Planning
GDP	Gross Domestic Product
HEP	Health Extension Program
HCD	Human-Centered Design
HEW	Health Extension Worker
IDI	In-Depth Interview
IUD	Intrauterine Device
LARC	Long-Acting Reversible Contraceptive
LGA	Local Government Area
LSHTM	London School of Hygiene & Tropical Medicine
mCPR	Modern Contraceptive Prevalence Rate
MMA	Matasa Matan Arewa
MoH	Ministry of Health
OE	Outcome Evaluation
OR	Odds Ratio
PAR	Participatory Action Research
PE	Process Evaluation
PMA2020	Performance Monitoring for Action 2020

PPE	Personal Protective Equipment
PSI	Population Services International
RR	Risk Ratio
SFH	Society for Family Health [Nigeria]
SRH	Sexual and Reproductive Health
SSN	Smart Start Navigator
ToC	Theory of Change

Executive Summary

Introduction

Reaching adolescent girls with modern contraception is a global health priority. Adolescents 360 (A360) was a four-year (2016–2020), US\$31 million initiative to increase adolescent girls’ access to and demand for modern contraception in Nigeria, Ethiopia and Tanzania. The program was co-funded by the Bill & Melinda Gates Foundation and the Children’s Investment Fund Foundation, and implemented by Population Services International and the Society for Family Health Nigeria in collaboration with IDEO.org and other partners. A360 drew on six distinct disciplines, including human-centered design (HCD) and meaningful youth engagement, to develop four novel ‘solutions’ (interventions) to reach adolescent girls in four locations: Ethiopia (Smart Start), Nigeria (9ja Girls and Matasa Matan Arewa) and Tanzania (Kuwa Mjanja). A second phase of the program began in 2020 and will run until 2025.

The program hypothesis was that this fusion of disciplines, including meaningful engagement of young people in all phases of the program, would catalyze novel and successful approaches to adolescent sexual and reproductive health (ASRH) that could be replicated around the world. The program was ambitious, embarked upon with an understanding that while the approach would require more resources than was ‘standard practice’, the investment would pay dividends through transforming access to and demand for modern contraception.

This report presents the findings from an independent evaluation of the A360 program. Itad worked in collaboration with the London School of Hygiene & Tropical Medicine (LSHTM) and Avenir Health to independently evaluate and distil lessons from A360 through a process evaluation, an outcome evaluation, and a cost-effectiveness analysis. The evaluation of A360 was commissioned to:

1. Provide timely evaluation data to course correct the program during implementation as necessary, and to maximize the effectiveness and impact of efforts.
2. Assess the impact of the program in increasing contraception access and use among adolescent girls by assessing population-level change in the modern contraceptive prevalence rate (mCPR).
3. Provide a robust evidence base of what does and does not work to reach adolescent girls at scale and cost-effectively, and to what extent the program is replicable.

Key findings

Results from the A360 process and outcome evaluations present a mixed picture with regards to the success of the program. The process evaluation found many examples where A360 was positively received by program stakeholders and girls who accessed the program. It also provided insights into the factors that helped A360 reach high numbers of girls (significantly more than initially anticipated) in its target geographies. In particular, it found that the program’s aspirational engagement approach helped contraception feel more relevant and valuable to girls, and enabled girls to access services in a context of stigma through providing socially acceptable reasons to attend A360 events. The process evaluation also identified some key gaps and challenges, such as: addressing social norms and the enabling environment for girls; consistently engaging with key community influencers; addressing girls’ misconceptions and service provider bias about contraception; and a greater focus on supporting girls to adopt a method as compared to continued method use.

The **outcome evaluation detected varied findings across the four A360 geographies** (Ethiopia, North Nigeria, South Nigeria and Tanzania), with generally more impact associated with girls who were exposed to the A360 solutions **but no impact on increasing the mCPR at a population level, except in Ethiopia.**

Population-level effects of A360 on mCPR

A population-level increase in mCPR was detected in Oromia, Ethiopia. An increase in mCPR was not detected in the other three locations where the outcome evaluation was conducted. In Oromia, Ethiopia, there was a 5.1 percentage point increase in mCPR compared to baseline among respondents to the outcome evaluation survey. In Nasarawa in Northern Nigeria and Ogun State in Southern Nigeria, the outcome evaluation did not detect an effect of A360 on increasing mCPR at population level. In Ilemela, Tanzania, a nine percentage point decrease in mCPR was detected at population level.

The effect of exposure to A360 on mCPR and intermediate outcomes





Exposure to the A360 solutions was associated with higher levels of modern contraception use in the outcome evaluation sites in three out of the four outcome evaluation geographies. In Oromia, Ethiopia and Ilemela, Tanzania, girls exposed to the A360 solutions (Smart Start/Kuwa Mjanja) had twice the odds of using a method than girls who were not exposed. In Nasarawa State in Northern Nigeria, girls exposed to MMA had 1.5 times the odds of using a method than girls who were not exposed. In Ogun State in Southern Nigeria, there was no difference in mCPR between girls who reported exposure to 9ja Girls and girls who were not exposed.

There was more of an effect on the intermediate outcomes among girls who were exposed to the A360 interventions than among girls who were not exposed. This suggests that A360 had more impact on girls who were directly exposed to the program. In many ways, this triangulates with the findings from the process evaluation. The process evaluation, which only surveyed girls who had participated in A360 activities and/or received services through A360 channels, identified many examples of positive outcomes of A360. It also identified challenges faced by girls who were reached by A360.

Cost-effectiveness analysis

Comparing the effect of A360 with its costs, A360 was not found to be cost-effective in any of the study geographies. In other words, the cost-effectiveness analysis findings suggest that the more costly HCD design effort, and the interventions that resulted from that design effort, were not worth the costs incurred in relation to the size of health outcomes achieved (as measured by a change in mCPR).

The effect of A360 on primary and intermediate outcomes at a population level and among girls exposed to the interventions

	 ETHIOPIA: Oromia region (Smart Start)		 NIGERIA: Nasarawa state (MMA)		 NIGERIA: Ogun state (9ja Girls)		 TANZANIA: Ilemela district (Kuwa Mjanja)	
Outcome evaluation components (A full description of each outcome can be found in Annex 1)	Was there an effect at population level? ²⁴	Was there a greater effect for girls exposed to Smart Start? ²⁵	Was there an effect at population level? ²⁴	Was there a greater effect for girls exposed to MMA? ⁵	Was there an effect at population level? ²⁴	Was there a greater effect for girls exposed to 9j Girls? ⁵	Was there an effect at population level? ²⁴	Was there a greater effect for girls exposed to Kuwa Mjanja? ⁵
Adolescents use high-quality sexual and reproductive health products and services								
mCPR (primary outcome)	*	**		**			*	***
Proportion of modern contraceptive users using a LARC	**				*	—	*	
Use of modern contraceptive in past 12 months		*		***				***
Age at first birth among girls who gave birth								
Births in the last 12 months ⁷	—	**		*			—	—
Unmet need for modern contraception		*		*				*
Adolescent girls have access to appropriate high-quality sexual and reproductive health information and services								
Awareness of contraceptive products	*		*	***			***	*
Awareness of where to obtain health services				***				**
Contraception positioned as relevant and valuable for adolescent girls								
Future aspirations ^{1,7}	—		—	*	—		—	—
Benefits of modern contraception (Benefit 1) ²	*		**	**	*		***	
Benefits of modern contraception (Benefit 2) ^{1,3}	—		—		—		—	
Intention to use a modern method				***			**	
Supportive environment for adolescent girls to access services created								
Attitudes towards the use of modern contraceptives	**		*	***	*		**	
Self-efficacy to use modern contraceptives	***						***	*
Descriptive norms ^{1,6}	—		—	**	—		—	
Community acceptance ⁷	**						—	—
Trust and credibility of family planning products								
Misconceptions about modern contraceptives								
Disadvantages of modern contraceptives ^{1,7}	—		—		—		—	—

***	**	*	*		—	
Strong evidence of effect, p<0.001	Evidence of effect, p<0.01	Weak evidence of effect, p<0.05	Evidence of an effect contrary to the hypothesized	No evidence of effect	Not applicable	Not possible to calculate due to sparse data

¹Measured at endline only. ²Assessed through the sentence "Using modern contraception can allow an adolescent woman girl to complete her education, find a better job and have a better life" with which the respondent agreed or disagreed. ³Assessed through the sentence "Using modern contraception can allow a girl to achieve her life goals" with which the respondent agreed or disagreed. ⁴In Northern and Southern Nigeria, effects were measured by assessing the difference between the change in outcomes over time in areas receiving A360 interventions compared with the change in outcomes over time in comparison areas not receiving A360 interventions. In Tanzania and Ethiopia, effects were measured by assessing the change over time, before and after A360 interventions were implemented. All analyses were adjusted to account for demographic changes in populations over time and between intervention and comparison areas. ⁵The effect among girls exposed compares outcomes for those self-reporting exposure to A360 with those self-reporting no exposure to A360. ⁶Assessed through a 'descriptive norms index' which asked three questions related to norms around contraceptive use e.g. 'How many unmarried/married girls aged 15–19 years in your community do you believe discuss using a method of contraception boyfriend or partner/husband or partner?' ⁷Outcome not measured at endline in Tanzania due to COVID-19 adaptations to the questionnaire.

Conclusions

The outcome evaluation suggests that A360's aspiration to achieve catalytic change among adolescent girls was achieved in the study geography in Ethiopia, but not in Northern or Southern Nigeria nor Tanzania.

A360 hypothesized that change in A360's intermediate outcomes (positioning contraception as relevant and valuable, building trust and credibility of family planning and building a more supportive environment for girls to access services) would lead to a catalytic change in adolescent contraceptive use (measured by population-level increase in the mCPR), as a result of increased access to and use of high-quality sexual and reproductive health (SRH) products and services.

Program monitoring data showed that A360 reached over 410,871 adolescent girls with modern contraception from 2017 to 2020, significantly exceeding the overall program goal of 285,674 adopters. However, the outcome evaluation detected population-level mCPR change in only one of the four study areas: Oromia in Ethiopia. This suggests that the program's aspiration to achieve catalytic changes were not realized in Nasarawa and Ogun States in Nigeria, or in Mwanza Region in Tanzania. However, there was a positive association between girls who were exposed to A360 when compared to girls who were not exposed for the primary outcome (mCPR) and for several of the intermediate outcomes in Oromia in Ethiopia, Nasarawa State in Nigeria and Illemela in Tanzania. This suggests that where the program reached girls it did, in some cases, achieve its intended effects.

The evaluation suggests that while A360's use of HCD and adaptive implementation added value to program design and implementation, the approach did not succeed (apart from in Ethiopia) in generating transformative solutions that translated into population-level change, and so did not prove cost-effective.

The process evaluation concluded that while the components within the A360 solutions were, by and large not new, A360 succeeded in conceptualizing and combining them in effective and innovative ways through its use of HCD, meaningful youth engagement, incorporating insights from different disciplines, and working adaptively. This led to a set of interventions that reached large numbers of girls and that exceeded A360's adopter targets. In particular, the HCD and adaptive implementation approaches helped A360 integrate aspirational content that resonated with girls, communities and government stakeholders, which attracted girls to events, built government buy-in, and allowed the program to operate in the context of high levels of stigma. It also allowed the program to adapt in response to data and changing contexts, which led to performance improvements over time, and helped A360 continue delivering services in the context of COVID-19.

The outcome evaluation findings suggest that despite this, the A360 approach was largely not successful in generating transformative solutions that translated into population-level change, with the exception of Ethiopia. As a result, A360 was not cost-effective. Although A360's design process cost seven to nine times as much as its comparator, even without its substantially higher design effort, costs would have been high. This is because A360 was a very person-intensive intervention, and implementation costs were primarily driven by personnel costs.

Ultimately, although A360 succeeded in reaching a large number of girls with modern contraception in often innovative ways, the evaluation cannot definitively conclude that A360 revolutionized ASRH programming in the way it was initially designed to do.

Recommendations

Recommendations are primarily focused on supporting learning across the broader sector working on ASRH programming. However, as many of these recommendations imply trade-offs and balancing donor expectations in the face of limited resources, we have included a final recommendation with the aim of supporting funders in further investment decisions.

Recommendations to support ASRH sector learning

- **Strengthen the focus on addressing social norms and building community engagement to reduce barriers for girls to access contraception.** The process evaluation and the outcome evaluation demonstrate that girls continued to face powerful sociocultural barriers to contraceptive access across A360 geographies. This ranged from lack of acceptance by key influencers and community disapproval, to persistent biases from service providers.
- **Harness the value of the empowerment components by making them more central and responsive to girls' needs, while being alert to the risks of light touch approaches that attract more than empower.** The process evaluation demonstrated multiple advantages of life skills, vocational sessions and aspirational messaging to ASRH programs. This component needs to be a core focus to have an impact on girls' empowerment. This requires either bringing expertise of economic empowerment with adolescent girls into the consortium, partnering with organizations who specialize in this or a combination of both.
- **Manage, monitor and regularly feedback learning from the integration of A360 into public health systems.** This will help to manage tensions and trade-offs between quality, fidelity to key components of the solutions, reach and government ownership. This requires strong government relations, and a shift in the focus of the A360 team from implementation to technical assistance. To monitor performance and learn from government integration, the process will need to be closely documented, and data on what is working/not working and why will need to be regularly collected, analyzed and discussed between A360 and government counterparts.
- **Continue to leverage the 'mindsets' that were built during A360 to design and deliver programs focused on the needs of adolescent girls and to involve young people in the program.** The rigor of the HCD approach ensured the consortium kept the needs of adolescents at the center of the solutions. It also contributed to shifting mindsets of those engaged with A360 towards more empathy for adolescent girls, humility and curiosity, and fostered an adaptive mindset to 'try, fail and adapt' which provided the foundation for the adaptive implementation approach adopted by A360. Engagement with young people in the design process fostered new ways of thinking. This should be continued with A360 and has the potential to extend beyond A360.

Recommendation to support funders' investment decisions

- **When applying HCD, design processes or adaptive implementation, build in sustainability considerations and be clear on the priorities from the outset.** Failure to do so causes inefficiencies in program delivery if implementation teams need to shift their focus to meet sustainability expectations or respond to shifting priorities. This can be mitigated by:
 - Ensuring that sustainability considerations, including pressure to cut costs, are balanced with activities (and the required timeframes) which require a consistent and central focus such as shifting socio-cultural barriers and supporting girls' empowerment.

- Adequately resourcing time to build strong relationships with government, and building government into joint activities and data collection in order to establish the foundations for government ownership.



Overview of evaluation objectives

The objectives of each evaluation component and a high-level summary of the methods used are provided below. Further details are in Section 4 of the full report.

Outcome evaluation:

The primary aim of the outcome evaluation was to assess the impact of A360 interventions on mCPR among sexually active girls aged 15–19 years at population level.

The secondary aims were to:

1. Evaluate the effectiveness of A360 in changing intermediate outcomes, to better understand pathways through which the program could affect mCPR. Intermediate outcomes include attitudes and behaviors which are linked to the use of modern contraception and are aligned to the behavior change path in the A360 theory of change.
2. Examine data on modern contraceptive use from other sources to assess whether changes in mCPR in A360 communities reflected the overall trend in mCPR or whether mCPR appears to have increased more or less than would be expected during this time period.

3. Quantify the association between respondents' self-reported exposure to A360 and the primary and intermediate outcomes.

The outcome evaluation used a pre- and post-population-based, cross-sectional survey design which targeted girls aged 15–19 years. A two-stage sampling design was used in all geographies, and the methodology in North and South Nigeria also included a comparison group

Process evaluation

The process evaluation aimed to answer a series of research questions in order to:

1. Provide analysis and learning to support adaptive management and course correction.
2. Evaluate how the A360 approach played out in implementation
3. Investigate how A360 interfaced with the contexts in which it was implemented.
4. Evaluate the experience of A360 among adolescents and community members, including how it affected the perceptions and opinions about adolescent use of contraception.

5. Investigate how A360 solutions (interventions) were operationalized, and their feasibility for scale-up and replication.

The process evaluation approach was theory-based and was designed to investigate how A360 played out in practice. The process evaluation aimed to provide evidence to explain the outcome evaluation findings.

Cost-effectiveness analysis

The cost-effectiveness analysis examined the cost drivers of the A360 approach and investigates the cost-effectiveness of A360, measured by the costs to achieve increases in mCPR and associated measures of program effectiveness such as the cost per disability-adjusted life year (DALY) averted, in relation to other approaches to solution design and implementation.

The expectation before A360 began was that the design process would be costlier than the comparator design process, but the extent to which implementation costs would differ between A360 and its comparator was unknown. A360 proponents believed that the higher design costs would be offset by better-designed interventions that would improve on the limited success of previous adolescent programs. The cost-effectiveness analysis aimed to assess whether this was borne out, i.e. to assess if A360 was cost-effective in relation to comparator approach.



| Introduction

1 Introduction

Adolescents 360 (A360) was a four-year (2016–2020), \$31 million initiative to increase adolescent girls' access to and demand for modern contraception in four locations – North and South Nigeria, Ethiopia and Tanzania. A360 used human-centered design (HCD) alongside other disciplines to develop location-specific interventions through an iterative process of research and prototyping with girls and other stakeholders. The program hypothesis was that this fusion of disciplines, including meaningful engagement of young people in all phases of the program, would catalyze novel and successful approaches to adolescent sexual and reproductive health (ASRH) that could be replicated by partners around the world. The program was therefore ambitious, embarked upon with an understanding that while the approach would require more resources than was 'standard practice', the investment would pay dividends through transforming access to and demand for modern contraception.

The overall target group for A360 was adolescent girls aged 15–19. Interventions were individually designed for sub-populations in each of the program geographies. The program targeted: married adolescent girls in Ethiopia and North Nigeria; unmarried adolescent girls in South Nigeria; and both married and unmarried girls in Tanzania. A Theory of Change (ToC) underpinned the overall A360 approach, which included specific goals around increasing the modern contraceptive prevalence rate (mCPR) as well as adoption and replication of the A360 design by governments and other actors. It was also hoped that lessons from the initiative would inform global ASRH practice.

A360 was implemented by Population Services International (PSI) and worked in partnership with IDEO.org, the Center for the Developing Adolescent at the University of California at Berkeley, and the Society for Family Health (SFH) Nigeria. It was co-funded by the Bill & Melinda Gates Foundation (BMGF) and the Children's Investment Fund Foundation (CIFF).

Itad worked in collaboration with the London School of Hygiene & Tropical Medicine (LSHTM) and Avenir Health to independently evaluate and distil lessons from the A360 program through an outcome evaluation, a cost-effectiveness analysis and a process evaluation. This report presents a synthesis of headline findings from across all three components of the evaluation. For a more in-depth view of the findings, individual reports on each component of the evaluation can be found on the [Itad website](#).



| Overview of A360

2 Overview of A360

The A360 Theory of Change

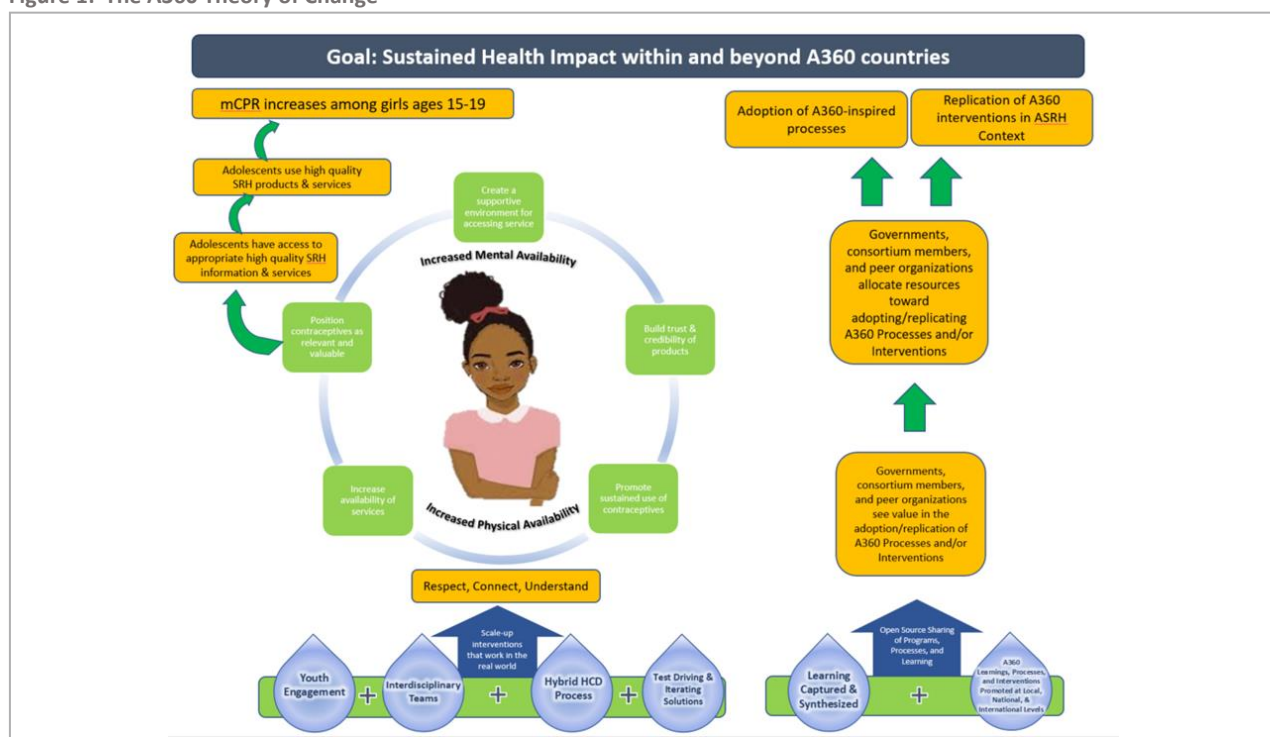
Prior to the design of the A360 solutions for each of the selected geographies, A360 was underpinned by a ToC. A series of intermediate outcomes, which formed a ‘behavior change path’ for girls, is fundamental to the ToC, as follows:

4. Adolescents use high-quality sexual and reproductive health products and services
5. Adolescent girls have access to high-quality sexual and reproductive health information and services
6. Contraception is positioned as relevant and valuable for adolescent girls
7. A supportive environment is created for adolescent girls to access services
8. Trust and credibility of family planning products
9. Sustained use of contraceptive methods.

The program posited that movement along this pathway would lead to a catalytic change in contraceptive use, measured by a population-level increase in the mCPR in the four geographies where A360 was implemented. Although not articulated in the ToC, it was understood that there were two ways through which A360 aimed to achieve population-level change: primarily through directly reaching a large proportion of the target population in the selected geographies, but also through an indirect effect whereby others would be indirectly impacted by the program, for example through changes to knowledge and attitudes filtering down from those who been directly exposed to the program.

In addition, the overall program design included a commitment to capturing and sharing learning throughout the course of the program. The intention behind this emphasis was to make evidence available for other ASRH actors to adopt and replicate the A360 design and approach in other contexts within the A360 countries and beyond.

Figure 1: The A360 Theory of Change



The A360 approach

The A360 approach drew on six disciplines: HCD, public health, adolescent developmental neuroscience, sociocultural anthropology, meaningful youth engagement and social marketing. A360 was set up in such a way that HCD had a prominent role as compared to the other disciplines, particularly in the design phase, with the other disciplines supporting the process at specific points and in specific ways. The program hypothesis was that this fusion of disciplines would yield novel and successful approaches to reaching adolescents that could be replicated by ASRH partners around the world. The multidisciplinary approach represented a shift for PSI – away from what was characterized as an ‘assembly line’ model, where each partner worked autonomously on a different element of a project.

