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Healthcare providers perspectives on use of family planning guidelines in family planning services in Amhara Region, Ethiopia: A qualitative study

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2 **Healthcare providers perspectives on use of family planning guidelines in family**
3 **planning services in Amhara Region, Ethiopia: A qualitative study**
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Abstract

Objective: To explore health providers' views on barriers to and facilitators of family planning (FP) guidelines in FP services in Amhara Region, Ethiopia.

Design: Qualitative study

Setting: Nine health facilities including two hospitals, five health centres, and two health posts in, Amhara region, Northwest Ethiopia.

Participants: Twenty-one healthcare providers working in the provision of family planning services in Amhara region.

Primary and secondary outcome measures:

Semi-structured interviews were conducted to understand health providers' views on barriers to and facilitators of FP guidelines use in FP services.

Results: While the providers' views points to a few facilitators that promote the use FP guidelines, more barriers were identified. The barriers for guidelines use included lack of knowledge about guidelines existence and purpose of the guidelines, providers' personal religious beliefs, relying on prior knowledge and tradition rather than protocols and guidelines, lack of or insufficient access, and inadequate training on use of guidelines. Facilitators for guidelines' use were related to access to guidelines, convenience and ease to implement, incentives in terms of recognition for providers to use the guidelines.

Conclusions: While development of these guidelines is a major important initiative by the Ethiopian government, continued use of this resource by all health care providers requires planning to promote facilitating factors and address barriers related to use of FP guidelines. Training that includes a discussion about providers' beliefs and traditional practices as well as other factors that reduce the use of guidelines, provision of sufficient number of copies, and translation in local language would be useful.

Strengths and limitations of this study

- **Strength:** It was the first study to explore the barriers and facilitators of family planning guidelines in family planning services in Ethiopia.
- **Limitation:** the study was conducted with participants from only urban health facilitates in one geographic region of Ethiopia.
- **Limitation:** the use of a single transcriber and translator but the lead investigator was careful not to impose his own perspectives about barriers/ facilitators of FP guidelines use.

Introduction

Similar to other low income countries in Africa, Ethiopia has a high maternal mortality rate, with 412 deaths per 100,000 live births.¹ This compares to an average of 196 per 100,000 live births at a global level.² Ensuring that all women can easily access and use appropriate and effective family planning (FP) services is widely regarded as critical in reducing maternal mortality.^{3,4} However, the rate of FP service utilisation remains low in Ethiopia with only 35% of married women using FP services.¹

Ensuring quality of care is critical in improving and maintaining high levels of FP services utilisation.⁵⁻¹¹ Developing evidence-based clinical practice guidelines and implementing them throughout the health system, is key to building quality of care.¹²⁻¹⁴ Clinical practice guidelines are “statements that include recommendations intended to optimize patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options”.^{15p4} Studies conducted in Ethiopia and Kenya have showed that the availability of FP guidelines was associated with quality of care in FP services.^{16,17} For guidelines to be effectively implemented and support quality care, it should be based on the findings of systematic reviews that include quality evidence; developed by a knowledgeable, multidisciplinary panel of experts and representatives from key affected groups; and consider important patient subgroups and patient preferences.^{15,18}

To support the improvement of quality of care in FP services, the World Health Organization (WHO) has developed guidelines, including the medical eligibility criteria (MEC) for contraceptive use.^{19,20} Informed by the MEC, several countries, including Ethiopia, have developed FP guidelines. In Ethiopia, FP guidelines were first developed in 1996, and last updated in 2011.^{21,22} A summary of the 2011 guidelines is provided in Table 1. The guidelines are intended to be used by policy makers and health professionals providing family planning services at all levels of the health system in Ethiopia.

A recent study on the factors associated with quality of care in FP services in Ethiopia reports that less than half of the facilities (46%) had FP guidelines/protocols, suggesting inadequate dissemination and uptake of FP guidelines.¹⁶ No study has examined factors influencing utilisation of FP guidelines in FP services in Ethiopia. Understanding the healthcare provider experiences of using guidelines in FP services can help inform initiatives to improve guideline implementation and thus quality of care provision in Ethiopia. The aim of this study was to explore health providers' views on the use of FP guidelines in FP services in Amhara Region, Ethiopia, focusing on barriers and facilitators.

Methods

Study design and setting

This study used in-depth interviews guided by a semi-structured interview guide for data collection. Data were collected between April and June 2017. Twenty one participants were recruited from nine health facilities including two hospitals, five health centres, and two health posts in Gondar and Bahir Dar City administrations, Amhara region, Northwest Ethiopia. The Amhara region is one of 11 administration areas in Ethiopia, with a population of approximately 21 million, 23% of Ethiopia's total population.²³ The region has 19 hospitals, 796 health centres, and 3267 health posts.²⁴ FP services are provided in all the health facilities in this region. In hospitals, FP services are provided in gynaecology departments by midwives, nurses, or doctors. In health centres, FP services are provided through maternal and child health (MCH) departments by nurses, midwives, or health officers. Health Extension Workers provide FP services in health posts.

Participants

Before contacting the study participants, we selected health facilities purposively, to include three types of health facilities - hospitals, health centres, and health posts. In the selected health facilities, potential study participants were approached in staff meetings, where they were provided information about the study and requested to express their willingness to be part of the study. Those staff who expressed willingness to be part of the study were contacted by telephone to further discuss the study including the study objectives, potential risks to participants, other ethical issues, and to arrange a convenient time and place for the interview. To be part of the study, participants had to be healthcare providers who had worked a minimum of six months providing FP services. A total of 21 providers (18 female, 3 males) were interviewed. See Table 2 for further details on participant characteristics).

Data collection

Data were collected through face-to-face in-depth interviews in the local language (Amharic) by the lead author (GAT). All except one of the interviews were audio-recorded. For the one interview in which the participant declined to give consent for audio-recording, notes were taken. The interview guide included questions inquiring about barriers and facilitators of guidelines utilisation in FP services as well as questions on participant characteristics. The interview guide is available from the lead author.

Data analysis

The audio-recorded interviews and notes taken were translated and transcribed into English by the lead author and entered into NVivo 11TM for analysis.²⁵ Thematic analysis according to the approach described by Braun and Clarke²⁶ was employed. The epistemological framework for this analysis was essentialist/realist, aiming to understand and report the experiences, meaning, and

1 reality of study participants regarding barriers for and facilitators of using FP guidelines in the
2 provisions of FP services.²⁶ Data analysis was led by GAT who first read and re-read the transcripts
3 to familiarise himself with the data, and then systematically coded the data related to barriers and
4 facilitators. The coding was conducted inductively; with codes informed by the data rather than pre-
5 existing frameworks. The codes were developed through an iterative process involving the co-
6 authors, who having read a sample of three transcripts, discussed the emerging codes.
7 Disagreements and discrepancies around codes, themes, and sub-themes were resolved by
8 consecutive discussions and reference to the original transcript document. Finally, the codes were
9 grouped based on similarities into themes and sub-themes.

16 **Ethical considerations**

17 Ethical approvals were obtained from the Human Research Ethics Committee (HREC) at the
18 University of Adelaide (Protocol # H-2017-023) and the Institutional Review Board (IRB) at the
19 University of Gondar, Ethiopia (Protocol # O/V/P/RCS/05/562/2017).

22 **Results**

23 Overall, five main barriers to and facilitators of using FP guidelines in FP services were identified.
24 These barriers and facilitators are summarised as themes and sub-themes in Table 3.

27 **Theme 1: Knowledge and access to the guidelines**

28 Providers' knowledge of and access to FP guidelines were identified as a key theme impacting the
29 use of FP guidelines in providing FP services. Lack of awareness about the FP guidelines was
30 perceived as a barrier preventing guideline use. In this regard, a number of the providers reported
31 that they were not aware of the existence of the national guidelines for the provisions of FP
32 services; as one provider said "*I have not heard about it [national family planning guideline]...*" [*In-*
33 *depth Interviewee (IDI)₁₄*].

34 Several other providers indicated that they were aware of the guidelines, but did not understand
35 their purpose adequately. They said that they perceived the guidelines as 'training material/manual',
36 only provided during training, rather than health standards to be used at their health facility. This
37 view of the guidelines was demonstrated when a participant described the guidelines in their facility
38 as 'compilation of printed training materials' provided in FP trainings. Also a participant said:

39 *...it is because of the guidelines... it is large...we got it from Ipas NGO... it was a collection*
40 *[compilation] of training materials... laminated together in a book form [IDI₁₈].*

41 Other providers who indicated that they were aware of the guidelines, referred to inadequate
42 knowledge about how to use the guideline: "*Since we did not understand on how to use it... we have not*
43 *been using it [guideline] for so long...*" [*IDI₂*].

1 A lack of access to the guidelines was described as not having guidelines available in the facility,
2 insufficient copies of guidelines or guidelines not provided in convenient location in the facility.
3
4

5 *I think, this guideline has to be accessible to various rooms. We have only a copy. [IDI₁₉].*
6

7 *We do not have family planning guidelines. We just work by looking into what other providers do
8 and by asking them if there are concerns that we are not sure. That is how we do. [IDI₁₁].*
9

10 *We wish to use it, but we do not have it... that is the reason we are not using. [IDI₁].*
11
12

13
14 In some instances, where the facility's provided copies of FP guidelines, participants explained that
15 it was often taken away or lost. In this regard, a midwife expressed his concern that students or
16 someone else removes the guidelines from the facility.
17
18

19 *The hospital may prepare it or got it from somewhere else [other organizations] ...but someone
20 may put it at some place for a provider to access it easily. ...and then a provider has accessed it for
21 use but failed to put it back... and lost from the facility... that is my assumption. He [provider] just
22 put [it] somewhere or may take it to his home and finally forget it... forgot to bring back. It may
23 also mixed up with other documents and then it became a difficult job to find it for use. [IDI₁₃].*
24
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28
29 Another participant described that although providers received copies of guidelines during training
30 sessions, they kept the guidelines at their homes, rather than using them in the facility.
31

32 *I had been working in health centre... far from this town...small town. By that time, we [I and
33 colleagues] had been provided the guideline at the training but we dropped it in our homes
34 [instead of bringing it for use in the facility], we did not bring it to the facility. [IDI₁₂].*
35
36
37

38 Lack of easy access to the copies of the guidelines for immediate referral during services provision
39 was mentioned as a barrier by some participants – “One problem is that we are not putting the
40 guidelines in our nearby areas” [IDI₁₂].
41
42
43

44 Participants expressed that because of the large size of the guideline, they were not only unable to
45 locate specific information in the text and also found it difficult to carry to outreach areas.
46

47 *...it is somehow difficult to get the exact page where the information we are looking for is located
48 [IDI₂].*
49

50 *It is also difficult to bring the guideline to use in the villages along other stuff. It is heavy for us...
51 we are also carrying our own stuff in the bag. Most of the time, we are forced not to take it with us
52 [IDI₁₃].*
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1
2 Scope of the guidelines, as it included a large number of health issues, making it difficult to
3 comprehend was mentioned by one of the participants.
4

5
6 *We have a guideline that included everything in it. It also deals about malaria... HIV... sanitation,*
7 *nutrition besides family planning for families in the community... It was not possible to easily get*
8 *the information about family planning services in it [guidelines] [IDI₁₃].*
9

10
11 Another barrier to the use of the FP guidelines was that the guidelines was considered often out of
12 date and did not cover the latest contraceptive methods or provide guidance on dealing with
13 community misconceptions about contraception. A nurse from health centre expressed:
14

15
16
17 *Plus, it [the current guideline] did not include information about the newly developed and*
18 *available methods... there is a new implant method which is called "Implanon NXT". This method*
19 *is now under distribution for health facilities. This method has its own insertion procedure, but you*
20 *could not get it in the current version of the guidelines [IDI₁₇].*
21
22

23
24 She also added:
25

26
27 *In the guideline... I found there is lacking about the common misconceptions [about the family*
28 *planning methods] in the community... if you know them... you will be ready to address during the*
29 *counselling session... sometimes, you will face with emergency questions in such a way that...*
30 *"does it lead to this or that?"... if these information are available in the guidelines, a provider will*
31 *be aware of them and getting ready to handle [answer] them [IDI₁₇].*
32
33

34
35 The guidelines were only provided in English and this was seen by some participants as a barrier to
36 their use, particularly for those healthcare providers who do not understand English well.
37

38
39 *There might be some healthcare providers that could not easily understand English. For them, it is*
40 *better to have Amharic version or guidelines in both languages [Amharic and English] [IDI₄].*
41
42

43 In terms of the facilitators related to the use of guidelines, providers' reported that convenient
44 access to guidelines, ease to use them, format of the guidelines were perceived by the participants as
45 important facilitators for their use. For example, a participant expressed that when FP guidelines
46 were conveniently available in the facilities for providers it was perceived as a facilitator for their
47 use.
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52 *The guideline is always available in our room, it is just located on the table, anyone who want to*
53 *refer it can found easily [IDI₈].*
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1
2 Moreover, a nurse from health centre felt that passing guidelines to the next colleague when a
3 provider is changing shifts or travelling to other areas was helpful in improving use of guidelines..
4

5
6 *I also pass the guidelines for the next person if I am going to travel somewhere. That is what I*
7 *think. I believe, following the guidelines would help a provider to provide a proper*
8 *counselling...which is really a key issue for a client and for providers to remind him to use the*
9 *guideline. That is what I believe [IDI₂₁].*
10
11

12 Ensuring ease of use and its convenience to carry were also demonstrated as a facilitator for the use
13 of the guidelines. From a provider's perspectives, several participants described that they inclined to
14 use the WHO eligibility criteria than the FP guidelines as the former was easier to get the intended
15 information and being smaller in size made it lighter to carry on when they travelled to villages for
16 outreach services.
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21
22 *For example, the WHO guideline is very simple and easy. Just you need to put on the table and*
23 *then look at the notes inside the circle while national guideline is a book and it needs [us] to*
24 *search for a page. So making it easier to use is good for providers [IDI₃].*
25
26

27 In line with this, some participants suggested that for guidelines to be easier to use by healthcare
28 providers, different colours and pictures need to be used within the guidelines.
29
30

31
32 *... it would also be good if they use different colours...green, red, pink to denote which methods*
33 *should not be taken for some diseases. If you see red, you do not give...but for green marked one...*
34 *you can do....you know, making it something like the WHO eligibility criteria [IDI₁₂].*
35
36

37
38 *I need a guideline having different pictures [figures] ... do you know what I mean, for examplea*
39 *guideline with a U-shape pictures [to indicate] for five-year family planning [IUCD]. ...sometimes*
40 *you will forget what you have been told in training... it will not stay long after a year or two... it*
41 *will be forgotten. The guidelines shall also have a clear indications on landmarks [anatomical] for*
42 *the measurement before inserting the contraceptive methods [IDI₉].*
43
44

45 Additionally, the participants indicated providing copies of guidelines in the local language, besides
46 providing an English version, can improve its utilisation.
47
48

49 *There might be some healthcare providers that could not easily understand English. For them, it is better to*
50 *have Amharic version or guidelines in both languages [Amharic and English]... [IDI₄]*
51
52

