

## Supplementary file 1

Contents:

- A. CCPF call volume
- B. Adolescents' and young people's sexual and reproductive health
- C. Multidimensional results of CCPF's collaboration

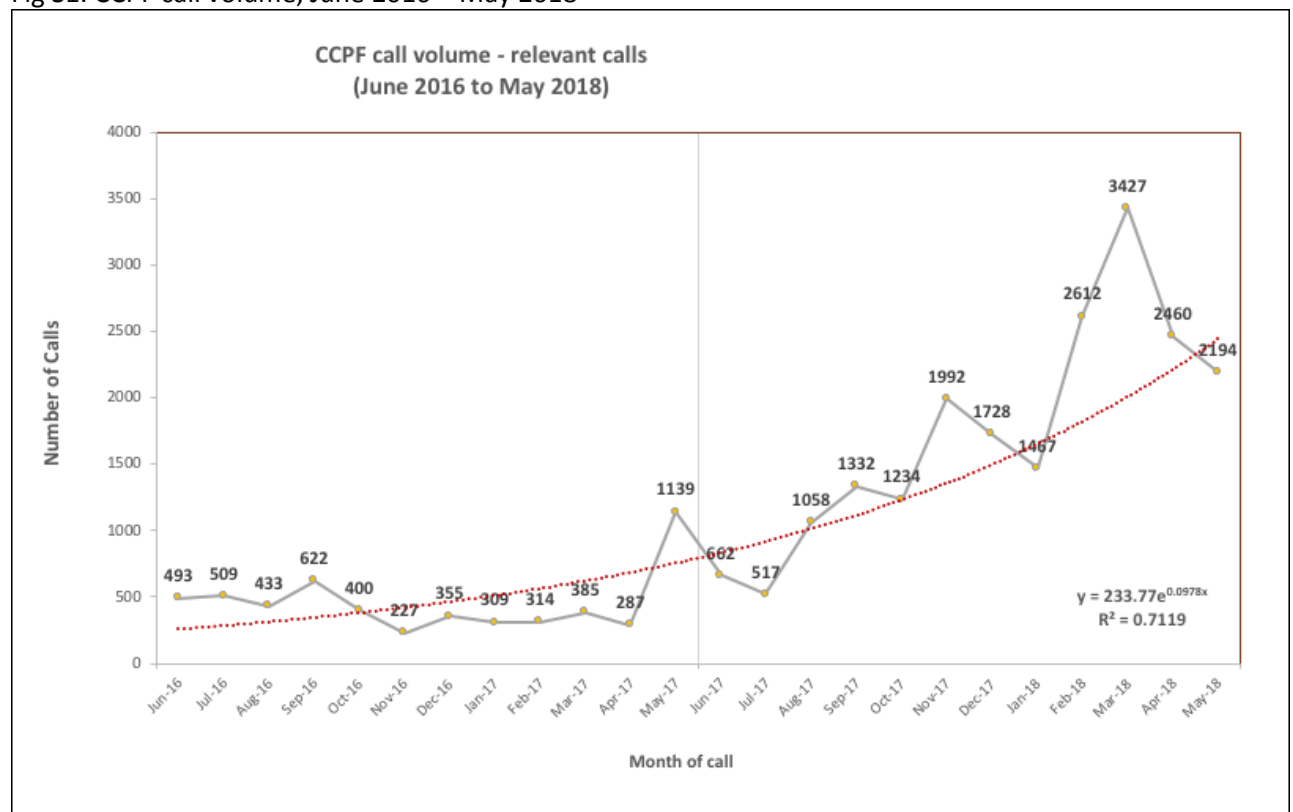
### A. CCPF call volume, June 2016 - May 2018

Call volumes are highly sensitive to the Airtel promotional SMS blasts and are mutually reinforced by community sensitization activities (fig S1). The peak of call volume in March 2018 likely results from an Airtel promotional blast sent to 7 districts at the end of February 2018.

The drop in call volume in April 2018 is likely due to reduced community sensitizations taking place in the DREAMS districts in April due to the school break.