“Everyone is tinkering and bringing their own experience to create something that is better than the sum of its parts to generate health impact.” (A360 Consortium member, 2017)





Box 1. What is Human-Centered Design?

Human-Centered Design (HCD) is an approach to intervention design increasingly applied in public health projects (Bazzano *et al.*, 2017). There is no single definition of HCD, and its tools and principles overlap with user-centered design, participatory design, and design thinking (Bazzano *et al.*, 2017; Holeman and Kane, 2019; Chen *et al.*, 2020). At its core is the idea that design should be a reflective practice employing a specific mindset to engage in creative problem solving and generate innovative solutions, with the end user integral to the process (Björgvinsson, Ehn and Hillgren, 2012). It differs from more ‘traditional’ social-behavioral research in its focus on users’ desires and aspirations, not just their needs. HCD also employs flexible, rapid and iterative data collection and analysis, with an emphasis on storytelling and creative insights over scientific research approaches (IDEO, 2015; Tolley, 2017). The HCD approach applied in A360 and described here reflects the HCD practices of IDEO.org, the design partner in the A360 consortium.

A360 was implemented in four phases: Inquiry, Insight Synthesis, Prototyping, and Adaptive Implementation.¹ The Inquiry and Insight Synthesis phases took place in 2016, involving formative research and analysis conducted by a team of design experts, implementers and young people. In 2017, insights were used to develop location-specific prototypes, which were tested and iterated to give rise to four distinct A360 ‘solutions’ (interventions) for Ethiopia, Northern Nigeria, Southern Nigeria and Tanzania. The solutions were piloted in late 2017 before being rolled out, scaled up, and further iterated between 2018 and the end of the program in September 2020 during the Adaptive Implementation phase. Each of the solutions is summarized in Table 1 and is described in more detail in Section 5.

¹ A360 initially referred to the phases using language from IDEO.org’s approach to HCD: Inspiration, Ideation, Pilot, and Scale. This terminology of Inquiry, Insight Synthesis, Prototyping and Adaptive Implementation was adapted in 2019 to improve clarity to wider audiences. The Inspiration phase is equivalent to the Inquiry and Insight Synthesis Phases; the Ideation and Pilot phases are now known as Prototyping, and the Scale phase became Adaptive Implementation.

Table 1: Summary of the A360 solutions

	<p>In Ethiopia, <u>Smart Start</u> used financial planning as an entry point to discuss contraception with newly married couples aged 15–19.</p> <p>Smart Start was implemented in four of 10 regions in Ethiopia: Amhara; Oromia; Southern Nations, Nationalities and Peoples; and Tigray.</p>
	<p>In Southern Nigeria, <u>9ja Girls</u> combined walk-in contraceptive counseling with life skills sessions for unmarried girls aged 15–19.</p> <p>9ja Girls was implemented in six of 16 states in Southern Nigeria: Ogun, Lagos, Osun, Oyo, Edo and Delta.</p>
	<p>In Northern Nigeria, <u>Matasa Matan Arewa (MMA)</u> targeted married adolescent girls aged 15–19 and their husbands, using maternal and child health as an entry point.</p> <p>MMA was implemented in two of 19 states in Northern Nigeria: Nasarawa and Kaduna.</p>
	<p>In Tanzania, <u>Kuwa Mjanja</u> reached married and unmarried girls aged 15–19 with life and entrepreneurial skills sessions alongside youth-friendly contraceptive counseling.</p> <p>Kuwa Mjanja was implemented in 20 of 25 mainland regions in Tanzania over the course of the program. This included: Kagera, Geita, Mwanza, Arusha, Tabora, Tanga, Dar es Salaam, Mbeya, Iringa and Morogoro.</p>



Spotlight: how was HCD used within A360?

The **multidisciplinary A360 approach** represented a novel approach to design for the consortium partners, and added value in several ways:

- The **HCD process** provided time and space to try out new ideas and bring them to fruition, created a mechanism to involve young people more intentionally in design, shifted the mindsets of implementers to inspire more empathy for adolescent girls and enable them to work in more flexible, responsive ways, and helped generate attractive brands that were rigorously tested and iterated.
- **Youth engagement** ensured young people were core to the design process from the outset, making valuable contributions to research and prototypes.
- The **other disciplines** (public health, adolescent developmental neuroscience, sociocultural anthropology) contributed to learning and generated insights that strengthened solutions during the design stage.

However, managing the complex approach and large consortium was challenging. Challenges arose from a lack of clarity in roles and responsibilities, and from managing inputs and communication across a large team through a fast-paced design process. There were concerns that existing evidence on best practice for ASRH programming and national guidelines were not given sufficient attention, and that there were unclear expectations of the heavy workload required by country teams. Lack of dedicated budget lines, measures to track progress and success, and a clear strategy also constrained youth engagement and frustrated country teams. Disciplines other than HCD and youth engagement had less explicit influence after A360 scaled, and in practice A360 was multidisciplinary rather than transdisciplinary.

Earlier clarity around the parameters for scalability and feasibility could have helped to avoid tensions.

The HCD approach focused on the desirability of concepts to girls, but not all ideas were practical to implement. Providing more explicit space for the public health perspective from the outset would have also helped ensure that early ideas were better grounded in evidence and context.

Adaptive implementation was introduced to facilitate continuous improvements as solutions scaled. This proved a success, although challenging to implement. The approach built on the skills and mindsets fostered through HCD to provide a framework for understanding and addressing variable performance, introducing adaptations in response to learning and changes in context, and supporting country teams to respond to COVID-19. The approach was intended to provide structure and tools to ensure the solutions continued to resonate with girls and that the core elements of A360 were preserved while pursuing adaptations to drive improvements as they were scaled. Staff viewed adaptive implementation as complementary to the HCD process, and as a means of moving from design to implementation while still maintaining ‘curiosity and tinkering.’ However, the introduction of adaptive implementation was time consuming for the country teams and required significant support from PSI Global.

More detailed findings on the use of HCD and adaptive implementation within A360 can be found in the process evaluation final report on the [Itad website](#)



Evaluation purpose and design

3 Evaluation purpose and design

Purpose of the evaluation

The evaluation of A360 was commissioned to:

1. Provide timely evaluation data to course correct the program during implementation as necessary, and to maximize the effectiveness and impact of efforts.
2. Assess the impact of the program in increasing contraception access and use among adolescent girls by assessing population-level change in mCPR.
3. Provide a robust evidence base of what does and does not work to reach adolescent girls at scale and cost-effectively, and to what extent the program is replicable.

A comprehensive methodology was designed in collaboration with the donors and with the engagement of PSI to meet these objectives and provide a robust assessment of the A360 program, offering valuable evidence to funders, implementers and policymakers on the effectiveness of the program. Indeed, there is limited empirical evidence on ASRH programs like A360 – in particular, evaluations with a costing component – adding further importance to these findings.

The evaluation also provides important learning on how to evaluate complex, adaptive programs such as A360 and the HCD approach it embodies. While this summative report provides an assessment of A360 at the close of the program, outputs from the evaluation – in particular the process evaluation – have been provided throughout the course of A360 in order to inform adaptive programming and decision making. For example, this has included a [mid-term review](#) published in 2018 and three participatory action research (PAR) case studies which aimed to provide a mechanism to answer implementers' 'burning questions' in a rapid way (available to view on the [Itad Website](#)). Findings from these outputs have been used by PSI throughout the course of the evaluation, for example the mid-term review flagged a concern that an increased drive for efficiency and emphasis on adoption numbers over other objectives created incentives for A360 to strip back activities focused on community engagement and continuation. These concerns helped drive a shift in focus from 'minimal' to 'recommended' viable product in 2019.

Evaluation design

To serve the evaluation objectives, three core components make up the evaluation design: an outcome evaluation, a cost-effectiveness study and a process evaluation (see Error! Reference source not found.). These components were designed to be complementary, with a view to providing a comprehensive snapshot of the impact of A360 and an explanation of why change did/did not occur, as well as providing timely evaluation data to course correct the program during implementation. The outcome evaluation collected baseline and endline data, and the process evaluation and cost-effectiveness study collected data throughout the course of the program.

This summative report triangulates data from these three evaluation components in order to provide a robust view of how the program functioned and the impact it had on increasing adolescent girls' voluntary use of modern contraception and positively influencing knowledge, attitudes and behaviors to support this. It draws on individual outputs from each of the evaluation components, which provides more detailed findings on the evaluation questions and are available to view on the [Itad Website](#).

Figure 2: Evaluation components



A series of research questions underpin the methodology for each evaluation component. These are summarized in Table 3:3 along with the data sources for each evaluation question. Table 2 summarises the scale of data collection for all components over the course of the evaluation. The methodology of each component is summarized in Section 5, with more detail available in the full reports for each evaluation component on the [Itad website](#).

Table 2: Scale of data collection for evaluation of A360

	Process evaluation	Cost effectiveness analysis	Outcome evaluation
Semi-structured in-depth interviews and focus group discussions	697 in-depth interviews conducted with A360 staff, donors, adolescent girls, community implementers, government officials, community members (including husbands, mothers, and local leaders), and external ASRH stakeholders. 85 focus group discussions conducted with girls and community members.	Almost 370 interviews conducted with country office staff, volunteers and government officials.	
Site visits, structured observations and exit interviews	Observation of 66 key events and process points during the A360 design period and beyond. This included workshops, annual review meetings and solution activities.	36 site visits across the four study geographies.	

Participatory research	Participatory ethnographic research conducted in 2017 and 2018, followed by lighter-touch 'sensemaking workshops' with girls in 2019.		
Online surveys		106 responses over six rounds of online surveys.	
Face-to-face surveys²			<p>Adolescent girls: 46,746 girls across 4 settings and both rounds of data collection</p> <p>Cohabiting adults: 2,336 adults across 4 settings and both rounds of data collection</p>
Document review and review of A360 monitoring data	Each data collection round included a review of key implementation documents, including A360 reporting and strategy documents, and solution materials such as curricula and implementation guidelines. From 2019, each full round of data collect for the process evaluation also involved an independent analysis of program monitoring data (conducted by Itad in 2019 and LSHTM in 2020), in order to triangulate national-level quantitative data on performance with qualitative insights from the process evaluation study sites.		

² Due to covid mitigation measures, at endline, surveys in Ethiopia, Southern Nigeria and Northern Nigeria were split between face-to-face and phone surveys. The phone surveys were conducted at a distance but in most cases, respondents and interviewers were still able to see each other'.

Table 3: Key evaluation questions and data sources

Evaluation component	Evaluation question	Data sources
Process evaluation	1. Process 1.1. What makes the A360 process different to traditional ways of designing and implementing interventions? 1.2. How has the A360 approach adapted over the course of the program and why? 1.3. How has the design and implementation of A360 been managed and with what implications and effects? 1.4. What is the evidence of the adoption of the A360-inspired approach to design programs in PSI, consortium members, governments and peer organizations? 1.5. What is the evidence of replication of the A360 developed solutions by PSI, consortium members, governments and peer organizations?	Primary data: <ul style="list-style-type: none"> In-depth interviews (IDIs) with: A360 country staff; A360 global staff; consortium partner staff; donor staff; partners who may have been influenced by A360 (including national government and ASRH stakeholders, and stakeholders in the global HCD/ASRH community) Group reflection exercises with consortium and A360 country staff Observations of solution activities, and exit interviews with girls Workshops with A360 teams IDIs with: girls; husbands; community members (mothers-in-law; religious/community leaders); service providers; national and sub-national government stakeholders Documents and data <ul style="list-style-type: none"> # learning and comms resources created # A360 advocacy events # Downloads from learning Hub/A360 site # A360 and external entities exposed to A360 approach/concepts Qualitative replication and adoption stories Qualitative monitoring data (e.g. exit interviews) Strategy and design documents, meeting and workshop notes and slides, documents describing A360 approach and experiences A360 meeting/workshop/adaptive implementation notes A360 monitoring data
	2. Context 2.1. How does the context in each country enable or inhibit the A360 approach and its implementation?	
	3. Solutions and experience 1.1 Do the A360 solutions create a supportive environment to access services for adolescent girls in the communities they are operating in? 1.2 Do the A360 solutions position modern contraception as relevant and valuable to adolescent girls? 1.3 Do the A360 solutions build the trust and credibility of family planning products among adolescent girls? 1.4 Do the A360 solutions increase availability of services to adolescent girls? 1.5 Do the solutions promote ongoing interaction between the adolescent girl and the service provider/health system? 1.6 How have the solutions been operationalized at scale in each country?	
Cost-effectiveness analysis	4. Is the A360 program cost-effective? 4.1 What are the main cost drivers of the A360 approach? 4.2 Is the A360 approach considered cost-effective in relation to other methods of solution design?	Primary data: <ul style="list-style-type: none"> Interviews with: A360 country staff; A360 global staff; consortium partners; government officials involved in A360; service providers involved in A360; other stakeholders involved in A360 (including mobilizers, health extension workers) Online surveys with: A360 and consortium staff Site visits at A360 sites (to observe, take measurements, etc.) Documents and data: <ul style="list-style-type: none"> A360 (including consortium partners) financial transaction data A360 monitoring data (# clients, # events) Literature review for benchmark/comparison costs

Outcome evaluation	<p>5. How has A360 affected key reproductive health outcomes in A360 countries?</p> <p>5.1. What is the effect of A360 project on the prevalence of modern contraceptive use (mCPR) among adolescent girls aged 15–19 in A360 project areas?</p> <p>5.2. What is the difference between A360 project and control areas in the prevalence of modern contraceptive use (mCPR) among adolescent girls aged 15–19?</p> <p>5.3. What is the discontinuation rate among adolescent girls aged 15–19 in A360 project areas?</p> <p>5.4. What is the number of incremental new users of modern contraceptive methods among adolescent girls aged 15–19 in A360 project countries?</p> <p>6 What impact has the A360 program had in the four locations?</p> <p>6.1 What impact has A360 had on age specific fertility rates for girls 15–19 years in A360 project areas?</p> <p>6.2 What impact has A360 had on age at first birth for girls 15–19 years in A360 project areas?</p> <p>6.3 What impact has A360 had on changing unmet need in A360 project areas among adolescent girls?</p> <p>6. How has A360 affected key intermediate outcomes (as articulated in the A360 ToC)?</p> <p>7.2 How has A360 affected community acceptance for adolescent girls to adopt healthy SRH behaviors?</p> <p>7.3 How has A360 affected adolescent girls’ agency to make informed decisions about their SRH?</p> <p>7.4 How has A360 affected adolescent girls knowledge on the risks, benefits, and actions to prevent unintended pregnancies?</p> <p>7.5 How has A360 affected adolescent girls perceived value of the benefits of preventing unintended pregnancies?</p> <p>7.6 How has A360 affected adolescent girls access to and use of contraceptive services and products?</p> <p>7.7 How has A360 affected adolescent girls perceived social support to make healthy and informed SRH choices?</p>	<p>Primary data:</p> <ul style="list-style-type: none"> • Baseline and endline surveys with girls aged 15–19 years <p>Documents and data</p> <ul style="list-style-type: none"> • PSI monitoring data • Secondary data on local or national mCPR trends in each area
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Evaluation methodology

4 Evaluation methodology

4.1 Outcome evaluation methodology

The outcome evaluation was led by LSHTM.

Its **primary aim** was to assess the impact of A360 on **mCPR** among sexually active girls aged 15–19 years at population level.

The **secondary aims** of the outcome evaluation were to:

1. Evaluate the effectiveness of A360 in changing **intermediate outcomes**,³ to better understand pathways through which the program could affect mCPR. Intermediate outcomes include a range of attitudes and behaviors which are closely linked to the use of modern contraception and are aligned to the behavior change path in the A360 ToC. See Annex 1 for a full list of intermediate outcomes measured by the outcome evaluation.
2. Examine data on modern contraceptive use available from other sources to assess whether changes in mCPR in A360 communities **reflected the overall trend** in mCPR or whether mCPR appears to have increased more or less than would be expected during this time period.
3. Quantify the association between respondents' **self-reported exposure** to A360 and the primary and intermediate outcomes.⁴

The outcome evaluation used a **pre- and post-population-based, cross-sectional survey design** which targeted girls aged 15–19 years. A two-stage sampling design was used in all geographies, and the methodology in North and South Nigeria also included a comparison group (due to resource limitations and a desire by donors to collect data in all four geographies, it was agreed that no comparison groups would be included in Tanzania or Ethiopia⁵). Data was collected from:

- Ethiopia: 57 Kebeles from four Woredas in the Oromia Region⁶
- Northern Nigeria: four local government areas (LGAs) in Nasarawa State⁷
- Southern Nigeria: two LGAs in Ogun State⁸
- Tanzania: 14 urban and semi-urban wards in Illemela District in Mwanza region.

Baseline surveys were conducted in late 2017, before the start of the main A360 implementation phase. Endline surveys were due to be conducted in early 2020, but were delayed due to the COVID-19 outbreak. They instead took place in Ethiopia and Nigeria in late 2020, and in Tanzania in mid-2021.

³ In the outcome evaluation protocol and reports, the terminology 'secondary outcomes' is used. For the purposes of this report, and for consistency with the A360 ToC, we are using the terminology 'intermediate outcomes'.

⁴ In the final analysis, the outcome evaluation specified an exposure variable with three levels, from lowest to greatest exposure. However, the low levels of exposure across outcome evaluation sites meant it was not possible to quantify the effect of greater or lower participation in program activities. We used a binary exposure variable in the final analysis – not exposed vs. exposed.

⁵ LSHTM proposed using the available budget to have stronger study designs in two countries only, but donors requested data collection in all three countries and understood and accepted the limitations of the before–after designs in Tanzania and Ethiopia.

⁶ Fentale, Ada'a and Lome Woredas in East Shewa Administrative Zone and Wara Jarso in North Shewa Administrative Zone.

⁷ Doma and Karu LGAs, in which the MMA intervention was delivered, and Nasarawa and Toto LGAs, which were comparison sites.

⁸ Ado-Odo/Ota LGA, in which the 9ja Girls intervention was delivered, and Shagamu, which was the comparison site.

The final sample in each setting was representative of all girls in the target population,⁹ including girls who were exposed and not exposed to the intervention. The endline surveys collected data on self-reported exposure to A360 in order to measure the association between individual-level engagement with the A360 interventions and the primary and intermediate outcomes. Further information on the outcome evaluation methodology is available in the individual country reports on the [Itad website](#).

Limitations and considerations of the outcome evaluation methods

The outcome evaluation measures the effects of A360 on the primary and intermediate outcomes. However, it is important to reflect on some key constraints to the methodology and decisions made in designing the evaluation approach – some of which offer important learning on the design of evaluations of adaptive programs like A360. A summary is provided below, with further detail in the full outcome evaluation reports on the [Itad website](#).

- **Lack of a comparison group in Ethiopia and Tanzania:** Due to budget constraints and donor-led resourcing decisions, Nigeria was the only country to include a comparison group within the outcome evaluation. The lack of a comparison group in Ethiopia and Tanzania could have reduced the internal validity¹⁰ of the findings and, consequently, threatened causal inference of evaluation findings (Shadish *et al.*, 2002, Marsden and Torgerson, 2012). Specifically, any changes in mCPR over time could have resulted from reasons other than the A360 interventions themselves – such as other interventions or general changes within the wider population ('secular trends'). In response to the former, other interventions in the study settings were mapped and considered alongside the findings. In response to the latter, mCPR data available from other sources were examined to assess whether any changes in A360 communities reflected background trends. Unfortunately, available datasets to investigate this were not directly comparable to the target population and did not show a clear trend in all cases (more details are available in the methodology annexes to the full outcome evaluation reports on the [Itad website](#)).
- **Implementation design:** At the point of planning the outcome evaluation, there was a lack of clarity over implementation plans, as the design of A360 interventions was still under development. Detailed information about the A360 interventions during the study design phase could have improved the questions included in baseline surveys and, consequently, it could have led to a set of outcomes more appropriate to measure the impact of A360 on the population of adolescent girls. This is well described in Atchison *et al.* (2018) and in Doyle *et al.* (2019). These potential limitations and trade-offs were accepted by the donors during discussions with the evaluation team, and there was support for the overall evaluation design.
- **Long-term effects:** The length of time (18–36 months) between the start of A360 implementation and the endline surveys inhibited the study from exploring the longer-term effects of exposure to A360, such as effects on gender norms and community acceptance of family planning, which are both difficult to change in the short term. However, the outcome evaluation did aim to measure a series of intermediate outcomes related to creating an enabling environment to access services (a component to changing gender norms and community acceptance), as A360 aimed to positively influence this during the time frame of program implementation.
- **Delays in endline measurement:** While endline measurement was intended to occur after 24 months of implementation, this was delayed due to the COVID-19 pandemic. In particular, endline data

⁹ This included: married adolescent girls aged 15–19 in Ethiopia and North Nigeria; unmarried adolescent girls aged 15–19 in South Nigeria; and married and unmarried adolescent girls aged 15–19 in Tanzania.

¹⁰ Internal validity, in this case, refers to being able to make unbiased inferences about the association between mCPR and A360 in the source population of adolescent girls aged 15–19 years living in outcome evaluation settings.

collection occurred 7-12 months after the end of implementation of Kuwa Mjanja in Tanzania. This may have limited the ability of the outcome evaluation to identify effects of the intervention.

- **Reporting bias:** The outcome evaluation relied on respondent self-reporting to measure modern contraceptive use, sexual activity and exposure to the program. Since both the use of contraceptives and sexual activity (particularly among unmarried adolescents) are sensitive topics, girls may have reported that they are not contraceptive users or that they are not sexually active, even though they are. To minimize misclassification due to self-reporting impacting on the evaluation findings, identical question sequences were used for very personal questions at baseline and endline surveys, and the evaluation team provided extensive interviewer training. Furthermore, all interviews were conducted in privacy, and away from the interviewees' husbands/other adults, as much as possible. In addition, if it were to be an issue, similar reporting bias at baseline and endline would be expected, meaning that trends should be unaffected by any such bias.

There may have also been reporting bias in the questions on exposure to A360 interventions. It is possible that respondents would say 'yes' when they had not been exposed to A360 or 'no' when they had been exposed. This could have impacted on the validity of the analysis according to exposure to the interventions. To minimize this bias, exposure questions were developed in consultation with PSI, and the final exposure definitions used for the analysis were revised based on feedback from PSI to address biases to the extent possible.

- **Generalizability:** In all three countries, the evaluation focused on a limited number of geographical areas. Thus, while the findings may apply to the selected settings, they may not be generalizable to the other areas in which A360 was implemented. The locations for the outcome evaluation were discussed and agreed upon in consultation with BMGF, CIFF and PSI.

4.2 Process evaluation methodology

The process evaluation was led by Itad between 2016 and 2020. It aimed to answer the research questions outlined in Table 3:, in order to:

1. Provide analysis and learning to support adaptive management and course correction.
2. Evaluate how the A360 approach played out in implementation.
3. Investigate how A360 interfaced with the contexts in which it was implemented.
4. Evaluate the experience of A360 among adolescents and community members, including how it affected the perceptions and opinions about adolescent use of contraception.
5. Investigate how A360 solutions (interventions) were operationalized, and their feasibility for scale-up and replication.

The process evaluation approach was theory-based and was originally designed to investigate how the A360 ToC played out in practice. By exploring how and why A360 had or had not achieved the intermediate outcomes in the ToC (see Figure 1), the process evaluation aimed to provide evidence to explain the outcome evaluation findings. However, early in the program, we found that the A360 ToC was a high-level model and was not being actively used by A360 to guide strategy or implementation. It also did not provide a detailed description of the country-level solutions. In response to this, in 2019 the process evaluation team worked in collaboration with PSI and SFH to design global- and solution-level User Journey models, depicting how girls were intended to experience A360 (see Figure 3: below, and solution-level diagrams in the process evaluation country annex on the [Itad Website](#)).

