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Family planning science and practice lessons from the 2018 International Conference on Family Planning [version 1; peer review: 3 approved]

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Abstract

Since 2009, the International Conference on Family Planning (ICFP) has served as an opportunity for the global reproductive health community to share FP advances and practice lessons in the areas of research, programming, and advocacy. The key takeaways from all 15 tracks were grouped into six thematic areas: 1) Investing in family planning for a lifetime of returns. FP may yield different health and monetary benefits but continues to face a shortage of funding, although locally owned models provide alternative financing solutions. 2) Addressing inequities in family planning for adolescents, youth, and key populations. Marginalized populations and youth still face challenges in accessing FP. Youth-inclusive and user-centered programming show promise in addressing such challenges. 3) Reproductive justice: Abortion care, family planning, and women's wellbeing. Unsafe abortions tend to be more common among younger, poor, uneducated and rural women. Promising evidence show that providers may effectively shift from unsafe practices of dilation and curettage to safer manual vacuum aspiration or misoprostol. 4) Couple dynamics and family planning decision-making. Couples who share everyday life decision-making are more likely to use contraceptives; couple discordance on childbearing and fertility decisions directly influence women's decisions to covertly use FP. 5) Male involvement in FP programming. Male champions and advocates can successfully promote couple uptake of FP. Gender-transformative programming promotes gender equity and can

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directly impact behavior change. 6) **Breakthroughs in novel contraceptives and systems improvement in family planning.** User-centered contraceptive technologies and information systems present an opportunity to facilitate self-care and optimal supply chain management.

ICFP 2018 highlighted research advances, implementation science wins, and critical knowledge gaps in global FP access and use. More research is needed to determine the scalability of novel technologies, more effective programming and service delivery models to ensure multisectoral knowledge translation and utilization by policymakers.

**Keywords**
Family planning, return on investment, women empowerment, reproductive rights, reproductive health, gender empowerment, contraceptive technology

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Introduction
The family planning (FP) community acknowledges that access to safe, high quality, voluntary family planning is a human right. However, the majority of girls and women, particularly in developing countries, continue to have limited and inequitable access to sexual and reproductive health rights, information, and services, including FP. Although more than 500 million couples in developing countries use FP, the United Nations estimates that by 2030, nearly 200 million women seeking to delay or avoid having a birth will have an unmet need for modern contraception. This demand will likely continue to grow as record numbers of young people enter the prime reproductive ages in the decades to come. It is thus essential that the family planning community identifies high impact approaches to address the major barriers and gaps affecting equitable access to quality family planning.

Since its inception in 2009, the International Conference on Family Planning (ICFP) has served as a strategic inflection point for the FP and reproductive health community worldwide. ICFP serves as an international forum for scientific and programmatic exchange that enables the sharing of available findings and identification of knowledge gaps, in addition to facilitating the use of new knowledge to transform policy. At the London Summit in 2012, the global FP community set an aspirational goal to enable 120 million more women and girls to access voluntary quality FP by 2020, and the FP community broadened that goal to include universal access to reproductive health care and right services by 2030. The ICFP has been an important, collaborative effort in the buildup to establishing that goal, raising visibility, creating momentum around FP, and leading to concrete changes in policy and programs.

The 2018 ICFP held in Kigali, Rwanda, was centered on the overarching theme, “Investing for a Lifetime of Returns”. This theme spoke to the various returns that investment FP provides — from education and empowerment to economic growth and environmental health. Over 700 oral presentations covered FP advocacy, services, and research from the following tracks: 1) Returns on investment in family planning and the demographic dividend; 2) Policy, financing, and accountability; 3) Demand generation and social and behavior change; 4) Fertility intention and family planning; 5) Reproductive rights and gender empowerment; 6) Improving quality of care, 7) Expanding access to family planning; 8) Advances in contraceptive technology and contraceptive commodity security; 9) Integration of family planning into health and development programs; 10) Sexual and reproductive health and rights among youth and adolescents; 11) Men and family planning; 12) Family planning and reproductive health in humanitarian settings; 13) Faith and family planning; 14) Urbanization and reproductive health; 15) Advances in monitoring and evaluation methods. This paper summarizes the highlights of the scientific program, and identifies key findings presented during the oral sessions in the fields of research, programming, and advocacy in order to inform future work in these fields.

The findings summarized in this paper are from the 65 individual and preformed panel abstracts accepted for oral presentations at ICFP 2018. Each co-author of this paper reviewed abstracts from up to three tracks based on their expertise and provided summaries from the tracks, organized by key themes. These summaries were then incorporated to develop the final draft of the paper.

Lessons from ICFP 2018
Investing in family planning for a lifetime of returns
Measuring the returns on investments in FP is crucial for continued funding and support for FP programs. The business cases for FP presented at ICFP demonstrated the ways in which cost-effective FP programming may save money in the short-term and long-term at the individual, community, donor, and national levels. Willcox and colleagues developed a model based on 47 county referral hospitals in Kenya, which demonstrated that for every dollar invested in training and equipment for implant removal services, a future return of around USD $1.62 would be accrued from the economic benefits of continued implants uptake. Costing data presented by Turnusime and colleagues found that in Senegal and Uganda, the total costs—including direct medical costs (i.e. provider time, supplies, drugs), costs of self-injection training (based on a one-page instruction sheet scenario), and direct non-medical costs (i.e. client travel and time costs)—are significantly lower for the self-injection of depot medroxyprogesterone acetate administered subcutaneously (DMPA-SC) as opposed to provider-administered injectables. In Nigeria, Adedeji and colleagues found that for every $1 invested in high-impact intervention-focused FP programs, an estimated $1.40 may be saved on maternal and newborn care, and another $4 could be saved on treating complications from unplanned pregnancies. While self-administered DMPA-SC may provide a cost-effective approach to improving access to long-acting reversible contraceptive (LARC) methods, a study conducted in Rwanda identified LARCs to be more cost-effective than non-LARC methods post-partum, with a savings of $31.42 per pregnancy averted for two years following birth, and additional cost savings expected over longer time frames.