53
54 *But, I prefer to have an Amharic version ...and in that case, I can go and read the Amharic version*
55 *if the English version is not clear for me [IDI₁₅]*
56

57 **Theme 2: Provider behaviour, values and beliefs**

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1 More than half of the participants described that many healthcare providers tend to rely on their
2 prior knowledge and practices learnt throughout their career rather than using the available
3 guidelines. The participants felt those providers keep doing things the usual way, as in the past,
4 even after attending FP trainings involving guidelines implementation.
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8
9 *...health professionals are providing family planning services just by tradition...without updating*
10 *him/herself [by reading guidelines]. Especially...the so-called 'chronic staff'...those staff who*
11 *upgraded themselves gradually from health assistant to junior nurse and then to*
12 *[diploma]nurse...and then to bachelor degree nurse...they do not want to be guided by*
13 *guidelines...not at all...they just follow what they have been doing for 10...20 or more years in the*
14 *past [IDI₂₁].*
15
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18
19 Some of the participants who had worked for many years in FP services continue to use their
20 knowledge and experience rather than what is using guidelines.
21
22

23 *We are working here by our experiences. I have been working here for long time...so I do not use*
24 *anything for providing family planning services (IDI₁).*
25
26

27 It was also described by some participants that lack of commitment to use health standards by
28 healthcare providers influenced their use of FP guidelines.
29
30

31 *Additionally [another reason for not using guidelines]...it is because of carelessness of the*
32 *healthcare provider... providing family planning services just by tradition...without updating*
33 *himself. [IDI₂₁]*
34
35

36 *...those providers who got the training are aware of that fact... that they should use the*
37 *guidelines...but they are not following[using] the laws or legislations [guidelines]... there is*
38 *ignorance ... [IDI₁₂].*
39
40

41 Other participants expressed that some providers perceive as having sufficient knowledge and a
42 belief that they can provide services without the need of any guidelines. For example, a provider
43 expressed “We thought...we know everything in the document [guidelines]” [IDI₁₄].”
44
45
46

47 For some participants, the habit of not reading any material provided was a barrier. One of the
48 participants mentioned that “Most of our people [including providers] do not have a good culture [habit]
49 of reading books... let alone family planning guidelines. [IDI₁₆].
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53 It was also noted that some providers were not comfortable reading the guidelines in front of
54 clients. They would rather rely on their personal experiences.
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1 *When you have clients sitting in front of you, it is boring to do [refer guidelines] that. That is why I*
 2 *prefer providing the services from my experiences [IDI₄]*

3
 4
 5 It was not all negative. One participant described his personal change in terms of commencing to
 6 use FP guidelines.
 7

8
 9 *I am using it [guidelines] rather than following the traditional [practice based on prior*
 10 *knowledge]... I tried to abandon [change] the old tradition to work without referring to family*
 11 *planning guidelines... [IDI₁₆].*

12
 13
 14 One participant presented the view that the religious beliefs of some providers was a barrier in the
 15 utilisation of the FP guidelines:
 16

17
 18 *...quite a number of providers do have a negative attitude for family planning and safe abortion.*
 19 *They consider it as a religiously prohibited thing...they always associate it with religion...and they*
 20 *do not accept it. Overall, I can say, their utilisation of the guideline is limited. [IDI₁₆]*
 21
 22

23
 24 The same participant expressed that in some instances providers' motivation to attend FP related
 25 training was the provision of per-diems rather than obtaining knowledge about the FP services and
 26 available guidelines to support FP services.
 27

28
 29 *Many providers are going to the training...not just for learning new knowledge on it [family*
 30 *planning services and use of guidelines], it is rather to get the per-diems during the training...They*
 31 *do not seem to provide the [family planning] services properly using the guidelines...we are*
 32 *observing that every time [IDI₁₆].*
 33
 34

35 **Theme 3: Manager support (or lack of support) and supervision**

36 Another theme arising from the interviews is about the role of supervisors, including district
 37 managers and staff from non-governmental organisation (NGO). One midwife said that supervisor's
 38 lack of emphasis on the guidelines when monitoring service delivery was an issue. More
 39 particularly the midwife participant from a health centre expressed that: "[when health managers
 40 from the district and regional health bureau visited their facility] *no one has checked whether we*
 41 *have been using it [guidelines] or not" [IDI₁₉].*
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46
 47 Another provider also reported that some healthcare managers were not concerned about
 48 availability or use of the guidelines.
 49

50
 51 *When they come to us they are asking us about the drugs, and contraceptive methods,*
 52 *vaccinations... They are not asking about the guidelines or if we use them or not. They are always*
 53 *asking on the numbers on the report... for example they ask us, "why only few people are getting*
 54 *family planning services in a certain month" [IDI₁₄].*
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1
2 However, some of the participants informed that support by district managers and NGO staff was
3 available and acted as a facilitator to use FP guidelines.
4

5
6 *We do have NGO partners who are coming regularly to check our services provisions, availability*
7 *of materials and contraceptive methods. They also checked the presence of family planning*
8 *guidelines [IDI₁₇].*
9

10
11 Creating a culture within the facility where the guidelines were seen as core to their service
12 provision was suggested by a number of participants as a facilitator. *If one needs providers to use*
13 *guidelines, encouragement is necessary... [IDI₆].*
14
15

16 17 **Theme 4: Resource availability: time and workforce**

18 Resource related issues such as lack of time, shortage of trained providers, and high workload were
19 expressed as barriers to using FP guidelines. Several of the participants reported that high client
20 load interferes with using the guidelines. The participants referred to long queues of clients'
21 waiting outside of the clinics to receive FP services; that made referring to the guidelines during
22 consultations difficult. In addition, the participants reported that limited time available for each
23 client meant that some provider prioritised using the 'consultation time' to counsel client based on
24 what they already know rather than using the guidelines. In one participant's words: "*We do not have*
25 *time... in order to read a text [guidelines], really... you should first get sufficient time*" [IDI₁₃].
26
27

28 Additionally, the lack of appropriately trained staff added to the pressure on the existing staff and so
29 taking the time to refer to the guidelines was considered a barrier to dealing with patient numbers.
30
31

32 For example, participants stated:
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34

35
36 *In that case [in the absence of trained providers], they [untrained providers] may just provide only*
37 *counselling to them [clients] and appoint for myself or other trained provider to see them when we*
38 *get back... these providers are not referring to the document [guidelines]. In the facility, we do*
39 *have only two trained providers, myself and another midwife [IDI₁₈].*
40
41
42

43 Another area of concern for one participant was the facilities' inability to retain those staff who had
44 been provided with training related to FP services and guidelines:
45
46

47
48 *There were many providers who have got the training but they moved to other places from our*
49 *facility for different reasons...there is a lot of providers' turnover here...that is a big challenge*
50 *[IDI₁₇].*
51
52

53 According to a health extension worker participant, it was difficult to use guidelines during
54 provision of FP services because providers were required to provide a number of other healthcare
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1 services along with FP services, be involved with various meetings, and to work in outreach
2 activities in the local community.
3

4
5
6 *We do have meetings all the time, we should give counselling for the clients, we should also need to*
7 *report to district managers, and health centre... we are not in the office to read available*
8 *documents, usually in the morning time “we are always out” [IDI₁₃].*

9
10
11 Another nurse explained that working on a number of tasks that are not co-located in one room but
12 offered by one provider was also seen as a barrier to guideline use. In her words:
13

14
15 *...if a midwife is assigned in one room, there is no reason that she does not use the guidelines*
16 *properly. But, this will not happen here... we are going to antenatal, postnatal care, etc...*
17 *Sometimes, we are rushing to reach the clients coming for different services. [IDI₁₅].*

18 **Theme 5: Training**

19
20
21 Providers' lack of or inadequate training on the contents of the FP guidelines was described as a
22 barrier to guidelines use. For example, one participant mentioned that: *“If you are not trained you*
23 *cannot use the guideline” [IDI₃].* Other providers expressed:
24

25
26
27 *I took the training....it was long time ago... I took it in 2005E.C (just before 4 years [IDI₈]*

28
29
30 *Once we have been provided a training, nobody remembers you for refreshment training... [IDI₂]*

31
32 In contrast, other participants referred to provision of training that targets FP guidelines as a
33 facilitator; for example one participant explained that discussing the contents of the guidelines
34 during FP training provision may help to motivate providers to use the guidelines.
35

36
37
38 *They [trainers] have highlighted some concepts in the guidelines using PowerPoint presentation. I*
39 *guess, this can help providers to motivate for using them while getting back to their facilities*
40 *[IDI₁₆].*

41
42
43 As part of the capacity building activity, the participants described that being a FP trainer has
44 helped them to improve their use of guidelines.
45

46
47
48 *...our facility is one of the practical attachment location for family planning trainings. I am also*
49 *part of the trainers' panel for the long term contraceptive methods. ...the guidelines are always in*
50 *my hand for me to use... I am updating myself every time...maybe... I read the book in weekly or*
51 *monthly basis. I also ask other friends [colleagues] to use it [IDI₁₆].*

52
53
54 Some participants acknowledged peer-learning from colleagues and identified this as a facilitator.
55 For example, a participant described that she and her colleagues did not use the guidelines until she
56
57

1 attended an induction training on how to use the guidelines and share the knowledge to her
2 colleagues.
3

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5
6 *...After I received the orientation [induction] on how to use it, I have also informed [on how to use
7 it] to all my staff and now we are using it in the same language [fashion]. The guideline had been
8 in our facility for three....or... four months without using it [IDI₂].*
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10 11 **Discussion**

12 This is the first study conducted to understand providers' perspectives on FP guidelines use in
13 Ethiopia. While the providers' views points to both barriers and facilitators affecting FP guidelines
14 use in FP services, more factors related to barriers were identified and described. Barriers exist,
15 from providers' perspective, mainly in inadequate knowledge about the purpose of the guidelines,
16 relevance of the guidelines for specific and practical needs of the providers, personal factors such as
17 beliefs and traditions, and organisational factors such as inadequate resources including time and
18 staff, lack of supervision and support.
19

20 Our findings that provider's lack of knowledge about the existence of FP guidelines and
21 unavailability of a copy of guidelines for healthcare providers supports our previous quantitative
22 study which found more than half of the health facilities in Ethiopia do not have FP guidelines
23 available.¹⁶ Lack of availability of the guidelines in health facilities points to a concern about lack
24 of planning to distribute such resource to health facilities for use by healthcare providers.²⁷
25 Inadequate planning to effectively distribute guidelines and protocols is a persistent concern across
26 other countries as well; for example, a 2012 Ugandan study, found that more than 60% of clinical
27 guidelines developed by the government were not available at the service delivery level despite that
28 these resources were available at national offices level.²⁸
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30 When guidelines were available in health facilities, other issues impeded their use, including
31 language and format of guidelines. Other studies have also identified these features of guidelines as
32 factors that negatively impact utilisation.²⁹⁻³¹
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34 The present study also found that a lack of information in the guidelines about common community
35 misconceptions related to FP methods and lack of information about newly-developed contraceptive
36 methods such as *Implanon NXT* impacted on their effective use. In Ethiopia, the current FP
37 guidelines were intended to serve various stakeholders ranging from policy makers at the national
38 level to FP providers at the services delivery point. As a result, instead of providing specific and
39 practical information to assist frontline health care providers for effective counselling and
40 contraceptive provision, the guidelines provide relatively general information about FP services.
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1 For example, the current version of the national FP guidelines²² does not provide information about
2 how to use the contraceptive methods and indications/contraindications. This finding suggests that
3 at the health facility level, guidelines need to include specific information for the health care
4 providers to use to provide effective family planning services. The guidelines by the Ministry of
5 Public Health and Sanitation of Kenya, for example, addressed this issue and provided current and
6 up to date information on FP methods.³² These guidelines cover the advantages and disadvantages
7 of FP methods, medical eligibility criteria, management of common side effects, and how to address
8 common community misperceptions about FP methods.
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15 A practice where healthcare providers continue to apply, even after receiving a guideline and
16 training, the procedures they have been applying in the past is a well-known problem in healthcare
17 sector.^{33 34} Similarly, in our study, the participants shared their concern that many providers
18 continue to provide FP services that are not in line with the guidelines but are based on providers
19 conventional practice over the years. This could be because of an organisation culture where staff
20 are not encouraged to read current evidence, literature and protocols to refresh their knowledge.
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26 This study informed about organisational factors including the role of management support for
27 providers to use the guideline and insufficient health workforce. Evidence shows that managerial
28 support is important to improve use of clinical practice guidelines.³⁵⁻³⁷ This alerts to the need for a
29 focus on support and supervision visits by health services managers at the regional level and at the
30 facility level. Lack of sufficient health workforce was identified as a main barrier for guidelines use.
31 A previous study conducted in four low-income countries, Uganda, Ethiopia, Tanzania, Myanmar,
32 showed that shortage of health workforce was one of the barriers impeding guidelines
33 implementation in the provision of maternal health services across all these countries.³⁸ Study
34 participants in our study also expressed that high staff turnover exacerbated the staff shortage
35 problem in health facilities. Our study has also pointed to that time pressure due to client overload
36 and multiple tasks was impeding guidelines use in FP services. Several studies reported that time
37 constraint was a barrier for implementing clinical practice guidelines.³⁹⁻⁴¹
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46 Health care providers in our study highlighted the importance of trainings to enhance skills for
47 effective use of guidelines and in turn provide quality of care in FP services. The need for trainings
48 and skill enhancement is noted in many other studies, across a range of health issues and healthcare
49 services provision. For example, multi-country studies, undertaken in low-and middle-income
50 countries such as Uganda, Malawi, Tanzania, Ethiopia conducted to identify the barriers and
51 facilitators for implementing various health services guidelines including maternal health services,
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1 27³⁸ and mental health services⁴² showed that lack of or insufficient training was a barrier for
2 implementing clinical guidelines.
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6 It is important to note a significant limitation of our study. First, the study was conducted with
7 participants from only urban health facilities in one geographic region of Ethiopia. Hence, the
8 barriers and facilitators identified may not be representative of those factors affecting the
9 implementation of the national guidelines in Ethiopia as a whole. Second, the use of a single
10 transcriber and translator limited our ability to conduct a quality assurance of transcript translations
11 but the lead investigator was careful not to impose his own perspectives about barriers/ facilitators
12 of FP guidelines use.
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18 However, the findings of this study have the following important implications. While the Ethiopian
19 government took an important initiative in developing these FP guidelines, for effective and
20 ongoing use of these guidelines a number of additional steps are needed, including translating the
21 guidelines to the local language, planning for distribution and availability across the country,
22 trainings that focus on personal beliefs and need for evidence base practice using guidelines, and
23 planning for supportive supervision.
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29 Further studies examining providers' perspectives of guideline use, with participants drawn from
30 different regions in Ethiopia are required to build a comprehensive understanding of barriers and
31 facilitators, and how to support utilisation of FP guidelines throughout the health system. Studies
32 targeting healthcare managers are also recommended to provide additional insights on resources and
33 managerial support related factors.
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37 **Conclusion**

38 This qualitative study presents further evidence of lack of rigorous application of standard operating
39 procedures and protocols, and informs about the potential reasons by highlighting the situation with
40 regard to the use of national FP guidelines in one region of Ethiopia. While the providers' views
41 points to a few facilitators that promote the use FP guidelines, more barriers were identified. The
42 barriers for guidelines use included lack of knowledge about guidelines existence and purpose of
43 the guidelines, lack of sufficient copies, difficult access, providers' personal religious beliefs,
44 relying of prior knowledge and tradition rather than protocols and guidelines, and inadequate
45 training on use of guidelines. Facilitators for guidelines' use were related to access to guidelines,
46 convenience and ease to implement; incentives in terms of recognition for providers to use the
47 guidelines.
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Contributors

GAT contributed to the study concept and design; acquisition, analysis and interpretation of data; drafting and critical revision of the manuscript. JSG, COL, MAM contributed to the study concept and design, as well as the critical revision of the manuscript. All the authors have approved the manuscript.