This approach builds on ‘journey maps’ from health research – a systematic approach to documenting service-user touchpoints with an intervention, capturing both the physical and emotional journey of the user including behavior, feelings, motivations and attitudes (McCarthy *et al.*, 2016).

The User Journeys were designed to help the evaluation investigate the three dimensions outlined in the UK Medical Research Council framework for process evaluation (Moore *et al.*, 2013):

- **Implementation factors:** how A360 was delivered (through which structures, resources, and processes); how implementation unfolded and whether this was faithful to the intended User Journey; and how A360 solutions adapted over time.
- **Mechanisms of impact:** how A360 activities, and participants’ interactions with them, triggered change.
- **Context:** how external factors influenced the delivery and functioning of A360.

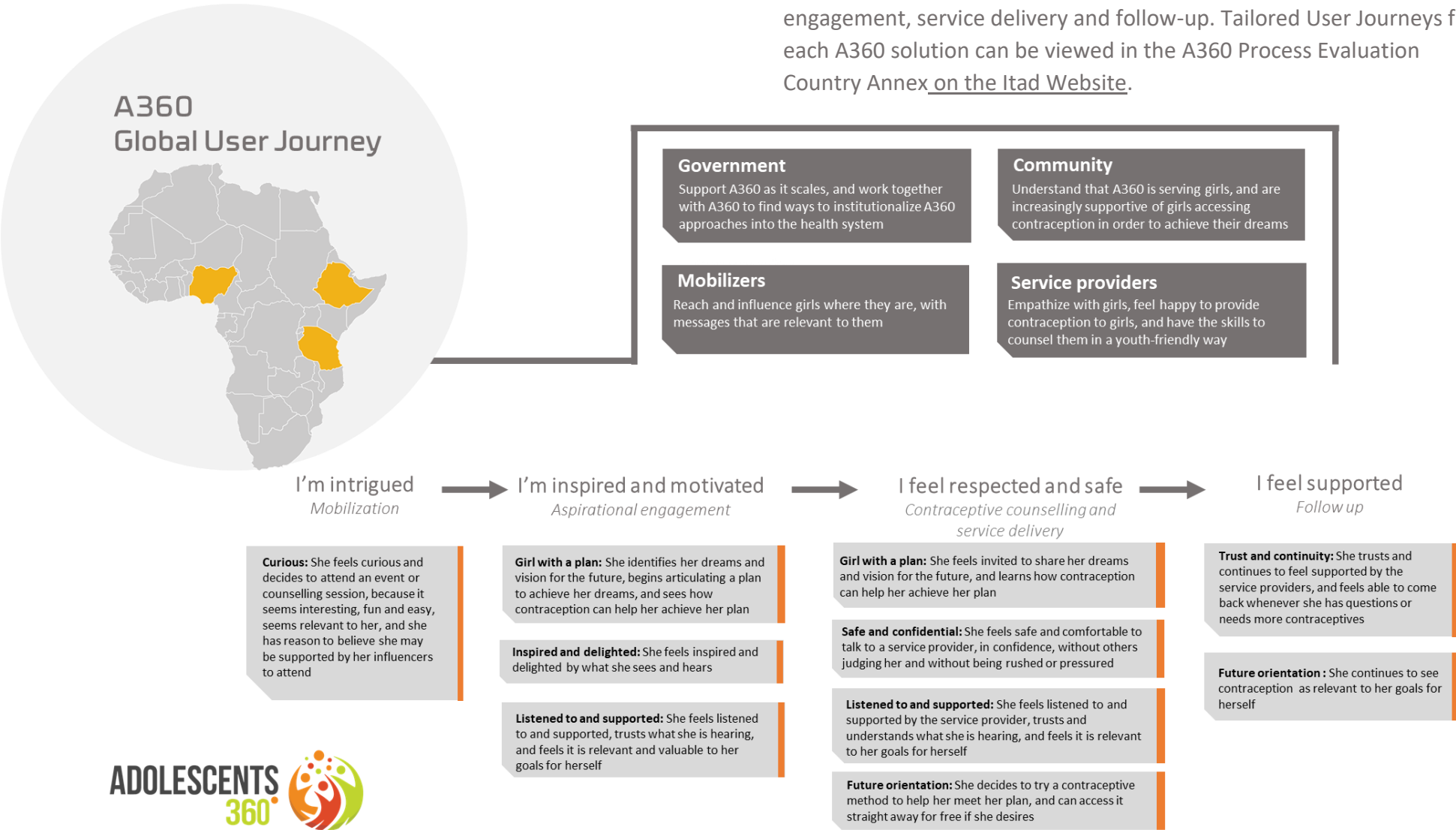
The User Journeys became the primary framework to structure process evaluation data collection and analysis in 2019, and to explore implementation factors, mechanisms of impact and context. The User Journeys were therefore used to structure the country-level insights in the full process evaluation report and the associated country annex, available on the [Itad website](#).

The process evaluation was operationalized through:

- Five rounds of data collection in each country, aligned with the design and implementation phases of A360;
- Four rounds of global-level data collection with PSI Global staff, A360 donors, consortium members and external stakeholders within the ASRH and HCD communities;
- Three PAR action research case studies as a mechanism to rapidly answer implementers’ ‘burning questions’.

Further information on the process evaluation methodology is available on the [Itad website](#).

Figure 3: A360 Global User Journey



Limitations and considerations of the process evaluation methods

The process evaluation provided ongoing learning and robust data on the context in which A360 operated and the experience of the solutions throughout the course of the program. However, it is important to be aware of several important limitations and considerations when interpreting the results. As detailed below, the process evaluation team worked to mitigate these limitations to the extent possible (further detail can be found in the process evaluation methodology annex on the [Itad website](#)):

- **Sample included girls exposed to the program only:** the resources available for the process evaluation only allowed the team to collect data from girls living in the intervention geographies who were exposed to A360. Therefore, limited understanding was obtained on the experiences of girls who were not exposed to the program, e.g. why they were not exposed and/or chose not to engage with A360.
- **Reliance on program monitoring and performance data:** While the process evaluation drew on A360's monitoring data, it was not within the evaluation team's remit to conduct data verification or quality checks on this data. The independent analysis was also restricted by some data gaps and did not include the final months of the program.
- **Keeping abreast of a fast-paced, iterative and adaptive process:** As the process evaluation team was independent from A360, this presented challenges in documenting how the design and implementation processes played out, as the evaluation team was not present for many key decision points and adaptations during the fast-paced process. This led to some gaps in evidence from the design phase. It was possible to supplement some of this retrospectively, which went some way toward mitigating this challenge.
- **Measuring adoption and replication:** Through interviews with A360 staff, national-level government officials and global ASRH stakeholders, the process evaluation was able to generate some insights on where A360 has been adopted and/or replicated, both globally and nationally. However, it was not within the scope of the process evaluation to investigate this issue in depth or verify claims of adoption and replication.
- **Limited generalizability of community-level findings:** Community-level data collection was conducted in a small number of sites (1–4 per round), and with a relatively small number of respondents in each round, meaning that insights may not be generalizable across all implementation areas. This challenge was mitigated to some extent by triangulating findings with a comprehensive review of key A360 documents, national-level monitoring data, and interviews with national stakeholders and staff.

4.3 Cost-effectiveness methodology

The cost-effectiveness analysis was led by Avenir Health. This component examines the cost drivers of the A360 approach and investigates the cost-effectiveness of A360, measured by the costs to achieve increases in mCPR and associated measures of program effectiveness such as the cost per disability-adjusted life year (DALY) averted, in relation to other approaches to solution design and implementation.

The expectation before A360 began was that the design process would be costlier than the comparator design process, but the extent to which implementation costs would differ between A360 and its comparator was unknown. A360 proponents believed that the higher design costs would be offset by better-designed interventions that would improve on the limited success of previous adolescent programs. The cost-effectiveness analysis aimed to assess whether this was borne out, i.e. to assess if A360 was cost-effective in relation to comparator approaches.

Key components of the cost-effectiveness analysis include:

1. **Cost data:** Costs of A360 design and implementation were collected from 2016 to 2020, combining top-down costing drawing on PSI and partner financial systems with multiple rounds of bottom-up costing from surveys, interviews and site visits. A360 costs included the costs of PSI and its partners, the government, and community volunteers, and excluded client costs.
2. **Comparator approach:** A cost-effectiveness analysis requires a comparator approach, and this study defined the comparator for A360 as the status quo. For design, this meant PSI's DELTA design methodology, the standard used at the time A360 initiated. Costs of DELTA were collected in 2017 through interviews and document review. For implementation, this meant the cost to maintain baseline contraceptive prevalence among adolescents through the existing contraceptive programming available in the A360 geographies. Comparator implementation costs were modelled combining measured contraceptive prevalence rates with the yearly cost per adolescent family planning user from Guttmacher Institute's 2019 report, 'Adding It Up'¹¹.
3. **Incremental cost-effectiveness:** The main aim of the study was to estimate incremental cost-effectiveness ratios (defined as the cost per DALY averted) for the four study geographies. Incremental costs were defined as the costs of A360 design and implementation minus the comparator costs. Incremental effectiveness was measured in additional maternal DALYs averted (and excluded child DALYs), calculated from the changes in adolescent contraceptive prevalence measured by the A360 outcome evaluation. One-way and multiway sensitivity analyses generated plausible ranges for incremental costs. Sensitivity analysis around effectiveness took into account the 95% confidence intervals (CIs) for measured change in modern contraceptive use. Probabilistic sensitivity analysis incorporated uncertainty ranges for cost and effectiveness in a Monte Carlo simulation using 10,000 iterations.

Further information on the cost-effectiveness methodology is available in the cost-effectiveness analysis full reports on the [Itad website](#).

Limitations and considerations of the cost-effectiveness analysis methods

The cost-effectiveness analysis drew its effectiveness measure from the outcome evaluation, so many of the limitations listed above for the outcome evaluation also apply to the cost-effectiveness analysis. However, there are some limitations related to the costing portion of the cost-effectiveness analysis. Although the costing study benefited from a consistent approach, repeated measures, and reliance on robust accounting systems, several important limitations and methodological considerations should be kept in mind when interpreting these results:

- **Recall error.** Using retrospective surveys and interviews may have generated potential recall error in estimates of leveraged costs and in estimates of how A360 staff split their time between design and other activities. Moreover, the reliance on interviews and limited document reviews to identify the costs of the design comparator methodology (called DELTA) may have also produced errors.
- **Choice of useful life of design.** Design costs were amortized, assuming a five-year useful life of the intervention design (sensitivity analysis covered a range of 3–7 years of useful life). Estimates of design costs were sensitive to the choice of useful life. More research is needed to expand the scarce literature on useful life of intervention design, particularly for an A360-style approach, which is more costly than typical design methodologies.

¹¹ Country specific costs per adolescent user inclusive of direct service delivery costs and indirect costs (program and system costs, including supervision, training, demand generation, advocacy, M&E, and facility maintenance) were used.

- **Underestimated design costs.** Design costs included only on-budget expenditures by PSI and its consortium partners. The costing may have missed some costs incurred by other, non-consortium counterparts such as government officials and others who contributed to the design phase. This may have resulted in an underestimate of the true cost of design.
- **Reliance on allocation rules to distribute many unassigned costs to study geographies.** The mostly top-down costing approach relied on PSI and sub-awardee financial systems, which did not provide full detail on costs specific to the study geographies. We tried to address this limitation by developing appropriate rules to allocate costs to the study geographies.
- **Constraints to collection of leveraged costs.** For leveraged costs of the government, we used a bottom-up approach that relied on interviews and site-specific data collection. Although for some inputs we were able to use a census approach, for others we relied on non-representative sampling. Moreover, for some inputs we had incomplete data collection due to the inability to contact some personnel and restrictions related to the COVID-19 pandemic.
- **Caution in comparing cross-country and with other studies.** Readers should take caution in comparing these results across the four A360 interventions, because of the inherent differences in program structure and target population, as well as differences in price levels across countries. Caution is similarly warranted in the comparison of A360 results to other studies that may use different methods to calculate costs or of programs that operate at different scales.
- **Potential change in implementation costs due to COVID-19.** PSI responded to COVID-19 by first curtailing services then quickly adjusting the program in response to COVID-19 precautions and resuming full operations. The overall impact of COVID-19 on costs is difficult to ascertain because while the shutdown likely reduced some costs (travel, materials associated with some types of services), other costs increased, such as funds required to adapt and restart the program to operate under COVID-related restrictions. Moreover, the accounting systems did not include sufficient detail to allow easy identification of COVID-related costs. Thus, other than excluding the identifiable costs of personal protective equipment (PPE), the base case cost estimate assumed no change in cost due to COVID-19.
- **Limited geographic coverage.** Due to evaluation resource constraints, and following the lead of the outcome evaluation, the costing focused on a limited number of geographical areas. Thus, while our cost and cost-effectiveness findings may apply to the selected geographies, they may not be generalizable to other areas of the countries where A360 was implemented.

One-way and multiway cost sensitivity analysis addressed many of these methodological limitations and produced plausible lower and upper ranges to total cost used in the probabilistic sensitivity analysis. Employing a full, bottom-up ingredients costing approach – for example using time and motion studies to estimate level of effort – might have yielded more accurate cost estimates, but also would have required more evaluation resources.

4.4 Changes in evaluation methodologies due to COVID-19 pandemic

The final rounds of data collection for all components of the evaluation were originally scheduled to take place during the height of the COVID-19 pandemic. As a result, some important changes to the planned evaluation methodologies were required. In some cases, this resulted in potential limitations which are discussed below along with mitigating actions. Full details can be found in the full reports for each component of the evaluation on the [Itad website](#). In summary:

For the **process evaluation**, the majority of interviews for the final round of data collection were conducted remotely (over the phone or online). While these interviews generated substantial rich and valuable data, there were several limitations:

- Topic guides were shorter in order not to overburden respondents with long phone calls, meaning some interviews were less in-depth.
- There was greater reliance on A360 staff to connect the process evaluation team with girls and community stakeholders, introducing some risk of bias.
- In Tanzania, the need to locate adolescent girls with access to a phone potentially biased the sample, given the overall low levels of phone ownership among adolescents in Tanzania.

For the **outcome evaluation**, PPE was used during interviews. In Nigeria and Ethiopia, part of the final questionnaire was administered by phone to minimize face-to-face contact, while in Tanzania the questionnaire was shortened and some intermediate outcomes were not measured. Such changes could have increased the risk of selection bias due to lower response rates or information bias due to increased or decreased rapport between interviewer and interviewee. Results indicate that selection bias did not pose an issue to the final sample. To address the potential threat of a change in rapport during the phone surveys, interviewers were usually able to see the interviewee from afar.

For the **cost-effectiveness analysis**, much of the final round of cost data collection coincided with the onset of the COVID-19 pandemic in March 2020, and therefore some data collection had to be done remotely via phone interviews. However, this likely had minimal impacts on the collected data. Potentially of more concern is whether COVID-19 changed the cost to implement A360 (as noted above in the cost-effectiveness analysis limitations).



**Primary and intermediate
outcomes**

5 Primary and intermediate outcomes: Overview

Results from the A360 process and outcome evaluations indicate some key areas of success for girls exposed to the program, however, there was limited success in increasing mCPR at the population level.

The process evaluation found many examples where A360 was positively received by program stakeholders and girls who accessed the program. It also provided insights into the factors that helped A360 reach high numbers of girls (significantly more than initially anticipated) in its target geographies. In particular, it found that the program's aspirational engagement approach helped contraception feel more relevant and valuable to girls, and enabled girls to access services in a context of stigma through providing socially acceptable reasons to attend A360 events (see Box 3 for a brief discussion on measurement of A360's impact and reach). The process evaluation also identified some key gaps and challenges, such as: addressing social norms and the enabling environment for girls; consistently engaging with key community influencers; addressing girls' misconceptions and service provider bias about contraception; and a greater focus on supporting girls to adopt a method as compared to continued method use.

The **outcome evaluation detected varied findings across the four A360 geographies** (Ethiopia, North Nigeria, South Nigeria and Tanzania), with generally more impact associated with girls who were exposed to the A360 solutions **but no impact on increasing the mCPR at a population level, except in Ethiopia.**

Comparing the effect of the A360 with its costs, A360 was not found to be cost-effective in any of the study geographies. In other words, the cost-effectiveness analysis findings suggest that the more costly HCD design effort, and the interventions that resulted from that design effort, were not worth the costs incurred in relation to the size of health outcomes achieved (as measured by a change in mCPR).

Additional analysis sought to determine what level of health impact would have been needed for A360 to achieve cost-effectiveness, given what was spent in each study geography. In Ethiopia, no manner of success in increasing mCPR in the study geography would have made A360 cost-effective given the costs incurred. In Nigeria, reaching minimum thresholds for cost-effectiveness would have required very rapid, almost unheard-of increases in mCPR. In Tanzania, in contrast, had mCPR simply stayed constant, the program would have been cost-effective. This report presents the cost-effectiveness analysis findings and also draws on the process evaluation findings to provide further context and to explain the cost-effectiveness analysis findings where possible.

Box 2. Measures of A360's Impact and Reach

Throughout implementation, A360 reported on the total number of girls served with modern contraception and the number of adopters reached – a subset of girls served who were not already using contraception before taking up a method. This routine measure of program reach provides important information about implementation but for many reasons cannot be directly compared with a population-level impact of increasing mCPR among adolescent girls.

Population-level changes in mCPR capture a range of dynamics including increases in the number of adolescent girls, changes in sexual activity and marriage among these girls, patterns of continuation and discontinuation of methods, and levels of service provision among all providers in the area. Increases in mCPR happen at a population-level and reach of individual adopters may or may not translate into increases in mCPR depending on that else is happening within communities.

The A360 adopter numbers are just one part of the puzzle, and where this piece fits in depends on what other service providers in the communities were doing during the time period and how the population of adolescent girls in need of family planning was changing.

Some of these issues across the family planning sector are further explored by Dasgupta et al (2017) within the article ““New Users” Are Confusing Our Counting: Reaching Consensus on How to Measure “Additional Users” of Family Planning.

This section is organized as follows:

- Section 5.1 presents a summary of the overall primary and intermediate outcomes findings from the outcome evaluation.
- Section 5.2 provides a deeper dive into the findings for each A360 geography by drawing on the process evaluation to explain and nuance the outcome evaluation findings from the four geographies.
- Section 5.3 presents the findings of the cost-effectiveness analysis, and draws on the process evaluation to identify A360 design and implementation approaches which contributed to the high cost of A360.

5.1 Summary of primary and intermediate outcomes

This section starts with a presentation of the population level changes in the primary outcome (mCPR). We then present the association, if any, between girls who were exposed to the A360 solutions and an increase in mCPR. This is summarized in Table 4. A brief summary of the intermediate outcomes is then provided, with an overall view shown within Figure 4. Intermediate outcomes are then further explored for each geography in Sections 5.2.1–5.2.4.

Population-level effects of A360 on mCPR

A population-level increase in mCPR was detected in Oromia, Ethiopia. An increase in mCPR was not detected in any of the other three locations where the outcome evaluation was conducted. In Oromia, Ethiopia, there was a 5.1 percentage point increase in mCPR between the baseline and endline outcome evaluation surveys. In Nasarawa in Northern Nigeria and Ogun State in Southern Nigeria, the outcome evaluation did not detect an effect of A360 on increasing mCPR at population level. In Ilemela, Tanzania, a 9 percentage point decrease in mCPR was detected at population level.

The effect of exposure to A360 on mCPR









Exposure to the A360 solutions was associated with higher levels of modern contraception use in the outcome evaluation sites in Ethiopia, Northern Nigeria and Tanzania. In Southern Nigeria, an association between reported exposure to A360 and higher levels of modern contraception use was not detected. In Oromia, Ethiopia and Ilemela, Tanzania, girls exposed to the A360 solutions (Smart Start/Kuwa Mjanja) had twice the odds of using a method than girls who were not exposed. In Nasarawa State in Northern Nigeria, girls exposed to MMA had 1.5 times the odds of using a method than girls who were not exposed. In Ogun State in Southern Nigeria, there was no difference in mCPR between girls who reported exposure to 9ja Girls and girls who were not exposed. Thus, exposure to the A360 solutions was associated with higher levels of modern contraception use in three out of the four outcome evaluation geographies.

The effect of A360 on the intermediate outcomes

A360 aimed to produce a catalytic change to adolescent contraceptive use, which was measured through a population-level increase in mCPR among adolescent girls in the intervention geographies. As the outcome evaluation identified a population-level change in mCPR only in Oromia, Ethiopia, this could be interpreted as A360 not being a success. However, the ‘success’ of A360 needs to be examined in the context of country-specific and programmatic realities, and the intermediate outcomes findings should also be taken into consideration as well as the process evaluation and cost-effectiveness analysis findings.

As seen in Table 4:, generally, there was more of an effect on the primary and intermediate outcomes among girls who were exposed to the A360 interventions than among girls who were not exposed. This suggests that A360 had more impact on girls who were directly exposed to the program. In many ways, this triangulates with the findings from the process evaluation. The process evaluation, which only surveyed girls who had participated in A360 activities and/or received services through A360 channels, identified many examples of positive outcomes of A360. It also identified challenges faced by girls who were reached by A360. It is important to consider the findings across the outcome evaluation, the process evaluation and the cost-effectiveness analysis in order to learn from A360 and identify the successes and persistent challenges. As such, the remainder of this section aims to contextualize the results of the outcome evaluation and process evaluation and to offer considerations for practitioners, policymakers and funders when designing, implementing or supporting programs which aim to increase access to voluntary modern contraception for adolescent girls.