FP may also be a catalyst for the demographic transition and an opportunity to realize the benefits produced through the demographic dividend. The demographic dividend describes the changes in the population age structure caused by reductions in population-level fertility and mortality rates. These structural population changes result in a large working-age population and a smaller number of dependents. The demographic transition leads to numerous, subsequent population-level and societal benefits which may help countries achieve Sustainable Development Goal (SDGs) targets. Modeling has shown that investments in FP may positively affect SDGs across several sectors including health, governance, economic growth, agriculture, and education. Despite improvements in FP funding and financing, expanded financial investments are still needed throughout much of sub-Saharan Africa in order to
successfully reach the FP targets necessary for countries to reap their demographic dividend potential\textsuperscript{12,11}.

Key strategies to sustain FP advances include long-term financing for FP, particularly the transition from donor-dependent financing to locally owned initiatives. Donor funding to support FP continues to fall short of the amount needed to address the unmet need of family planning globally and the extent of this gap varies significantly across countries and regions\textsuperscript{23}. To mitigate the impact of this shortage in donor funding, it is critical for countries to plan for shifts in financing options, including procurement financing for subsidized commodities. Locally owned community-based health insurance (CBHI) schemes may be a promising option in order to sustain FP financing. Research on CBHI schemes in sub-Saharan Africa showed positive effects on healthcare utilization and FP uptake. In Ethiopia, Pathfinder International found that women who were enrolled in a CBHI scheme were 1.3 times more likely to practice modern FP than those who were not exposed\textsuperscript{15}. Since 2014, the Ethiopian government has slowly shifted away from donor-dependence and has launched and expanded the number of community-based health insurance (CBHI) and social health insurance (SHI) programs in more than one-third of districts. Based on current projections, by 2025, the number of modern contraceptive users in Ethiopia will have doubled from 6 million to 12 million, and the private sector will account for 40\% of them\textsuperscript{16}.

Data gleaned from nationally representative datasets showed a similar global pattern in factors associated with FP utilization. The Ethiopia (2016), Kenya (2014), Nigeria (2013), Philippines (2013) Demographic Health Surveys (DHS) and Indonesia’s 2015 Susenas survey revealed trends in the number of insured women and the modern contraceptive prevalence rate (mCPR); specifically, the ratio of mCPR between insured versus uninsured individuals was greatest among women of the lowest socioeconomic status (SES) in the Philippines, Kenya, Indonesia, and Ethiopia\textsuperscript{13–20}. Insurance coverage was shown to be directly associated with FP utilization. These findings signify the importance of comprehensive health insurance for FP access amongst marginalized groups\textsuperscript{31}. Another important finding related to FP access and insurance showed how national health priorities supersede individual FP access. While FP is often included under universal health coverage (UHC) schemes, the inclusion of FP is often not operationalized or realized\textsuperscript{23}. Findings from 22 priority FP2020 countries on the limitations of UHC and barriers to universal access revealed that the challenges to comprehensive UHC are many, including government prioritization of less cost-effective, yet urgent, curative services, instead of preventive care or primary services\textsuperscript{32}.

Additionally, innovative research on health financing highlighted opportunities for new financing models and insurance schemes. In Tanzania, the United Nations Fund for Population Activities (UNFPA) and DKT International implemented an innovative micro-insurance scheme for urban youth and adolescents, which demonstrated high uptake in just one year of initiation. This program, “iPlan”, required a nominal annual fee of $10, after which an individual received comprehensive sexual and reproductive health (SRH) services including contraceptive counseling and commodities for one year\textsuperscript{3}. Similarly, researchers found that the Public-Private Partnership (PPP) Health Posts model in Rwanda was a cost-effective and viable solution for individuals living more than 60 minutes away from health facilities\textsuperscript{33}. The social franchising model created by the Family Health Guidance Association of Ethiopia (FGAE) was also shown to be a cost-effective model compared to the FGAE-owned static clinics. The cost per Couple Years of Protection (CYP) provided through the FGAE social franchise model was estimated to be between USD $0.73–$1.77, compared to USD $25.61–37.35 per CYP provided at the FGAE-owned static clinics\textsuperscript{34}.

Addressing inequities in family planning for adolescents, youth, and key populations

Inequities in access to FP exist across women from different socio-economic groups, age cohorts, health statuses, and physical abilities. Compared to other women of reproductive age, adolescent girls and young women (AGYW) have specific FP and sexual and reproductive health needs, including low contraceptive uptake, high risk of unintended pregnancies and unsafe abortions, high risk of sexually transmitted infections, and a greater risk of acquiring HIV\textsuperscript{17,28}.