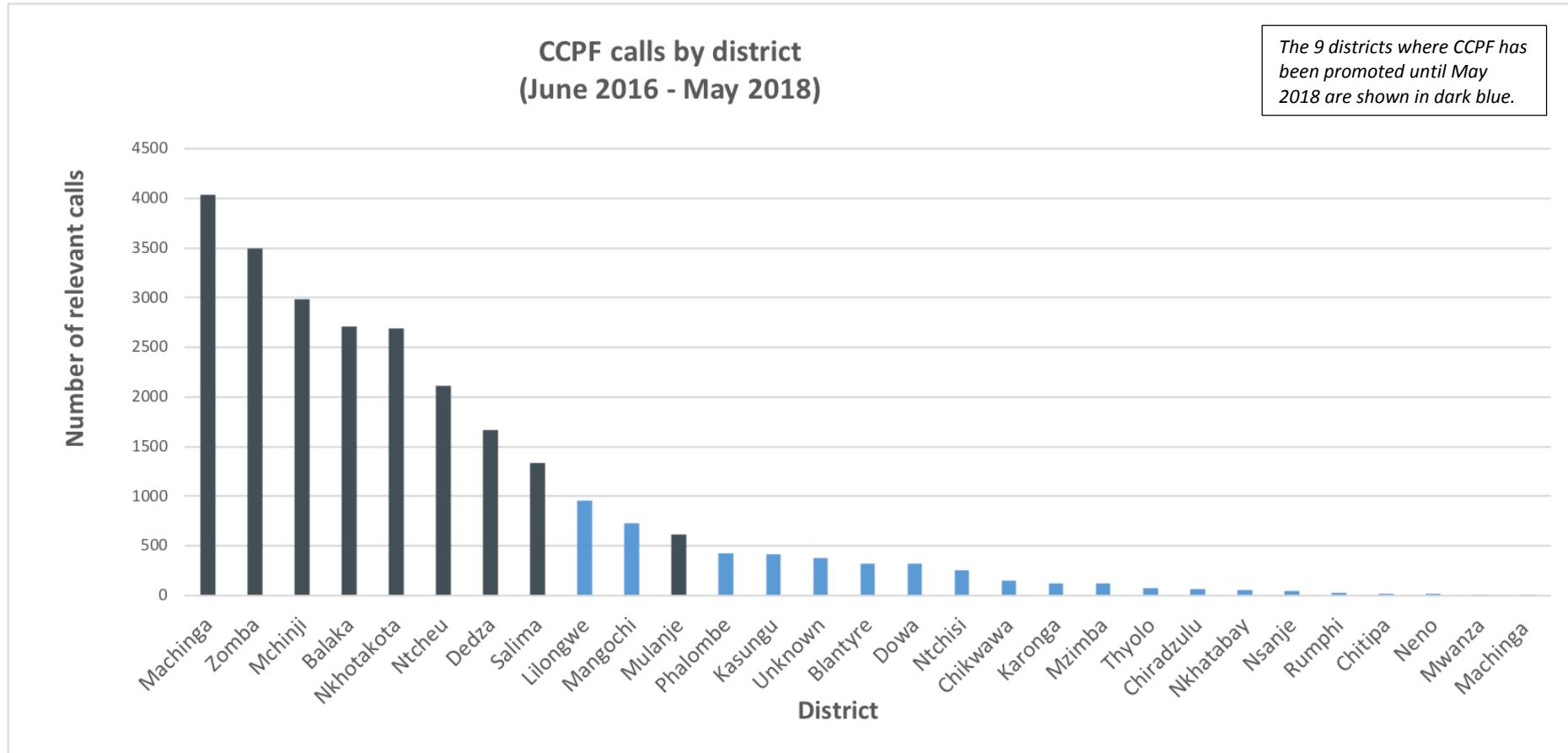
The Airtel promotional blast to Balaka, Mulanje and Ntcheu was sent in late April, because these were the districts with the lowest call volume in March. The blast was ineffective in raising call volumes, and community promotion of CCPF is needed in these districts (low Airtel phone ownership).

Fig S1. CCPF call volume, June 2016 – May 2018



The hotline is increasingly receiving calls from people based in districts where the hotline is not advertised, as illustrated in fig S2. This suggests a spill-over effect, probably resulting from word-of-mouth recommendations by family and friends.