Table 4: The effect of A360 on mCPR change

A360 solution	Location	Population	Population level effect on mCPR ¹	Exposure to A360 solution	Endline mCPR at population level	Endline mCPR among exposed	Association between mCPR and exposure
Smart Start 	ETHIOPIA Oromia	Married	5.1% point increase	24%	54.5 (CI: 44.2-64.5)	80.5 (CI: 73.7-85.9)	 Positive association ²
MMA 	NORTHERN NIGERIA Nasarawa	Married	No effect	6%	36.7 (CI: 33.6-40.0)	51.0 (CI: 40.1-61.8)	 Positive association ³
9ja Girls 	SOUTHERN NIGERIA Ogun State	Unmarried	No effect	5%	49.4 (CI: 44.7-54.1)	40.7 (CI: 28.2-54.6)	 No association
Kuwa Mjanja 	TANZANIA Ilema District, Mwanza	Married and unmarried	9% point decrease	24%	37.13 (CI: 34.1-40.25)	52.74 (CI: 46.72-58.69)	 Positive association ⁴

^[1] Adjusted for confounding variables ^[2] OR: 2.1, 95%CI: 1.3, 3.3 ^[3] RR, 95%CI: 1.41, 1.13-1.76 ^[4] OR: 2.01 95%CI: 1.68, 2.43

Figure 4: The effect of A360 on primary and intermediate outcomes

The effect of A360 on primary and intermediate outcomes at a population level and among girls exposed to the interventions

	 ETHIOPIA: Oromia region (Smart Start)		 NIGERIA: Nasarawa state (MMA)		 NIGERIA: Ogun state (9ja Girls)		 TANZANIA: Ilemela district (Kuwa Mjanja)	
Outcome evaluation components (A full description of each outcome can be found in Annex 1)	Was there an effect at population level? ²⁴	Was there a greater effect for girls exposed to Smart Start? ⁵	Was there an effect at population level? ²⁴	Was there a greater effect for girls exposed to MMA? ⁵	Was there an effect at population level? ²⁴	Was there a greater effect for girls exposed to 9j Girls? ⁵	Was there an effect at population level? ²⁴	Was there a greater effect for girls exposed to Kuwa Mjanja? ⁵
Adolescents use high-quality sexual and reproductive health products and services								
mCPR (primary outcome)	*	**		**			*	***
Proportion of modern contraceptive users using a LARC	**				*	—	*	
Use of modern contraceptive in past 12 months		*		***				***
Age at first birth among girls who gave birth								
Births in the last 12 months ⁷	—	**		*			—	—
Unmet need for modern contraception		*		*				*
Adolescent girls have access to appropriate high-quality sexual and reproductive health information and services								
Awareness of contraceptive products	*		*	***			***	*
Awareness of where to obtain health services				***				**
Contraception positioned as relevant and valuable for adolescent girls								
Future aspirations ^{1,7}	—		—	*	—		—	—
Benefits of modern contraception (Benefit 1) ²	*		**	**	*		***	
Benefits of modern contraception (Benefit 2) ^{1,3}	—		—		—		—	
Intention to use a modern method				***			**	
Supportive environment for adolescent girls to access services created								
Attitudes towards the use of modern contraceptives	**		*	***	*		**	
Self-efficacy to use modern contraceptives	***						***	*
Descriptive norms ^{1,6}	—		—	**	—		—	
Community acceptance ⁷	**						—	—
Trust and credibility of family planning products								
Misconceptions about modern contraceptives								
Disadvantages of modern contraceptives ^{1,7}	—		—		—		—	—

*** Strong evidence of effect, $p < 0.001$ ** Evidence of effect, $p < 0.01$ * Weak evidence of effect, $p < 0.05$ * Evidence of an effect contrary to the hypothesized No evidence of effect — Not applicable Not possible to calculate due to sparse data

¹ Measured at endline only. ² Assessed through the sentence "Using modern contraception can allow an adolescent woman girl to complete her education, find a better job and have a better life" with which the respondent agreed or disagreed. ³ Assessed through the sentence "Using modern contraception can allow a girl to achieve her life goals" with which the respondent agreed or disagreed. ⁴ In Northern and Southern Nigeria, effects were measured by assessing the difference between the change in outcomes over time in areas receiving A360 interventions compared with the change in outcomes over time in comparison areas not receiving A360 interventions. In Tanzania and Ethiopia, effects were measured by assessing the change over time, before and after A360 interventions were implemented. All analyses were adjusted to account for demographic changes in populations over time and between intervention and comparison areas. ⁵ The effect among girls exposed compares outcomes for those self-reporting exposure to A360 with those self-reporting no exposure to A360. ⁶ Assessed through a 'descriptive norms index' which asked three questions related to norms around contraceptive use e.g. "How many unmarried/married girls aged 15–19 years in your community do you believe discuss using a method of contraception boyfriend or partner/husband or partner?" ⁷ Outcome not measured at endline in Tanzania due to COVID-19 adaptations to the questionnaire.

5.2 Primary and intermediate outcomes: Ethiopia, Northern Nigeria, Southern Nigeria, Tanzania

5.2.1 Ethiopia



In Ethiopia, **Smart Start** used financial planning as an entry point to discuss **contraception with newly married couples**. It leveraged the nationwide Health Extension Worker network, supported by A360 Smart Start Navigators and the volunteer Women's Development Army. It aimed to help young couples view contraception as a tool that can help them achieve financial security and raise healthy children. Health Extension Workers were trained to host conversations about financial planning and provide contraceptive services in an approachable way to rural, married girls and their husbands, using a visual discussion guide. Further details on the Smart Start intervention and how it evolved over time can be found in the [A360 Process Evaluation Country Annex](#).

Smart Start was implemented in four of 10 regions in Ethiopia: Amhara; Oromia; Southern Nations, Nationalities and Peoples; and Tigray.

Summary of A360's results in Ethiopia

mCPR Source: Outcome evaluation	Increase in mCPR of 5.1 percentage points from baseline to endline in Oromia. 24% of girls surveyed at endline reported exposure to Smart Start. Girls who were exposed were twice as likely to use a modern method as girls who were not exposed.
Girls reached Source: A360 routine monitoring data, October 2017–September 2020 Further details in the A360 Process Evaluation Country Annex	Across Ethiopia, 75,237 adolescent girls counseled through Smart Start. ¹² 35,420 girls adopted a method. ¹³ 76% of eligible girls (i.e. those not already using contraception or pregnant) adopted a method. Long-acting reversible contraceptives (LARCs) – implants or intrauterine devices (IUDs) – accounted for 20% of methods adopted over the course of the program. 31% of adopters were aged 15–17, compared to 69% aged 18–19.

¹² This figure only includes girls counseled during the six-week initial implementation period at each site. It does not include girls counseled after the Smart Start Navigator transitioned out of the community.

¹³ Adopters: girls who adopted a method out of girls reached, who did not use modern contraception when they were last active.

<p>Change in intermediate outcomes</p> <p>Source: Outcome evaluation and process evaluation</p>	<p>The outcome evaluation detected positive changes at population level in seven out of the 14 intermediate outcomes that were measured at baseline and endline in Oromia.</p> <ul style="list-style-type: none"> ▪ A360 was particularly successful in building a supportive environment for girls to access services: 79% of girls felt that there was community acceptance of contraceptive use at endline, compared to 51% at baseline. ▪ Smart Start messaging raised awareness and shifted attitudes toward contraception: the proportion of girls who believed that “using modern contraceptives can allow an adolescent girl to complete her education, find a better job and have a better life” increased by an average of 9% points in the outcome evaluation endline as compared to baseline. ▪ A360 had less success in tackling misconceptions around contraceptives, with the outcome evaluation showing no change. ▪ The process evaluation found that Ethiopia had more success than other countries in building sustained relationships to support continuation, although there were still major gaps.
<p>Cost and cost-effectiveness</p> <p>Source: Cost-effectiveness evaluation</p>	<p>The A360 design cost was eight times higher than the comparator cost (DELTA); however, design costs accounted for only 11% of the total incremental cost in the four study woredas in Oromia. A360 costs were estimated to be \$.067 per capita, translating to 2.5% of health care spending and \$74 per eligible girl per year of implementation in the four study woredas in Oromia.¹⁴</p> <p>An estimated 31 cumulative incremental DALYs were averted as a result of changes in mCPR, resulting in a cost per DALY averted of \$30,885. This is 33 times the gross domestic product (GDP) per capita in Ethiopia, and therefore not considered to be cost-effective by WHO-CHOICE standards (less than three times the GDP per capita).</p>

¹⁴ Further details can be found within the Cost Effectiveness report on the [Itad Website](#).

Figure 5: Smart Start: effect of A360 on primary and intermediate outcomes



ETHIOPIA: Oromia region (Smart Start)

Outcome evaluation components (A full description of each outcome can be found in Annex 1)	Was there an effect at population level? ⁴	Was there a greater effect for girls exposed to Smart Start? ⁵	
Adolescents use high-quality sexual and reproductive health products and services			*** Strong evidence of effect, p<0.001
mCPR (primary outcome)	*	**	** Evidence of effect, p<0.01
Proportion of modern contraceptive users using a LARC	**		*
Use of modern contraceptive in past 12 months		*	Weak evidence of effect, p<0.05
Age at first birth among girls who gave birth			*
Births in the last 12 months ⁷	—	**	Evidence of an effect contrary to the hypothesized
Unmet need for modern contraception		*	
Adolescent girls have access to appropriate high quality sexual and reproductive health information and services			No evidence of effect
Awareness of contraceptive products	*		— Not applicable
Awareness of where to obtain health services			
Contraception positioned as relevant and valuable for adolescent girls			Not possible to calculate due to sparse data
Future aspirations ^{1,7}	—		
Benefits of modern contraception (Benefit 1) ²	*		
Benefits of modern contraception (Benefit 2) ^{1,3}	—		
Intention to use a modern method			
Supportive environment for adolescent girls to access services created			
Attitudes towards the use of modern contraceptives	**		
Self-efficacy to use modern contraceptives	***		
Descriptive norms ^{1,6}	—		
Community acceptance ⁷	**		
Trust and credibility of family planning products			
Misconceptions about modern contraceptives			
Disadvantages of modern contraceptives ^{1,7}	—		

¹ Measured at endline only. ² Assessed through the sentence “Using modern contraception can allow an adolescent woman girl to complete her education, find a better job and have a better life” with which the respondent agreed or disagreed. ³ Assessed through the sentence “Using modern contraception can allow a girl to achieve her life goals” with which the respondent agreed or disagreed. ⁴ In Northern and Southern Nigeria, effects were measured by assessing the difference between the change in outcomes over time in areas receiving A360 interventions compared with the change in outcomes over time in comparison areas not receiving A360 interventions. In Tanzania and Ethiopia, effects were measured by assessing the change over time, before and after A360 interventions were implemented. All analyses were adjusted to account for demographic changes in populations over time and between intervention and comparison areas. ⁵ The effect among girls exposed compares outcomes self-reporting exposure to A360 with those self-reporting no exposure to A360. ⁶ Assessed through a ‘descriptive norms index’ which asked three questions related to norms around contraceptive use, e.g. ‘How many unmarried/married girls aged 15–19 years in your community do you believe discuss using a method of contraception boyfriend or partner/husband or partner?’ ⁷ Outcome not measured at endline in Tanzania due to COVID-19 adaptations to the questionnaire.

Did A360 have a positive effect on contraceptive use among adolescents in Oromia, Ethiopia, and why or why not?

The outcome evaluation detected a population-level increase in mCPR among married adolescent girls in Oromia. The mCPR increased by 5.1% from baseline to endline in Oromia, indicating a population-level increase in mCPR over the time that Smart Start was being implemented. The change between baseline and endline surveys within the implementation areas was larger than the overall trends in mCPR in Ethiopia between 2015 and 2017 using a secondary data set (PMA2020).¹⁵

Girls who were exposed to Smart Start had higher mCPR and lower unmet need. 24% of girls surveyed at endline reported exposure to Smart Start. Girls exposed to the intervention were twice as likely to use a modern method than girls who were not exposed. There was also evidence of 50% lower odds of unmet need in girls exposed to Smart Start than in girls not exposed. There was slightly weaker evidence for an association between exposure to the program and use of a modern contraceptive method within the last 12 months, and no evidence of an association between exposure and use of a LARC method.

The process evaluation suggests that A360's success in Oromia is a result of a strong intervention design and a successful implementation model, in the context of a supportive policy environment.

- **Supportive policy environment:** The government of Ethiopia has invested significantly in sexual and reproductive health (SRH) over the past 20 years, with family planning viewed as a 'top priority' in the Ethiopian Ministry of Health (MoH). More recently there has been increasing recognition of the need to reach adolescents in order to tackle teenage pregnancy rates. The process evaluation found that A360 effectively communicated the strong results achieved in the early stages of the program (in terms of girls reached and adopters), which helped build government buy-in, demonstrating how Smart Start contributed to government priorities and objectives. Over the course of the program, Smart Start increasingly integrated into the daily work of woreda-level health officers and obtained their support and buy-in, despite capacity gaps. The integration of financial planning messaging with contraceptive counseling was widely appreciated by government stakeholders at all levels, and was an important factor in building buy-in. The decision of the Ethiopian Federal MoH to roll out the Smart Start solution nationwide, aiming to reach one million married girls by 2025, was a strong endorsement of the program and provides a path to scale and sustainability for Smart Start.

"We include this program in our daily health activities [...] merged into our daily planning and evaluation activities. It is highly welcomed by our office and considered as an opportunity to further improve public health status." (Woreda government official, Ethiopia, 2019)

- **Strong intervention design:** Smart Start was designed around couples' counseling, with the aim of engaging husbands in conversations about how financial planning and contraception could help them achieve their goals. Although it proved challenging to reach men in practice, girls were 1.6 times more likely to adopt a method when accompanied by their husbands. The process evaluation consistently found that Smart Start's financial planning messaging resonated strongly with girls and their husbands, and helped to show the relevance of contraception. Many girls and husbands described the counseling changing their minds about when to have a baby, through highlighting the importance of building assets and spacing pregnancies in order to increase economic security and

¹⁵ The PMA dataset includes married and unmarried women aged 15–49, and is therefore not directly comparable to the target population of the outcome evaluation. However, in the absence of directly comparable trend data, this strengthens the evidence that the increase in mCPR observed in this study is likely to be explained by Smart Start rather than ongoing trends in mCPR in this population independent of Smart Start. The analysis of trends in modern contraceptive use from PMA2020 data between 2015 and 2018 did not show a clear trend. Nevertheless, we should consider the limitations of using this dataset to estimate trends in mCPR in our target population. PMA2020 are not directly comparable to our target population – PMA2020 refers to married and unmarried women aged 15–49, whereas our target population were married adolescent girls aged 15–19. These two populations differ in many factors, such as number of children and education. Also, PMA2020 data reflect national level data, but there is large local variation. <https://www.pmadata.org/>

give their children a better life. The visual discussion aids resonated with girls and helped them understand the concept of financial planning and its links to contraception.

- **Successful implementation model:** Smart Start was integrated from the beginning into the Ethiopian government's Health Extension Program (HEP), which has been a significant driver of increased family planning access in Ethiopia. This integration allowed A360 to scale up and access hard-to-reach rural girls through the existing Health Extension Worker network, which is widely known and trusted. The process evaluation found that Smart Start was changing Health Extension Worker attitudes around delivering contraception to adolescent girls, encouraging many to view girls as potential clients for the first time. Smart Start navigators played a key role in supporting mobilization during the initial implementation of the program and helped to embed training with the Health Extension Workers. Training and on-the-job support from A360 Smart Start Navigators built Health Extension Worker confidence and capacity and provided a crucial 'extra pair of hands' to ease the burden on providers through supporting mobilization, service delivery and reporting. The program also successfully enlisted the support of the national volunteer Women's Development Army, who have played an increasingly central role in supporting mobilization and follow-up (see Box 4). The process evaluation found that the continued presence of well-known and trusted Health Extension Workers helped girls feel supported to continue using contraception.

Box 3. The expanding role of the Women's Development Army in Ethiopia

The engagement of the Women's Development Army in Ethiopia is a major A360 success story, highlighting the value of harnessing existing, trusted local structures to reach adolescent girls.

The national Women's Development Army was established by the government in 2011. It consists of volunteers (mainly older married women) who support various development initiatives in their communities. Initially, A360 was apprehensive about working with this group, fearing that older women would not be able to build a rapport with adolescent girls. However, it became clear that Health Extension Workers were drawing on volunteers to support mobilization regardless, and so A360 decided at the end of the prototyping phase to formally integrate them into the program. Low-literacy mobilization materials were developed to support volunteers to talk to girls about Smart Start and to introduce basic financial planning concepts.

The Women's Development Army works through a decentralized structure in which each volunteer is responsible for 10 households in her neighborhood. This means that volunteers know which girls are eligible for the program in their area – helping A360 identify and reach girls even in the more remote parts of a kebele. The process evaluation found that volunteers are generally well known and respected and are able to connect with girls through sharing their personal stories and are frequently motivated by a desire to help girls avoid the challenges they faced when they were young. Bringing the Women's Development Army into the Smart Start model has proved very successful, with monitoring data showing that volunteers mobilized 37% of girls as of October 2019.¹⁶ They also support Health Extension Workers with follow-up, visiting girls in their neighborhoods and reminding them about upcoming appointments.

"You can consider the Women's Development Army volunteers as our eyes and ears in the community. We would not have been able to do our jobs at all without them. How else would we have been able to reach the girls amidst seven thousand residents?"
(Health Extension Worker, Ethiopia, 2020)

¹⁶ LSHTM analysis of A360 monitoring data, June 2017–Oct 2019.

How far did A360 achieve its intermediate outcomes in Oromia, Ethiopia, and why?

More than half of the intermediate outcomes measured by the outcome evaluation changed in the desired direction over the course of the program in Oromia. Positive changes were detected at population level in seven out of the 14 intermediate outcomes that were measured at baseline and endline (see Figure 5).

A360 was particularly successful in building a supportive environment for girls to access services, likely a result of connecting contraceptive use to financial security and systematically engaging key influencers.

The outcome evaluation suggests that community acceptance of adolescent contraceptive use increased over the course of the program: 79% of girls felt that there was community acceptance at endline, compared to 51% at baseline. Girls' approval for married couples to use modern contraceptives remained unchanged (very high at baseline and at endline), but approval for unmarried couples to use modern contraceptives increased substantially from baseline to endline.¹⁷ The outcome evaluation also found an increase in adolescent girls' self-efficacy to access and use family planning methods over time.

The process evaluation suggests that Smart Start's connection of contraceptive use to financial security was likely a key factor in explaining this success. Smart Start messaging successfully linked contraception with widespread concerns about resource availability and lack of economic opportunities, tapping into community aspirations for young couples to have a better life. A360's engagement with community leaders, Women's Development Army volunteers, and local health officials was also important to building community buy-in and helping to reduce stigma. Finally, working with Health Extension Workers helped lead to changes in service provider attitudes toward delivering contraception to adolescents. Through these mechanisms the process evaluation found that Smart Start had successfully built on existing norms around family planning, widening the window of acceptability to include married girls. In the final year of the process evaluation, almost every community stakeholder interviewed said that they believed Smart Start had increased community support for family planning practices – not just for girls, but also in general – and felt that this had increased use of contraception, decreased stigma and the need for women to hide contraceptive use, and led to greater openness in the community to discuss family planning and SRH.

“Our family will encourage us to come attend [Smart Start]. Because our family don't want us to live the kind of life they are living. They want us to live a better life.”

(Adolescent girl, Ethiopia, 2019)

The evaluation suggests that Smart Start messaging positioned contraception as relevant and valuable through helping girls and husbands see how it could help them improve their financial security and reach their goals. The outcome evaluation found that the proportion of girls who believed that *“using modern contraceptives can allow an adolescent girl to complete her education, find a better job and have a better life”* increased by an average of 9% from baseline to endline.

The process evaluation suggests that Smart Start's messaging resonated strongly with girls (and their husbands, when they participated), and helped to show the relevance of contraception. Many girls and husbands described the counseling as changing their minds about when to have a baby, through highlighting the importance of building assets and spacing pregnancies in order to increase economic security and give their children a better life.

“She showed us that the child who didn't get enough to eat got skinny and weak and the one who got enough to eat got bigger and healthy [...] I thought, I never want to go through that kind of thing. I was certain. So I started using the three-year [method].” (Adolescent girl, Ethiopia, 2019)

¹⁷ The final regression model showed that adolescent girls' attitudes toward modern contraception score increased by 0.22 over time (95% CI: 0.08 – 0.36; p-value: 0.003).

Smart Start appeared to have less success in increasing trust and credibility of contraception, with no change in misconceptions about modern contraceptives. This is likely linked to persisting bias and misconceptions among service providers. The outcome evaluation found no change in girls' beliefs in misconceptions about modern contraceptives, or beliefs about their disadvantages¹⁸, between baseline and endline. This is supported by process evaluation findings around persisting weaknesses in contraceptive counseling by Health Extension Workers despite A360 training and mentoring – for example girls not always being fully informed about side effects, or at times were provided with inaccurate information about particular methods. In some cases the implant was explicitly recommended over other methods by Health Extension Workers, which may be influenced by a previous quota system established by the government to boost LARC adoption.

“She told us about the injectable contraceptive. But she also added that its chemical will not be easily removed from our body. She advised most of us to use the implant.”
(Adolescent girl, Ethiopia, 2019)

The process evaluation highlighted important weaknesses in capacity and support for Health Extension Workers in the program model. Throughout the four years of the program, a persistent concern among government and health worker stakeholders was that Health Extension Workers are overworked, with ever-increasing responsibilities, and Smart Start represented one more package of health services to deliver. These concerns related to HEWs go beyond Smart Start and many were beyond the scope of Smart Start to be able to resolve. However, as Smart Start relied on HEWs for successful implementation, it is important to note the challenges this introduced into the Smart Start model. For example, there were concerns from Health Extension Workers and others that the training received (a two-day course run by the program prior to Smart Start's launch in a new kebele) was not sufficient for Health Extension Workers to feel fully confident in delivering the counseling. The process evaluation found that the Smart Start Navigator was a key enabler, viewed as a critical 'extra pair of hands' to support the initial implementation of the program – including door-to-door mobilization and financial planning counseling – and that Health Extension Workers lacked support once they transitioned out of communities at the end of the initial six-week implementation period.

¹⁸ We note that belief in / reporting disadvantages of modern contraception is not necessarily negative. Balanced counselling should include counselling about advantages and disadvantages (e.g. effectiveness, side-effects). Contraceptive use represents balancing the trade-offs between the advantages (benefits) and disadvantages.

5.2.2 Northern Nigeria



In Northern Nigeria MMA targeted married adolescent girls and their husbands, using maternal and child health as an entry point. MMA used a two-pronged approach to reach married girls. Female mentors recruited girls to take part in four Love, Life and Family classes, which incorporated life and vocational skills sessions, as well as an opportunity for one-to-one contraceptive counseling with a provider. Meanwhile, male mobilizers started conversations with husbands, to encourage them to refer their adolescent wives to a clinic for walk-in counseling. MMA was delivered by A360 Young Providers working alongside government providers through public health facilities, in a Hub and Spoke model. Further details on the MMA intervention and how it evolved over time can be found in the [A360 Process Evaluation Country Annex](#).

MMA was implemented in two of 19 states in Northern Nigeria: Nasarawa and Kaduna.

Summary of A360's results in Northern Nigeria

mCPR Source: Outcome evaluation	<p>Increase in mCPR from baseline to endline in Nasarawa State was not associated with MMA.</p> <p>6% of girls surveyed at endline reported exposure to MMA. Girls exposed to MMA in Nasarawa State were more likely to use a modern method than girls who were not exposed.</p>
Girls reached Source: A360 routine monitoring data, October 2017–September 2020 Further details in the A360 Process Evaluation Country Annex	<p>By the end of September 2020, 45,371 girls had been counseled through MMA, with 35,641 adopters (a conversion rate of 84%).¹⁹</p> <p>LARCs accounted for 39% of methods adopted over the course of the program.</p> <p>19% of MMA adopters were aged 15–17, compared to 81% aged 18–19.</p>
Change in intermediate outcomes Source: Outcome evaluation and process evaluation	<p>The outcome evaluation detected positive changes at population level in just two out of the 14 intermediate outcomes that were measured at baseline and endline in Nasarawa State. However, exposure to MMA is positively associated with change in nine of the intermediate outcomes.</p> <ul style="list-style-type: none"> ▪ A360 was particularly successful at increasing access to SRH information and services: girls who were exposed to MMA displayed a greater awareness of contraception and greater awareness of where to obtain health services or contraceptive products as compared to girls who were not exposed. ▪ Building on existing norms around family planning helped position contraception as relevant and valuable. Girls who were exposed to MMA were more likely to display more positive attitudes toward the benefits of contraception, have a higher level of intention to use contraception in the future, and a higher level of approval for married and unmarried couples to use modern contraception.

¹⁹ Adopter 'conversion rate': percentage of girls reached who adopt a method, minus continuing users and pregnant girls.