Involving youth in advocacy and programming efforts was shown to be critical in order to ensure that unique, population-specific FP needs are met. Reproductive Health Uganda (RHU) developed an innovative program to support young people in realizing their right to hold state-actors accountable for improving access to youth-friendly health services. The initiative led to the successful allocation of county-level funds for youth-friendly services in all sectors and created a network of youth advocates for FP programming\textsuperscript{35}. In Kenya, the Network for Adolescents and Youth of Africa developed a holistic advocacy network in Kisii County that led to the allocation of KES 7,000,000 (USD 68,000) to contraceptive procurement and FP services in the financial year 2016/2017, the first time a line item for FP was included in the county budget\textsuperscript{36}.

FP programs for youth with hearing and speech impairments included a sexual health education program for adolescents in Vietnam and a social media literacy program integrating sexual and reproductive health and rights (SRHR) and FP information exchange in Burkina Faso\textsuperscript{13,32}. In Egypt, Love Matters Arabic Project was launched to engage young people on SRH issues, dispel myths and taboos, and improve access to accurate and reliable SRH and FP information\textsuperscript{37}. Some researchers maintain that to attract youth and gain their trust, programming must include a pleasure component and tie this information to healthy sexual behaviors and practices\textsuperscript{38,34}. This hypothesis needs further exploration in future research and programming.

Other key populations highlighted included youth living in conflict zones, people living with HIV, women with disabilities,
female sex workers, people who use drugs, individuals with a low socioeconomic status, and individuals who do not identify as heterosexual\textsuperscript{13,16}. A nationally-representative survey from Ethiopia found that more than 95% of women living with a mental, physical, or visual disability faces obstacles in physically accessing health facilities and are less likely to have access to FP information\textsuperscript{17}. Furthermore, this sub-population may be more likely to face discrimination by healthcare providers. These barriers to FP services and knowledge may have direct consequences on health outcomes. For example, among women with disabilities who had ever had a pregnancy, more than 85% reported that the pregnancies were unintended\textsuperscript{18}.

Studies from conflict zones in Afghanistan, Cameroon, Liberia, Sierra Leone, and Yemen showed that girls who marry before the age of 18 have lower rates of FP use, less intention to use in the future, and a significantly higher risk of unintended pregnancy, compared to married women 18 years of age and older\textsuperscript{19}. Among Somali refugee girls, aged 10–19 and living in Ethiopia, nearly 75% of girls were aware of how to become pregnant, but fewer were aware of the risks associated with inadequate birth spacing. Despite nearly one in five girls having already given birth, 40% of participants remained unaware of methods to avoid pregnancy\textsuperscript{20}.

People living with HIV may also have trouble accessing comprehensive FP services. A study from Uganda found that unmarried women with an HIV-positive status and women of high parity were significantly less likely to use FP post-partum\textsuperscript{21}. Women on anti-retroviral therapy (ART) have desires to bear children as well as learn about contraception and methods to prevent mother-to-child transmission of HIV (PMTCT)\textsuperscript{22}. To this end, a program in London demonstrated the promise of service integration to improve access to FP for women living with HIV; Mabonga and colleagues found a 50% increase in LARC use after the integration of FP and HIV services in a postnatal contraception clinic in London\textsuperscript{23}. Due to the overlap of FP and HIV, integrating services into one convenient location helps promote healthy SRH while also easing client burden associated with traveling between different clinics.

Reproductive justice: Abortion care, family planning, and women’s wellbeing

Unsafe abortions have emerged as one of the key neglected public health problems, accounting for more than 1 in 10 maternal-related deaths worldwide\textsuperscript{24}. Accordingly, abstracts discussing safe abortion access and FP were cross-cutting through the conference’s tracks. Research on unsafe abortion services underscored determinants of abortion practices as well as inequities in the accessibility of safe abortion services. For example, in both Nigeria and Rwanda, younger, uneducated women in rural areas are more likely to seek out and use abortion services. However, due to restrictive abortion laws, these abortions are often unsafe, which pose not only health challenges but legal challenges as well\textsuperscript{25,26}. In 2012, 24% of all incarcerated women in Rwanda were convicted for participating in clandestine abortions\textsuperscript{27}. Access to safe abortion services is a critical component of comprehensive SRHR yet continues to be heavily restricted in many parts of the world. Several authors called for targeted advocacy for legal provisions to ensure the availability of safe abortion services\textsuperscript{28,29}. Amendments to national laws, increased and expanded training of providers, and improved access to medical methods of abortion were highlighted as priorities for high-level policymakers\textsuperscript{30,31}. Furthermore, emphasis was placed on the recognition of social disparities and inequities in abortion prevalence and access\textsuperscript{32}.

Analysis of a post-abortion care (PAC) program for women in humanitarian settings in DRC and Yemen proved that providers may effectively shift from unsafe practices of dilation and curettage (D&C) to manual vacuum aspiration and medical treatment with misoprostol. Over a period of 5 years, the percentage of PAC clients requiring evacuation who received D&C as treatment was reduced from of 18.6% to 2.0% in DRC and from 25% to 2.8% in Yemen\textsuperscript{33}.