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Competing interest None

References

1. Central Statistics Agency (CSA) [Ethiopia] and ICF International. Ethiopia Demographic and Health Survey 2016. Addis Ababa, Ethiopia, and Rockville, Maryland, USA, 2016.
2. Kassebaum NJ, Barber RM, Bhutta ZA, et al. Global, regional, and national levels of maternal mortality, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. *Lancet* 2016;**388**(10053):1775-812.
3. Chola L, McGee S, Tugendhaft A, et al. Scaling Up Family Planning to Reduce Maternal and Child Mortality: The Potential Costs and Benefits of Modern Contraceptive Use in South Africa. *PLoS One* 2015;**10**(6):e0130077.
4. Cleland J, Conde-Agudelo A, Peterson H, et al. Contraception and health. *Lancet* 2012;**380**(9837):149-56.
5. Blanc A, Curtis S, Croft T. Monitoring contraceptive continuation: links to fertility outcomes and quality of care. *Stud Fam Plann* 2002;**33**(2):127-40.
6. Askew I, Mensch B, Adewuyi A. Indicators for Measuring the Quality of Family Planning Services in Nigeria. *Stud Fam Plann* 1994;**25**(5):268-83.
7. Kaufman J, Zhang Z, Qiao X, et al. The quality of family planning services in rural China. *Stud Fam Plann* 1992;**23**(2):73-84.
8. Koenig MA, Hossain MB, Whittaker M. The Influence of Quality of Care upon Contraceptive Use in Rural Bangladesh. *Stud Fam Plann* 1997;**28**(4):278-89.
9. RamaRao S, Mohanam R. The quality of family planning programs: concepts, measurements, interventions, and effects. *Stud Fam Plann* 2003;**34**(4):227-48.
10. Ali MM. Quality of care and contraceptive pill discontinuation in rural Egypt. *J biosoc sci* 2001;**33**(2):161-72.
11. Sanogo D, RamaRao S, Jones H, et al. Improving Quality of Care and Use of Contraceptives in Senegal. *Afr J Reprod Health* 2003;**7**(2):57-73.
12. Woolf S, Schünemann HJ, Eccles MP, et al. Developing clinical practice guidelines: types of evidence and outcomes; values and economics, synthesis, grading, and presentation and deriving recommendations. *Implement Sci* 2012;**7**:61-61.

13. Grimshaw JM, Thomas RE, MacLennan G, et al. Effectiveness and efficiency of guideline dissemination and implementation strategies. *Health Technol Assess* 2004;**8**(6):iii-iv, 1-72.
14. Grol R, Grimshaw J. From best evidence to best practice: effective implementation of change in patients' care. *Lancet* 2003;**362**(9391):1225-30.
15. Institute of Medicine. In: Graham R, Mancher M, Miller Wolman D, et al., eds. *Clinical Practice Guidelines We Can Trust*. Washington DC: The National Academy of Sciences, 2011.
16. Tessema GA, Mahmood MA, Gomersall JS, et al. Client and facility level determinants of quality of care in family planning services in Ethiopia: Multilevel modelling. *PLoS One* 2017;**12**(6):e0179167.
17. Stanback J, Griffey S, Lynam P, et al. Improving adherence to family planning guidelines in Kenya: an experiment. *Int J Qual Health Care* 2007;**19**(2):68.
18. NHMRC A. *Guide to the Development, Implementation and Evaluation of Clinical Practice Guidelines*. Canberra: National Health and Medical Research Council, 2000.
19. World Health Organization (WHO). *Medical eligibility criteria for contraceptive use- 5th Ed*. Geneva, Switzerland: WHO, 2015.
20. World Health Organization Department of Reproductive Health and Research (WHO/RHR) and Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs (CCP) KfHP. *Family planning: A Global Handbook for Providers (2011 Unpdate). Evidence-based guidance developed through worldwide collaboration*. Baltimore and Geneva: CCP and WHO, 2011.
21. Federal Ministry of Health (FMOH). *Guidelines for FP services in Ethiopia*. Addis Ababa: FMOH, 1996.
22. Federal Ministry of Health (FMOH). *National Guidelines for Family Planning Services in Ethiopia*. Addis Ababa: FMOH, 2011.
23. Central Statistical Agency (CSA) [Ethiopia]. *Population Projections for Ethiopia 2007-2037*. Addis Ababa, Ethiopia: CSA [Ethiopia], 2013.
24. Amhara Regional Health Bureau (ARHB) and I-TECH Ethiopia. *Institutionalization plan for mentoring program Amhara Regional Health Bureau 2013-2014*. Bahir Dar: ARHB and I-TECH [Ethiopia], 2013.
25. QSR International. *NVivo 11 pro for windows: Getting Started Guide (Version 11.2). Secondary NVivo 11 pro for windows: Getting Started Guide (Version 11.2)* 2016. www.qsrinternational.com.
26. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative research in psychology* 2006;**3**(2):77-101.
27. Puchalski Ritchie LM, Khan S, Moore JE, et al. Low- and middle-income countries face many common barriers to implementation of maternal health evidence products. *J Clin Epidemiol* 2016;**76**(Supplement C):229-37.
28. Nabyonga Orem J, Bataringaya Wavamunno J, Bakeera SK, et al. Do guidelines influence the implementation of health programs?--Uganda's experience. *Implement Sci* 2012;**7**:98.
29. Lee PY, Liew SM, Abdullah A, et al. Healthcare Professionals' and Policy Makers' Views on Implementing a Clinical Practice Guideline of Hypertension Management: A Qualitative Study. *PLOS ONE* 2015;**10**(5):e0126191.
30. Donnellan C, Sweetman S, Shelley E. Implementing clinical guidelines in stroke: a qualitative study of perceived facilitators and barriers. *Health Policy* 2013;**111**(3):234-44.
31. Luitjes S, Wouters MG AJ, Franx A, et al. Study protocol: Cost effectiveness of two strategies to implement the NVOG guidelines on hypertension in pregnancy: An innovative strategy including a computerised decision support system compared to a common strategy of professional audit and feedback, a randomized controlled trial. *Implement Sci* 2010;**5**(1):68.
32. Kenyan Ministry of Public Health and Sanitation (KMOPHS). *National Family Planning Guidelines for Service Providers Updated to reflect the 2009 Medical Eligibility Criteria of the World Health Organization*. In: Division of Reproductive Health, ed. Nairobi, Kenya: KMOPHS, 2010.

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33. Williams B, Perillo S, Brown T. What are the factors of organisational culture in health care settings that act as barriers to the implementation of evidence-based practice? A scoping review. *Nurse Education Today* 2015;**35**(2):e34-e41.
 34. Spallek H, Song M, Polk D, et al. Barriers to implementing evidence-based clinical guidelines: A survey of early adopters. *The journal of evidence-based dental practice* 2010;**10**(4):195-206.
 35. Steinberg E, Greenfield S, Wolman DM, et al. *Clinical practice guidelines we can trust*: National Academies Press, 2011.
 36. Marchionni C, Ritchie J. Organizational factors that support the implementation of a nursing best practice guideline. *J Nurs Manag* 2008;**16**(3):266-74.
 37. Stetler CB, Ritchie JA, Rycroft-Malone J, et al. Institutionalizing evidence-based practice: an organizational case study using a model of strategic change. *Implement Sci* 2009;**4**:78.
 38. Vogel JP, Moore JE, Timmings C, et al. Barriers, Facilitators and Priorities for Implementation of WHO Maternal and Perinatal Health Guidelines in Four Lower-Income Countries: A GREAT Network Research Activity. *PLoS ONE* 2016;**11**(11):e0160020.
 39. Gravel K, Legare F, Graham I. Barriers and Facilitators to Implementing Shared Decision-Making in Clinical Practice: A Systematic Review of Health Professionals' Perceptions. *Implement Sci* 2006;**1**:16.
 40. Taba P, Rosenthal M, Habicht J, et al. Barriers and facilitators to the implementation of clinical practice guidelines: A cross-sectional survey among physicians in Estonia. *BMC Health Serv Res* 2012;**12**:455-55.
 41. Munce SEP, Graham ID, Salbach NM, et al. Perspectives of health care professionals on the facilitators and barriers to the implementation of a stroke rehabilitation guidelines cluster randomized controlled trial. *BMC Health Services Research* 2017;**17**(1):440.
 42. Kane JC, Adaku A, Nakku J, et al. Challenges for the implementation of World Health Organization guidelines for acute stress, PTSD, and bereavement: a qualitative study in Uganda. *Implement Sci* 2016;**11**:36.

Table 1. Summary of the 2011 national guidelines for family planning services in Ethiopia

Developed by:	<p>A panel of experts from:</p> <ul style="list-style-type: none"> • Government (Ministry of Health of Health) • Addis Ababa University • Non-governmental organisations working in Ethiopia (DKT, EngenderHealth, FHI, Ipas, WHO, Marie Stopes International, IFHP, UNFPA, Venture Strategy, JSI/Deliver)
Intended users:	<ul style="list-style-type: none"> • Policy makers • Health managers • FP program coordinators and managers at all levels • All cadres of health care providers and instructors at health training institutions • FP researchers, monitors and evaluators • Donors, other stakeholders and implementers of FP programs in government, non-government and private sectors
Objectives:	<ul style="list-style-type: none"> • Guide FP programmers and implementers at government, non-government, bilateral and multilateral organisations, private sector as well as charity and civic institutions • Guide to all cadres of health care providers directly or indirectly involved in the provision of FP services including pre-service and in-service training • Set standards for FP programs and services • Standardise various components of FP services at all levels • Expand and improve quality of FP services to be offered • Direct integration of FP services with other reproductive health services, and • Serve as a general directive and management tool.
Main content:	<ul style="list-style-type: none"> • Goals and objectives of the Family Planning Guideline • FP Services* • FP Service Strategies • Services for Clients with Special Needs • Advocacy communications and social mobilisation • Contraceptive supplies and management • Quality of Care in Family Planning • Health Management Information System

Source: Ministry of Health. National Guidelines for Family Planning Services in Ethiopia. Addis Ababa: Ministry of Health, 2011.

**This section describes the range of FP services provided in the health facilities. The services specified are counselling, provision of contraceptive methods, screening services for sexual transmitted infections, HIV and reproductive organ cancers, prevention and management of fertility treatment*

FP- Family Planning FHI- Family Health International IFHP- Integrated Family Health Program

JSI- John Snow Incorporation UNFPA- United Nations Fund for Population Agency WHO- World Health Organization

Table 2. Characteristics of participants

Characteristics	Number	Percent
Sex		
Female	18	85.7
Male	3	14.3
Age (years)		
25-30	10	47.6
>30	11	52.4
Mean age	30 (SD=4.9)	
Range	Min=25, max=49	
Profession		
HEW	4	19.0
Midwife	10	47.6
Nurse	7	33.3
Highest qualification		
BSc	8	38.1
Diploma	13	61.9
Facility in which provider provided FP services		
Ayer-marefia Health Post	2	9.5
Azezo Health Centre	3	14.3
Belay Zeleke Health Post	2	9.5
Felege-hiwot Hospital	2	9.5
Gabriel Health centre	2	9.5
Gondar Health centre	1	4.8
Han Health Centre	2	9.5
Maraki Health Centre	2	9.5
University of Gondar Hospital	5	23.8
Types of facility from which participants were recruited		
Health Centre	10	47.6
Hospital	7	33.3
Health Post	4	19.0

Table 3. Summary of provider perceptions of factors (barriers and facilitators) related to implementation of FP guidelines

Theme	Sub-themes
Knowledge and access	<ul style="list-style-type: none"> • Awareness of guideline existence • Understanding of guideline purpose, content and requirements • Dissemination / availability of the guidelines • Size of the guideline • Scope of the guidelines • Language and layout of the guidelines
Provider behaviour and values	<ul style="list-style-type: none"> • Beliefs of providers (e.g. views about what should be provided based on religion) • Values (e.g. commitment to use of health standards) • Habits (e.g. practice according to traditional ways of doing things and expert knowledge of providers)
Support and supervision from managers	<ul style="list-style-type: none"> • Supervision • Monitoring of guidelines implementation • Incentives created for guideline implementation
Resource availability: time and workforce	<ul style="list-style-type: none"> • Availability of trained providers • Time pressure • Required activities
Training	<ul style="list-style-type: none"> • Frequency of training • Content of training • Peer-learning

BMJ Open

Healthcare providers perspectives on use of family planning guidelines in family planning services in Amhara Region, Ethiopia: A qualitative study

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Secondary Subject Heading:	Qualitative research, Public health, Health policy, Evidence based practice, Global health
Keywords:	family planning, quality of care, clinical guidelines, qualitative study, Ethiopia

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3 **1 Healthcare providers perspectives on use of family planning guidelines in**
4 **2 family planning services in Amhara Region, Ethiopia: A qualitative study**

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13 Abstract

14 **Objective:** To explore healthcare providers' views on barriers to and facilitators of use of
15 family planning (FP) guidelines in FP services in Amhara Region, Ethiopia.

16 **Design:** Qualitative study

17 **Setting:** Nine health facilities including two hospitals, five health centres, and two health
18 posts in, Amhara region, Northwest Ethiopia.

19 **Participants:** Twenty-one healthcare providers working in the provision of FP services in
20 Amhara region.

21 Primary and secondary outcome measures:

22 Semi-structured interviews were conducted to understand healthcare providers' views on
23 barriers to and facilitators of FP guidelines use in FP services.

24 **Results:** While the providers' views points to a few facilitators that promote the use FP
25 guidelines, more barriers were identified. The barriers for guidelines use included lack of
26 knowledge about guidelines existence and purpose of the guidelines, quality of the
27 guidelines, providers' personal religious beliefs, relying on prior knowledge and tradition
28 rather than protocols and guidelines, lack of or insufficient access, and inadequate training on
29 use of guidelines. Facilitators for guidelines' use were related to access to guidelines,
30 convenience and ease to implement, incentives in terms of recognition for providers to use
31 the guidelines.

32 **Conclusions:** While development of these guidelines is a major important initiative by the
33 Ethiopian government, continued use of this resource by all healthcare providers requires
34 planning to promote facilitating factors and address barriers related to use of FP guidelines.
35 Training that includes a discussion about providers' beliefs and traditional practices as well
36 as other factors that reduce the use of guidelines, provision of sufficient number of copies,
37 and translation in local language would be useful.