	<ul style="list-style-type: none"> ▪ MMA had less success in relation to increasing trust and credibility of family planning (FP) products, with the outcome evaluation showing no change.
Cost and cost-effectiveness Source: Cost-effectiveness evaluation	<p>The A360 design cost was seven times higher than the comparator cost (DELTA). However, design costs accounted for only 15% of the total incremental cost in the two study LGAs in Nasarawa State. A360 costs were estimated to be \$0.40 per capita, translating to 0.5% of total health care spending per capita and \$102 per eligible girl per year of implementation in the two study LGAs in Nasarawa State.</p> <p>An estimated four cumulative incremental DALYs were averted, resulting in a cost per DALY averted of \$111,416. This is 53 times the GDP per capita in Nigeria, and therefore not considered to be cost-effective by WHO-CHOICE standards, which define cost-effectiveness as less than three times the GDP per capita.</p>

Figure 6: MMA: effect of A360 on primary and intermediate outcomes



NIGERIA: Nasarawa state (MMA)

Outcome evaluation components (A full description of each outcome can be found in Annex 1)	Was there an effect at population level? ⁴	Was there a greater effect for girls exposed to MMA? ⁵	
Adolescents use high-quality sexual and reproductive health products and services			*** Strong evidence of effect, p<0.001
mCPR (primary outcome)		**	** Evidence of effect, p<0.01
Proportion of modern contraceptive users using a LARC			* Weak evidence of effect, p<0.05
Use of modern contraceptive in past 12 months		***	* Evidence of an effect contrary to the hypothesized
Age at first birth among girls who gave birth			
Births in the last 12 months ⁷		*	
Unmet need for modern contraception		*	
Adolescent girls have access to appropriate high quality sexual and reproductive health information and services			— No evidence of effect
Awareness of contraceptive products	*	***	— Not applicable
Awareness of where to obtain health services		***	
Contraception positioned as relevant and valuable for adolescent girls			
Future aspirations ^{1,7}	—	*	
Benefits of modern contraception (Benefit 1) ²	**	**	
Benefits of modern contraception (Benefit 2) ^{1,3}	—		
Intention to use a modern method		***	
Supportive environment for adolescent girls to access services created			
Attitudes towards the use of modern contraceptives	*	***	
Self-efficacy to use modern contraceptives			
Descriptive norms ^{1,6}	—	**	
Community acceptance ⁷			
Trust and credibility of family planning products			
Misconceptions about modern contraceptives			
Disadvantages of modern contraceptives ^{1,7}	—		

¹ Measured at endline only. ² Assessed through the sentence "Using modern contraception can allow an adolescent woman girl to complete her education, find a better job and have a better life" with which the respondent agreed or disagreed. ³ Assessed through the sentence "Using modern contraception can allow a girl to achieve her life goals" with which the respondent agreed or disagreed. ⁴ In Northern and Southern Nigeria, effects were measured by assessing the difference between the change in outcomes over time in areas receiving A360 interventions compared with the change in outcomes over time in comparison areas not receiving A360 interventions. In Tanzania and Ethiopia, effects were measured by assessing the change over time, before and after A360 interventions were implemented. All analyses were adjusted to account for demographic changes in populations over time and between intervention and comparison areas. ⁵ The effect among girls exposed compares outcomes self-reporting exposure to A360 with those self-reporting no exposure to A360. ⁶ Assessed through a 'descriptive norms index' which asked three questions related to norms around contraceptive use, e.g. 'How many unmarried/married girls aged 15–19 years in your community do you believe discuss using a method of contraception boyfriend or partner/husband or partner?' ⁷ Outcome not measured at endline in Tanzania due to COVID-19 adaptations to the questionnaire.

Did A360 have a positive effect on contraceptive use among adolescents in Nasarawa State, Nigeria, and why or why not?

In Nasarawa State, the outcome evaluation found no evidence that MMA had a positive effect on mCPR for 15–19 year old married adolescents. While mCPR did increase between baseline and endline across all outcome evaluation LGAs, there was no difference between the increases in the intervention and the comparison sites. Thus, the outcome evaluation did not detect a population-level association between MMA and increased mCPR among 15–19 year old married adolescent girls in Nasarawa State.

Girls who were exposed to MMA were significantly more likely to use modern contraceptive methods than those who were not exposed. However, exposure to the intervention was low among girls surveyed at endline. At endline, mCPR for exposed girls was 51%, compared to 37% for girls who were not exposed. In addition to having a higher mCPR, girls exposed to MMA were more likely to have used modern contraception in the past 12 months, and reported a 40% lower risk of unmet need as compared to girls who were not exposed. This suggests that when the intervention reached the target population, it worked as intended. This is further corroborated by a range of positive associations between exposure and the intermediate outcomes (see below). However, only 6% of girls who were surveyed in Nasarawa State self-reported that they had been exposed to MMA. This may indicate that MMA did not have the reach or scale to achieve measurable impact at population level. As the story around exposure to A360 in Nigeria is complex, this theory should be considered carefully in light of the potential caveats discussed below (see Box 5).

There are some potential explanations for the lack of effect on mCPR at population level in Nasarawa State, including:

- **Increase in mCPR in comparison sites:** There was an increase in mCPR in the implementation sites in Nasarawa State. However, as the increase was matched in the comparison sites, this change was not attributable to MMA. It is possible that MMA's effect on mCPR in the intervention areas was matched by the effects of other FP programs in the comparison areas. One of the comparison sites (Nasarawa LGA) had two large-scale FP interventions in place since 2018 and registered a particularly large increase in mCPR (from 13% at baseline to 31% at endline).
- **Social norms around childbearing:** One of the main reasons reported by married girls surveyed for the outcome evaluation on why they were not using contraception was the desire to bear (more) children. The process evaluation and other literature highlight the significant social and familial pressures which enforce established norms around marriage, childbearing and the control of adolescent girls' decision making by husbands and parents (McCleary-Sills *et al.*, 2014). Even if they desire to use contraception, married girls may feel pressured to prove fertility by their husband, by other relatives or by their community soon after they get married. Thus, in several settings contraception may only be considered for child spacing. A considerable number of married girls interviewed for the outcome evaluation at endline did not yet have any children (ranging from 34% in Toto LGA to 51% in Karu LGA). This is likely to affect their uptake of modern contraception, given these social norms and expectations (McCleary-Sills *et al.*, 2014).

How far did A360 achieve its intermediate outcomes in Nasarawa State, and why?

The outcome evaluation detected an association between MMA and population-level change in only two of the intermediate outcomes in Nasarawa State. However, exposure to MMA is positively associated with change in the desired direction for the majority of the intermediate outcomes. The outcome evaluation found positive population-level change between baseline and endline for many of the intermediate outcomes but no significant differences between the intervention and comparison sites, suggesting that changes were not associated with MMA (see Figure 6). However, positive associations were found between exposure to MMA and nine of the intermediate outcomes that were measured at

baseline and endline. This suggests that the program worked as intended when it reached the target population.

The two intermediate outcomes in which population-level changes were seen and in which the increase was greater in intervention than comparison sites relate to: improving the supportive environment for adolescent girls;²⁰ and positioning contraception as relevant and valuable.²¹ There was also a positive association between exposure to MMA and both of these intermediate outcomes, thus strengthening the inference that they are a result of MMA. Key aspects of the MMA program which likely contributed to these changes are discussed below in relation to positive outcomes mirrored by girls exposed to the program.

A360 was particularly successful in increasing access to SRH information and services in Nasarawa State. A key strategy which supported this was mobilization of husbands, which led to increased referrals and uptake while helping to build community acceptance and support. The outcome evaluation found that girls who were exposed to MMA displayed a greater awareness of contraception and greater awareness of where to obtain health services or contraceptive products, as compared to girls who were not exposed. In the Northern Nigerian context, girls are often unable to make decisions about whether to adopt a method without their husband's consent. As a result, MMA was designed with a husband referral pathway. This included male mobilizers who were trained to initiate conversations with groups of men to encourage them to refer their wives to counseling. PSI program monitoring data indicates that 47% of MMA participants were referred by their husbands²² and that girls referred by husbands were 1.4 times more likely to adopt a method than those referred by a mobilizer.²³ However, the process evaluation raised some concerns that husband engagement risked undermining girls' agency. A number of stakeholders reported that husbands sometimes make unilateral decisions about whether their wives should adopt a method, and even about which one. Compounding this issue is the fact that girls referred by their husbands did not access the aspirational and empowerment aspects of A360, as they were referred to walk-in counseling rather than joining skills classes.

Building on existing norms around FP helped the program to resonate with husbands and girls and to position contraception as relevant and valuable. The concept of child spacing is widely understood in Northern Nigeria, and A360 found that emphasizing spacing over 'family planning' helped the program resonate more strongly with both husbands and girls. This likely contributed to girls who were exposed to MMA displaying more positive attitudes toward the benefits of contraception, a higher level of intention to use contraception in the future, and a higher level of approval for married and unmarried couples to use modern contraception, as compared to girls who were not exposed. The outcome evaluation also found an association between having given birth in the past 12 months and reporting exposure to MMA – suggesting that the program was perhaps more efficient in influencing the lives of girls who had given birth to one or more children, as compared to the lives of girls in the community more generally.

The aspirational components of MMA played a central role in facilitating uptake of services. Once recruited to take part in MMA, girls attended four Love, Family, Health skills sessions over a four-week period. These taught life, vocational and financial planning skills and provided information about health and nutrition. The skills sessions were found to provide a 'hook' which encouraged girls to participate, helped to make contraception feel more relevant and valuable, and built girls' knowledge, confidence and ability to plan for the future. The outcome evaluation found an association between exposure to MMA and a higher score when girls were presented with four statements about their future aspirations. This

²⁰ Evidenced by an attitudes index score indicating greater approval for married and unmarried couples to use modern contraceptives.

²¹ Evidenced by greater likelihood of agreeing with statements on the benefits of contraception – adolescent girls in intervention sites were 5% more likely to agree with the statement "Using modern contraception can allow an adolescent girl to complete her education, find a better job and have a better life".

²² LSHTM analysis of A360 monitoring data (June 2017–April 2020).

²³ 95% CI: 1.2 – 1.7. Results of a logistic regression mixed model, adjusted for age as well as for data dependency between observations from the same Facility (random effect) and districts within the same State (fixed effect). Data from LSHTM independent analysis of A360 monitoring data (June 2017–April 2020).

strengthens the evidence that MMA positively influenced girls' future aspirations. However, it is important to note that as aspirations were not measured before girls participated in MMA skills sessions, we do not have proof of attribution, and it is possible that girls who attended the classes already had higher aspirations than girls who did not attend.

There were mixed findings from the outcome evaluation and the process evaluation related to building a supportive environment for contraceptive use. The outcome evaluation found a population-level increase associated with MMA in relation to positive attitudes to contraception. In addition, girls exposed to MMA were more likely to have positive attitudes toward the use of contraception than girls who were not exposed to MMA, and were more likely to agree with a set of descriptive norms around the use of contraceptive methods. However, the outcome evaluation also found that MMA was less likely to positively affect self-efficacy, and it did not detect an association between exposure to A360 and girls' perception of greater community acceptance of contraception.

Given the entrenched sociocultural barriers to contraceptive access for girls in Nigeria, community engagement was recognized as crucially important from the outset of the program. On entering a new community, government-supported sensitization meetings were carried out with key community leaders and gatekeepers who, in turn, mobilized their local sphere of influence. As the program scaled, the ongoing presence of community mobilizers and the greater involvement of community leaders in regular program meetings were seen as instrumental in securing increased community support. The aspirational components of the program helped secure the support of government, service providers and community members, helping girls access services in a context of widespread stigma, by framing the program as about more than contraception. However, the aspirational components were light-touch and did not reach all of the girls, and the process evaluation raised concerns that some of the content of the Love, Life and Health classes may have supported rather than challenged gender norms about the role of women.

MMA had less success in relation to increasing trust and credibility of FP products. The outcome evaluation found no association between exposure to MMA and positive scores on indexes related to misconceptions around using contraceptives or disadvantages of using modern contraceptives. In Northern Nigeria, girls face significant social and familial pressures which reinforce established norms around marriage, childbearing and the control of adolescent girls' decision making by husbands and parents. The process evaluation reported deeply entrenched fears and misconceptions about contraception – especially fears of infertility – which generate distrust of ASRH interventions and opposition to contraception use. While these findings are by no means new to the ASRH field, they highlight the continued challenges of entrenched social norms to influence behavior. The process evaluation found that work to engage key influencers, combined with tactics to build community support, were key successes of the program. However, A360 was not designed with a substantial social norms component, which likely limited its ability to positively challenge sociocultural barriers to contraceptive use.

5.2.3 Southern Nigeria



In Southern Nigeria, **9ja Girls** combined walk-in contraceptive counseling with life skills sessions for unmarried girls. Walk-in counseling was provided alongside Saturday sessions on the Life, Love, Health curriculum, which featured vocational skills, future-planning exercises, and discussions about love, sex and dating. The aim was to make contraception relevant by helping girls tap into their aspirations and see contraception as a tool to reach their goals. 9ja Girls was delivered through public health facilities, where A360's Young Providers worked alongside government providers to deliver classes and contraceptive counseling. 9ja Girls was permanently present at some facilities ('Hub' sites) and provided regular outreach services through more remote facilities linked to each Hub ('Spoke' sites). Further details on the 9ja Girls intervention and how it evolved over time can be found in the [A360 Process Evaluation Country Annex](#).

9ja Girls was implemented in six of 16 states in Southern Nigeria: Ogun, Lagos, Osun, Oyo, Edo and Delta.

Summary of A360's results in Southern Nigeria

mCPR Source: Outcome evaluation	<p>No population-level increase in mCPR among unmarried girls in the comparison or the intervention LGAs in Ogun State.</p> <p>5% of girls surveyed at endline reported exposure to 9ja Girls. No association was found between exposure to 9ja Girls and greater use of modern methods of contraception.</p>
Girls reached Source: A360 routine monitoring data, October 2017–September 2020 Further details in the A360 Process Evaluation Country Annex	<p>172,517 adolescent girls were counseled through 9ja Girls.²⁴ 119,380 adopted a method.²⁵</p> <p>75% of eligible girls (i.e. those not already using contraception or pregnant) adopted a method after counseling.</p> <p>LARCs accounted for 31% of methods adopted in 9ja Girls.</p> <p>13% of 9ja Girls adopters were aged 15–17, compared to 87% aged 18–19.</p>
Change in intermediate outcomes Source: Outcome evaluation and process evaluation	<p>Population-level change in only one of A360's intermediate outcomes (LARC use), and no positive associations between exposure to 9ja Girls and any of the intermediate outcomes.</p> <p>However, some evidence from the process evaluation that 9ja Girls was making progress toward intermediate outcomes in targeted communities, although this was not detected by the outcome evaluation. These included:</p> <ul style="list-style-type: none"> Using life and vocational skills sessions to position contraception as relevant and valuable for girls and build girls' confidence and skills Improving the quality of service provision to build trust and credibility around contraception

²⁴Girls registered at a 9ja Girls clinic or event.

²⁵ Adopters: girls under 20 who had never used a modern method of contraception or were discontinued users, who took up a method at the clinic/event.

	<ul style="list-style-type: none"> ▪ Engaging communities and key influencers to create a more supportive environment for accessing services ▪ Positioning contraception as relevant to girls through community in-person mobilization.
Cost and cost-effectiveness Source: Cost-effectiveness evaluation	<p>The A360 design cost was seven times higher than the comparator cost (DELTA). However, design costs accounted for only 8% of the total incremental cost in the one study LGA in Ogun State. A360 costs were estimated to be \$0.21 per capita, translating to 0.3% of total health care spending per capita and \$43 per eligible girl per year of implementation in the one study LGA in Ogun State²⁶.</p> <p>An estimated 17 cumulative incremental DALYs were averted, resulting in a cost per DALY averted of \$30,114. This is 14 times the GDP per capita in Nigeria, and therefore not considered to be cost-effective by WHO-CHOICE standards, which define cost-effectiveness as less than three times the GDP per capita.</p>

²⁶ Further details can be found within the Cost Effectiveness report on the [Itad Website](#).

Figure 7: 9ja Girls: effect of A360 on primary and intermediate outcomes



NIGERIA: Ogun state (9ja Girls)

Outcome evaluation components (A full description of each outcome can be found in Annex 1)	Was there an effect at population level? ⁴	Was there a greater effect for girls exposed to 9ja Girls? ⁵	
Adolescents use high-quality sexual and reproductive health products and services			*** Strong evidence of effect, $p < 0.001$
mCPR (primary outcome)			** Evidence of effect, $p < 0.01$
Proportion of modern contraceptive users using a LARC	*	—	*
Use of modern contraceptive in past 12 months			
Age at first birth among girls who gave birth			
Births in the last 12 months ⁷			
Unmet need for modern contraception			
Adolescent girls have access to appropriate high quality sexual and reproductive health information and services			
Awareness of contraceptive products			
Awareness of where to obtain health services			
Contraception positioned as relevant and valuable for adolescent girls			
Future aspirations ^{1,7}	—		
Benefits of modern contraception (Benefit 1) ²	*		
Benefits of modern contraception (Benefit 2) ^{1,3}	—		
Intention to use a modern method			
Supportive environment for adolescent girls to access services created			
Attitudes towards the use of modern contraceptives	*		
Self-efficacy to use modern contraceptives			
Descriptive norms ^{1,6}	—		
Community acceptance ⁷			
Trust and credibility of family planning products			
Misconceptions about modern contraceptives			
Disadvantages of modern contraceptives ^{1,7}	—		

¹ Measured at endline only. ² Assessed through the sentence "Using modern contraception can allow an adolescent woman girl to complete her education, find a better job and have a better life" with which the respondent agreed or disagreed. ³ Assessed through the sentence "Using modern contraception can allow a girl to achieve her life goals" with which the respondent agreed or disagreed. ⁴ In Northern and Southern Nigeria, effects were measured by assessing the difference between the change in outcomes over time in areas receiving A360 interventions compared with the change in outcomes over time in comparison areas not receiving A360 interventions. In Tanzania and Ethiopia, effects were measured by assessing the change over time, before and after A360 interventions were implemented. All analyses were adjusted to account for demographic changes in populations over time and between intervention and comparison areas. ⁵ The effect among girls exposed compares outcomes self-reporting exposure to A360 with those self-reporting no exposure to A360. ⁶ Assessed through a 'descriptive norms index' which asked three questions related to norms around contraceptive use, e.g. 'How many unmarried/married girls aged 15–19 years in your community do you believe discuss using a method of contraception boyfriend or partner/husband or partner?' ⁷ Outcome not measured at endline in Tanzania due to COVID-19 adaptations to the questionnaire.

Did A360 have a positive effect on contraceptive use among adolescents in Ogun, and why?

The outcome evaluation did not detect a population-level increase in mCPR among unmarried girls in the comparison or the intervention LGAs in Ogun State, and no association was found between exposure to 9ja Girls and greater use of modern methods of contraception. There was no evidence of an increase in mCPR in either comparison or intervention areas between baseline and endline.²⁷ In Ogun, only 5% of girls surveyed at endline reported exposure to 9ja Girls (see Box 5 for a discussion of challenges around measuring exposure in Nigeria). The outcome evaluation did not detect an association between exposure to 9ja Girls and greater use of modern methods of contraception. This suggests that even when the program reached the target population, it did not work as intended. However, the small percentage of girls surveyed who self-reported exposure to 9ja Girls in the outcome evaluation may not be representative of the experience of girls who were reached by the program.

The only population-level change detected by the outcome evaluation was an increase in the proportion of LARC users. The proportion of girls using LARCs (among all modern contraceptive users) increased from 0.3% to 2.2% in the intervention LGA and dropped from 1.4% to 1.0% in the comparison LGA. This suggests a positive effect of 9ja Girls on LARC use among unmarried adolescents, with the proportion of LARC users 13 times greater in the intervention site than the comparison site.

There are a number of potential reasons why population-level change was not detected in Ogun, including a higher than expected baseline mCPR, challenges with A360 targeting and reach, and greater stigma associated with serving unmarried girls, particularly through public health facilities.

- **Baseline mCPR:** The baseline mCPR in Ogun State was higher than the program initially anticipated: 45% in Ado-Odo/Ota, the intervention LGA for the outcome evaluation, and 50% in Shagamu, the control LGA for the outcome evaluation. This may have made it more difficult to detect a change over time in intervention versus comparison LGAs in Ogun State. Secondary Health Management Information System (HMIS) data reporting on female clients aged 15–49 showed an increase in modern contraceptive use at health facilities in all states in Nigeria, and in Ado Oda/Ota and Shaguma LGAs between 2016 and 2019. The increase appears to start in 2016, before 9ja Girls started activities. However, there are limitations in using the dataset to estimate trends in mCPR in our target population. The HMIS data is not directly comparable to the 9ja Girls target population as it refers to married and unmarried women aged 15–49, whereas the 9ja Girls target population was married adolescent girls aged 15–19. These two populations differ in many factors, such as number of children and education.
- **A360 reach and outcome evaluation respondents:** The program may have reached a subset of the target population that was not efficiently detected using population-based surveys. In particular, 9ja Girls reached girls slightly older than the general population of unmarried adolescent girls. According to program monitoring data 87% of 9ja Girls adopters were aged 18–19, while in the outcome evaluation the proportion of sexually active²⁸ respondents aged 18–19 was 74%.²⁹ The process evaluation also found that 9ja Girls was likely more effective at reaching girls living in places nearer to health facilities (where in-person mobilization was significantly easier, and where girls had less distance to travel to access services). This subset of girls may have been under-represented in the outcome evaluation population-level survey.
- **Stigma and sociocultural barriers:** A key difference between MMA in the North and 9ja Girls in the South was the population they sought to reach: MMA was aimed at married girls, whereas 9ja Girls was aimed at unmarried girls – a group that faces greater barriers to accessing contraception.

²⁷ In the comparison area, mCPR was 50% (95% CI: 47 – 53) at baseline and 51% (95% CI: 47 – 55) at endline. In the intervention area, mCPR was 45% (95% CI: 41 – 48) at baseline and 49% (95% CI: 44 – 53) at endline. As the results fall within the 95% CI, the change was not statistically significant.

²⁸ Reported sexual activity in last 12 months.

²⁹ n=2,553/3,460; 95% CI: 72.1 – 75.4.

Stigma associated with premarital sex is a major barrier to accessing contraception for unmarried girls in Nigeria. The process evaluation found evidence of these norms and sociocultural barriers within the study geographies, including a prevalent belief that providing access to information about contraception would encourage girls to have sex. Entrenched norms take time to change, and it may not have been possible for A360 to influence change over the course of the relatively short duration of the program. Girls' attitudes often mirrored those of the community at large, with girls holding very negative attitudes toward premarital sex and toward girls who engage in it. Girls often lacked support from their communities or key influencers to continue using contraception, with the risk of backlash if they experienced side effects, leading many girls to keep their use of contraception a secret. This environment creates a barrier to girls renewing a method or accessing a clinic for a second time and can lead to discontinuation, which may help explain the absence of a population-level effect and a positive effect on outcomes even among girls exposed to the program. 9ja Girls made ongoing efforts to intensify follow-up both by phone and in person, with service providers phoning girls to check in on them and remind them to attend follow-up appointments, mobilizers conducting follow-up visits to girls' homes, and use of WhatsApp groups to allow girls to contact service providers when they needed to renew their method. However, follow-up relied largely on girls having access to a phone, causing issues with reach and confidentiality.

- **Challenges with the intervention model:** In the 9ja Girls model, contraceptive counseling was delivered by trained government or A360 service providers through public health clinics. However, the outcome evaluation found that pharmacy stores and chemists were the main source of modern contraception in Ogun State, having increased from 55% to 67% between baseline and endline. This is probably because these private settings are seen to offer more discretion and anonymity. The process evaluation highlighted that stigma remained a key barrier to girls accessing services in public health settings, despite generally positive feedback on the quality of counseling received through A360-trained providers.

“Some of us young girls will not come to take up family planning services at the regular clinic, because people will be many and they will be looking at us somehow.” (Girl, Southern Nigeria, 2019)

In addition, program monitoring data shows that almost 70% of adopters accessed 9ja Girls through walk-in appointments, not skills classes. This means their exposure to the program would have been very light-touch, and they would have received little, if any, of the aspirational content. This may have proved insufficient to achieve lasting improvements in contraceptive behaviors.