Expanding access to safe abortion services can also directly increase women’s access to FP methods. Research from Kenya found that regardless of pregnancy intentions, over 70% of women who attended PAC initiated contraceptive use during the PAC visit\textsuperscript{34}. Analyses of post-abortion FP (PAFP) service delivery across two states in India also revealed that 28% of women adopted a contraceptive method within two months after their abortion\textsuperscript{35}. Another study from Kenya found that women’s choice of PAFP method varied based on the type of abortion the woman experienced. While women who had undergone surgical abortions were more likely to choose intrauterine devices (IUDs) or other long-acting or permanent methods, women who had medical abortions were more likely to choose implants. While this may be due to the fact that IUDs can be inserted following a surgical abortion but not following a medical abortion, further client-centered research is necessary to ensure women receive the FP method that best suits their needs, preferences, and fertility desires\textsuperscript{36,37}. Insights into context-specific ideals of family size as well as abortion care-seeking behaviors are important in understanding how to improve future PAFP service delivery and increase contraceptive use\textsuperscript{38}.

Couple dynamics and family planning decision-making

Research on women’s covert use of FP underscored the ethical tensions between supporting and validating women’s ability to exercise reproductive autonomy without disclosure to a partner while also striving to engage male partners in reproductive health decisions\textsuperscript{39}. Research revealed that a woman’s decision to covertly use FP may be linked to discordant partner views on childbearing and fertility desires\textsuperscript{40}. One study found that when men expressed beliefs that contraception is “women’s business”, women were more likely to engage in covert use and not disclose their FP decisions to their partner\textsuperscript{41}. However, women who use FP covertly often struggle with the cost of contraceptives and worry about concealing FP from their partner\textsuperscript{42}. Power dynamics continue to influence FP use, even when women choose to use FP methods covertly.
Couple power dynamics, including household decision-making power, also influence FP utilization. Easterlina and colleagues found that 75% of women in West Pokot, Kenya, identified their husband or partner as the biggest barrier to voluntary FP use. In the Afar region of Ethiopia, 58.8% of women reported not having the freedom to make independent fertility decisions. Researchers have found that the odds of using modern contraception increases significantly when couples make FP decisions together. Couples who reported shared decision-making on everyday life decisions (e.g. financial decisions) in Ibadan, Nigeria, were more likely to report using FP than couples in which decisions were made solely by the husband. The educational status of couple dyads, couple’s knowledge of reproductive health and rights, women’s economic security and involvement in microcredit schemes, and gender equitable household dynamics have been found to be significantly associated with couple’s FP decision-making.

Male involvement in family planning programming

Considering men’s influence on FP decisions, involving male partners in FP programming is essential to meeting FP goals globally. Research revealed the potential of male champions and advocates in changing social norms, educating male networks, and creating a community culture receptive and open to family planning discussions. In Uttar Pradesh, India, a community-based information diffusion strategy was used to dispel FP myths and misconceptions and provide comprehensive information on non-scalpel vasectomy. To accommodate the diverse lives of men living in informal settlements, men were engaged by their peers at traditional male gathering points at convenient times, such as evening meetings for rickshaw pullers. In Zamboanga City, Philippines, a packaged community-based learning program, EL HOMBRE, used a successful peer-to-peer technique for information dissemination related to FP within broader conversations around family matters and family plans. Similarly, a male champions program was rolled out successfully in Western Kenya, where 50 male champions held sensitization forums once a month to encourage discussions on healthy timing and spacing of pregnancies. In Benin, USAID/ANCRE implemented a “men as advocates” intervention that included counseling male spouses on FP when their partners left the maternity ward and creating groups of “committed men” to sensitize male peers. Over the course of a year, post-partum FP counseling for males increased by more than 100% across 47 health facilities.

Males have a desire to learn about FP and contraception, but often have limited or inaccurate information. In turn, this affects their decision to engage in FP programs and make informed decisions related to FP. In Uganda, when men were asked why they do not allow their wives to use modern FP methods, participants expressed fears that their wives were likely to become promiscuous if they began using contraception. However, the researchers found that male participants’ beliefs about FP were often inaccurate, inconsistent, or grounded in gendered stereotypes, and this fueled their fears about wives’ promiscuity. Similarly, Easterlina and colleagues found that 50% of men in West Pokot, Kenya, lack the information on the benefits of healthy timing and spacing. In Nepal, men’s limited understanding of contraceptives and prevalent misconceptions were shown also to impact their partner’s uptake of IUDs.

Couple-based approaches to behavioral change and FP uptake also show promise. Project Concern International implemented a social and behavioral change program that used couples as community change agents to address social norms, SRHR and myths, improve couple communication strategies, and aid couples in the development of their FP and fertility goals. The Emanzi program in Uganda also showed an improvement in the attitudes of men towards gender norms, a rise in shared decision-making, and a significant increase in FP uptake.

Gender-transformative programming is grounded in the notion that changes in gendered norms, beliefs, and attitudes can influence behaviors and thus positive health outcomes. The gender-transformative Banderebeho intervention in Rwanda included 15-week group education meetings for more than 4,000 young adult men and women and 1,700 expectant and new fathers and couples. When compared to the control group, findings showed an increase in the proportion of young people who had sought SRH services, as well as changes in positive gender norms and increases in the decision-making. The GroupUp Smart education curriculum in Rwanda targeted pre-pubescent male and female adolescents and their parents. The program found that adolescent boys’ awareness of prevention pregnancy strategies increased from 65% to 81% and their knowledge of female and male reproductive health significantly increased. When comparing pre- and post-test results, adolescent boys experienced significant changes in gender equity scores, pointing to the notion that SRH education that includes gender equity components may be more beneficial than SRH education alone, particularly when introduced earlier in life.