38 Strengths and limitations of this study

- 39 ▪ Strength: It was the first study to explore the barriers and facilitators of use of FP
40 guidelines in FP services in Ethiopia.

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- 41 ▪ Limitation: the study was conducted with participants from only urban health facilities
- 42 in one geographic region of Ethiopia.
- 43 ▪ Limitation: the use of a single transcriber and translator but the lead investigator was
- 44 careful not to impose his own perspectives about barriers/ facilitators of FP guidelines
- 45 use.
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For peer review only

47 Introduction

48 Similar to other low income countries in Africa, Ethiopia has a high maternal mortality rate,
49 with 412 deaths per 100,000 live births.¹ This compares to an average of 196 per 100,000 live
50 births at a global level.² Ensuring that all women can easily access and use appropriate and
51 effective family planning (FP) services is widely regarded as critical in reducing maternal
52 mortality^{3 4}. However, the rate of FP service utilisation remains low in Ethiopia with only
53 35% of married women using FP services.¹

54 Ensuring quality of care is critical in improving and maintaining high levels of FP services
55 utilisation.⁵⁻¹¹ Developing evidence-based clinical practice guidelines and implementing
56 them throughout the health system, is key to building quality of care.¹²⁻¹⁴ Clinical practice
57 guidelines are “statements that include recommendations intended to optimize patient care
58 that are informed by a systematic review of evidence and an assessment of the benefits and
59 harms of alternative care options”.^{15p4} Studies conducted in Ethiopia and Kenya have showed
60 that the availability of FP guidelines was positively associated with quality of care in FP
61 services.^{16 17} For example, Stanback et al.¹⁷ showed that when FP guidelines are properly
62 distributed to FP services providing health facilities, they help improve health providers
63 sustained use of guidelines and thereby the quality of care in FP services. For guidelines to be
64 effectively implemented and support quality care, it should be based on the findings of
65 systematic reviews that include quality evidence; developed by a knowledgeable,
66 multidisciplinary panel of experts and representatives from key affected groups; and consider
67 important patient subgroups and patient preferences.^{15 18}

68 To support the improvement of quality of care in FP services, the World Health Organisation
69 (WHO) has developed guidelines, including the medical eligibility criteria (MEC) for
70 contraceptive use.^{19 20} Informed by the MEC, several countries, including Ethiopia, have
71 developed FP guidelines. In Ethiopia, FP guidelines were first developed in 1996, and last
72 updated in 2011.^{21 22} A summary of the 2011 national FP guidelines considered in the present
73 study is provided in Table 1. The guidelines are intended to be used by policy makers and
74 health professionals providing FP services at all levels of the health system in Ethiopia.

75 A recent study on the factors associated with quality of care in FP services in Ethiopia reports
76 that less than half of the facilities (46%) had FP guidelines/protocols, suggesting inadequate
77 dissemination and uptake of FP guidelines.¹⁶ No study has examined factors influencing
78 utilisation of FP guidelines in FP services in Ethiopia. Understanding the healthcare provider

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3 79 experiences of using guidelines in FP services can help inform initiatives to improve
4 80 guideline implementation and thus quality of care provision in Ethiopia. The aim of this study
5 81 was to explore healthcare providers' views on the use of FP guidelines in FP services in
6 82 Amhara Region, Ethiopia, focusing on barriers and facilitators.

9 83 **Methods**

11 84 **Study design and setting**

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14 85 This study used in-depth interviews guided by a semi-structured interview guide for data
15 86 collection. The study was conducted in two big cities- Bahir Dar city and Gondar city-
16 87 located in Amhara region, Northwest Ethiopia between April and June 2017. Study
17 88 participants were recruited from nine health facilities including two hospitals, five health
18 89 centres, and two health posts. The Amhara region is the second largest of the 11
19 90 administration areas in Ethiopia, with a population of approximately 21 million, 23% of
20 91 Ethiopia's total population.²³ The region has 19 hospitals, 796 health centres, and 3267
21 92 health posts.²⁴ FP services are provided in all the health facilities in this region. In hospitals,
22 93 FP services are provided in gynecology departments by midwives, nurses, or doctors. In
23 94 health centres, FP services are provided through maternal and child health (MCH)
24 95 departments by nurses, midwives, or health officers. Health Extension Workers provide FP
25 96 services in health posts.

27 97 **Participants**

28
29 98 Before contacting the study participants, we selected health facilities purposively, to include
30 99 three types of health facilities - hospitals, health centres, and health posts. In the selected
31 100 health facilities, potential study participants were approached in staff meetings, where they
32 101 were provided information about the study and requested to express their willingness to be
33 102 part of the study. Those staff who expressed willingness to be part of the study were
34 103 contacted by telephone to further discuss the study including the study objectives, potential
35 104 risks to participants, other ethical issues, and to arrange a convenient time and place for the
36 105 interview. To be part of the study, participants had to be healthcare providers who had
37 106 worked a minimum of six months providing FP services. This helped to explore providers'
38 107 direct/real experiences on factors affecting use of FP guidelines in FP services. While it was
39 108 initially anticipated to include up to 15 study participants, recruitment of participants were
40 109 conducted until saturation was achieved in that no new barrier or facilitator were identified.

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2
3 110 As a result, a total of 21 providers (18 female, 3 males) were interviewed. See Table 2 for
4 111 further details on participant characteristics).

6 7 112 **Data collection**

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9 113 Data were collected through face-to-face in-depth interviews in the local language (Amharic)
10 114 by the lead author (GAT). In-depth interviews was used as this approach allows exploring
11 115 individual experiences/views/perceptions of healthcare providers working in the provision of
12 116 FP services. Unlike the focus group discussion, the findings in the in-depth interviews are not
13 117 influenced by the views of other participants.²⁵ All except one of the interviews were audio-
14 118 recorded. For the one interview in which the participant declined to give consent for audio-
15 119 recording, notes were taken. The interview guide included questions inquiring about barriers
16 120 and facilitators of guidelines utilisation in FP services as well as questions on participant
17 121 characteristics. The interview guide is available from the lead author.

24 25 122 **Data analysis**

26
27 123 The audio-recorded interviews and notes taken were translated and transcribed into English
28 124 by the lead author and entered into NVivo 11™ for analysis.²⁶ Thematic analysis according
29 125 to the approach described by Braun and Clarke²⁷ was employed. The epistemological
30 126 framework for this analysis was essentialist/realist, aiming to understand and report the
31 127 experiences, meaning, and reality of study participants regarding barriers for and facilitators
32 128 of using FP guidelines in the provisions of FP services.²⁷ Data analysis was led by GAT who
33 129 first read and re-read the transcripts to familiarise himself with the data, and then
34 130 systematically coded the data related to barriers and facilitators. GAT is a reproductive health
35 131 researcher who has been working in family planning research in Ethiopia. His knowledge
36 132 about the local culture, values and context of the study setting enhanced the research in terms
37 133 of making probing questions during the interviews and appropriate interpretation of the data
38 134 and identifying the barriers/facilitators. JSG has knowledge of the context surrounding
39 135 guidelines utilisation and healthcare delivery in resource-limited African settings which assist
40 136 with appropriate interpretation of the data collected. COL and MAM are also well-
41 137 experienced in qualitative research and this helped in data analysis and interpretation of the
42 138 findings. The coding was conducted inductively; with codes informed by the data rather than
43 139 pre-existing frameworks. The codes were developed through an iterative process involving
44 140 the co-authors (JSG, COL, MAM), who having read a sample of three transcripts, discussed

1
2
3 141 the emerging codes. Disagreements and discrepancies around codes, themes, and sub-themes
4 142 were resolved by consecutive discussions and reference to the original transcript document.
5
6 143 Finally, the codes were grouped based on similarities into themes and sub-themes.
7

8 144 **Ethical considerations**

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10
11 145 Ethical approvals were obtained from the Human Research Ethics Committee (HREC) at the
12
13 146 University of Adelaide (Protocol # H-2017-023) and the Institutional Review Board (IRB) at
14
15 147 the University of Gondar, Ethiopia (Protocol # O/V/P/RCS/05/562/2017). Those study
16
17 148 participants who expressed willingness to participate in the study were provided with written
18
19 149 informed consents before the start of the interviews.

20 150 **Patient and public involvement**

21
22 151 Patients or members of the public were not involved in the development, design or conduct of
23
24 152 this study.
25

26 153 **Results**

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28
29 154 Overall, six main barriers to and facilitators of using FP guidelines in FP services were
30
31 155 identified. These barriers and facilitators are summarised as themes and sub-themes in Table
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33 156 3.
34

35 157

1
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3 158 **Theme 1: Knowledge and access to the guidelines**
4

5 159 Providers' knowledge of and access to FP guidelines were identified as a key theme
6
7 160 impacting the use of FP guidelines in providing FP services. Lack of awareness about the FP
8
9 161 guidelines was perceived as a barrier preventing guideline use. In this regard, three
10
11 162 participants reported that they were not aware of the existence of the national guidelines for
12
13 163 the provisions of FP services; as one provider said "*I have not heard about it [national family*
14
15 164 *planning guideline] ...*" [In-depth Interviewee (IDI)₁₄].

16 165 Several other providers indicated that they were aware of the guidelines, but did not
17
18 166 understand their purpose adequately. They said that they perceived the guidelines as 'training
19
20 167 material/manual', only provided during training, rather than health standards to be used at
21
22 168 their health facility. This view of the guidelines was demonstrated when a participant
23
24 169 described the guidelines in their facility as 'compilation of printed training materials'
25
26 170 provided in FP trainings. Also a participant said:

27 171 *...it is because of the guidelines... it is large...we got it from Ipas NGO... it was a collection*
28
29 172 *[compilation] of training materials... laminated together in a book form [IDI]₁₈.*

30 173 Other providers who indicated that they were aware of the guidelines, referred to inadequate
31
32 174 knowledge about how to use the guideline: "*Since we did not understand on how to use it... we*
33
34 175 *have not been using it [guideline] for so long...*" [IDI]₂.

35 176 A lack of access to the guidelines was described as not having guidelines available in the
36
37 177 facility, insufficient copies of guidelines or guidelines not provided in convenient location in
38
39 178 the facility.

40
41 179 *I think, this guideline has to be accessible to various rooms. We have only a copy. [IDI]₁₉.*

42
43 180 *We do not have family planning guidelines. We just work by looking into what other*
44
45 181 *providers do and by asking them if there are concerns that we are not sure. That is how we*
46
47 182 *do. [IDI]₁₁.*

48
49 183 *We wish to use it, but we do not have it... that is the reason we are not using. [IDI]₁.*

50
51 184 In some instances, where the facility's provided copies of FP guidelines, participants
52
53 185 explained that it was often taken away or lost. In this regard, a midwife expressed his concern
54
55 186 that students or someone else removes the guidelines from the facility.

1
2
3 187 *The hospital may prepare it or got it from somewhere else [other organizations] ...but*
4 188 *someone may put it at some place for a provider to access it easily. ...and then a provider*
5 189 *has accessed it for use but failed to put it back... and lost from the facility... that is my*
6 190 *assumption. He [provider] just put [it] somewhere or may take it to his home and finally*
7 191 *forget it... forgot to bring back. It may also mixed up with other documents and then it*
8 192 *became a difficult job to find it for use. [IDI₁₅].*

9
10
11
12 193 Another participant described that although providers received copies of guidelines during
13 194 training sessions, they kept the guidelines at their homes, rather than using them in the
14 195 facility.

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17
18 196 *I had been working in health centre... far from this town...small town. By that time, we [I*
19 197 *and colleagues] had been provided the guideline at the training but we dropped it in our*
20 198 *homes [instead of bringing it for use in the facility], we did not bring it to the facility.*
21 199 *[IDI₁₂].*

22
23
24
25 200 Lack of easy access to the copies of the guidelines for immediate referral during services
26 201 provision was mentioned as a barrier by some participants – “*One problem is that we are not*
27 202 *putting the guidelines in our nearby areas*” [IDI₁₂].

28
29
30
31 203 Participants expressed that because of the large size of the guideline, they were not only
32 204 unable to locate specific information in the text and also found it difficult to carry to outreach
33 205 areas.

34
35
36
37 206 *...it is somehow difficult to get the exact page where the information we are looking for is*
38 207 *located [IDI₂].*

39
40
41 208 *It is also difficult to bring the guideline to use in the villages along other stuff. It is heavy for*
42 209 *us... we are also carrying our own stuff in the bag. Most of the time, we are forced not to*
43 210 *take it with us [IDI₁₃].*

44
45
46 211 The guidelines were only provided in English and this was seen by some participants as a
47 212 barrier to their use, particularly for those healthcare providers who do not understand English
48 213 well.

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50
51
52 214 *There might be some healthcare providers that could not easily understand English. For*
53 215 *them, it is better to have Amharic version or guidelines in both languages [Amharic and*
54 216 *English] [IDI₄].*

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2
3 217 In terms of the facilitators related to the use of guidelines, providers' reported that convenient
4 218 access to guidelines, ease to use them, format of the guidelines were perceived by the
5
6 219 participants as important facilitators for their use. For example, a participant expressed that
7
8 220 when FP guidelines were conveniently available in the facilities for providers it was
9
10 221 perceived as a facilitator for their use.

11
12 222 *The guideline is always available in our room, it is just located on the table, anyone who*
13 223 *want to refer it can found easily [IDI₈].*

14
15
16 224 Moreover, a nurse from health centre felt that passing guidelines to the next colleague when a
17 225 provider is changing shifts or travelling to other areas was helpful in improving use of
18
19 226 guidelines.

20
21 227 *I also pass the guidelines for the next person if I am going to travel somewhere. That is what*
22 228 *I think. I believe, following the guidelines would help a provider to provide a proper*
23 229 *counselling...which is really a key issue for a client and for providers to remind him to use*
24 230 *the guideline. That is what I believe [IDI₂₁].*

25
26
27
28 231 Ensuring ease of use and its convenience to carry were also demonstrated as a facilitator for
29
30 232 the use of the guidelines. From a provider's perspectives, several participants described that
31
32 233 they inclined to use the WHO eligibility criteria than the FP guidelines as the former was
33
34 234 easier to get the intended information and being smaller in size made it lighter to carry on
35 235 when they travelled to villages for outreach services.

36
37 236 *For example, the WHO guideline is very simple and easy. Just you need to put on the table*
38 237 *and then look at the notes inside the circle while national guideline is a book and it needs*
39 238 *[us] to search for a page. So making it easier to use is good for providers [IDI₃].*

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41
42
43 239 In line with this, some participants suggested that for guidelines to be easier to use by
44 240 healthcare providers, different colours and pictures need to be used within the guidelines.

45
46
47 241 *... it would also be good if they use different colours...green, red, pink to denote which*
48 242 *methods should not be taken for some diseases. If you see red, you do not give...but for*
49 243 *green marked one... you can do....you know, making it something like the WHO eligibility*
50 244 *criteria [IDI₁₂].*

51
52
53
54 245 *I need a guideline having different pictures [figures] ... do you know what I mean, for*
55 246 *examplea guideline with a U-shape pictures [to indicate] for five-year family planning*

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2
3 247 *[IUCD]. ...sometimes you will forget what you have been told in training... it will not stay*
4 248 *long after a year or two... it will be forgotten. The guidelines shall also have a clear*
5 249 *indications on landmarks [anatomical] for the measurement before inserting the*
6 250 *contraceptive methods [IDI₉].*

7
8
9 251 Additionally, the participants indicated providing copies of guidelines in the local language,
10 252 besides providing an English version, can improve its utilisation.