How far did A360 achieve its intermediate outcomes in Southern Nigeria, and why?

The outcome evaluation did not detect population-level change in Ogun State in any of A360's intermediate outcomes. It also did not find positive associations between exposure to 9ja Girls and any of the outcomes (see Figure 7), suggesting that even when the program reached the target population it did not work as intended. However, as noted above, the small percentage of girls surveyed who self-reported exposure to 9ja Girls may not be representative of the experience of girls who were reached by the program.

However, the process evaluation suggested that 9ja Girls did make some progress toward achieving A360's intermediate outcomes in its targeted communities. These included:

- **Using life and vocational skills sessions to position contraception as relevant and valuable for girls and build girls' confidence and skills:** 'Life, Love, Health' classes took place weekly at public health facilities. During the classes, girls learned life and vocational skills, and participated in conversations about how contraception might enable them to realize their dreams and goals. The process evaluation consistently showed that the skills components encouraged girls to participate in the program, and the vocational skills elements were consistently described as girls' favorite element.

Interviews with participants suggested that the classes were helping girls expand their horizons by equipping them with skills, increasing their confidence and making them more aware of their potential and life opportunities. The classes also functioned as safe spaces where girls were able to raise issues they did not feel comfortable discussing with family or friends. However, the classes were less effective at creating a space to access contraceptive counseling – the process evaluation suggested that girls were often unwilling to adopt a method during the classes, due to fear of stigma.

“I gained a lot from my coming that day [...] I was having issues with my lover. And the way my question was answered, it was just as if the person that answered my question actually knew what I was going through. Her response was so precise and helpful.” (Adolescent girl, Southern Nigeria, 2020)

- **Improving the quality of service provision to build trust and credibility around contraception:** In 2018, A360 identified a number of counseling weaknesses and quality issues. In order to address these, 9ja Girls introduced additional mentoring, on-the-job training and supervision through its regional Quality Assurance team, and the PSI youth-friendly Counseling for Choice book to support providers during contraceptive counseling. Process evaluation interviews conducted in 2019 and 2020 suggest this approach had led to improvements: girls were overwhelmingly positive about the counseling process and reported feeling comfortable and safe. Feedback from providers also consistently highlighted that 9ja Girls training and support had helped address misinformation and improve service provider attitudes toward providing contraception to adolescent girls.
- **Engaging communities and key influencers to create a more supportive environment for accessing services:** In response to early examples of community backlash, 9ja Girls invested in community engagement activities and building relationships with community leaders, with the support of state MoH officials. As the program scaled, the ongoing presence of community mobilizers and the greater involvement of community leaders in regular program meetings helped secure increased community support. Monthly sessions with mothers (a key influencer for unmarried girls) also helped build participants’ support for their daughters to access contraception – although the sessions only reached a small number of mothers, and did not prove a significant mobilization channel. The process evaluation also found that skills classes helped secure acceptance from key community stakeholders through positioning the program as a ‘community-based wellness’ program rather than a contraceptive program. However, the program’s community engagement activities were light-touch, and outcome evaluation findings suggest they were not sufficient to address high levels of stigma around contraceptive access for unmarried girls.
- **Positioning contraception as relevant to girls through community in-person mobilization:** 9ja Girls mobilizers targeted unmet need ‘hot spots,’ approaching adolescent girls on the street and engaging them using a variety of youth-friendly tools. Mobilizers honed the times and places they worked to reach girls more efficiently – for example focusing on the end of the school day, while targeting older girls during their work lunch breaks. Girls consistently reported that they became interested in A360 because of the friendly and engaging approach of mobilizers and the program messaging, which intrigued them and made them want to continue the conversation. Employing young mobilizers from nearby communities also helped build trust among girls and increase community support for 9ja Girls. Mobilizers talked about the life skills and vocational sessions in order to ‘sell’ the program to girls, which the process evaluation suggested were effective in sparking girls’ curiosity and appealing to girls who were keen to learn new skills. However, mobilizers found it increasingly challenging to reach new girls as they saturated communities near Hub facilities, which may have contributed to the program predominantly reaching girls in areas close to health facilities, as discussed above.

Box 4: Challenges measuring exposure in Nigeria

In both North and South Nigeria, the outcome evaluation endline found low reported exposure to MMA and 9ja Girls. This could be related both to how the program was operationalized and the exposure questions which were asked as part of the outcome evaluation survey.

The outcome evaluation measured exposure by asking respondents about particular aspects of the interventions (for example whether they had participated in skills classes or in one-to-one counseling through MMA or 9ja Girls), relying on respondents' recall. However, A360's program monitoring data indicates that the majority of girls in Nigeria (51% of MMA participants in the North and 69% of 9ja Girls participants in the South) accessed the program through one-off walk-in appointments at public health centers rather than via skills classes. This means they did not receive most or any of the aspirational content during which the MMA and 9ja Girls names and branding would have been more prominent. As a result, these girls may not have associated their contraceptive uptake with MMA or 9ja Girls, or even remembered the program names or branding, and so would not have been captured as 'exposed' in the outcome evaluation. In addition, A360 staff sometimes used the language of 'mentorship' rather than 'skills classes' when engaging with girls in Northern Nigeria, which may have contributed to underreporting of exposed girls.

However, these hypotheses do not explain the limited effects of 9ja Girls across all outcomes, either at population level or among those who did report themselves as exposed.

5.2.4 Tanzania



In Tanzania, **Kuwa Mjanja** reached unmarried girls with life and entrepreneurial skills sessions alongside youth-friendly contraceptive counseling. Out-of-clinic pop-up events aimed to provide a safe, non-medicalized space for girls to access contraceptive services. Events were framed as well-being rather than contraceptive events, incorporating targeted messaging on body changes or ‘achieving dreams’ – depending on girls’ life stage and priorities – and entrepreneurial skills sessions designed to inspire girls and enlist the support of communities. In-clinic events provided dedicated times and spaces for girls to access counseling at local facilities, with contraception linked to their goals and dreams. Kuwa Mjanja was delivered through A360 outreach teams. Further details on the Kuwa Mjanja intervention and how it evolved over time can be found in the [A360 Process Evaluation Country Annex](#).

Kuwa Mjanja was implemented in 20 of 25 mainland regions in Tanzania: Kagera, Geita, Mwanza, Arusha, Tabora, Tanga, Dar es Salaam, Mbeya, Iringa and Morogoro.

Summary of A360’s results in Tanzania

mCPR Source: Outcome evaluation	<p>Decrease in mCPR of 9 percentage points from 51% at baseline to 42% endline in Ilemela District.</p> <p>24% of girls who were surveyed in Ilemela reported that they had been exposed to Kuwa Mjanja. Girls who were exposed to Kuwa Mjanja were almost twice as likely to use a modern method than girls who were not exposed.</p>
Girls reached Source: A360 routine monitoring data, October 2017–September 2020 Further details in the A360 Process Evaluation Country Annex	<p>By the end of September 2020, a total of 341,155 adolescent girls had attended Kuwa Mjanja events across all regions in which the program operated, and 72% of eligible girls (i.e. those not already using contraception or pregnant) had adopted a method.</p> <p>LARCs accounted for 48% of methods adopted over the course of the program.</p> <p>49% of adopters were aged 15–17, compared to 51% aged 18–19.</p>
Change in intermediate outcomes Source: Outcome evaluation and process evaluation	<p>No population-level change in the desired direction in most of A360’s intermediate outcomes. Positive associations between exposure to Kuwa Mjanja and five of the intermediate outcomes.</p> <p>The process evaluation identified challenges faced by A360 in Tanzania which may help explain the outcome evaluation results, as well as areas where Kuwa Mjanja was making progress towards the intermediate outcomes:</p> <ul style="list-style-type: none"> Awareness of contraceptive products increased from baseline to endline, and girls who were exposed to Kuwa Mjanja were more likely to be aware of contraceptives and where to obtain health services than girls who were not exposed to Kuwa Mjanja.

	<ul style="list-style-type: none"> ▪ The outcome evaluation suggests that Kuwa Mjanja was not successful in making contraception appear more relevant or valuable to girls. The aspirational content in Kuwa Mjanja was relatively light touch. Many girls attended only a single event, and so their exposure to empowerment messages was limited. However, Kuwa Mjanja branding and messaging resonated strongly with girls interviewed for the process evaluation, and many girls talked about how the program helped girls to 'be smart', clever and more self-aware. ▪ Stigma remained a major concern for girls. Fears about contraception encouraging promiscuity was widespread, premarital sex was highly stigmatized and often not talked about within families, and contraception was frequently viewed as being unsuitable for adolescent girls. ▪ Community engagement activities were a weak point of the Kuwa Mjanja model, although entrepreneurship skills sessions did help to drive community acceptability for program activities.
Cost and cost-effectiveness Source: Cost-effectiveness evaluation	<p>The A360 design cost was 9 times higher than the comparator cost (DELTA); however, design costs accounted for only 13% of the total incremental cost in Illemela district. A360 costs were estimated to be \$0.22 per capita, translating to 0.5% of total health care spending per capita and \$13 per eligible girl per year of implementation in Illemela district³⁰.</p> <p>An estimated 5 cumulative incremental DALYs were averted, resulting in a cost per DALY averted of \$25,579. This is 24 times the GDP per capita in Tanzania, and therefore not considered to be cost-effective by WHO-CHOICE standards (less than three times the GDP per capita).</p>

³⁰ Further details can be found within the Cost Effectiveness report on the [Itad Website](#).

Figure 8: Kuwa Mjanja effect of A360 on primary and intermediate outcomes



TANZANIA: Ilemela district (Kuwa Mjanja)

Outcome evaluation components (A full description of each outcome can be found in Annex 1)	Was there an effect at population level? ⁴	Was there a greater effect for girls exposed to Kuwa Mjanja? ⁵	
Adolescents use high-quality sexual and reproductive health products and services			*** Strong evidence of effect, p<0.001
mCPR (primary outcome)	*	***	** Evidence of effect, p<0.01
Proportion of modern contraceptive users using a LARC	*		*
Use of modern contraceptive in past 12 months		***	Weak evidence of effect, p<0.05
Age at first birth among girls who gave birth			*
Births in the last 12 months ⁷	—	—	Evidence of an effect contrary to the hypothesized
Unmet need for modern contraception		*	
Adolescent girls have access to appropriate high quality sexual and reproductive health information and services			No evidence of effect
Awareness of contraceptive products	***	*	—
Awareness of where to obtain health services		**	Not applicable
Contraception positioned as relevant and valuable for adolescent girls			
Future aspirations ^{1,7}	—	—	
Benefits of modern contraception (Benefit 1) ²	***		
Benefits of modern contraception (Benefit 2) ^{1,3}	—		
Intention to use a modern method	**		
Supportive environment for adolescent girls to access services created			
Attitudes towards the use of modern contraceptives	**		
Self-efficacy to use modern contraceptives	***	*	
Descriptive norms ^{1,6}	—		
Community acceptance ⁷	—	—	
Trust and credibility of family planning products			
Misconceptions about modern contraceptives			
Disadvantages of modern contraceptives ^{1,7}	—	—	

¹ Measured at endline only. ² Assessed through the sentence "Using modern contraception can allow an adolescent woman girl to complete her education, find a better job and have a better life" with which the respondent agreed or disagreed. ³ Assessed through the sentence "Using modern contraception can allow a girl to achieve her life goals" with which the respondent agreed or disagreed. ⁴ In Northern and Southern Nigeria, effects were measured by assessing the difference between the change in outcomes over time in areas receiving A360 interventions compared with the change in outcomes over time in comparison areas not receiving A360 interventions. In Tanzania and Ethiopia, effects were measured by assessing the change over time, before and after A360 interventions were implemented. All analyses were adjusted to account for demographic changes in populations over time and between intervention and comparison areas. ⁵ The effect among girls exposed compares outcomes self-reporting exposure to A360 with those self-reporting no exposure to A360. ⁶ Assessed through a 'descriptive norms index' which asked three questions related to norms around contraceptive use, e.g. 'How many unmarried/married girls aged 15–19 years in your community do you believe discuss using a method of contraception boyfriend or partner/husband or partner?' ⁷ Outcome not measured at endline in Tanzania due to COVID-19 adaptations to the questionnaire.

Did A360 have a positive effect on contraceptive use among adolescents in Ilemela District, and why or why not?

In Tanzania, the outcome evaluation detected a population-level decrease of 9 percentage points in the mCPR among unmarried adolescent girls aged 15–19 in Ilemela District, driven by a fall in self-reported condom use. The mCPR in Ilemela decreased from 51% at baseline to 42% at endline, indicating a population-level decrease in mCPR over the time that Kuwa Mjanja was being implemented. This was driven by a fall in self-reported male condom use, which decreased from 34% at baseline to 19% at endline.³¹

However, there was a 50% increase in LARC use in Ilemela from baseline to endline, and girls who were exposed to Kuwa Mjanja were almost twice as likely to use a modern method than girls who were not exposed. Among the sexually active and fecund current users of modern contraception, LARC use increased from 14% at baseline to 21% at endline.³² This change was driven by increased use of implants Kuwa Mjanja could have contributed to - according to A360 program monitoring data, Kuwa Mjanja distributed almost 95,000 implants nationally, accounting for 43% of all methods.

In addition, girls who were exposed to Kuwa Mjanja had almost twice the likelihood of using a modern method at the time of the survey and in the previous 12 months as girls who were not exposed. This suggests that when Kuwa Mjanja reached adolescent girls, it had some effect in supporting them to use contraception. 24% of girls who were surveyed in Ilemela self-reported that they had been exposed to Kuwa Mjanja. A 54% prevalence of modern contraceptive use was seen among the respondents who reported exposure to Kuwa Mjanja, compared to a prevalence of 37% among the girls who reported having no exposure to Kuwa Mjanja.

Comparison with secondary data on mCPR trends in Tanzania is of limited use in helping to explain the negative change in mCPR in Ilemela. An upward trend in mCPR was observed from 2016 to 2020 for married and unmarried women aged 15–49, using publicly available data on mCPR from the Tanzanian National Health Portal. However, this data has limited use, as it does not disaggregate by age or marital status and it uses a different definition of mCPR to that of the outcome evaluation. It is therefore difficult to explain the decrease in mCPR over the implementation time period. Possible explanations include an unintended negative impact of A360 on population-level condom use, bias in the study methodology at baseline, endline, or both, or a combination of factors.

The process evaluation suggests several contextual and programmatic factors that presented challenges for A360 and may help explain the absence of an effect on mCPR.

- **Unsupportive political environment:** The process evaluation found that the political environment in Tanzania was more challenging than the other A360 contexts and posed significant barriers to implementation, with high-ranking government officials explicitly criticizing FP and expressing negative attitudes toward pregnant girls remaining in school. While the MoH continued to support A360 and adolescent contraception provision throughout this period, uncertainty was created among ASRH actors in Tanzania. They felt they had to tread carefully with messaging, to the extent that Kuwa Mjanja temporarily halted outreach activities to prevent backlash following the comments in 2018. The national-level discourse influenced attitudes at district level, with District Commissioners occasionally halting activities or issuing complaints. A360 employed strategies to mitigate this by conducting additional advocacy meetings at district and ward levels and by enlisting the support of Regional Education Officers before approaching schools; these strategies helped manage these sensitivities.

³¹ From 34.17% (95% CI: 31.24 – 37.23) at baseline to 19.09% (95% CI: 16.20 – 22.36) at endline.

³² 14.29% (95% CI: 10.76 – 18.73) and 20.99% (95% CI: 18.04 – 24.28) reported the use of LARCs (includes implants, intrauterine devices and injectables) at baseline and endline respectively.

“Some of the political leaders in the councils still believe that adolescents should not be given contraceptives until they are grown up or married, so they tend not to allow some of the events to happen in their area of authority.” (Regional A360 staff member, Tanzania, 2020)

- **Stigma and insufficient engagement of key influencers:** The process evaluation found that stigma around unmarried girls accessing contraception remained high and acted as a major barrier for girls to access services and continue use of contraception. The program’s work to address stigma may have been insufficient. In 2018, components of Kuwa Mjanja which helped to build the support of key influencers were discontinued. This could have limited community acceptance for Kuwa Mjanja and thus program impact, as discussed further below.
- **A360 targeting and reach:** The process evaluation highlighted that it was challenging for the program to hold events far from health facilities, and found that the push for ‘speed and scale’ in 2018 provided a disincentive for Kuwa Mjanja to focus on harder-to-reach girls. In late 2018, a ‘saturation strategy’ was introduced to help deepen engagement in a smaller number of target regions (reducing from 18 in 2018 to eight in 2020) before moving outreach teams to new areas. However, unmet need proved higher than anticipated, making it difficult to reach saturation in targeted areas. Some wards are exceptionally large, with dispersed rural settlements that can be very difficult to access. Many stakeholders interviewed for the process evaluation felt that the program was ‘stretched too thin’ and would have benefited from staying longer in one place and reaching more neighborhoods, including more rural and isolated communities, where unmet need is high. This could help explain why mCPR increased among girls exposed to Kuwa Mjanja in Ilemela, but not among the population as a whole.
- **Outreach model:** The outreach model poses a challenge to systematic follow-up, which has been difficult for A360 to address. The intention was for outreach teams to visit the same areas every three months, to ensure that girls who adopt injectables are able to access follow-up services, as well as to provide continued access for girls who are not willing or able to visit health facilities. However, in practice this has been challenging, in part because of government requests for the program to visit new areas that have not yet been served. In October 2019, A360 reported that under 25% of facilities had received a repeat visit, and those that had were not always at the three-month interval. Several girls and Kuwa Mjanja Queens felt that events are spaced too far apart, leaving some girls without access to services.

“It becomes a challenge... [some girls] who take the method from [a Kuwa Mjanja event] don’t want anyone else to find out, she thinks she will be taking it from there all the time [...] she finds herself in a dilemma not knowing what to do.” (Kuwa Mjanja Queen, Katavi)

Although PSI call center data and interviews for the process evaluation suggested that many girls did return to subsequent Kuwa Mjanja events when the program returned to their communities, program monitoring data shows that the number of continuing users attending events was low and had not increased much over time (only 2,644 continuing users were recorded in 2019–2020, comprising 1.5% of all attendees). ‘Kuwa Mjanja Clubs’ were prototyped and piloted at the beginning of the program, as a mechanism to support sustained engagement and ongoing dialogue between girls and service providers. While the clubs were appreciated by girls, maintaining attendance was difficult, they were not viewed as cost-effective in terms of reaching new adopters, and they proved too challenging to scale. In the absence of the clubs, Kuwa Mjanja Queens were the only in-person form of follow-up support to girls – some reported that girls called or visited them if they had challenges, and they helped direct them to a nearby youth-friendly provider. However, this support was informal and was not always be available, as not all Kuwa Mjanja Queens stayed engaged after A360 left their area.

- **Program adaptations due to COVID-19:** In the last seven months of Kuwa Mjanja, COVID-19 significantly hindered service delivery. A360 was required to halt all service delivery in Tanzania for three months from March 2020 to May 2020. When services resumed, the revised model relied on in-clinic events, which traditionally attracted fewer girls and older girls than outreach events, and mass mobilization activities which attracted large numbers of girls were not reinstated.

The first case of COVID-19 in Tanzania was confirmed on 16 March 2020, after which the government closed schools, banned public gatherings, and restricted travel. This resulted in a complete halt of A360 activities, as both the in- and out-of-clinic models involved gatherings of sometimes large groups of girls, and the outreach model relied on staff being able to travel. National government guidance on safe resumption of SRH services was not published until the end of May, resulting in a three-month pause in service delivery. When services were able to resume in June, PSI pivoted quickly to pilot a revised model which they developed following phone surveys with girls using the central call center and drawing on adaptive implementation processes to consider how all the elements of the intervention could be adapted to meet girls' needs safely. The revised model involved in-clinic events only which were modified from the original solution to ensure girls spent no longer than 30 minutes in facilities to minimize risk. They included a short 'inspirational talk' which contained an abbreviated version of the 'know your body' and 'know your path' messaging to encourage girls to think about their life goals. While this helped to mitigate the COVID-19 risk it meant that access and exposure to Kuwa Mjanja services were more limited than prior to COVID-19.

Between November 2017 and March 2020 (before COVID-19 restrictions), 2,945 out-of-clinic events were held compared to 4,299 in-clinic events. In 2019–20, approximately 70 girls attended each out-of-clinic event, compared to 35 who attended each in-clinic event. Monitoring data also shows that girls attending out-of-clinic events were generally younger and had no children when compared to participants at in-clinic events. **This raises concerns that the adapted COVID-19 model, which involved in-clinic events only, may have been a barrier to Kuwa Mjanja reaching younger girls who did not feel comfortable to come to a clinic. It is likely that the adapted model would have reached more older girls .**

- **Methodological challenges:** The endline outcome evaluation survey was conducted seven to twelve months after implementation of Kuwa Mjanja ended in Mwanza region. Implementation of Kuwa Mjanja in Mwanza region had stopped by October 2020. However, due to COVID-19, the endline population survey in Mwanza region was not conducted until May 2021–October 2021. This gap between the end of implementation and the survey means that the youngest survey participants were unlikely to have been exposed to Kuwa Mjanja. In addition, there were changes in the population between baseline and endline: the number of adolescent girls resident in the study area increased noticeably, and the sampling strategy at endline had to be modified to account for this change.³³ There were some measured differences between girls at baseline and endline – most notably in levels of educational attainment and proportion girls in school – and unmeasured differences between the two populations cannot be ruled out.

How far did A360 achieve its intermediate outcomes in Ilemela District, and why?

Most of the intermediate outcomes measured by the Outcome Evaluation did not change in the desired direction at population level, and a negative change was detected in four of the outcomes in Ilemela District. As shown in Figure 7, a positive change was detected in two outcomes in Ilemela over the course of the program, a negative change was detected in four of the outcomes and no change was detected in the remainder of the intermediate outcomes that were measured at baseline and endline. This suggests that, overall, Kuwa Mjanja was not successful in achieving its intermediate outcomes at population level in

³³ See TZ outcome evaluation report, Appendix A.

Ilemela. However, there was a positive association between exposure to Kuwa Mjanja and five of the intermediate outcomes.

Awareness of contraceptive products increased from baseline to endline in Ilemela, and exposure to Kuwa Mjanja was associated both with greater awareness of contraceptive products and greater awareness of where to obtain health products. Most respondents had heard of contraceptives at baseline and endline. 81% reported having previously heard of contraceptives at baseline with this increasing to 95% at endline. While there was no evidence of change over time in awareness of where to obtain health services at a population level, girls who were exposed to Kuwa Mjanja were slightly more aware of where to obtain health services than girls who were not exposed, and were more aware of contraceptives.

The outcome evaluation suggests that Kuwa Mjanja was not successful in making contraception appear more relevant and valuable to girls in Ilemela, with negative changes in two of the intermediate outcomes related to this area of the A360 TOC. Across the population of girls surveyed in Ilemela at endline, the proportion of girls who agreed that *“using modern contraceptives can allow an adolescent girl to complete her education, take up better economic opportunities and fulfil their potential”* decreased by 5% as compared to baseline. Similarly, the intention to use modern contraception decreased by 14% between baseline and endline. There was no significant difference between girls who were and were not exposed to Kuwa Mjanja.

This may be explained by the relatively light-touch nature of the aspirational content in Kuwa Mjanja. Many girls attended only a single event, and so their exposure to empowerment messages was limited. In addition, the process evaluation found that service providers did not always link contraception to the aspirational content during the one-to-one counseling moment – potentially a consequence of the relatively short orientation providers received on the program before helping to deliver events.

However, Kuwa Mjanja branding and messaging resonated strongly with girls interviewed for the process evaluation, and many girls talked about how the program helped girls to ‘be smart’, clever and more self-aware.