Breakthroughs in novel contraceptives and systems improvement in family planning

Research advances in contraceptive technology highlighted the importance of beginning with the end-user in mind. In Nigeria and India, initial acceptability research of a microneedle contraceptive patch (MNP) explored client perceptions of the method and quantified desired MNP attributes. Across both contexts, prospective users liked the potential for self-application and India, initial acceptability research of a microneedle contraceptive patch (MNP) explored client perceptions of the method and quantified desired MNP attributes. Across both contexts, prospective users liked the potential for self-application and both providers and clients found the method to be easily used. Researchers also wanted to identify user preferences for other attributes, including the method’s effect on menstruation, duration of effectiveness, placement location, pain, and the potential for skin reactions at the application site. These findings underscored high overall acceptability of microneedles as a novel delivery method, yet also emphasized the importance of reducing side effects associated with existing contraceptive methods.

Use of the levonorgestrel intrauterine system (LNG-IUS) has risen rapidly in high-income countries and is one of the most effective forms of contraception available. However, the cost of the method is typically a barrier to clients in low-income countries. Research by Marie Stopes International Nigeria piloted
the introduction of an affordable version of the LNG-IUS at multiple service delivery points and found that users, providers, and key opinion leaders expressed enthusiasm for the method. Many clients also reported reduced menstrual bleeding as a key non-contraceptive benefit of the method. This research also suggested that a multi-stakeholder approach, including coordinated demand-generation activities, may be important in order to advance the scale-up of LNG-IUS in Nigeria and in other similar contexts.

Improved access to subdermal implants and other long-acting methods like IUDs have raised concerns on whether women can access timely removal services on-demand. Data from pilot studies examining the subdermal implant removal tool, RemoveAid, suggested that this novel device is safe to proceed to larger studies, and with it, physicians can safely remove one-rod implants and minimize the removal time to just under seven minutes\(^2\). Furthermore, initial acceptability research revealed that a novel postpartum IUD inserter would be attractive in India due to high unmet need and a lack of trained providers\(^3\). These products would not require additional supplies, aside from what it’s packaged with, and demonstrated high client and provider satisfaction.

Novel approaches to service delivery and contraceptive commodity procurement included the development of an “informed push” model, which would change the public health sector’s reporting system to allow for consolidated transport routes and combined supply delivery. Rather than following a typical model where an individual health facility is responsible for FP commodity reporting, product requisition, and pick-up, this model relied on health “zone staff” to optimize transport routes and report on stockouts and product consumption. By consolidating FP commodities alongside other health products and optimizing transit routes, the study demonstrated a substantial reduction in the incidence of stockouts and a decline in transit costs\(^3\). In India, an application developed by the Ministry of Health and Family Welfare also seeks to collect consumption data, forecast demand, and track commodity distribution. While still in the formative stage, individual states have demonstrated an interest in customization of the app per state to allow the government to improve commodity distribution and transfers by tracking “live” data\(^5\).

Lastly, algorithm-based fertility apps, such as the Dynamic Optimal Timing application (DOT) demonstrated a typical-use failure rate that was comparable or better to other user-initiated methods, including fertility-awareness based methods. This method delivered consistently correct information to women about their daily fertility status, which suggests that the app could allow women to self-manage fertile days to avoid pregnancy\(^6\).

**Discussion**

The 2018 ICFP scientific program underscored new advances and gaps in family planning research, programs, and advocacy, that have important practical and policy implications. Short- and long-term benefits of FP investments were highlighted, from increased empowerment at the individual and couple dyad level to reduced maternal mortality and improved population health. Nevertheless, achieving these dividends as a result of FP investments continues to be thwarted by insufficient funding, limited contraceptive choices, and persistent inequality in accessing FP programs and services.

The growing reproductive-age population, particularly in developing countries, and the increasing demand for FP requires innovative financing initiatives to meet the demand and ensure resilient health systems. Community-based health insurances, micro-insurance schemes, and public-private partnerships between the Ministries of Health and local businesses are promising locally grounded approaches to ensure that all girls and women in need can access and utilize FP. Future research should focus on scaling cost-effective, self-administered technologies.

While progress is being made globally on improving access to contraceptive services, urgent actions are required to address the FP needs of specific subpopulations that lag behind. These populations include AGYW, female sex workers, women and girls with disabilities, women living with HIV, and populations living in conflict-afflicted regions. Future research should explore the unique sub-population needs and evaluate interventions and programs that may successfully be scaled to address the FP needs of these marginalized groups. Gender and social norms continue to play a key role in FP access and utilization. Further research is needed to evaluate the effectiveness of gender programs that aim to address gender norms that perpetuate social and health inequalities. Empowerment efforts need to continue to engage men as partners and ensure the consideration of context-specific couple dynamics and social norms to properly address FP needs of couples in a given region.

Despite, achievements and advances in FP access and utilization, the abortion space is still behind. Unsafe abortions and related abortion fatalities remain a neglected and preventable public health challenge. Current and future advocacy efforts should focus on the legal provision of abortion care to ensure the availability of safe, decriminalized abortion services. Such efforts should be undertaken in parallel with expanded training for providers while utilizing the opportunities to integrate FP methods in post-abortion care. To further understand PAC, future research is needed to determine what influences a woman’s decision to use contraceptives post-abortion and the specific method choice selected, and why.

Continued improvement in information systems has allowed for the rapid reporting of inventories, consolidated transport routes, and combined supply delivery. Such systems present an opportunity to address supply chain challenges and prevent stock-outs from the sub-national to the national levels. Artificial intelligence and algorithm-based apps present opportunities for FP information access through mobile user technologies. Allowing such systems to communicate with the supply chain may allow women to better access their contraceptive method of choice and allow couples to achieve their desired family size.