11
12
13 253 *But, I prefer to have an Amharic version ...and in that case, I can go and read the Amharic*
14 254 *version if the English version is not clear for me [IDI₁₅]*

15 255 **Theme 2: Quality of the guidelines**

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18 256 Another theme arising from the interviews was related to that available guidelines included a
19 257 range of information not directly related to FP services such as information about malaria and
20 258 nutrition. It was also described that the guidelines covers out of date information about FP
21 259 methods.

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23
24 260 Scope of the guidelines, as it included a large number of health issues, making it difficult to
25 261 comprehend was mentioned by one of the participants.

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27
28 262 *We have a guideline that included everything in it. It also deals about malaria... HIV...*
29 263 *sanitation, nutrition besides family planning for families in the community... It was not*
30 264 *possible to easily get the information about family planning services in it [guidelines]*
31 265 *[IDI₁₃].*

32
33
34 266 Another barrier to the use of the FP guidelines was that the guidelines was considered often
35 267 out of date and did not cover the latest contraceptive methods or provide guidance on dealing
36 268 with community misconceptions about contraception. A nurse from health centre expressed:

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38
39 269 *Plus, it [the current guideline] did not include information about the newly developed and*
40 270 *available methods... there is a new implant method which is called "Implanon NXT". This*
41 271 *method is now under distribution for health facilities. This method has its own insertion*
42 272 *procedure, but you could not get it in the current version of the guidelines [IDI₁₇].*

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44
45 273 She also added:

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47
48 274 *In the guideline... I found there is lacking about the common misconceptions [about the*
49 275 *family planning methods] in the community... if you know them... you will be ready to*

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3 276 *address during the counselling session... sometimes, you will face with emergency questions*
4 277 *in such a way that... “does it lead to this or that?” ... if these information are available in*
5 278 *the guidelines, a provider will be aware of them and getting ready to handle [answer] them*
6 279 *[IDI₁₇].*
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10 280 **Theme 3: Provider behaviour, values and beliefs**

11
12 281 More than half of the participants described that many healthcare providers tend to rely on
13 282 their prior knowledge and practices learnt throughout their career rather than using the
14 283 available guidelines. The participants felt those providers keep doing things the usual way, as
15 284 in the past, even after attending FP trainings involving guidelines implementation.

16
17 285 *...health professionals are providing family planning services just by tradition...without*
18 286 *updating him/herself [by reading guidelines]. Especially...the so-called ‘chronic*
19 287 *staff’ ...those staff who upgraded themselves gradually from health assistant to junior nurse*
20 288 *and then to [diploma]nurse...and then to bachelor degree nurse...they do not want to be*
21 289 *guided by guidelines...not at all...they just follow what they have been doing for 10...20 or*
22 290 *more years in the past [IDI₂₁].*
23
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29 291 Some of the participants who had worked for many years in FP services continue to rely on
30 292 their knowledge and experience rather than referring to guidelines.

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32
33 293 *We are working here by our experiences. I have been working here for long time...so I do*
34 294 *not use anything for providing family planning services (IDI₁).*
35
36

37 295 It was also described by some participants that lack of commitment to use health standards by
38 296 healthcare providers influenced their use of FP guidelines.

39
40
41 297 *Additionally [another reason for not using guidelines]...it is because of carelessness of the*
42 298 *healthcare provider... providing family planning services just by tradition...without*
43 299 *updating himself. [IDI₂₁]*
44
45

46
47 300 *...those providers who got the training are aware of that fact... that they should use the*
48 301 *guidelines...but they are not following[using] the laws or legislations [guidelines]... there is*
49 302 *ignorance ... [IDI₁₂].*
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52 303 Other participants expressed that some providers perceive as having sufficient knowledge and
53 304 a belief that they can provide services without the need of any guidelines. For example, a
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3 305 provider expressed “We thought...we know everything in the document [guidelines]”
4 306 [IDI₁₄].”

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6
7 307 For some participants, the habit of not reading any material provided was a barrier. One of
8 308 the participants mentioned that “*Most of our people [including providers] do not have a good*
9 309 *culture [habit] of reading books... let alone family planning guidelines. [IDI₁₆].*

10
11
12 310 It was also noted that some providers were not comfortable reading the guidelines in front of
13 311 clients. They would rather rely on their personal experiences.

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16
17 312 *When you have clients sitting in front of you, it is boring to do [refer guidelines] that. That*
18 313 *is why I prefer providing the services from my experiences [IDI₄]*

19
20
21 314 It was not all negative. One participant described his personal change in terms of
22 315 commencing to use FP guidelines.

23
24
25 316 *I am using it [guidelines] rather than following the traditional [practice based on prior*
26 317 *knowledge]... I tried to abandon [change] the old tradition to work without referring to*
27 318 *family planning guidelines... [IDI₁₆].*

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30 319 One participant presented the view that the religious beliefs of some providers was a barrier
31 320 in the utilisation of the FP guidelines:

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33
34 321 *...quite a number of providers do have a negative attitude for family planning and safe*
35 322 *abortion. They consider it as a religiously prohibited thing...they always associate it with*
36 323 *religion...and they do not accept it. Overall, I can say, their utilisation of the guideline is*
37 324 *limited. [IDI₁₆]*

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41 325 The same participant expressed that in some instances providers’ motivation to attend FP
42 326 related training was the provision of per-diems rather than obtaining knowledge about the FP
43 327 services and available guidelines to support FP services.

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45
46 328 *Many providers are going to the training...not just for learning new knowledge on it [family*
47 329 *planning services and use of guidelines], it is rather to get the per-diems during the*
48 330 *training...They do not seem to provide the [family planning] services properly using the*
49 331 *guidelines...we are observing that every time [IDI₁₆].*

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53 332 **Theme 4: Manager support (or lack of support) and supervision**

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3 333 Another theme arising from the interviews is about the role of supervisors, including district
4 334 managers and staff from non-governmental organisation (NGO). One midwife said that
5
6 335 supervisor's lack of emphasis on the guidelines when monitoring service delivery was an
7
8 336 issue. More particularly the midwife participant from a health centre expressed that: "[when
9
10 337 healthcare managers from the district and regional health bureau visited their facility] *no one*
11 338 *has checked whether we have been using it [guidelines] or not*" [IDI₁₉].

12
13 339 Another provider also reported that some healthcare managers were not concerned about
14
15 340 availability or use of the guidelines.

16
17 341 *When they come to us they are asking us about the drugs, and contraceptive methods,*
18 342 *vaccinations... They are not asking about the guidelines or if we use them or not. They are*
19 343 *always asking on the numbers on the report... for example they ask us, "why only few people*
20 344 *are getting family planning services in a certain month*" [IDI₁₄].

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24 345 However, some of the participants informed that support by district managers and NGO staff
25 346 was available and acted as a facilitator to use FP guidelines.

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28 347 *We do have NGO partners who are coming regularly to check our services provisions,*
29 348 *availability of materials and contraceptive methods. They also checked the presence of*
30 349 *family planning guidelines* [IDI₁₇].

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34 350 Creating a culture within the facility where the guidelines were seen as core to their service
35 351 provision was suggested by a number of participants as a facilitator. *If one needs providers to*
36 352 *use guidelines, encouragement is necessary...* [IDI₆].

37 38 39 40 353 **Theme 5: Resource availability: time and workforce**

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42 354 Resource related issues such as lack of time, shortage of trained providers, and high workload
43 355 were expressed as barriers to using FP guidelines. Several of the participants reported that
44 356 high client load interferes with using the guidelines. The participants referred to long queues
45 357 of clients' waiting outside of the clinics to receive FP services; that made referring to the
46 358 guidelines during consultations difficult. In addition, the participants reported that limited
47 359 time available for each client meant that some provider prioritised using the 'consultation
48 360 time' to counsel client based on what they already know rather than using the guidelines. In
49 361 one participant's words: "*We do not have time... in order to read a text [guidelines], really... you*
50 362 *should first get sufficient time*" [IDI₁₃].

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3 363 Additionally, the lack of appropriately trained staff added to the pressure on the existing staff
4 364 and so taking the time to refer to the guidelines was considered a barrier to dealing with
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6 365 patient numbers. For example, participants stated:

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9 366 *In that case [in the absence of trained providers], they [untrained providers] may just*
10 367 *provide only counselling to them [clients] and appoint for myself or other trained provider*
11 368 *to see them when we get back... these providers are not referring to the document*
12 369 *[guidelines]. In the facility, we do have only two trained providers, myself and another*
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14 370 *midwife [IDI8]*

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16
17 371 Another area of concern for one participant was the facilities' inability to retain those staff
18 372 who had been provided with training related to FP services and guidelines:

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21 373 *There were many providers who have got the training but they moved to other places from*
22 374 *our facility for different reasons...there is a lot of providers' turnover here...that is a big*
23 375 *challenge [IDI17].*

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25
26 376 According to a health extension worker participant, it was difficult to use guidelines during
27 377 provision of FP services because providers were required to provide a number of other
28 378 healthcare services along with FP services, be involved with various meetings, and to work in
29 379 outreach activities in the local community.

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34 380 *We do have meetings all the time, we should give counselling for the clients, we should also*
35 381 *need to report to district managers, and health centre... we are not in the office to read*
36 382 *available documents, usually in the morning time "we are always out" [IDI13].*

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39 383 Another nurse explained that working on a number of tasks that are not co-located in one
40 384 room but offered by one provider was also seen as a barrier to guideline use. In her words:

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43 385 *...if a midwife is assigned in one room, there is no reason that she does not use the*
44 386 *guidelines properly. But, this will not happen here... we are going to antenatal, postnatal*
45 387 *care, etc... Sometimes, we are rushing to reach the clients coming for different services.*
46 388 *[IDI13].*

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50 389 **Theme 6: Training**

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52 390 Providers' lack of or inadequate training on the contents of the FP guidelines was described
53 391 as a barrier to guidelines use. For example, one participant mentioned that: *"If you are not*
54 392 *trained you cannot use the guideline" [IDI3].* Other providers expressed:

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3 393 *I took the training....it was long time ago... I took it in 2005E.C (just before 4 years [IDI₈]*

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5 394 *Once we have been provided a training, nobody remembers you for refreshment training...*

6
7 395 *[IDI₂]*

8
9 396 In contrast, other participants referred to provision of training that targets FP guidelines as a
10 397 facilitator; for example one participant explained that discussing the contents of the
11 398 guidelines during FP training provision may help to motivate providers to use the guidelines.

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14
15 399 *They [trainers] have highlighted some concepts in the guidelines using PowerPoint*
16 400 *presentation. I guess, this can help providers to motivate for using them while getting back*
17 401 *to their facilities [IDI₁₆].*

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19
20 402 As part of the capacity building activity, the participants described that being a FP trainer has
21 403 helped them to improve their use of guidelines.

22
23
24 404 *...our facility is one of the practical attachment location for family planning trainings. I am*
25 405 *also part of the trainers' panel for the long term contraceptive methods. ...the guidelines are*
26 406 *always in my hand for me to use... I am updating myself every time...maybe... I read the*
27 407 *book in weekly or monthly basis. I also ask other friends [colleagues] to use it [IDI₁₆].*

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31 408 Some participants acknowledged peer-learning from colleagues and identified this as a
32 409 facilitator. For example, a participant described that she and her colleagues did not use the
33 410 guidelines until she attended an induction training on how to use the guidelines and share the
34 411 knowledge to her colleagues.

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39 412 *...After I received the orientation [induction] on how to use it, I have also informed [on how*
40 413 *to use it] to all my staff and now we are using it in the same language [fashion]. The*
41 414 *guideline had been in our facility for three....or... four months without using it [IDI₂].*

42 43 44 415 **Discussion**

45
46 416 This is the first study conducted to understand providers' perspectives on FP guidelines use in
47 417 Ethiopia. While the providers' views points to both barriers and facilitators affecting FP
48 418 guidelines use in FP services, more factors related to barriers were identified and described
49 419 than facilitators. Barriers exist, from providers' perspective, mainly in inadequate knowledge
50 420 about the purpose of the guidelines, relevance of the guidelines for specific and practical
51 421 needs of the providers, personal factors such as beliefs and traditions, and organisational
52 422 factors such as inadequate resources including time and staff, lack of supervision and support.

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3 423 Our findings that provider's lack of knowledge about the existence of FP guidelines and
4 424 unavailability of a copy of guidelines for healthcare providers supports our previous
5 425 quantitative study which found more than half of the health facilities in Ethiopia do not have
6 426 FP guidelines available.¹⁶ Lack of availability of the guidelines in health facilities points to a
7 427 concern about lack of planning to distribute such resource to health facilities for use by
8 428 healthcare providers.²⁸ Inadequate planning to effectively distribute guidelines and protocols
9 429 is a persistent concern across other countries as well; for example, a 2012 Ugandan study,
10 430 found that more than 60% of clinical guidelines developed by the government were not
11 431 available at the service delivery level despite that these resources were available at national
12 432 offices level.²⁹

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20 433 When guidelines were available in health facilities, other issues impeded their use, including
21 434 language and format of guidelines. Other studies have also identified these features of
22 435 guidelines as factors that negatively impact utilisation.³⁰⁻³²

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26 436 The present study also found that a lack of information in the guidelines about common
27 437 community misconceptions related to FP methods and lack of information about newly-
28 438 developed contraceptive methods such as *Implanon NXT* impacted on their effective use. In
29 439 Ethiopia, the current FP guidelines were intended to serve various stakeholders ranging from
30 440 policy makers at the national level to FP providers at the services delivery point. As a result,
31 441 instead of providing specific and practical information to assist frontline healthcare providers
32 442 for effective counselling and contraceptive provision, the guidelines provide relatively
33 443 general information about FP services. For example, the current version of the national FP
34 444 guidelines²² does not provide information about how to use the contraceptive methods and
35 445 indications/contraindications. This finding suggests that at the health facility level, guidelines
36 446 need to include specific information for the healthcare providers to use to provide effective
37 447 FP services. The guidelines by the Ministry of Public Health and Sanitation of Kenya, for
38 448 example, addressed this issue and provided current and up to date information on FP
39 449 methods.³³ These guidelines cover the advantages and disadvantages of FP methods, medical
40 450 eligibility criteria, management of common side effects, and how to address common
41 451 community misperceptions about FP methods.

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53 452 Healthcare providers continuing to apply, even after receiving guidelines and training, the
54 453 procedures they have been applying in the past is a well-known problem in the healthcare
55 454 sector, not only in developing countries, but throughout the world.^{34 35} Therefore, our study

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3 455 findings that providers perceive traditional ways of doing things as a barrier to guidelines use
4 456 is not surprising. This problem is probably partly due to a provider's lack of commitment to
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6 457 implement the best practice that they gained from trainings. A study conducted in rural India
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8 458 found a clear gap between what the providers 'know' about the standard practices to be
9
10 459 provided/followed for patients and what they 'do' in their routine practice during the
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12 460 provision of a healthcare services. ³⁶ Therefore, this finding suggests that improving
13
14 461 healthcare providers' use of FP guidelines require not only improvement in providers'
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16 462 knowledge and skills about the use of guidelines but also there need to be a regular
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18 463 supportive supervision and incentive mechanisms to motivate healthcare providers.