“I took some good advice from the event, that the girl should stand by her own opinion so that she may be able to reach her dreams. There should be nobody to discourage her [...] she is to stand by her opinion, and she will make it.” (Adolescent girl, Tanzania, 2020)

The outcome evaluation found no evidence of change in girls’ beliefs in misconceptions about modern contraceptives between baseline and endline. Consistent with this result, the process evaluation found that service providers were not always giving girls accurate information about side effects, and service providers sometimes steered girls toward or against particular methods.

“Girls don’t like being lied to. [...] The provider was telling her if you take this method, you won’t get side effects [...] she chose an implant and the provider said you will find it where we have put it [but then] the implant disappeared [...] she was then afraid of anything else from Kuwa Mjanja.” (Adolescent girl, Tanzania, 2018)

Service provider training and support were lighter-touch in Tanzania than the other countries, as the outreach model made large-scale screening or training unfeasible given program resources. A short introductory video was used to help ensure providers had some understanding of Kuwa Mjanja before participating in events, but this was not a full replacement for formal training. Interviews suggested that providers were sometimes unclear about how Kuwa Mjanja counseling should differ from their usual approach. Despite these challenges, the vast majority of girls interviewed for the process evaluation said that service providers were friendly and listened to them, and that they felt safe and comfortable, free to speak and express themselves, and trusted what they heard.

The outcome evaluation suggests that Kuwa Mjanja was not successful in building a more supportive environment for girls to access services, with negative changes in two of the intermediate outcomes.

Approval for both unmarried and married couples to use modern contraception was lower in Illemela at endline than baseline. Consistent with this result, the linear regression model showed that adolescent girls' approval toward modern contraceptive use decreased by 14% over the course of the program. There was no significant difference in attitudes between girls who were and were not exposed to Kuwa Mjanja.

Girls' self-efficacy to access and use FP methods also decreased, from baseline to endline.³⁴ However, girls who were exposed to Kuwa Mjanja had higher self-efficacy than girls who were not exposed.

This is consistent with process evaluation findings that stigma remained a major concern for girls. Fears about contraception encouraging promiscuity were widespread, premarital sex was highly stigmatized and often not talked about within families, and contraception was frequently viewed as being unsuitable for adolescent girls. Religious beliefs that contraception is a sin, and cultural norms around early marriage and childbirth within particular communities, posed another major barrier. Some girls interviewed for the process evaluation felt more confident to visit a clinic after attending a Kuwa Mjanja event, because they now knew a local provider and knew what to expect. However, others were still unwilling or unable to visit a clinic, due to fears of being seen and judged by others from the community, distance from the nearest clinic, or fears that they would be asked to pay for services. These concerns were particularly acute for younger girls.

The process evaluation found that community engagement activities were a weak point of the Kuwa Mjanja model, although entrepreneurship skills sessions did help to drive community acceptability for program activities. In 2018 the program's emphasis was 'speed and scale', with a push from the donors to identify the 'minimum viable product' and reduce costs. This led to the decision to drop two of the elements of the program that aimed at building a supportive environment and sustained engagement with girls – Kuwa Mjanja Clubs and parent–girl clinic days – as these were not generating as many adopters. Concerns were raised in the midterm evaluation that this narrower focus reduced opportunities to engage influencers and build a supportive environment for girls. A360 explored the potential to reintroduce Kuwa Mjanja Clubs in 2019, but struggled to find a partner to help implement them at scale. However, parents' sessions were reinstated in late 2018 as a mechanism to engage parents in conversations around contraception and build support for the program. The process evaluation found that these were positively received by parents, and some parents interviewed said the sessions had shifted their attitudes. However, the sessions were light-touch, were not being systematically held across all sites, and were likely reaching relatively small numbers of parents given the size of program catchment areas.

Although community engagement activities were a weak point of the Kuwa Mjanja model, the promise of helping girls become 'liberated' or financially independent resonated strongly with parents, teachers and community leaders – particularly in a context of poverty and challenges in finding formal employment. Interviews with community stakeholders across multiple years suggest that the aspirational component of the program was a critical factor in building community support for girls' participation in events.

The process evaluation found that Tanzania encountered more challenges than other countries in building sustained relationships to support continuation, largely due to the outreach model and not landing on a cost-effective and practical way to implement Kuwa Mjanja Clubs. The intention was for outreach teams to visit the same areas every three months, to ensure that girls who adopted injectables were able to access follow-up services, as well as to provide continued access for girls who were not willing or able to visit health facilities. However, in practice this was challenging, in part because of government requests for the program to visit new areas that had not yet been served. In October 2019, A360 reported that under 25% of facilities had received a repeat visit, and those that had were not always

³⁴ The mean self-efficacy score decreased from 3.34 (95% CI: 3.27 – 3.41) at baseline to 3.16 (95% CI: 3.08 – 3.23) at endline. See Annex 1 for a description of how self-efficacy was measured.

at the three-month interval. Several girls and Kuwa Mjanja Queens felt that events were spaced too far apart, leaving some girls without access to services.

“It becomes a challenge... [some girls] who take the method from [a Kuwa Mjanja event] don’t want anyone else to find out, she thinks she will be taking it from there all the time [...] she finds herself in a dilemma not knowing what to do.” (Kuwa Mjanja Queen, Katavi)

Kuwa Mjanja Clubs were prototyped and piloted at the beginning of the program as a mechanism to support sustained engagement and ongoing dialogue between girls and service providers. While the clubs were appreciated by girls, maintaining attendance was difficult, they were not viewed as cost-effective in terms of reaching new adopters, and they proved too challenging to scale. In the absence of the clubs, Kuwa Mjanja Queens (peer mobilizers) were the only in-person form of follow-up support to girls, but their support was largely informal and dependent on the capacity and availability of the Queens.

5.3 Was A360 cost-effective?

As the increase in mCPR detected by the outcome evaluation was small or non-existent, it follows that the cost-effectiveness analysis results indicate that A360 was not cost-effective, as cost-effectiveness is premised on effectiveness. Additional analysis sought to determine what level of health impact would have been needed for A360 to achieve cost-effectiveness, given what was spent in each study geography. In Ethiopia, no manner of success in increasing mCPR in the study geography would have made A360 cost-effective. In Nigeria, reaching minimum thresholds for cost-effectiveness would have required very rapid, almost unheard-of increases in mCPR. In Tanzania, in contrast, had A360 merely kept a constant mCPR, the program would have been cost-effective.

This section does not attempt to explain the outcome evaluation results (effectiveness) as that is covered in Sections 5.1 and 5.2. This section provides an overview of the results of the cost-effectiveness analysis (the full results are available on the [Itad website](#)), and provides some potential explanations for the high cost of the design and implementation of A360 – which is important to consider, given the finding that it would have been impossible, or would require unheard-of increases in mCPR, for A360 to be cost-effective in Ethiopia and North and South Nigeria. This section focuses on programmatic elements that were identified by the process evaluation as resource-intensive.

Cost-effectiveness analysis results

The A360 approach was not cost-effective in any of the study geographies. Incremental costs per DALY averted for the A360 interventions were \$30,855 (33 times GDP per capita) in Ethiopia, \$111,416 (53 times GDP per capita) in Northern Nigeria, \$30,114 (14 times GDP per capita) in Southern Nigeria and \$25,579 (24 times GDP per capita) in Tanzania. These incremental cost-effectiveness ratios are far above the WHO-CHOICE standards for cost-effective health interventions (an incremental cost-effectiveness ratio of less than three times GDP per capita). They are also far above the \$225 per DALY averted proposed as a cut-off for inclusion of interventions in the Universal Health Care package, and far above the cost per DALY averted for other FP interventions³⁵ (between \$235 and \$587).

There are some potential explanations for these results:

- **Positive health impact was small or non-existent.** Adjusting for confounding variables, the outcome evaluation found a statistically significant increase in the mCPR in only one of the four

³⁵ Based on ranges seen in Zakiah N, van Asselt ADI, Roijmans F, Postma MJ (2016) Economic Evaluation of Family Planning Interventions in Low and Middle Income Countries; A Systematic Review. PLoS ONE 11(12): e0168447.

geographies. Even without positive changes in mCPR, small increases in DALYs averted were found due to increases in the number of eligible girls. However, effect sizes were small.

- **A360 costs were high in relation to the comparator.** A360 costs were substantially higher than the comparator intervention that represented the programming status quo. Although A360's design process cost seven to nine times as much as the comparator DELTA process, design costs in general accounted for, at most, 15% of total costs in any one study geography. In other words, even without the substantially higher design effort under A360, overall A360 costs would have been high, and taking out the design costs would not have significantly changed the cost-effectiveness results.
- **Implementation costs were primarily driven by personnel costs and most costs were incurred at national or international level.** Consistently across the geographies, personnel costs account for 57%–71% of the total costs, meaning that A360 was a very person-intensive intervention. Personnel costs capture everything from international technical staff down to government service providers at site level, although a smaller share of these costs happen at site level. In Ethiopia and Nigeria, more than half of the costs were incurred at national (e.g. country headquarters) or international level, while in Tanzania this fell just below half (48%). Had A360 been able to achieve wider geographic scale with the international and national HQ staff they had, these costs could have been spread more thinly. However, spreading these staff resources more thinly could have also resulted in poorer performing programs if there were not adequate staff to oversee implementation.

Using the process evaluation to explain the cost-effectiveness analysis findings

The process evaluation identified elements of A360 which were central to the approach and were reported to be resource-intensive. These included the focus of integrating A360 into public health systems and adaptive implementation. Activities related to adoption and replication activities represented an important cost component in the early stages of A360. Although these costs were not included in the cost-effectiveness analysis costing, we comment on adoption and replication in this section, as the process evaluation highlighted these as resource-intensive activities. Further, some of the resource-intensive elements described below happened at site level or regional level, and while they may not explain the cost-effectiveness analysis findings (where many costs came from national and international levels) they highlight important considerations in thinking about the future cost and sustainability of A360.

Government integration

Integration of A360 into public health systems required working closely with multiple layers of government to coordinate and implement the program. This helped build government buy-in for the program. However, this required substantial efforts to navigate persistent health system constraints, including poor-quality facilities and limited government capacity to support and supervise health workers. Regional and national contraceptive shortages are common across all contexts, which often placed limits on girls' choice of methods, and in some cases inhibited uptake of long-acting methods. While A360 funds were not used for commodity procurement, A360 regional staff invested significant time and effort to proactively identify and report gaps, and in some cases liaised and negotiated with government officials and other non-governmental organizations to address stock-outs and supply challenges.

In Ethiopia and Nigeria A360 staff provided crucial on-the-job support to help build provider capacity and mitigate the challenges of high workloads and staff shortages. The high workloads of public health workers were a consistent challenge across all contexts. In Ethiopia Health Extension Workers shouldered ever more responsibility over the years, delivering more and more services and frequently facing fatigue and burnout. COVID-19 further exacerbated this challenge. In both countries there were also capacity constraints within district or state-level government health departments to support and supervise health workers.

“During the training we were resistant to accept and implement Smart Start. We mentioned that we are very busy and we have so much work, but later we believed that it is our responsibility to serve the community.” (Health Extension Worker, Ethiopia, 2018)

This issue was mitigated in part through on-the-job support from A360, which the literature suggests is important for long-term impact on service provider capacity (World Health Organization, 2015; Chandra-Mouli *et al.*, 2017). In Nigeria and Ethiopia, A360 staff were stationed in communities and facilities, to work alongside government providers to implement the program. The process evaluation found that this reinforced formal training, built confidence and capacity, and provided a crucial ‘extra pair of hands’ to ease the burden on providers through supporting mobilization, service delivery and reporting. At regional or state level, A360 supervisors worked alongside government officials to support health workers – proving critical to ensuring quality and consistency as the program scales. **This support added value and was critical to ensuring high-quality services were provided to adolescent girls. However, it is important to recognize that it was also resource-intensive.**

Additionally, reliance on A360 staff for service delivery and supervision raised concerns about sustainability, with the risk that quality and fidelity could drop dramatically once A360 staff are no longer supporting government providers. In 2019, the Nigeria team tested the program without the support of an A360 Young Provider, but this led to a significant drop in service quality, with providers forced to limit adolescent services to one day a week given their high workloads. In Ethiopia, Smart Start Navigators played a vital role in mobilization and often led on financial planning counseling, as Health Extension Workers were less confident with this component – which could present risks to fidelity after the Smart Start Navigators transition out.

“Government providers have so many responsibilities; most are overstressed, they're understaffed, so it's always a challenge for them to have time to be around to listen to how we attend to girls.” (A360 regional staff member, Southern Nigeria, 2020)

PSI is well aware of the risk to fidelity once interventions are fully integrated into government health systems. This will be a central focus of the follow-on program.

Adaptive implementation

Adaptive implementation, which was introduced in 2018, facilitated continuous improvements as the solutions scaled. The adaptive implementation approach was introduced with the support of an implementation scientist who joined the global team. This approach was intended to provide structure and tools to ensure that the solutions continued to resonate with girls and that the core elements of A360 were preserved while pursuing adaptations to drive improvements as they were scaled. The process involved country teams regularly reviewing qualitative and quantitative monitoring data to identify learning and iterate solutions. A360 staff viewed adaptive implementation as complementary to the HCD process and as a means of moving from design to implementation while still maintaining ‘curiosity and tinkering’. The skills and new mindsets fostered through HCD (flexibility, curiosity and the ability to test and iterate) helped teams adjust to and apply an adaptive approach, including supporting country teams to respond to COVID-19.

Box 5. The value of adaptive implementation

PSI's definition of adaptive implementation is grounded in the fundamental tenet of implementation science that no intervention is optimal prior to implementation (Chambers, Glasgow, and Strange, 2013).

The adaptive implementation approach embraces the need for and encourages iterative, learning-based adaptations to program implementation. Data systems and monitoring approaches were designed to allow for rapid reviews of qualitative and quantitative data to inform continuous program adaptation. In introducing adaptive implementation, PSI intended for programs to be supported to respond to girls' experiences and needs and the possibilities and constraints of local health systems.

"HCD will shape your cornerstones. And then adaptive implementation gives you the bricks in between [...] it does not rely on big sprints, but rather smaller tweaks based on the needs that are there." (A360 staff member, Tanzania, 2020)

Adaptive implementation was supported by opportunities for cross-country learning. Country teams felt that regular peer-to-peer learning visits, co-creation meetings and shared quality assessment exercises were useful mechanisms to learn from other settings. While useful, these types of opportunities were likely cost-intensive in terms of both travel costs and staff time.

The introduction of adaptive implementation complemented the HCD-driven design phase and provided useful tools and processes to support regular review of data to generate learning and inform continuous adaptations of the solutions. There are several examples across the A360 countries where adaptations led to tangible improvements – for example the shorter discussion guide and incorporation of the Women's Development Army in Ethiopia and the introduction of the Hub and Spoke model in Nigeria. Experience with adaptive implementation also helped country teams to pivot more quickly to respond to the COVID-19 restrictions on service delivery.

However, the introduction of adaptive implementation was time-consuming for the country teams and required significant support from PSI Global. Adaptive implementation was brought in mid-course and proved time-consuming and difficult to implement for country teams, requiring significant support to integrate it into their ways of working. Some country teams found the array of new materials and resources difficult to assimilate. The Tanzania team began with weekly performance review meetings, but eventually reduced these to monthly meetings and limited the engagement of regional staff members due to time constraints. It was also difficult to embed adaptive ways of working into front-line implementation and was challenging to roll out adaptations to multiple regions and implementation teams after the solutions scaled.

Adoption and replication

Note: The cost-effectiveness analysis removed costs associated with adoption and replication (spent at international level as well as in-country) and sensitivity analysis tested assumptions about what share of total costs were removed for these purposes. However, a discussion of adoption and replication activities is included in this section as process evaluation highlighted these as resource-intensive activities.

From the early stages, A360 actively promoted its approach and solutions to encourage others to adopt or replicate them. There were several important examples of adoption and replication by the end of the program. However, this required substantial resources, and the impact of it was challenging to quantify as outcomes were not clearly defined or systematically measured. Adoption and replication activities included developing materials for external audiences and participation in key meetings and conferences. Pressure to communicate the successes of the A360 approach and the solutions from early on in the program, before evidence was available on their effectiveness, added to the already high workload of

implementation teams during the early stages of the program, and was an important cost driver. By the end of the pilot phase, it was estimated that \$1 million–\$1.5 million had been spent on adoption and replication, out of \$9.9 million in total costs at that time.³⁶

Box 6. What are adoption and replication?

Adoption refers to A360 inspiring other interventions to adopt a similar approach to design and implementation. For example: including youth as designers, employing HCD or a multidisciplinary approach, or using an adaptive implementation process.

Replication refers to A360 inspiring other actors to replicate the A360 solutions (or elements of them) within and beyond intervention areas, with other funding sources.

Promoting the adoption and replication of A360 was a core program objective, driven by donors' desire to catalyze investment to support learning, scale and sustainability. However, there was a lack of clarity on 'what good looks like'. A clear ToC was never established for adoption and replication. Although outcome-level indicators were initially developed, they were later abandoned due to difficulties in measuring this type of change, and also due to donor prioritization of country-level performance over other objectives. In the final years of the program, A360 focused on monitoring outputs related to adoption and replication rather than outcomes, including stakeholder engagement, conference activities and resources produced.

At global level, A360 invested extensive efforts to generate global public goods and share learning through publications, conferences, meetings and online content. These were appreciated by ASRH stakeholders, who were interested in learning about how to apply HCD, engage youth meaningfully and tap into girls' aspirations. However, there was some skepticism among external actors about the cost and complexity of the A360 approach, and few concrete examples of adoption or replication at global level were identified beyond donors and implementing organizations.

A360 influenced thinking and practice across PSI, and within BMGF and CIFF. A360 staff provided direct technical assistance to PSI projects in Mozambique and Mali that were attempting to replicate elements of the A360 approach and solutions. PSI and SFH country teams incorporated HCD into several other projects and proposals, and in Nigeria SFH planned to roll out training on HCD across the organization. Within PSI Global, the 'Keystone' design framework developed in 2019 was reportedly influenced by the A360 approach.

Donors felt that A360 had demonstrated the importance of incorporating both aspirations and meaningful youth engagement into ASRH. The CIFF India team wrote a proposal to adapt Smart Start for India, and conversations were held with other teams around building A360 tools and messaging into other programs.

***"The biggest lesson that we have taken away from A360 is reconsidering how we talk about contraceptive uptake [...] having it be centered around some kind of hook that speaks specifically to [adolescents], is something that we think is a huge benefit to the program."** (Donor, 2019)*

By the end of the program, A360 had considerable success in promoting national-level adoption and replication. A360 country teams led or engaged actively in national and state-level platforms to share learning and influence policy, and provided learning tours and other support to organizations interested in adapting elements of the program. This led to a growing number of examples of replication among

³⁶ P. 25 of midterm review.

national ASRH actors. National ASRH stakeholders interviewed for the process evaluation often expressed appreciation of the work A360 had done to bring stakeholders together and share learning.

Engagement proved substantially easier once the design process was over and the solutions were 'landed'.

"I think my biggest personal learning is to not expect a program to do too much up front [...] where we expect not only a proof of concept but to go to scale [...] asking to have scale, plus adoption and replication, is a bit too much." (Donor, 2019).

This reinforces the midterm review finding that adoption and replication goals were likely pursued too soon, before clear evidence existed on the effectiveness of the solutions. This also raised the question of whether it was worth dedicating resources to these activities in the early days of the program.



| Conclusion

Conclusion

The outcome evaluation suggests that A360's aspiration to achieve catalytic change among adolescent girls was achieved in the study geography in Ethiopia, but not in Northern or Southern Nigeria nor Tanzania.

A360 aimed to catalyze novel approaches to reaching adolescents, supporting them to access modern methods of contraception in ways that could be replicated by partners around the world. The program hypothesized that change in A360's intermediate outcomes (positioning contraception as relevant and valuable, building trust and credibility of FP and building a more supportive environment for girls to access services) would lead to a catalytic change in adolescent contraceptive use (measured by population-level increase in the mCPR), as a result of increased access to and use of high-quality SRH products and services.

Program monitoring data showed that A360 reached 410,871 adolescent girls with modern contraception since 2017, significantly exceeding the overall program goal of 285,674 adopters. While this target shifted downwards during the design stage, A360 also substantially exceeded the original adopter target of 300,000 girls.³⁷ This achievement is notable in the context of COVID-19, which significantly affected performance across all contexts. However, the outcome evaluation detected population-level mCPR change in only one of the four study areas: Oromia in Ethiopia. This suggests that the program's aspiration to achieve catalytic changes among adolescent girls were not realized in Nasarawa and Ogun States in Nigeria, or in Mwanza Region in Tanzania. However, there was a positive association between girls who were exposed to A360 when compared to girls who were not exposed for the primary outcome (mCPR) and for several of the intermediate outcomes in Oromia in Ethiopia, Nasarawa State in Nigeria and Ilemela in Tanzania. This suggests that where the program reached girls it did, in some cases, achieve its intended effects.

The process evaluation suggests that A360's success in Ethiopia was a result of a strong intervention design and a successful implementation model, in the context of a supportive policy environment.

FP has been a priority for the government of Ethiopia in recent years, with increasing recognition of the need to reach adolescents in order to tackle teenage pregnancy rates. The process evaluation found that A360 effectively communicated the strong results achieved in the early stages of the program, which helped demonstrate how Smart Start contributed to government priorities and objectives and build government buy-in. The intervention design proved effective, built around couples' counseling and the linking of financial planning to contraceptive use. Although engaging husbands proved a consistent challenge, the process evaluation found that program messaging resonated strongly with couples and helped to show the relevance of contraception. The implementation model also proved successful, with Smart Start well integrated into the Ethiopian government's Health Extension Program (which has been a significant driver of increased FP access in Ethiopia) and delivered by Health Extension Workers, who are known and trusted in communities. The process evaluation found that training and on-the-job support from A360 Smart Start Navigators built the confidence and capacity of Health Extension Workers, and that Smart Start was changing their attitudes around delivering contraception to adolescent girls, encouraging many to view girls as potential clients for the first time. The program also successfully enlisted the support of the national volunteer Women's Development Army, who have played an increasingly central role in supporting mobilization and follow-up.

The reasons for the lack of change in mCPR in Northern and Southern Nigeria and Tanzania vary across the study geographies:

- In **Northern Nigeria** (Nasarawa State), although there was no evidence of a population-level effect on mCPR, girls who were exposed to MMA were considerably more likely to use contraception than girls who were not exposed. The outcome evaluation did detect an increase in mCPR at population

³⁷ See evaluation mid-term review (p.29) for further details on evolving targets. <https://www.itad.com/knowledge-product/midterm-review-of-the-adolescents-360-program/>

level in the implementation sites, but as this was matched by a corresponding increase in comparison sites the change was not attributable to MMA. It is therefore possible that MMA's effect on mCPR in the intervention areas was matched by the effects of other FP programs in the comparison areas. Challenges with reach and scale may also have inhibited a population-level effect: MMA was implemented in only two of 12 LGAs in Nasarawa State, due to a decision to delay scale-up. Finally, one of the main reasons survey participants said they were not using contraception was the desire to bear children, reflecting established social norms and pressure faced by married girls to conceive children soon after marriage. A considerable number of married girls in the endline survey did not yet have children, which is likely to affect their uptake of modern contraception.