Implementation science research should also focus on understanding key drivers that affect the uptake of research
findings. This research can be used to inform evidence dissemination and utilization by policymakers and other decision-makers at the local and national levels. FP is not only a social justice issue, but a smart investment for individuals and communities. Ensuring that local leaders and policymakers properly understand these two aspects of FP could be key to success for the global FP community and may lead to more prosperous and resilient communities.

Conclusion
ICFP 2018 generated rich evidence of successes achieved in recent years and highlighted continued gaps in research, implementation and advocacy. Science and practice lessons demonstrated the need for a multi-sectoral approach within the family planning community in order to inform new actions to attain the 2030 universal access goal. Universal access to FP presents an opportunity for the world to close the gap in FP inequities between individuals of different socioeconomic backgrounds and attain shared prosperity across communities. Addressing the remaining FP advocacy, services, and research challenges and continuously sharing lessons learned and best practices through platforms such as ICFP will be essential for countries to accelerate progress and ultimately, meet the needs of women and girls.

Data availability
All data underlying the results are available as part of the article and no additional source data are required.

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70. Mukabatsinda M: Boys need to know this too: Improving puberty awareness and gender equality among very young adolescents in Rwanda. Paper presented at: 5th International Conference on FP (ICFP); November 12–15; Kigali, Rwanda. ICFP Program. [online database]. Reference Source


73. Singh S: How to take innovation from conceptual idea to practice in the public health field- Emerging learning from India while introducing “Innovation Postpartum IUD ( PPIUD ) Inserter”. Paper presented at: 5th International Conference on FP (ICFP); November 12–15; Kigali, Rwanda. ICFP Program. [online database]. Reference Source


Gillian Mckay

Department of Global Health and Development, London School of Hygiene and Tropical Medicine, London, UK

Thank you for the opportunity to review this Open Letter that summarizes the key findings from the 2018 International Conference on Family Planning that was held in Kigali, Rwanda. The letter brings together 6 overarching themes drawing across the 15 tracks of the conference, to provide a concise yet comprehensive overview of the state of the evidence in family planning programming, advocacy and research.

I have some minor recommendations to improve the paper:

Methods:
○ It was not clear to me how many panels there were at the conference. Were the 65 individual and preformed abstracts the sum total of the 700+ oral presentations made? If this was a sub-section, how were these abstracts chosen for inclusion?
○ How did the process of thematic grouping of the 15 tracks into 6 themes take place?
○ Include a line in the abstract around the methods.

General Comments:
○ Quite technical language is used from time to time, which may be inaccessible to those outside of the FP space. e.g. Community Based Health Insurance & Couple Years of Protection: these terms could be better explained in the text or in a footnote.
○ There are too many acronyms, many of which are only used once, therefore could likely be removed to make the paper easier to read.
○ Some light copy-editing is needed for grammatical errors.

Is the rationale for the Open Letter provided in sufficient detail?
Yes

Does the article adequately reference differing views and opinions?
Yes

Are all factual statements correct, and are statements and arguments made adequately supported by citations?
Yes

Is the Open Letter written in accessible language?
Partly

Where applicable, are recommendations and next steps explained clearly for others to follow?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Reproductive health in humanitarian crises, with a focus on outbreaks of infectious disease.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Author Response 22 Oct 2020

Jean Christophe Rusatira, Johns Hopkins Bloomberg School of Public Health, Baltimore, USA

Dear Gillian,

Thank you for your thorough review of our paper. Please find below our responses to your comments in italic and marked with bullets.

Sincerely,

Jean Christophe Rusatira

Methods:
It was not clear to me how many panels there were at the conference. Were the 65 individual and preformed abstracts the sum total of the 700+ oral presentations made? If this was a sub-section, how were these abstracts chosen for inclusion?

- At ICFP 2018, there were 700+ oral presentations presented, submitted as both individual and performed abstracts. Each abstract is counted as one oral presentation. All abstracts were reviewed for the novelty of their findings and 64 abstracts were selected for the final paper. We clarified this in the Introduction and Abstract.

How did the process of thematic grouping of the 15 tracks into 6 themes take place?
- The thematic groupings were based on key findings from the selected abstracts and major
thematic areas highlighted in these findings. The 15 tracks were from the abstract submissions and guided the review process, but for the purposes of this paper, new thematic areas were defined based on the main findings from the abstracts.

Include a line in the abstract around the methods.

○ The abstract has been revised and this comment has been addressed.

General Comments:

Quite technical language is used from time to time, which may be inaccessible to those outside of the FP space. e.g. Community Based Health Insurance & Couple Years of Protection: these terms could be better explained in the text or in a footnote.

○ Thank you for your comment. We have addressed this by explaining CYP and CBHI directly in the text of the paper.

There are too many acronyms, many of which are only used once, therefore could likely be removed to make the paper easier to read.

○ We agree with this comment and have removed all acronyms that only occur once in the paper. We have kept acronyms that are used more than once.

Some light copy-editing is needed for grammatical errors.

○ We have made editorial copy editing to remove grammatical errors.