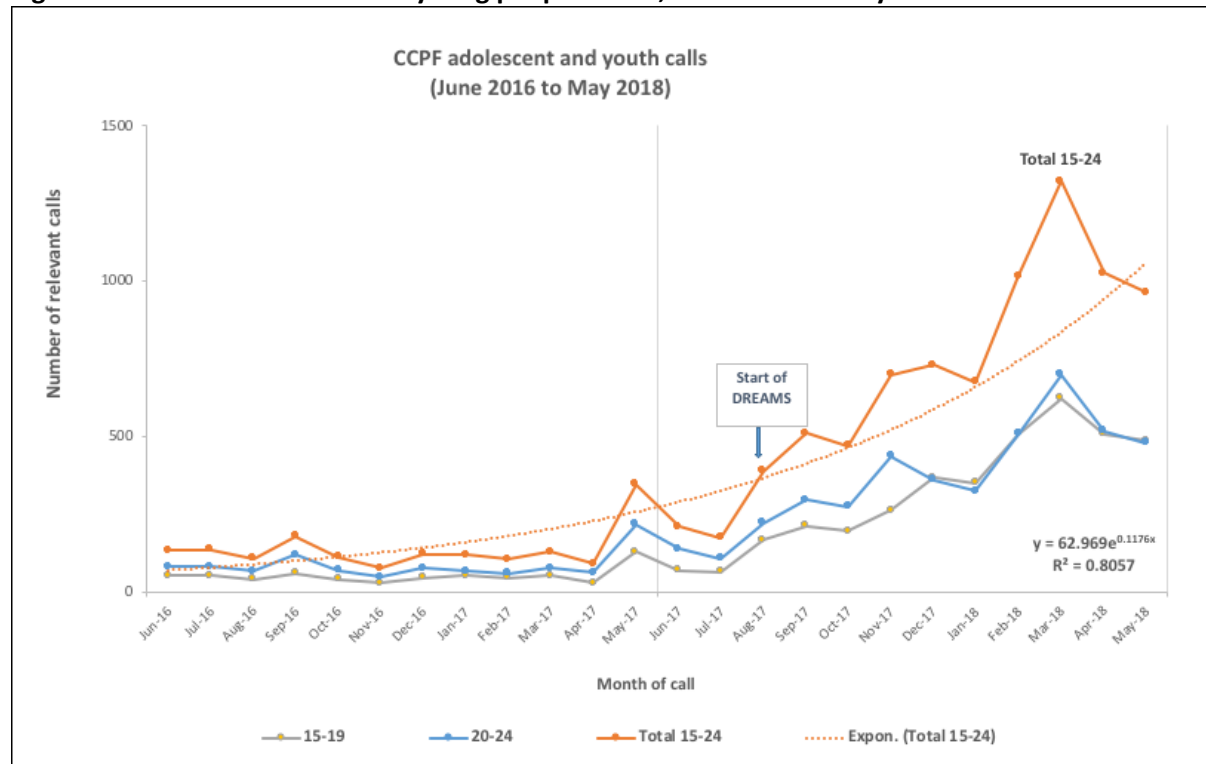
Fig S2. CCPF calls by district, June 2016 – May 2018



## B. Adolescents' and young people's sexual and reproductive health

Calls from adolescents and young peoples have increased since the launch of the adolescent- and youth-friendly sexual and reproductive health (SRH) module and the start of the DREAMS-funded activities, as shown in fig S3.

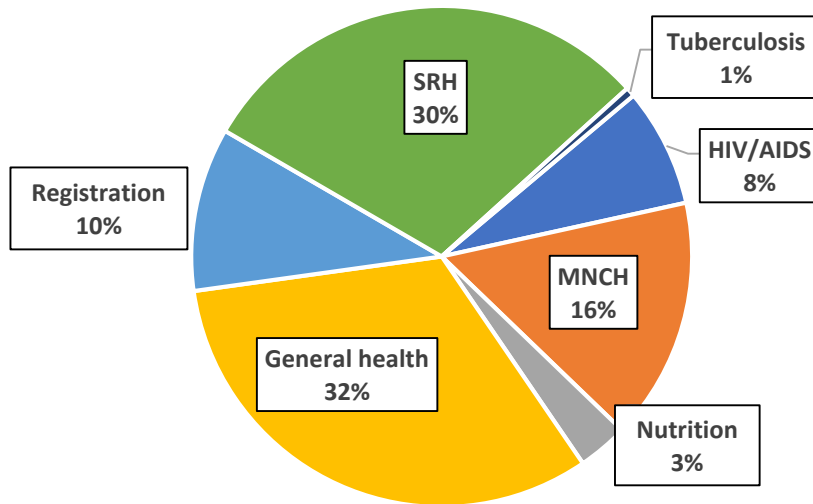
**Figure S3. CCPF adolescents' and young people's calls, June 2016 to May 2018**