18 464 This study informed about organisational factors including the role of management support
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20 465 for providers to use the guideline and insufficient health workforce. Evidence shows that
21
22 466 managerial support is important to improve use of clinical practice guidelines. ³⁷⁻³⁹ This alerts
23
24 467 to the need for a focus on support and supervision visits by healthcare services managers at
25
26 468 the regional level and at the facility level. Lack of sufficient health workforce was identified
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28 469 as a main barrier for guidelines use. A previous study conducted in four low-income
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30 470 countries, Uganda, Ethiopia, Tanzania, Myanmar, showed that shortage of health workforce
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32 471 was one of the barriers impeding guidelines implementation in the provision of maternal
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34 472 healthcare services across all these countries. ⁴⁰ Study participants in our study also expressed
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36 473 that high staff turnover exacerbated the staff shortage problem in health facilities. Our study
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38 474 has also pointed to that time pressure due to client overload and multiple tasks was impeding
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40 475 guidelines use in FP services. Several studies reported that time constraint was a barrier for
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42 476 implementing clinical practice guidelines. ⁴¹⁻⁴³

40 477 Healthcare providers in our study highlighted the importance of training to enhance skills for
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42 478 effective use of guidelines and in turn provide quality of care in FP services. The need for
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44 479 train and skill enhancement is noted in many other studies, across a range of health issues and
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46 480 healthcare services provision. For example, multi-country studies, undertaken in low-and
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48 481 middle-income countries such as Uganda, Malawi, Tanzania, Ethiopia conducted to identify
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50 482 the barriers and facilitators for implementing various healthcare services guidelines including
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52 483 maternal healthcare services, ^{28 40} and mental healthcare services⁴⁴ showed that lack of or
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54 484 insufficient training was a barrier for implementing clinical guidelines.

54 485 Considering limitations of this study, first, the study was conducted with participants from
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56 486 only urban health facilities in one geographic region of Ethiopia. Hence, as expected in

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3 487 qualitative studies, the results may not be representative to rural health facilities and other
4 488 regions of Ethiopia. However, we continued interviewing until data saturation, and therefore
5 489 the barriers and facilitating factors that we identified may be similar in other facilities,
6 490 particularly within the Amhara region. In fact, as facilities being located in rural and remote
7 491 areas pose additional challenges in terms of adequate human resource, training and access to
8 492 resources such as guidelines, we believe that the barriers highlighted by the study participants
9 493 in Amhara region may be even more pronounced in rural and remote areas. Second, while the
10 494 lead author (GAT) has been working in FP research in Ethiopia, there might be a potential
11 495 bias in the research. However, the lead author was careful not to impose his own perspectives
12 496 about barriers/ facilitators of FP guidelines use during data collection and analysis. The use of
13 497 a single transcriber and translator limited our ability to conduct a quality assurance of
14 498 transcript translations. As the co-authors, JSG, COL, AMM, have no experience in Ethiopia
15 499 and they have little or no bias in the research. They were also careful not to impose their own
16 500 perspectives about barriers/ facilitators of FP guidelines use during data collection and
17 501 analysis. The use of a single transcriber and translator limited our ability to conduct a quality
18 502 assurance of transcript translations. However, the lead investigator was careful not to impose
19 503 his own perspectives about barriers/ facilitators of FP guidelines use during data collection
20 504 and analysis. The co-authors, JSG, COL, AMM, have no experience in Ethiopia and hence
21 505 have little or no bias in the research.
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34 506 **Policy and research implications**

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37 507 The findings of this study have important policy and research implications. While the
38 508 Ethiopian government took an important initiative in developing FP guidelines its utilisation
39 509 could be improved by implementing the following steps. (1) The guidelines should be
40 510 translated into the local language and ensure that they are distributed to health facilities. (2)
41 511 Provision of additional training for healthcare providers to improve their knowledge about the
42 512 guidelines is required. The trainings should focus more on encouraging/incentivizing
43 513 providers to use the guidelines and to build their confidence in referring to the guidelines in
44 514 front of the clients. It should also be emphasised that the guidelines are not only to be used as
45 515 a training material but also are actually a reference guide to be used continuously throughout
46 516 their career. (3) Steps need to be taken to ensure that the guidelines are easily available, and
47 517 that providers and managers have the time to participate in relevant trainings, as well as to
48 518 deliver the standard and range of services set out in the guidelines. 4) The current national FP
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3 519 guidelines are out-of-date in terms of addressing new FP methods and technologies, so the
4 520 government should consider revising this guidelines. During the guidelines revision, it could
5 521 be important to include more practical information required by healthcare providers which
6 522 includes how to use each FP method, advantages/disadvantages, contraindications, side
7 523 effects, and common community misconceptions. It would also be useful for the guidelines to
8 524 be more concise and simple to carry/transfer/share and have better indexed content so that
9 525 providers can find what they need to know more quickly, and more up to date information so
10 526 that providers do not fear they are acting on outdated knowledge. 5) It is also necessary to
11 527 establish better systems for managers to provide effective monitoring and supervision of
12 528 providers and to use the opportunity to check the availability guidelines in the facilities and if
13 529 the providers are properly implementing the guidelines.

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21 530 Further studies examining providers' perspectives of guidelines use involving participants
22 531 from other regions in Ethiopia may be required to build a comprehensive understanding of
23 532 barriers and facilitators, and how to support utilisation of FP guidelines throughout the health
24 533 system. While some of the barriers identified in this study such as lack of managerial support
25 534 and training could be better explored by including healthcare managers, further study
26 535 targeting healthcare managers is recommended to provide additional insight on these factors.

31 536 **Conclusion**

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34 537 Provider perspectives confirmed that a range of barriers contribute to lack of use of
35 538 guidelines in FP services in some health facilities in Ethiopia. The barriers observed included
36 539 lack of knowledge about guidelines existence and purpose of the guidelines, lack of sufficient
37 540 copies of the guidelines, providers' personal religious beliefs, a desire amongst providers to
38 541 deliver services based on prior knowledge and tradition rather than protocols and guidelines,
39 542 insufficient time (resource issues), lack of knowledge about the guidelines and inadequate
40 543 training on how to use them. Ensuring that the guidelines were easy to access and implement
41 544 and incentives for their use (e.g. recognition) were the main facilitators indented by providers
42 545 in this qualitative study. While the Federal Ministry of Health of Ethiopia need to work on
43 546 revising the current FP guidelines, strategies need to be designed to properly distributing
44 547 these guidelines to health facilities providing FP services. Future FP guidelines development
45 548 need to focus on providing concise, easy to carry guidelines with a more practical
46 549 information for healthcare providers.

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3 550 **Data sharing statement**
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5 551 All the required data used in the research is included in the text.
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9

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17 557 **Contributors**
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20 558 GAT contributed to the study concept and design; acquisition, analysis and interpretation of
21 559 data; drafting and critical revision of the manuscript. JSG, COL, MAM contributed to the
22 560 study concept and design, as well as the critical revision of the manuscript. All the authors
23 561 have approved the manuscript.
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35 566 **Competing interest** None
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38 567 **References**
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- 40 568 1. Central Statistical Agency (CSA) and ICF International. Ethiopia Demographic and Health
41 569 Survey 2016. Addis Ababa, Ethiopia, and Rockville, Maryland, USA: CSA and ICF
42 570 International,, 2016.
43 571 2. Kassebaum NJ, Barber RM, Bhutta ZA, et al. Global, regional, and national levels of
44 572 maternal mortality, 1990-2015: a systematic analysis for the Global Burden of
45 573 Disease Study 2015. *Lancet* 2016;**388**(10053):1775-812.
46 574 3. Chola L, McGee S, Tugendhaft A, et al. Scaling Up Family Planning to Reduce Maternal
47 575 and Child Mortality: The Potential Costs and Benefits of Modern Contraceptive Use
48 576 in South Africa. *PloS one* 2015;**10**(6):e0130077.
49 577 4. Cleland J, Conde-Agudelo A, Peterson H, et al. Contraception and health. *Lancet*
50 578 2012;**380**(9837):149-56.
51 579 5. Ali M. Quality of care and contraceptive pill discontinuation in rural Egypt. *Journal of*
52 580 *biosocial science* 2001;**33**(2):161-72.
53 581 6. Askew I, Mensch B, Adewuyi A. Indicators for Measuring the Quality of Family Planning
54 582 Services in Nigeria. *Stud Fam Plann* 1994;**25**(5):268-83.
55
56
57
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59
60

- 583 7. Blanc A, Curtis S, Croft T. Monitoring contraceptive continuation: links to fertility
584 outcomes and quality of care. *Stud Fam Plann* 2002;**33**(2):127-40.
- 585 8. Kaufman J, Zhang Z, Qiao X, et al. The quality of family planning services in rural China.
586 *Stud Fam Plann* 1992;**23**(2):73-84.
- 587 9. Koenig M, Hossain M, Whittaker M. The Influence of Quality of Care upon Contraceptive
588 Use in Rural Bangladesh. *Stud Fam Plann* 1997;**28**(4):278-89.
- 589 10. RamaRao S, Mohanam R. The quality of family planning programs: concepts,
590 measurements, interventions, and effects. *Stud Fam Plann* 2003;**34**(4):227-48.
- 591 11. Sanogo D, RamaRao S, Jones H, et al. Improving Quality of Care and Use of
592 Contraceptives in Senegal. *African journal of reproductive health* 2003;**7**(2):57-73.
- 593 12. Woolf S, Schünemann HJ, Eccles MP, et al. Developing clinical practice guidelines:
594 types of evidence and outcomes; values and economics, synthesis, grading, and
595 presentation and deriving recommendations. *Implement Sci* 2012;**7**:61.
- 596 13. Grimshaw JM, Thomas RE, MacLennan G, et al. Effectiveness and efficiency of
597 guideline dissemination and implementation strategies. *Health Technol Assess*
598 2004;**8**(6):iii-iv, 1-72.
- 599 14. Grol R, Grimshaw J. From best evidence to best practice: effective implementation of
600 change in patients' care. *Lancet* 2003;**362**(9391):1225-30.
- 601 15. Institute of Medicine. In: Graham R, Mancher M, Miller Wolman D, et al., eds. *Clinical*
602 *Practice Guidelines We Can Trust*. Washington DC: The National Academy of
603 Sciences, 2011.
- 604 16. Tessema GA, Mahmood MA, Gomersall JS, et al. Client and facility level determinants
605 of quality of care in family planning services in Ethiopia: Multilevel modelling. *PLoS*
606 *one* 2017;**12**(6):e0179167.
- 607 17. Stanback J, Griffey S, Lynam P, et al. Improving adherence to family planning guidelines
608 in Kenya: an experiment. *International journal for quality in health care : journal of*
609 *the International Society for Quality in Health Care / ISQua* 2007;**19**(2):68-73.
- 610 18. National Health and Medical Research Council (NHMRC) Australia. *Guide to the*
611 *Development, Implementation and Evaluation of Clinical Practice Guidelines*.
612 Canberra: The Commonwealth of Australia, 1999.
- 613 19. World Health Organization (WHO). *Medical eligibility criteria for contraceptive use- 5th*
614 *Ed*. Geneva, Switzerland: WHO, 2015.
- 615 20. World Health Organization (WHO), Johns Hopkins Bloomberg School of Public
616 Health/Center for Communication Programs (CCP), Knowledge for Health Project.
617 *Family planning: A Global Handbook for Providers (2011 Update)*. Evidence-based
618 guidance developed through worldwide collaboration. Baltimore and Geneva: CCP
619 and WHO, 2011.
- 620 21. Federal Ministry of Health (FMOH). *Guidelines for FP services in Ethiopia*. Addis
621 Ababa: FMOH, 1996.
- 622 22. Federal Ministry of Health (FMOH). *National Guideline for Family Planning Services in*
623 *Ethiopia*. Addis Ababa: FMOH, 2011.
- 624 23. Central Statistical Agency (CSA). *Population Projections for Ethiopia 2007-2037*. Addis
625 Ababa, Ethiopia: CSA, 2013.
- 626 24. Amhara Regional Health Bureau (ARHB) and I-TECH Ethiopia. *Institutionalization plan*
627 *for mentoring program Amhara Regional Health Bureau 2013-2014*. Bahir Dar:
628 ARHB and I-TECH, 2013.
- 629 25. Guest G, Namey E, Mitchell M. *Collecting Qualitative Data: A Field Manual for Applied*
630 *Research*. 55 City Road, London: SAGE Publications, Ltd, 2013.

- 1
2
3 631 26. QSR International. NVivo 11 pro for windows: Getting Started Guide (Version 11.2).
4 632 Secondary NVivo 11 pro for windows: Getting Started Guide (Version 11.2) 2016.
5 633 www.qsrinternational.com.
6 634 27. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative research in*
7 635 *psychology* 2006;**3**(2):77-101.
8 636 28. Puchalski Ritchie LM, Khan S, Moore JE, et al. Low- and middle-income countries face
9 637 many common barriers to implementation of maternal health evidence products. *J*
10 638 *Clin Epidemiol* 2016;**76**(Supplement C):229-37.
11 639 29. Nabyonga Orem J, Bataringaya Wavamunno J, Bakeera SK, et al. Do guidelines
12 640 influence the implementation of health programs?--Uganda's experience. *Implement*
13 641 *Sci* 2012;**7**:98.
14 642 30. Lee PY, Liew SM, Abdullah A, et al. Healthcare Professionals' and Policy Makers'
15 643 Views on Implementing a Clinical Practice Guideline of Hypertension Management:
16 644 A Qualitative Study. *PloS one* 2015;**10**(5):e0126191.
17 645 31. Donnellan C, Sweetman S, Shelley E. Implementing clinical guidelines in stroke: a
18 646 qualitative study of perceived facilitators and barriers. *Health Policy*
19 647 2013;**111**(3):234-44.
20 648 32. Luitjes S, Wouters MG AJ, Franx A, et al. Study protocol: Cost effectiveness of two
21 649 strategies to implement the NVOG guidelines on hypertension in pregnancy: An
22 650 innovative strategy including a computerised decision support system compared to a
23 651 common strategy of professional audit and feedback, a randomized controlled trial.
24 652 *Implement Sci* 2010;**5**(1):68.
25 653 33. Kenyan Ministry of Public Health and Sanitation (KMOPHS). National Family Planning
26 654 Guidelines for Service Providers Updated to reflect the 2009 Medical Eligibility
27 655 Criteria of the World Health Organization. In: Division of Reproductive Health, ed.
28 656 Nairobi, Kenya: KMOPHS, 2010.
29 657 34. Williams B, Perillo S, Brown T. What are the factors of organisational culture in health
30 658 care settings that act as barriers to the implementation of evidence-based practice? A
31 659 scoping review. *Nurse Educ Today* 2015;**35**(2):e34-41.
32 660 35. Spallek H, Song M, Polk D, et al. Barriers to implementing evidence-based clinical
33 661 guidelines: A survey of early adopters. *J Evid Based Dent Pract* 2010;**10**(4):195-206.
34 662 36. Mohanan M, Vera-Hernandez M, Das V, et al. The know-do gap in quality of health care
35 663 for childhood diarrhea and pneumonia in rural India. *JAMA Pediatr* 2015;**169**(4):349-
36 664 57.
37 665 37. Steinberg E, Greenfield S, Wolman DM, et al. *Clinical practice guidelines we can trust*.
38 666 National Academies Press, 2011.
39 667 38. Marchionni C, Ritchie J. Organizational factors that support the implementation of a
40 668 nursing best practice guideline. *J Nurs Manag* 2008;**16**(3):266-74.
41 669 39. Stetler CB, Ritchie JA, Rycroft-Malone J, et al. Institutionalizing evidence-based
42 670 practice: an organizational case study using a model of strategic change. *Implement*
43 671 *Sci* 2009;**4**:78.
44 672 40. Vogel JP, Moore JE, Timmings C, et al. Barriers, Facilitators and Priorities for
45 673 Implementation of WHO Maternal and Perinatal Health Guidelines in Four Lower-
46 674 Income Countries: A GREAT Network Research Activity. *PloS one*
47 675 2016;**11**(11):e0160020.
48 676 41. Gravel K, Legare F, Graham I. Barriers and Facilitators to Implementing Shared
49 677 Decision-Making in Clinical Practice: A Systematic Review of Health Professionals'
50 678 Perceptions. *Implement Sci* 2006;**1**:16.