Competing Interests: No competing interest declared

Nguyen Toan Tran

1 The Australian Centre for Public and Population Health Research, Faculty of Health, University of Technology Sydney, Sydney, NSW, Australia
2 Faculty of Medicine, University of Geneva, Geneva, Switzerland

Thank you for the opportunity to review this open letter, which offers a remarkably useful summary of the state of family planning programs and research. A few points:

○ With regard to the abstract, a line on the open letter objective and methods would help transition between the introduction paragraph and the second one.

○ It would be helpful to learn more about why the theme of “Investing for a lifetime of returns” was chosen, taking into account the tensions between the macro level (e.g.
economic and environmental) and individual level (e.g. empowerment, rights, and justice, which are just touched upon).

- The second para under “Investing in family planning” feels incomplete without acknowledging that access to quality education and employment opportunities is critical to realize the benefits of the demographic dividend.
- Consider stressing how the conference has embraced and contributed to highlighting the development and humanitarian nexus - as well as safe abortion!

**Minor points:**

- The frequent use of abbreviations might impede the text flow.
- Slight text editing required (grammar).
- Check references: 2 and 4: UN DESA vs "DESA/Desa, UN". 2: more recent source available? Duplicates 44 & 45?

**Is the rationale for the Open Letter provided in sufficient detail?**

Yes

**Does the article adequately reference differing views and opinions?**

Partly

**Are all factual statements correct, and are statements and arguments made adequately supported by citations?**

Partly

**Is the Open Letter written in accessible language?**

Partly

**Where applicable, are recommendations and next steps explained clearly for others to follow?**

Yes

**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** Global health with a focus on sexual and reproductive health and rights, including contraception and postpartum family planning, in development and humanitarian settings

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

**Author Response 22 Oct 2020**

Jean Christophe Rusatira, Johns Hopkins Bloomberg School of Public Health, Baltimore, USA
Dear Nguyen,

Thank you for your thorough review of our paper. Please find below our responses to your comments in italic and marked with bullets.

Sincerely,

Jean Christophe Rusatira

With regard to the abstract, a line on the open letter objective and methods would help transition between the introduction paragraph and the second one.

- The abstract has been revised and multiple section breaks have been added to make reading the abstract easier.

It would be helpful to learn more about why the theme of “Investing for a lifetime of returns” was chosen, taking into account the tensions between the macro level (e.g. economic and environmental) and individual level (e.g. empowerment, rights, and justice, which are just touched upon).

- We have made changes in the paper to address this comment: this theme was chosen because of the essential role of FP to achieving the 17 Sustainable Development Goals and spoke to the various returns that investments in FP provide — from reproductive health outcomes, to maternal and child health improvements, to empowerment, increases in education, and population-level socioeconomic growth.

The second para under “Investing in family planning” feels incomplete without acknowledging that access to quality education and employment opportunities is critical to realize the benefits of the demographic dividend.

- This was addressed in the new iteration of the paper.

Consider stressing how the conference has embraced and contributed to highlighting the development and humanitarian nexus - as well as safe abortion!

- This was addressed in the new iteration of the paper.

Minor points:

The frequent use of abbreviations might impede the text flow.

- We have removed all acronyms that only occur once in the paper. We have kept acronyms that are used more than one time.

Slight text editing required (grammar).

- Editorial copy editing was provided to remove grammatical errors and improve the flow of the paper.

Check references: 2 and 4: UN DESA vs "DESA/Desa, UN". 2: more recent source available? Duplicates 44 & 45?

- This has been addressed in the new iteration of the paper.

**Competing Interests:** No competing interest declared
This open letter concisely summarizes the wide range of scientific inputs to the 2018 International Conference on Family Planning. It serves as a snapshot of the state of current evidence and interest on family planning. What follows are a few suggestions for revision and minor corrections.

1. It would be useful to take a further step back from the analysis of content to raise the larger debates on framing family planning that can often be in conflict among stakeholders with different objectives and agendas for action (government, donor, advocates): e.g., Demographic Dividend framing with fertility reduction a focus and macro-level benefits emphasized versus a human rights-oriented framing, where individual well-being and attention to inequities and reproductive justice are a central focus. On page 8 this situation is raised but not discussed (“FP is not only a social justice issue, but a smart investment for individuals and communities.”)

2. On a related note, could the authors speak to what motivated the thematic framing of the 2018 conference to be “Investing for a Lifetime of Returns”?

3. At least a nod to job growth and productivity-related policy supports is needed around the demographic dividend explanation (“The demographic transition leads to numerous, subsequent population-level and societal benefits…”). The fertility reductions and age structure shifts are necessary but not sufficient. Education and health investments are required as well as the ability of the economy to productively employ workers.

4. Abstract: State the evidence and method in one sentence on which the theme-based key points are based (i.e., content analysis of conference abstracts). Also, the general phrase “locally owned models provide alternative financing solutions” is not clear for a general reader, perhaps add an example (such as….)

5. The abstract has a heavy focus on research alone (“ICFP 2018 highlighted research advances, implementation science wins, and critical knowledge gaps in global FP access and use.”) and yet a substantial part of the program was devoted to utilization (advocacy, policy and program shifts).

6. (page 6) Clarify if the contrast group is individual decision-making? (“…have been found to be significantly associated with couple’s FP decision-making60,61”)

7. Explicit attention by the authors (and the conference) to safe abortion is merited as it is a
topic and essential intervention often ignored or sidelined in the scientific literature. A helpful contribution of the conference.

Minor comments:
1. Where possible, minimize the use of acronyms for readability (e.g., AGYW).