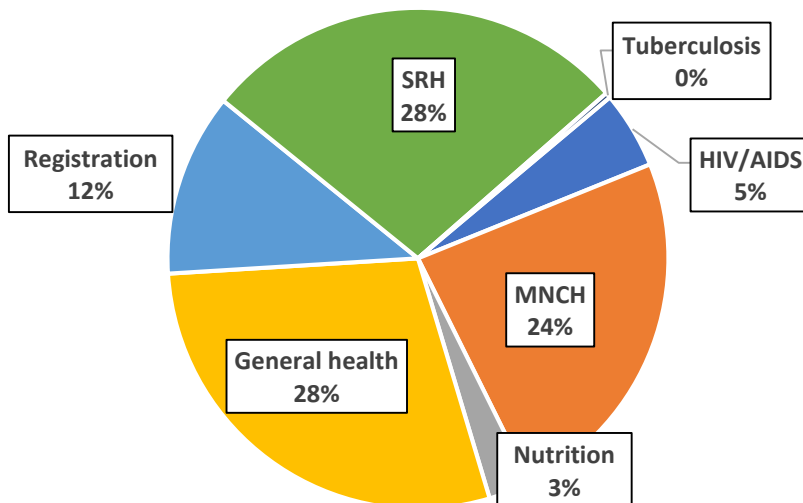
General topics that adolescents and young people call most frequently about are included in figure S4, and presented together with the topics that adults aged 25-49 are most interested in. Adolescents aged 15-19 years call primarily about SRH, specifically; puberty/menstruation, condoms and contraceptives, sexually transmitted infections, and HIV prevention. In the 20-24 years age group, family planning and MNCH are key topics. In the 25-49 years age group, SRH continues to be an important topic, along with MNCH. The two DREAMS districts (Zomba and Machinga) account for more than 42% of the adolescent (15-19 years) and youth (20-24 years) call volume since August 2017, so these two districts are largely responsible for the growth in adolescent and youth call volumes over the past 10 months.

Figure S4. Adolescent, youth and adult calls: main purpose of call June 2017-May 2018