- 1
2
3 679 42. Taba P, Rosenthal M, Habicht J, et al. Barriers and facilitators to the implementation of
4 680 clinical practice guidelines: A cross-sectional survey among physicians in Estonia.
5 681 BMC health services research 2012;**12**:455.
6 682 43. Munce SEP, Graham ID, Salbach NM, et al. Perspectives of health care professionals on
7 683 the facilitators and barriers to the implementation of a stroke rehabilitation guidelines
8 684 cluster randomized controlled trial. BMC health services research 2017;**17**(1):440.
9 685 44. Kane JC, Adaku A, Nakku J, et al. Challenges for the implementation of World Health
10 686 Organization guidelines for acute stress, PTSD, and bereavement: a qualitative study
11 687 in Uganda. Implement Sci 2016;**11**:36.

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689 Table 1. Summary of the 2011 national guidelines for family planning services in Ethiopia

Developed by:	<p>A panel of experts from:</p> <ul style="list-style-type: none"> • Government (Ministry of Health of Health) • Addis Ababa University • Non-governmental organisations working in Ethiopia (DKT, EngenderHealth, FHI, Ipas, WHO, Marie Stopes International, IFHP, UNFPA, Venture Strategy, JSI/Deliver)
Intended users:	<ul style="list-style-type: none"> • Policy makers • Health managers • FP program coordinators and managers at all levels • All cadres of health care providers and instructors at health training institutions • FP researchers, monitors and evaluators • Donors, other stakeholders and implementers of FP programs in government, non-government and private sectors
Objectives:	<ul style="list-style-type: none"> • Guide FP programmers and implementers at government, non-government, bilateral and multilateral organisations, private sector as well as charity and civic institutions • Guide to all cadres of health care providers directly or indirectly involved in the provision of FP services including pre-service and in-service training • Set standards for FP programs and services • Standardise various components of FP services at all levels • Expand and improve quality of FP services to be offered • Direct integration of FP services with other reproductive health services, and • Serve as a general directive and management tool.
Main content:	<ul style="list-style-type: none"> • Goals and objectives of the Family Planning Guideline • FP Services* • FP Service Strategies • Services for Clients with Special Needs • Advocacy communications and social mobilisation • Contraceptive supplies and management • Quality of Care in Family Planning • Health Management Information System

690 Source: Ministry of Health. National Guidelines for Family Planning Services in Ethiopia. Addis
 691 Ababa: Ministry of Health, 2011.

692 **This section describes the range of FP services provided in the health facilities. The services specified are*
 693 *counselling, provision of contraceptive methods, screening services for sexual transmitted infections, HIV and*
 694 *reproductive organ cancers, prevention and management of fertility treatment*

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3 695 *FP- Family Planning FHI- Family Health International IFHP- Integrated Family Health Program*
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5 696 *JSI- John Snow Incorporation UNFPA- United Nations Fund for Population Agency WHO- World Health*
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698 Table 2. Characteristics of participants

Characteristics	Number	Percent
Sex		
Female	18	85.7
Male	3	14.3
Age (years)		
25-30	10	47.6
>30	11	52.4
Mean age	30 (SD=4.9)	
Range	Min=25, max=49	
Profession		
HEW	4	19.0
Midwife	10	47.6
Nurse	7	33.3
Highest qualification		
BSc	8	38.1
Diploma	13	61.9
Facility in which provider provided FP services		
Ayer-marefia Health Post	2	9.5
Azezo Health Centre	3	14.3
Belay Zeleke Health Post	2	9.5
Felege-hiwot Hospital	2	9.5
Gebriel Health centre	2	9.5
Gondar Health centre	1	4.8
Han Health Centre	2	9.5
Maraki Health Centre	2	9.5
University of Gondar Hospital	5	23.8
Types of facility from which participants were recruited		
Health Centre	10	47.6
Hospital	7	33.3
Health Post	4	19.0
Total number of work experience in the provision of FP services		
Mean	2.85 (SD=1.7), Min=1, Max=7	

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700 Table 3. Summary of provider perceptions of factors (barriers and facilitators) related to
701 implementation of FP guidelines

Theme	Sub-themes
Knowledge and access	<ul style="list-style-type: none"> • Awareness of guideline existence • Understanding of guideline purpose • Dissemination / availability of the guidelines • Size of the guideline • Language and layout of the guidelines
Quality of the guidelines	<ul style="list-style-type: none"> • Scope of the guidelines • Content of the guidelines
Provider behaviour and values	<ul style="list-style-type: none"> • Beliefs of providers (e.g. views about what should be provided based on religion) • Values (e.g. commitment to use of health standards) • Habits (e.g. practice according to traditional ways of doing things and expert knowledge of providers)
Support and supervision from managers	<ul style="list-style-type: none"> • Supervision • Monitoring of guidelines implementation • Incentives created for guideline implementation
Resource availability: time and workforce	<ul style="list-style-type: none"> • Availability of trained providers • Time pressure • Required activities
Training	<ul style="list-style-type: none"> • Frequency of training • Content of training • Peer-learning

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BMJ Open

Healthcare providers perspectives on use of family planning guideline in family planning services in Amhara Region, Ethiopia: A qualitative study

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Keywords:	family planning, quality of care, clinical guidelines, qualitative study, Ethiopia

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3 **1 Healthcare providers perspectives on use of family planning guideline in**
4 **2 family planning services in Amhara Region, Ethiopia: A qualitative study**

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13 Abstract

14 **Objective:** To explore healthcare providers' views on barriers to and facilitators of use of
15 family planning (FP) guideline in FP services in Amhara Region, Ethiopia.

16 **Design:** Qualitative study

17 **Setting:** Nine health facilities including two hospitals, five health centres, and two health
18 posts in Amhara region, Northwest Ethiopia.

19 **Participants:** Twenty-one healthcare providers working in the provision of FP services in
20 Amhara region.

21 Primary and secondary outcome measures:

22 Semi-structured interviews were conducted to understand healthcare providers' views on
23 barriers to and facilitators of FP guideline use in FP services.

24 **Results:** While the providers' views points to a few facilitators that promote the use FP
25 guideline, more barriers were identified. The barriers for guideline use included lack of
26 knowledge about the guideline's existence, purpose and quality, the providers' personal
27 religious beliefs, reliance on prior knowledge and tradition rather than protocols and
28 guideline, lack of or insufficient access, and inadequate training on use of guideline.
29 Facilitators for guideline use were related to access to the guideline, convenience and ease of
30 implementation and of incentives in terms of recognition for providers to use the guideline.

31 **Conclusions:** While development of the guideline is a major important initiative by the
32 Ethiopian government, continued use of this resource by all healthcare providers requires
33 planning to promote facilitating factors and address barriers related to use of the FP
34 guideline. Training that includes a discussion about providers' beliefs and traditional
35 practices as well as other factors that reduce the use of guideline, provision of sufficient
36 number of copies, and translation in local language would be useful.

37 Strengths and limitations of this study

- 38 ■ Strength: It was the first study to explore the barriers and facilitators of use of the FP
39 guideline in FP services in Ethiopia.

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- 40 ▪ Limitation: the study was conducted with participants from only urban health facilities
- 41 in one geographic region of Ethiopia.
- 42 ▪ Limitation: the use of a single transcriber and translator, however the lead investigator
- 43 was careful not to impose his own perspectives about barriers/ facilitators of FP
- 44 guideline use.
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46 Introduction

47 Similar to other low income countries in Africa, Ethiopia has a high maternal mortality rate,
48 with 412 deaths per 100,000 live births.¹ This compares with an average of 196 per 100,000
49 live births at a global level.² Ensuring that all women can easily access and use appropriate
50 and effective family planning (FP) services is widely regarded as critical in reducing maternal
51 mortality^{3 4}. However, the rate of FP service utilisation remains low in Ethiopia with only
52 35% of married women using FP services.¹

53 Ensuring quality of care is critical in improving and maintaining high levels of FP services
54 utilisation.⁵⁻¹¹ Developing evidence-based clinical practice guidelines and implementing
55 them throughout the health system, is key to building quality of care.¹²⁻¹⁴ Clinical practice
56 guidelines are “statements that include recommendations intended to optimize patient care
57 that are informed by a systematic review of evidence and an assessment of the benefits and
58 harms of alternative care options”.^{15p4} Studies conducted in Ethiopia and Kenya have shown
59 that the availability of FP guidelines was positively associated with improved quality of care
60 in FP service delivery.^{16 17} For example, Stanback et al.¹⁷ showed that when FP guidelines are
61 properly distributed to healthcare facilities offering FP services, the reliable presence of these
62 guidelines helps to improve health providers’ sustained use of the guidelines and thereby the
63 quality of FP service delivery. For guidelines to be effectively implemented and support
64 quality care, they should be based on the findings of systematic reviews that include quality
65 evidence; developed by a knowledgeable, multidisciplinary panel of experts and
66 representatives from key affected groups and consider important patient subgroups and
67 patient preferences.^{15 18}

68 To support the improvement of quality of care in FP services, the World Health Organisation
69 (WHO) has developed guidelines, including the medical eligibility criteria (MEC) for
70 contraceptive use.^{19 20} Informed by the MEC, several countries, including Ethiopia, have
71 developed FP guidelines. In Ethiopia, FP guideline was first developed in 1996, and last
72 updated in 2011, and is the only FP guideline available in Ethiopia.^{21 22} A summary of the
73 2011 national FP guideline²² considered in the present study is provided in Table 1. The
74 guideline is intended to be used by policy makers and health professionals providing FP
75 services at all levels of the health system in Ethiopia.

76 A recent study on the factors associated with quality of care in FP services in Ethiopia reports
77 that less than half of the facilities (46%) had FP guidelines/protocols, suggesting inadequate

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2
3 78 dissemination and uptake of FP guidelines.¹⁶ No study has examined factors influencing
4 79 utilisation of FP guideline in FP services in Ethiopia. Understanding the healthcare provider
5 80 experiences of using guideline in FP services can help inform initiatives to improve guideline
6 81 implementation and thus quality of care provision in Ethiopia. The aim of this study was to
7 82 explore healthcare providers' views on the use of FP guideline in FP services in Amhara
8 83 Region, Ethiopia, focusing on barriers and facilitators.

84 **Methods**

85 **Study design and setting**

86 This study used in-depth interviews guided by a semi-structured interview guide for data
87 collection. The study was conducted in two big cities- Bahir Dar city and Gondar city-
88 located in Amhara region, Northwest Ethiopia between April and June 2017. Study
89 participants were recruited from nine health facilities including two hospitals, five health
90 centres, and two health posts. The Amhara region is the second largest of the 11
91 administration areas in Ethiopia, with a population of approximately 21 million, 23% of
92 Ethiopia's total population.²³ The region has 19 hospitals, 796 health centres, and 3267
93 health posts.²⁴ FP services are provided in all the health facilities in this region. In hospitals,
94 FP services are provided in gynecology departments by midwives, nurses, or doctors. In
95 health centres, FP services are provided through maternal and child health (MCH)
96 departments by nurses, midwives, or health officers. Health Extension Workers provide FP
97 services in health posts.

98 **Participants**

99 Before contacting the study participants, we selected health facilities purposively, to include
100 three types of health facilities - hospitals, health centres, and health posts. In the selected
101 health facilities, potential study participants were approached in staff meetings, where they
102 were provided information about the study and requested to express their willingness to be
103 part of the study. Those staff who expressed willingness to be part of the study were
104 contacted by telephone to further discuss the study, including the study objectives, potential
105 risks to participants, other ethical issues, and to arrange a convenient time and place for the
106 interview. To be part of the study, participants had to be healthcare providers who had
107 worked a minimum of six months providing FP services. This helped to explore providers'
108 direct/real experiences on factors affecting use of FP guideline in FP services. While it was

1
2
3 109 initially anticipated to include up to 15 study participants, recruitment of participants were
4 110 conducted until saturation was achieved in that no new barrier or facilitator were identified.
5
6 111 As a result, a total of 21 providers (18 female, 3 males) were interviewed. See Table 2 for
7
8 112 further details on participant characteristics).
9

10 113 **Data collection**

11
12 114 Data were collected through face-to-face in-depth interviews in the local language (Amharic)
13
14 115 by the lead author (GAT). In-depth interviews were used as this approach allows exploring
15
16 116 individual experiences/views/perceptions of healthcare providers working in the provision of
17
18 117 FP services. Unlike the focus group discussion, the findings in the in-depth interviews are not
19
20 118 influenced by the views of other participants.²⁵ All except one of the interviews were audio-
21
22 119 recorded. For the one interview in which the participant declined to give consent for audio-
23
24 120 recording, notes were taken. The interview guide included questions inquiring about barriers
25
26 121 and facilitators of guideline utilisation in FP services as well as questions on participant
27
28 122 characteristics. The interview guide is available from the lead author.