- In **Southern Nigeria** (Ogun State) the outcome evaluation found no association between exposure to 9ja Girls and greater use of contraception, suggesting that even when the program reached girls, it did not work as intended. This is probably in part due to high levels of stigma around contraceptive use for unmarried girls and an intervention model that inadequately addressed this. The 9ja Girls model delivered counseling through public health clinics, but the outcome evaluation found that pharmacies and chemists were the main source of contraception in Ogun State – likely because they were viewed as more discreet. The process evaluation found that girls often lacked support from communities to access and continue contraception, and often kept their use a secret, which can contribute to discontinuation. The program's community engagement activities were light-touch, and outcome evaluation findings suggest they were not sufficient to address high levels of stigma around contraceptive access for unmarried girls.
- In **Tanzania** (Ilemela), the outcome evaluation found that girls who were exposed to Kuwa Mjanja were almost twice as likely to use a modern method as girls who were not exposed. There was also a 50% increase in LARC use in Ilemela from baseline to endline, driven by implant use. Given the high volume of implants distributed by Kuwa Mjanja, it is likely that Kuwa Mjanja contributed to this increase. However, there was a 9 percentage point population-level decrease in the mCPR among unmarried adolescent girls aged 15–19 in Ilemela District, driven by a fall in self-reported condom use. The absence of a population-level effect may be explained by a particularly challenging political environment in Tanzania, with high-ranking government officials explicitly criticizing FP. This posed significant barriers to implementation and at one point led to a halt in outreach activities. The process evaluation also found that stigma around unmarried girls accessing contraception remained high, and the program's work to address this was likely insufficient – community engagement activities were light-touch and some elements were discontinued due to a drive for 'speed and scale' in 2018. Finally, there may have been challenges with Kuwa Mjanja's targeting and reach, inhibiting population-level change. The process evaluation suggested that the program's activities were held mainly in communities relatively near to health facilities, due to challenges in reaching and delivering outreach events in more rural and isolated areas.

The process evaluation found that A360's integration of life skills, vocational sessions and aspirational messaging was a key reason for the program's achievement of its adopter targets across all geographies. This likely contributed to population-level change in girls' beliefs and attitudes in Nasarawa (Northern Nigeria) and Oromia (Ethiopia).

The process evaluation found that across all four A360 geographies the program's aspirational elements encouraged girls to attend activities and helped them feel that contraception was relevant to them. Aspirational components also helped secure the support of government, service providers and community stakeholders, who appreciated that A360 aimed to empower girls as well as meet their contraceptive needs. In Southern Nigeria and Tanzania, this helped unmarried girls access services in a context of widespread stigma by framing the program as about more than contraception. The process evaluation suggested that this was a key success factor explaining A360's strong performance against its adopter targets in all four geographies.

The outcome evaluation detected a population-level change in girls' belief in the benefits of modern contraception in Nasarawa (Northern Nigeria) and Oromia (Ethiopia), suggesting that A360 helped increase the proportion of girls who believe that *'Using modern contraception can allow an adolescent woman/girl to complete her education, find a better job and have a better life'*. The outcome evaluation also found a population-level increase in the proportion of girls with positive attitudes toward modern contraception in these two geographies. However, there was no change in either of these outcomes in Ogun (Southern Nigeria) or Illemela (Tanzania), and no difference in beliefs or attitudes among girls who were exposed to the program as compared with those not exposed. This suggests that the aspirational content proved less successful at generating change in key attitudes or beliefs among unmarried girls. This may be in part due to the greater stigma and sociocultural norms against contraception for this group, which are potentially harder to shift through light-touch aspirational activities and messages (across all geographies activities generally consisted of short, one-off skills sessions without follow-up support).

The process evaluation and program monitoring data also suggested that A360 succeeded in increasing the availability of services to girls over the course of the program, but was less successful at supporting continuation.

All A360 solutions worked through public health facilities and with public providers. The process evaluation found that this enabled national scale-up and government ownership, helping the program reach its adopter targets. A360's flexible delivery models also succeeded in reaching girls with free services at times and places that work for them, including: life skills classes and out-of-clinic events; facility-level youth-friendly counseling opportunities; home and community-based counseling; and outreach services. These were supported by a variety of (mainly in-person) mobilization approaches, which reached girls as they went about their daily lives through peers, influencers, trusted community members and trained youth-friendly mobilizers. The process evaluation suggested that this helped A360 overcome several common barriers to adolescent access to contraception – including cost, access and awareness. The outcome evaluation found that A360 had an impact on awareness of contraception among girls at population level in Ethiopia and Tanzania, while in Northern Nigeria girls exposed to A360 demonstrated greater awareness of contraception than girls who were not exposed.

A360's success at increasing access was not matched by success in supporting continuation. However, contraception continuation among adolescents is an area where the ASHR sectors continues to struggle and approaches need to be more nuanced given that adolescent patterns of sexual activity are different from those of adults, e.g. they may discontinue if sexual activity is infrequent. Over the course of the program A360 intensified its efforts to follow up with adopters across the geographies and encourage them to continue using contraception. However, many of these processes relied on girls having access to a phone, excluding many younger, rural and low-income adopters. The process evaluation also found that persisting stigma around adolescent use of contraception posed major barriers to sustained use and was potentially contributing to discontinuation among unmarried girls – possibly helping to explain the absence of a population-level effect in Southern Nigeria and Tanzania. Locating services in public health centers may have compounded this challenge. The process evaluation found that unmarried girls often continued to feel uncomfortable being seen in these spaces for fear of stigma.

A360 success tackling social stigma around adolescent contraceptive use and building a more supportive environment for girls to access contraception was mixed.

The literature is clear that sociocultural factors pose important barriers to adolescent contraceptive use, and that ASRH interventions should engage communities and seek to address social norms (WHO, 2011; Prata and Weidert, 2020). However, A360 was not designed or resourced to substantially address social norms, and pressure from donors to prioritize adoption targets during scale-up initially inhibited community engagement activities. The program instead used various light-touch approaches to engage communities and enlist their support – or tacit acceptance – for girls to access contraception in the face of powerful sociocultural barriers. This included enlisting the support of communities and key influencers through parents' sessions and couples' counseling; working with community leaders, local government

officials and trusted community structures; and developing messaging that tapped into existing community concerns. In most cases, the process evaluation found that these approaches enabled A360 to operate without widespread community resistance. Where key influencers were engaged, the process evaluation suggested that this did help build support for girls to access contraception, although the program did not generally manage to engage them consistently or in large numbers.

In Ethiopia, the outcome evaluation suggests that A360's light-touch approach paid off: community acceptance of adolescent contraceptive use increased over the course of the program, along with girls' approval for modern contraceptives and girls' self-efficacy to access and use FP. The process evaluation suggests that Smart Start's connection of contraceptive use to financial security was likely a key factor in explaining this success. Smart Start messaging clearly and effectively linked contraception with widespread concerns about resource availability and lack of economic opportunities, tapping into community aspirations for young couples to have a better life.

However, there was no effect of MMA or 9ja Girls on increasing community acceptance at population level in Nigeria (this was not measured in Tanzania, due to the need to shorten the survey in the context of COVID-19 restrictions). There was also no effect of MMA or 9ja Girls on increasing self-efficacy in Nigeria, and self-efficacy decreased at population level in Tanzania between baseline and endline. No association was found between exposure to the A360 solutions and greater self-efficacy in any of the outcome evaluation geographies.

Service provider bias and weaknesses in counseling quality were also ongoing challenges for the program, reflected in the outcome evaluation results.

The process evaluation highlighted issues with service provider bias and weaknesses in contraceptive counseling quality across all geographies. Despite consistent efforts to improve counseling quality over the course of the program, A360's intervention models – which involved light-touch training followed by on-the-job support – may have been insufficient to address these widespread capacity challenges. Across all contexts, service providers often believed that certain methods were more or less suitable for adolescents, reflecting deep-seated community beliefs that persisted in spite of training. Although most of the girls interviewed for the process evaluation had positive interactions with providers, felt safe and listened to, and trusted the provider and the information they had been given, interviews also suggested that many girls still had concerns about contraception, or about particular methods, even after counseling. Most girls served through A360 would have experienced only a one-off event or counseling session, which may have proved insufficient to address deep-seated fears, often rooted in widespread community beliefs about the negative effects of contraception.

This is reflected in outcome evaluation findings around misconceptions, which were widespread at baseline and endline across all four study areas. There was no evidence of an effect either at population level or among girls who were exposed to A360.

The process evaluation found that there was a tension between the 'desirability' of solutions to girls and their feasibility and scalability in the face of constrained public health systems, limited resources for A360 and a need to manage costs.

HCD focuses on the 'desirability' of solutions to users, and this consideration initially took precedence during the design stage. Considering the feasibility and scalability of concepts at an earlier stage may have helped establish clear parameters for prototyping. The solutions in Ethiopia and Nigeria were designed to integrate into public health systems, which face major challenges in relation to contraceptive availability, human resources for health and infrastructure, and management and leadership capacity. In some cases, this led to tensions between what was ideal and what was practical and considered to be a good use of resources. For example, in Nigeria a standalone branded space for girls in vacant government facilities was included as part of the design despite concerns about cost (and was later removed from the model

because of cost considerations). In Ethiopia the Discussion Guide designed for Health Extension Workers proved too onerous given their busy schedules, requiring significant revision at a later stage.

The costing data indicates that much of the costs were happening above the ‘site’ level, at the national (country headquarters) or international level, suggesting that small efficiencies or cost-savings at the site level did not make a meaningful differences in driving down costs.

Components which supported community acceptance and could have helped with addressing persistent socio-cultural barriers, could have had an impact on the effectiveness of the solutions. However, in several cases, they were discontinued or scaled down as part of the drive to manage costs. The results of the PE and the OE both suggest that while some progress was made in these areas, the A360 solutions did not make significant headway in fostering a supportive environment for girls to access contraceptive services.

The introduction of adaptive implementation complemented the HCD-driven design phase and helped A360 continue improving performance.

One of A360’s biggest strengths was its ability to adapt and iterate in response to learning. The adaptive implementation approach introduced in 2018 complemented the HCD process, building on and reinforcing the new, more flexible ways of thinking and working that the country teams had been practicing during the design stage.

Adaptive implementation provided useful tools and processes to support regular review of data to generate learning and inform continuous adaptations of the solutions. There were several examples across the A360 countries where adaptations led to tangible improvements – for example the shorter discussion guide and incorporation of the Women’s Development Army in Ethiopia, and the introduction of the Hub and Spoke model in Nigeria. Experience with adaptive implementation also helped country teams to pivot more quickly to respond to the COVID-19 restrictions on service delivery.

However, adaptive implementation was brought in mid-course and proved time consuming and difficult to implement for country teams, requiring significant support to integrate it into their ways of working. Rolling out adaptations to multiple regions and implementation teams, and embedding adaptive ways of working into staff practices on the ground, proved particularly challenging.

Ultimately the evaluation suggests that while A360’s use of HCD and adaptive implementation added value to program design and implementation, the approach did not succeed (apart from in Ethiopia) in generating transformative solutions that translated into population-level change, and so did not prove cost-effective.

The process evaluation concluded that while the components within each of the A360 solutions were, by and large not new, A360 had succeeded in conceptualizing and combining them in effective and sometimes innovative ways through its use of HCD, meaningful youth engagement, incorporating insights from different disciplines, and working adaptively. This led to a set of interventions that reached large numbers of girls and that exceeded A360’s adopter targets. In particular, the HCD and adaptive implementation approach helped A360 integrate aspirational content that resonated with girls, communities and government stakeholders across all four geographies, which attracted girls to events, built government buy-in, and allowed the program to operate in the context of high levels of stigma. It also allowed the program to adapt in response to data and changing contexts, which led to performance improvements as reflected in adopter numbers over time, and which helped A360 continue delivering services in most situations in the context of COVID-19.

The outcome evaluation findings suggest that despite this, the complex and expensive A360 approach was largely not successful in generating transformative solutions that translated into population-level change, with the exception of Ethiopia.

As a result, A360 was not judged to be cost-effective. The approach proved very expensive, with incremental costs per DALY averted far above the WHO-CHOICE standards for cost-effective health interventions. Although A360's design process cost seven to nine times as much as its comparator, even without its substantially higher design effort costs would have been high. This is because A360 was a very person-intensive intervention, and implementation costs were primarily driven by personnel costs, mostly at country headquarters or international level.

Ultimately, although A360 succeeded in reaching a large number of girls with modern contraception in often innovative ways, the evaluation cannot definitively conclude that A360 revolutionized ASRH programming in the way it was initially designed to do.



Recommendations

6 Recommendations

The following recommendations draw on the findings in the report. They are provided to support A360 in its current phase of implementation. Recommendations are primarily focused on supporting learning across the broader sector working on ASRH programming. However, as many of these recommendations imply trade-offs and balancing donor expectations in the face of limited resources, we have included a final recommendation with the aim of supporting funders in further investment decisions.

Recommendations to support ASRH sector learning

- **Strengthen the focus on addressing social norms and building community engagement to reduce barriers for girls to access contraception.** The process evaluation and the outcome evaluation demonstrate that girls continued to face powerful sociocultural barriers to contraceptive access across all four A360 geographies. This ranged from lack of acceptance by key influencers (mothers, mothers-in-law, husbands) and community disapproval, to persistent biases from service providers. Overall, there is considerable scope for the next phase of the program to build on and deepen community engagement. The ASRH literature suggests that community-level interventions should be intensive and sustained rather than piecemeal, in order to have long term impacts on knowledge, attitudes, practices and behaviors (Robin *et al.*, 2004; Durlak and DuPre, 2008; Villarruel *et al.*, 2010; Gottschalk and Ortayli, 2014; Chandra-Mouli, Lane and Wong, 2015).
- **Harness the value of the empowerment components by making them more central and responsive to girls' needs, while being alert to the risks of light touch approaches that attract more than empower.** The process evaluation demonstrated multiple advantages of life skills, vocational sessions and aspirational messaging to ASRH programs. However, this component needs to be a core focus of future programming rather than an add-on, and have sufficient resources attached to it, to have an impact on girls' empowerment. This requires either in bringing expertise of economic empowerment initiatives with adolescent girls into the consortium, partnering with organizations who specialize in this or a combination of both. It will also be important to define success upfront and periodically track progress and review learning.
- **Manage, monitor and regularly feedback learning from the integration of A360 into public health systems.** This will help to manage tensions and trade-offs between quality implementation, reach and government ownership. Doing this requires adequate resources to build strong government relations and ownership. It also requires a shift in focus from implementation to technical assistance, with new skills required of the A360 team. A360 will need to have realistic expectations of potential loss of fidelity to some components of the solutions when they are integrated into the public health system. In line with the adaptive implementation approach of A360, the components where it is acceptable or inevitable that fidelity will not be maintained should be identified up-front, preferably in coordination with government counterparts, so there is alignment on what the interventions will look like. Components which are considered essential to ensure quality – i.e. comprehensive counseling on method mix, regular follow-up to support continuation, community engagement to build and sustain acceptance – will need to be prioritized by A360 for focused support, capacity building and phased handover. To monitor performance and learn from government integration, the process will need to be closely documented, and data on service provision, as well as what is working/not working and why will need to be regularly collected, analyzed and discussed in joint forums between A360 and with government counterparts.
- **Continue to leverage the 'mindsets' that were built during A360 to design and deliver programs focused on the needs of adolescent girls and to involve young people in the program.** The rigor of the HCD approach ensured the consortium kept the needs of adolescents at the center of the solutions. It also contributed to shifting mindsets of those engaged with A360 towards more empathy for adolescent girls, humility and curiosity. It also fostered an adaptive mindset to 'try, fail and adapt' which provided the foundation for the adaptive implementation approach adopted by

A360 as well as supporting the program to pivot quickly when COVID-19 disrupted service delivery. Engagement with young people in the design process fostered new ways of thinking, understanding and advocating for MAYE. This has the potential to extend beyond A360 and should be continued with A360 and integrated into other programs.

Recommendation to support funders' investment decisions

- **When applying HCD, design processes or adaptive implementation, build in sustainability considerations and be clear on the priorities from the outset.** Failure to do so causes inefficiencies in program delivery if implementation teams need to shift their focus to meet sustainability expectations or response to shifting priorities. This can be mitigated by:
 - Ensuring that sustainability considerations, including pressure to cut costs, are balanced with activities (and the required timeframes) for activities which require a consistent and central focus such as shifting socio-cultural barriers and supporting girls' empowerment.
 - Adequately resourcing time to build strong relationships with government, and building government into joint activities and data collection in order to establish the foundations for government ownership.
 - Considering trade-offs between reaching high numbers of adopters and integrating into health systems, and engaging in national and sub-national forums to influence thinking, policy and practice on ASRH.

The results highlight the continuing difficulty the family planning community faces in significantly moving the needle on adolescent contraceptive use and doing so in a cost-effective way. Programmers should continue to search for ways to improve program design and implementation to reach this key group with contraceptive services. As part of this, it is important to continue to build the evidence base on the costing and cost-effectiveness of ASRH programs, as well as adolescent sexual behavior patterns and potential levers to support adolescents in SRH choices such as economic strengthening opportunities.

Finally, the independent evaluation of A360 has provided valuable learning on how to evaluate HCD processes and adaptive programs. Several aspects of this learning have been discussed over the course of the program with the donors and with PSI, shared at conferences and in publications, and included in the evaluation methodology section of this report. However, this has not been exhaustive and there is value in continuing to share these learnings and, in doing so, contribute to the wider field of evaluation and specifically, evaluation of ASRH programs. We hope that all those who engaged directly in this evaluation – from the evaluation team to the donors and PSI – as well as the wider evaluation and ASRH community, continue to discuss, debate and grapple with the best way to evaluate such programs and in doing so contribute to the evidence base on what works to support adolescent girls to use high-quality sexual and reproductive health products and services.

Annex 1: Outcome evaluation primary and intermediate outcomes

Theory of Change component 1:
Adolescents use high-quality sexual and reproductive health products and services
Outcome 1: Proportion of current modern contraceptive users who were using long-acting reversible contraception among sexually active girls (in last 12 months)
Outcome 2: Use of modern contraceptive in 12 months before the survey among sexually active girls (in last 12 months)
Outcome 3: Age at first birth among girls who gave birth
Outcome 4: Births in last 12 months: divided into two categories – those who gave birth in 12 months before the survey, and those who did not
Outcome 5: Unmet need for modern contraception ³⁸ among sexually active girls (in last 12 months)
Theory of Change component 2:
Adolescent girls have access to appropriate high-quality sexual and reproductive health information and services
Outcome 6: Awareness of contraceptive products: sexually active girls (in last 12 months) were divided into two categories: those who answered 'Yes' to the question 'Have you ever heard of contraceptives?' and those who did not
Outcome 7: Awareness of where to obtain health services: sexually active girls (in last 12 months) who were not currently using a contraceptive method (traditional or modern) but intended to use one in the future were divided into two categories: those who answered 'Yes' to the question 'Do you know of a place where or person from whom you would feel comfortable getting family planning services and products to delay or avoid getting pregnant?' and those who did not
Theory of Change component 3:
Contraception positioned as relevant and valuable for adolescent girls
Outcome 8: Future aspirations index (0–9): created using four statements among girls who heard of contraceptives – 'I have goals for my life' (2 strongly agree, 1 agree, 0 disagree or strongly disagree), 'I believe I have some tools to help me achieve my goals for my life' (2 strongly agree, 1 agree, 0 disagree or strongly disagree), 'I have little control over the things that happen to me' (0 strongly agree or agree, 1 disagree, 2 strongly disagree), and 'I believe preventing unintended pregnancy is important to help me achieve my goals for life' (4 strongly agree, 3 agree, 0 disagree or strongly disagree); greater scores more desirable than lower scores
Outcome 9: Benefit 1 of modern contraception: girls who heard of contraceptives were divided into two categories – those who agreed with the sentence 'Using modern contraception can allow an adolescent woman girl to complete her education, find a better job and have a better life' and those who disagreed
Outcome 10: Benefit 2 of modern contraception: girls who heard of contraceptives were divided into two categories – those who agreed with the sentence 'Using modern contraception can allow a girl to achieve her life goals' and those who disagreed
Outcome 11: Intention to use a modern method: sexually active girls (in last 12 months) who were not using a modern method at the time of the survey were divided into two categories – those who intended to use a method and those who did not

³⁸ The sum of unmet need for spacing and unmet need for limiting. Unmet need for spacing includes: pregnant women whose pregnancy was mistimed; fecund women who are non-pregnant, who are not using any modern method of contraception, and say they want to wait two or more years for their first/next birth; and postpartum amenorrheic women, who are not using any modern method of contraception, and say at the time they became pregnant they had wanted to delay pregnancy. Unmet need for limiting refers to: pregnant women whose pregnancy was unwanted; fecund women who are non-pregnant, who are not using any modern method of contraception, and want no more children; and postpartum amenorrheic women, who are not using any modern method of contraception, and say at the time they became pregnant they had not wanted any more children.

Theory of Change component 4:**Supportive environment for adolescent girls to access services created**

Outcome 12: Attitudes index (0–2: toward the use of modern contraceptives): created using two questions among girls who heard of contraceptives – ‘Do you approve or disapprove of married couples using a modern contraceptive method to avoid or delay pregnancy?’ (1 approve, 0 disapprove) and ‘Do you approve or disapprove of couples who are not married using a modern contraceptive method to avoid or delay pregnancy?’ (1 approve, 0 disapprove); greater scores more desirable than lower scores

Outcome 13: Self-efficacy index (0–4: to use modern contraceptives): created using four statements among girls who heard of contraceptives – whether she felt able to start a conversation with her partner about contraception (1 agree, 0 disagree), felt able to use a method of contraception even if her partner did not want her to (1 agree, 0 disagree), felt able to obtain information on contraception services and products if she needed to (1 agree, 0 disagree), and felt able to obtain a contraception method if she decided to use one (1 agree, 0 disagree); greater scores more desirable than lower scores

Outcome 14: Descriptive norms index (0–6): created using three questions among girls who heard of contraceptives – ‘How many unmarried/married girls aged 15–19 years in your community do you believe discuss using a method of contraception with their boyfriend or partner/husband or partner?’ (1 most of them or less than half of them, 0 none of them), ‘How many unmarried/married girls aged 15–19 years in your community do you believe use contraceptive methods?’ (1 most of them or less than half of them, 0 none of them) and ‘How many unmarried/married girls aged 15–19 years in your community do you believe use contraceptive methods in secrecy from their boyfriend or family/husband or partner?’ (1 most of them or less than half of them, 0 none of them); greater scores more desirable than lower scores

Outcome 15: Community acceptance index (0–2): created using two questions among sexually active girls (in last 12 months) who heard of contraceptives – ‘Does your husband/mother³⁹² approve or disapprove of girls your age using a modern contraceptive method to avoid or delay pregnancy?’ (1 approve, 0 disapprove) and ‘Does your community as a whole approve or disapprove of girls your age using a modern contraceptive method to avoid or delay pregnancy?’ (1 approve, 0 disapprove); greater scores more desirable than lower scores

Theory of Change component 5:**Trust and credibility of family planning products**

Outcome 16: Misconceptions index (0–3: about contraceptives): created using three variables among sexually active girls (in last 12 months) who heard of contraceptives – ‘Some modern contraception can stop an adolescent woman from ever being pregnant again even after she stops using it’ (0 agree, 1 disagree), ‘If a modern contraception changes an adolescent woman’s menstrual bleeding, it is bad for her health and can harm her womb’ (0 agree, 1 disagree) and ‘Some modern contraceptives can make adolescent women permanently fat’ (0 agree, 1 disagree); greater scores more desirable than lower scores

Outcome 17: Modern contraceptives disadvantages index (0–7): number of disadvantages/negative consequences of using modern contraceptive methods mentioned by girls who heard of contraceptives; greater scores less desirable than lower scores

Theory of Change component 6:**Family planning services available for adolescent girls**

n/a

Theory of Change component 7:**Adolescent girls sustain use**

n/a

³⁹ ‘Husband’ considered an important influencer for married adolescent girls; ‘Mother’ for unmarried adolescent girls.

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