### Purpose of call - adolescents (15-19 years)



### Purpose of call - youth (20-24 years)



### Purpose of call - adults (25-49 years)

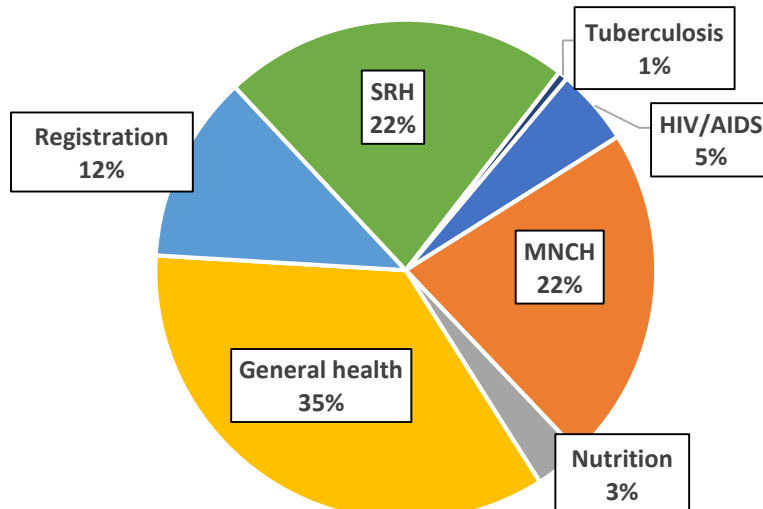


Table S1. Multidimensional results of CCPF's collaboration

<i>Collaboration</i>	<i>Implementation</i>	<i>Knowledge</i>	<i>Policy impacts and political will</i>	<i>Service delivery</i>	<i>Health, societal and sustainable development impacts</i>
<ul style="list-style-type: none"> <li>• Joint vision and mutual support among the partners in reaching the most remote communities, and in achieving the goal of transitioning to government-ownership.</li> <li>• Shared resources and responsibilities in providing the equipment, technology, human resources, and technical capacity to deliver the hotline, and additional modules over time.</li> <li>• Achieve more together than separately – CCPF evolved from an MNCH intervention to include all health topics and nutrition in December 2015, then adolescent specific modules in 2017.</li> <li>• Collaboration mechanisms or networks set up or strengthened – the steering committee exists and will continue to provide long-term technical advisory support to deliver CCPF for all Malawians.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of duplicative activities or services (e.g. merging of Dial-A-Doc with CCPF) and integration of nutrition and adolescent modules into existing services.</li> <li>• Saves time through the achievement of unified communication, information sharing and implementation.</li> <li>• Value for money (cost-effectiveness) – efficient to scale up service across districts.</li> <li>• Human resources (enhancing the skills of hotline workers with the latest clinical information and high customer care standards).</li> <li>• Capacity-strengthening of national government to manage future of CCPF in collaboration with different stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>• CCPF demonstrated the value of mHealth innovations as a powerful tool to reach not just women of reproductive age, but women and men of all ages with accurate health and nutrition information for themselves and their young children.</li> <li>• CCPF also proved popular with adolescents/youth – given the high value placed on confidentiality for SRH and HIV/AIDS.</li> <li>• A small, but growing number of older adults (50+ years) have also been calling the hotline for their health needs – an underserved group.</li> <li>• Customer satisfaction rates have been consistently high, and trust is being built between communities and the health system, when CCPF provides the same advice as received from local health workers, and contributes to reduced myths and misconceptions in the community.</li> <li>• CCPF can supplement MoH disease surveillance efforts (e.g. cholera outbreak).</li> </ul>	<ul style="list-style-type: none"> <li>• CCPF is transitioning to MoH ownership, becoming one of the first government-run and government funded health hotlines in Africa. Plenty of political capital for mHealth and successful public-private partnerships.</li> <li>• MoH and CCPF have been collaborating on developing clinical reference materials for mHealth hotline workers, and collaborating on national training materials.</li> <li>• CCPF strengthens the use of and adherence to the approved MoH guidelines and protocols e.g. Nutrition Guidelines</li> <li>• Results from the DREAMS CCPF project are being used to influence youth-friendly health services and information more generally in Malawi.</li> </ul>	<ul style="list-style-type: none"> <li>• CCPF provides a novel type of service delivery – parallel and complementary to the health facilities.</li> <li>• CCPF is being promoted in 17 districts yet already receiving calls from all throughout Malawi.</li> <li>• CCPF is promoting efficiency and effectiveness of health services – reducing unnecessary queueing at facilities by providing appropriate referrals.</li> <li>• Through CCPF there are mass dissemination of key health messages in the community through community awareness and sensitization campaigns.</li> <li>• Equity: The hotline now answers questions on hundreds of health topics, for all age groups and both genders, and answers calls from urban and rural communities.</li> <li>• Quality of health advice has been maintained despite the expansion to all health topics and the increased call volumes.</li> <li>• CCPF provides confidentiality and user-friendly services for beneficiaries to discuss sensitive health issues</li> </ul>	<ul style="list-style-type: none"> <li>• Through accurate, timely, personalized, free health information, CCPF is intended to contribute to many of the SDG and Global Strategy indicators for Women's, Children's and Adolescents' health – especially Survive (indicators 1-5) and Thrive (indicators 6-7, 9, 11).<sup>1</sup></li> <li>• The last impact evaluation showed that CCPF has produced some key knowledge gains and behavior change related to MNCH.</li> <li>• Equity: CCPF does not discriminate by location, gender, literacy or phone ownership. The hotline receives many calls from clients who do not own a mobile phone.</li> <li>• Communities have become more engaged with taking health action (calling for advice) and preventative health behaviors. Provides a bridge between health system and underserved communities.</li> </ul>

<sup>1</sup> EWEC Global Strategy <http://www.everywomaneverychild.org/global-strategy/>