2. Reference 2 is not correct. The statement is about the number of couples in 2030 with unmet need for modern methods (and the 2020 revision is available now for all women, not just married women --https://www.un.org/en/development/desa/population/theme/family-planning/cp_model.asp), but the reference is a much older publication on population estimates (DESA, UN. United Nations Department of Economic and Social Affairs/Population Division: World Population Prospects: The 2008 Revision. 2009b.)

3. (page 6) Given the restricted space of an open letter and the number of studies covered, suggest not highlighting the same local study twice (Easterlina and colleagues).

4. Reference 4 is an official UN publication - the SDGs - and not from the Dept of Social and Economics Affairs (DESA).

5. References 44 and 45 are duplicates.

6. Light copy-editing needed (e.g., in abstract “Promising evidence show that...”, “couple discordance...directly influence...”; elsewhere “95% of women living with a mental...faces...”).

Is the rationale for the Open Letter provided in sufficient detail?
Yes

Does the article adequately reference differing views and opinions?
Partly

Are all factual statements correct, and are statements and arguments made adequately supported by citations?
Partly

Is the Open Letter written in accessible language?
Yes

Where applicable, are recommendations and next steps explained clearly for others to follow?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Demographic research focused on contraceptive use, abortion, reproductive decisionmaking and adolescent sexual and reproductive health.

I confirm that I have read this submission and believe that I have an appropriate level of
expertise to confirm that it is of an acceptable scientific standard.

Jean Christophe Rusatira, Johns Hopkins Bloomberg School of Public Health, Baltimore, USA

Dear Ann,

Thank you for your thorough review of our paper. Please find below our responses to your comments in italic marked with bullets.

Sincerely,

Jean Christophe Rusatira

It would be useful to take a further step back from the analysis of content to raise the larger debates on framing family planning that can often be in conflict among stakeholders with different objectives and agendas for action (government, donor, advocates): e.g., Demographic Dividend framing with fertility reduction a focus and macro-level benefits emphasized versus a human rights-oriented framing, where individual well-being and attention to inequities and reproductive justice are a central focus. On page 8 this situation is raised but not discussed ("FP is not only a social justice issue, but a smart investment for individuals and communities.")

○ This was addressed in the new version of the paper.

On a related note, could the authors speak to what motivated the thematic framing of the 2018 conference to be "Investing for a Lifetime of Returns"?

○ Thank you for this comment. We have made changes in the paper to address this comment: this theme was chosen because of the essential role of FP to achieving the 17 Sustainable Development Goals and spoke to the various returns that investments in FP provide — from reproductive health outcomes to maternal and child health improvements, to empowerment, increases in education, and population-level socioeconomic growth.

At least a nod to job growth and productivity-related policy supports is needed around the demographic dividend explanation ("The demographic transition leads to numerous, subsequent population-level and societal benefits..."). The fertility reductions and age structure shifts are necessary but not sufficient. Education and health investments are required as well as the ability of the economy to productively employ workers.

○ We have revised this section and incorporated information on the investments and political environment necessary to harness the DD.

Abstract: State the evidence and method in one sentence on which the theme-based key points are based (i.e., content analysis of conference abstracts). Also, the general phrase "locally owned models provide alternative financing solutions" is not clear for a general reader, perhaps add an example (such as....)

○ We have provided more details to clarify in the Abstract the process of selecting the final themes for the paper.

The abstract has a heavy focus on research alone ("ICFP 2018 highlighted research advances, implementation science wins, and critical knowledge gaps in global FP access and..."
use.") and yet a substantial part of the program was devoted to utilization (advocacy, policy and program shifts).

- The abstract has been revised considerably and we have attempted to address this comment.

(page 6) Clarify if the contrast group is individual decision-making? (“...have been found to be significantly associated with couple's FP decision-making 60,61”)

- We checked this abstract and changed the wording to provide clarifications.

Where possible, minimize the use of acronyms for readability (e.g., AGYW).

- We have removed all acronyms that only occur once in the paper. We have kept acronyms that are used more than one time.

Reference 2 is not correct. The statement is about the number of couples in 2030 with unmet need for modern methods (and the 2020 revision is available now for all women, not just married women --https://www.un.org/en/development/desa/population/theme/family-planning/cp_model.asp), but the reference is a much older publication on population estimates (DESA, UN. United Nations Department of Economic and Social Affairs/Population Division: World Population Prospects: The 2008 Revision. 2009b.)

- This has been addressed in the new iteration of the paper. Correct citation: United Nations, Department of Economic and Social Affairs, Population Division (2017). World Family Planning 2017 - Highlights (ST/ESA/SER.A/414).

(page 6) Given the restricted space of an open letter and the number of studies covered, suggest not highlighting the same local study twice (Easterlina and colleagues).

- The Easterlina et al. paper was used to augment data on male partners’ lack of education and misinformation related to FP. We have kept the citation but revised the Male Involvement in FP Programming section and provided copyediting to make the section more succinct.

Reference 4 is an official UN publication - the SDGs - and not from the Dept of Social and Economics Affairs (DESA).


References 44 and 45 are duplicates.

- This has been addressed in the new iteration of the paper.

Light copy-editing needed (e.g., in abstract “Promising evidence show that…”, “couple discordance…directly influence…”; elsewhere “95% of women living with a mental…faces…”).

- Editorial copy editing was provided to remove grammatical errors and improve the flow of the paper.

**Competing Interests:** No competing interest