28 123 **Data analysis**

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30
31 124 The audio-recorded interviews and notes taken were translated and transcribed into English
32
33 125 by the lead author and entered into NVivo 11TM for analysis.²⁶ Thematic analysis according
34
35 126 to the approach described by Braun and Clarke²⁷ was employed. The epistemological
36
37 127 framework for this analysis was essentialist/realist, aiming to understand and report the
38
39 128 experiences, meaning, and reality of study participants regarding barriers and facilitators in
40
41 129 using FP guideline in the provisions of FP services.²⁷ Data analysis was led by GAT who
42
43 130 first read and re-read the transcripts to familiarise himself with the data, and then
44
45 131 systematically coded the data related to barriers and facilitators. GAT is a reproductive health
46
47 132 researcher who has been working in family planning research in Ethiopia. His knowledge
48
49 133 about the local culture, values and context of the study setting enhanced the research in terms
50
51 134 of enabling probing questions during the interviews and appropriate interpretation of the data
52
53 135 and identification of the barriers/facilitators. JSG has knowledge of the context surrounding
54
55 136 guidelines utilisation and healthcare delivery in resource-limited African settings which
56
57 137 assists with appropriate interpretation of the data collected. COL and MAM are also well-
58
59 138 experienced in qualitative research and this helped in data analysis and interpretation of the
60 139 findings. The coding was conducted inductively; with codes informed by the data rather than

1
2
3 140 pre-existing frameworks. The codes were developed through an iterative process involving
4 141 the co-authors (JSG, COL, MAM), who having read a sample of three transcripts, discussed
5 142 the emerging codes. Disagreements and discrepancies around codes, themes, and sub-themes
6 143 were resolved by consecutive discussions and reference to the original transcript document.
7
8 144 Finally, the codes were grouped based on similarities into themes and sub-themes.

11 145 **Ethical considerations**

12
13
14 146 Ethical approvals were obtained from the Human Research Ethics Committee (HREC) at the
15 147 University of Adelaide (Protocol # H-2017-023) and the Institutional Review Board (IRB) at
16 148 the University of Gondar, Ethiopia (Protocol # O/V/P/RCS/05/562/2017). Informed written
17
18 149 consent was obtained from each study participant before the start of the interviews.

20 21 22 150 **Patient and public involvement**

23
24 151 Patients or members of the public were not involved in the development, design or conduct of
25
26 152 this study.

27 28 29 153 **Results**

30
31 154 Overall, six main barriers and facilitators in using FP guideline in FP services were identified.
32 155 These barriers and facilitators are summarised as themes and sub-themes in Table 3.

33
34 156

1
2
3 157 **Theme 1: Knowledge and access to the guideline**
4

5 158 Providers' knowledge of and access to FP guideline were identified as a key theme impacting
6
7 159 the use of FP guideline in providing FP services. Lack of awareness about the FP guideline
8
9 160 was perceived as a barrier preventing guideline use. In this regard, three participants reported
10
11 161 that they were not aware of the existence of the national guideline for the provisions of FP
12
13 162 services; as one provider said "*I have not heard about it [national family planning guideline]...*"
14
15 163 *[In-depth Interviewee (IDI)₁₄]*.
16
17 164 Several other providers indicated that they were aware of the guidelines, but did not
18
19 165 understand their purpose adequately. They said that they perceived the guidelines as 'training
20
21 166 material/manual', only provided during training, rather than health standards to be used at
22
23 167 their health facility. This view of the guidelines was demonstrated when a participant
24
25 168 described the guidelines in their facility as 'compilation of printed training materials'
26
27 169 provided in FP trainings. Another participant said:

28
29
30 170 *...it is because of the guidelines... it is large...we got it from Ipas NGO... it was a collection*
31
32 171 *[compilation] of training materials... laminated together in a book form [IDI]₁₈].*
33
34

35 172 Other providers who indicated that they were aware of the guideline, referred to inadequate
36
37 173 knowledge about how to use the guideline: "*Since we did not understand on how to use it... we*
38
39 174 *have not been using it [guideline] for so long...*" [IDI]₂.
40

41 175 A lack of access to the guideline was described as not having guideline available in the
42
43 176 facility, insufficient copies of guideline or guideline not provided in a convenient location in
44
45 177 the facility.

46
47 178 *I think, this guideline has to be accessible to various rooms. We have only a copy. [IDI]₁₉].*

48
49 179 *We do not have family planning guideline. We just work by looking into what other*
50
51 180 *providers do and by asking them if there are concerns that we are not sure. That is how we*
52
53 181 *do. [IDI]₁₁].*

54
55 182 *We wish to use it, but we do not have it... that is the reason we are not using. [IDI]₁].*
56

57
58 183 In some instances, where the facility provided copies of FP guideline, participants explained
59
60 184 that they were often taken away or lost. In this regard, a midwife expressed his concern that
185 students or someone else removes the guideline from the facility.

1
2
3 186 *The hospital may prepare it or got it from somewhere else [other organizations]...but*
4 187 *someone may put it at some place for a provider to access it easily. ...and then a provider*
5 188 *has accessed it for use but failed to put it back... and lost from the facility... that is my*
6 189 *assumption. He [provider] just put [it] somewhere or may take it to his home and finally*
7 190 *forget it... forgot to bring back. It may also mixed up with other documents and then it*
8 191 *became a difficult job to find it for use. [IDI₁₅].*

12 192 Another participant described that although providers received copies of guideline during
13 193 training sessions, they kept the guideline at their homes, rather than using them in the facility.

17 194 *I had been working in health centre... far from this town...small town. By that time, we [I*
18 195 *and colleagues] had been provided the guideline at the training but we dropped it in our*
19 196 *homes [instead of bringing it for use in the facility], we did not bring it to the facility.*
20 197 *[IDI₁₂].*

24 198 Lack of easy access to the copies of the guideline for immediate referral during services
25 199 provision was mentioned as a barrier by some participants – “*One problem is that we are not*
26 200 *putting the guideline in our nearby areas” [IDI₁₂].*

29 201 Participants expressed that because of the large size of the guideline, they were not only
30 202 unable to locate specific information in the text but also found it difficult to carry to outreach
31 203 areas.

35 204 *...it is somehow difficult to get the exact page where the information we are looking for is*
36 205 *located [IDI₂].*

39 206 *It is also difficult to bring the guideline to use in the villages along other stuff. It is heavy for*
40 207 *us... we are also carrying our own stuff in the bag. Most of the time, we are forced not to*
41 208 *take it with us [IDI₁₃].*

44 209 The guideline were only provided in English and this was seen by some participants as a
45 210 barrier to their use, particularly for those healthcare providers who do not understand English
46 211 well.

50 212 *There might be some healthcare providers that could not easily understand English. For*
51 213 *them, it is better to have Amharic version or guideline in both languages [Amharic and*
52 214 *English] [IDI₄].*

1
2
3 215 In terms of the facilitators related to the use of the guideline, providers reported that
4 216 convenient access to the guideline, ease to use and the format of the guideline were perceived
5
6 217 by the participants as important facilitators for their use. For example, a participant said that
7
8 218 when the FP guideline was conveniently available in the facilities for providers it was
9
10 219 perceived as a facilitator for its use.

11
12 220 *The guideline is always available in our room, it is just located on the table, anyone who*
13 221 *want to refer it can found easily [IDI₈].*

14
15
16 222 Moreover, a nurse from health centre felt that passing the guideline to the next colleague
17 223 when a provider is changing shifts or travelling to other areas was helpful in improving use of
18
19 224 guideline.

20
21 225 *I also pass the guideline for the next person if I am going to travel somewhere. That is what*
22 226 *I think. I believe, following the guideline would help a provider to provide a proper*
23 227 *counselling...which is really a key issue for a client and for providers to remind him to use*
24
25 228 *the guideline. That is what I believe [IDI₂₁].*

26
27
28 229 Ensuring ease of use and its carrying convenience were also demonstrated as a facilitator for
29
30 230 the use of the guideline. From a provider's perspective, several participants described that
31
32 231 they inclined to use the WHO eligibility criteria than the FP guideline as the former was
33
34 232 easier to get the intended information and being smaller in size made it lighter to carry on
35
36 233 when they travelled to villages for outreach services.

37 234 *For example, the WHO guideline is very simple and easy. Just you need to put on the table*
38 235 *and then look at the notes inside the circle while national guideline is a book and it needs*
39
40 236 *[us] to search for a page. So making it easier to use is good for providers [IDI₃].*

41
42
43 237 In line with this, some participants suggested that for the guideline to be easier to use by
44
45 238 healthcare providers, different colours and pictures need to be used within the guideline.

46
47 239 *... it would also be good if they use different colours...green, red, pink to denote which*
48 240 *methods should not be taken for some diseases. If you see red, you do not give...but for*
49 241 *green marked one... you can do....you know, making it something like the WHO eligibility*
50
51 242 *criteria [IDI₁₂].*

52
53
54 243 *I need a guideline having different pictures [figures]... do you know what I mean, for*
55 244 *examplea guideline with a U-shape pictures [to indicate] for five-year family planning*

1
2
3 245 *[IUCD]. ...sometimes you will forget what you have been told in training... it will not stay*
4 246 *long after a year or two... it will be forgotten. The guideline shall also have a clear*
5 247 *indications on landmarks [anatomical] for the measurement before inserting the*
6 248 *contraceptive methods [IDI₉].*

9 249 Additionally, the participants indicated providing copies of in the local language, besides
10 250 providing an English version, can improve its utilisation.

13 251 *But, I prefer to have an Amharic version ...and in that case, I can go and read the Amharic*
14 252 *version if the English version is not clear for me [IDI₁₅]*

17 253 **Theme 2: Quality of the guideline**

19 254 Another theme arising from the interviews related to the scope of the guideline, content and
20 255 currency which the FP information contained.

23 256 Participants reported that the guideline included a large number of health issues beyond FP,
24 257 making it difficult to navigate.

27 258 *We have a guideline that included everything in it. It also deals about malaria... HIV...
28 259 sanitation, nutrition besides family planning for families in the community... It was not
29 260 possible to easily get the information about family planning services in it [guideline]
30 261 [IDI₁₃].*

33 262 Another barrier to the use of the FP guideline was that the guideline was often considered out
34 263 of date and not covering the latest contraceptive methods. A nurse from health centre
35 264 expressed:

37 265 *Plus, it [the current guideline] did not include information about the newly developed and
38 266 available methods... there is a new implant method which is called "Implanon NXT". This
39 267 method is now under distribution for health facilities. This method has its own insertion
40 268 procedure, but you could not get it in the current version of the guideline [IDI₁₇].*

42 269 Finally, the guideline did not provide the important information to assist FP providers to
43 270 undertake their work effectively. For example, no guidance was provided on dealing with
44 271 community misconceptions about contraception.

47 272 *In the guideline... I found there is lacking about the common misconceptions [about the
48 273 family planning methods] in the community... if you know them... you will be ready to*

1
2
3 274 *address during the counselling session... sometimes, you will face with emergency questions*
4 275 *in such a way that... “does it lead to this or that?”... if these information are available in*
5 276 *the guideline, a provider will be aware of them and getting ready to handle [answer] them*
6 277 *[IDI₁₇].*
7
8
9

10 278 **Theme 3: Provider behaviour, values and beliefs**

11
12 279 More than half of the participants described that many healthcare providers tend to rely on
13 280 their prior knowledge and practices learnt throughout their career rather than using the
14 281 available guideline. The participants felt those providers keep doing things the usual way, as
15 282 in the past, even after attending FP trainings involving guideline implementation.

16
17 283 *...health professionals are providing family planning services just by tradition...without*
18 284 *updating him/herself [by reading guideline]. Especially...the so-called ‘chronic*
19 285 *staff’...those staff who upgraded themselves gradually from health assistant to junior nurse*
20 286 *and then to [diploma]nurse...and then to bachelor degree nurse...they do not want to be*
21 287 *guided by guideline...not at all...they just follow what they have been doing for 10...20 or*
22 288 *more years in the past [IDI₂₁].*

23
24 289 Some of the participants who had worked for many years in FP services continue to rely on
25 290 their knowledge and experience rather than referring to guideline.

26
27 291 *We are working here by our experiences. I have been working here for long time...so I do*
28 292 *not use anything for providing family planning services (IDI₁).*

29
30 293 It was also described by some participants that lack of commitment to use health standards by
31 294 healthcare providers influenced their use of FP guideline.

32
33 295 *Additionally [another reason for not using guideline]...it is because of carelessness of the*
34 296 *healthcare provider... providing family planning services just by tradition...without*
35 297 *updating himself. [IDI₂₁]*

36
37 298 *...those providers who got the training are aware of that fact... that they should use the*
38 299 *guideline...but they are not following[using] the laws or legislations [guideline]... there is*
39 300 *ignorance ... [IDI₁₂].*

40
41 301 Other participants expressed that some providers perceive themselves as having sufficient
42 302 knowledge and a belief that they can provide services without the need of any guideline. For

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2
3 303 example, a provider expressed “We thought...we know everything in the document
4 304 [guideline]” [IDI₁₄].”

5
6
7 305 For some participants, the habit of not reading any material provided was a barrier. One of
8 306 the participants mentioned that “*Most of our people [including providers] do not have a good*
9 307 *culture [habit] of reading books... let alone family planning guideline. [IDI₁₆].*

10
11
12 308 It was also noted that some providers were not comfortable reading the guideline in front of
13 309 clients. They would rather rely on their personal experiences.

14
15
16
17 310 *When you have clients sitting in front of you, it is boring to do [refer guideline] that. That is*
18 311 *why I prefer providing the services from my experiences [IDI₄]*

19
20
21 312 It was not all negative. One participant described his personal change in terms of
22 313 commencing to use FP guideline.

23
24
25 314 *I am using it [guideline] rather than following the traditional [practice based on prior*
26 315 *knowledge]... I tried to abandon [change] the old tradition to work without referring to*
27 316 *family planning guideline... [IDI₁₆].*

28
29
30 317 One participant presented the view that the religious beliefs of some providers were a barrier
31 318 in the utilisation of the FP guideline:

32
33
34 319 *...quite a number of providers do have a negative attitude for family planning and safe*
35 320 *abortion. They consider it as a religiously prohibited thing...they always associate it with*
36 321 *religion...and they do not accept it. Overall, I can say, their utilisation of the guideline is*
37 322 *limited. [IDI₁₆]*

38
39
40
41 323 The same participant expressed that in some instances providers’ motivation to attend FP
42 324 related training was the provision of per-diems rather than obtaining knowledge about the FP
43 325 services and available guideline to support FP services.

44
45
46 326 *Many providers are going to the training...not just for learning new knowledge on it [family*
47 327 *planning services and use of guideline], it is rather to get the per-diems during the*
48 328 *training...They do not seem to provide the [family planning] services properly using the*
49 329 *guideline...we are observing that every time [IDI₁₆].*

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51
52
53 330 **Theme 4: Manager support and supervision**

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3 331 Another theme arising from the interviews concerns the role of supervisors, including district
4 332 managers and staff from non-governmental organisation (NGO). One midwife said that
5
6 333 supervisor's lack of emphasis on the guideline when monitoring service delivery was an
7
8 334 issue. More particularly, the midwife participant from a health centre expressed that: "[when
9
10 335 healthcare managers from the district and regional health bureau visited their facility] *no one*
11 336 *has checked whether we have been using it [guideline] or not*" [IDI₁₉].

12
13 337 Another provider also reported that some healthcare managers were not concerned about
14
15 338 availability or use of the guideline.

16
17 339 *When they come to us they are asking us about the drugs, and contraceptive methods,*
18 340 *vaccinations... They are not asking about the guideline or if we use them or not. They are*
19 341 *always asking on the numbers on the report... for example they ask us, "why only few people*
20 342 *are getting family planning services in a certain month*" [IDI₁₄].

21
22
23
24 343 However, some of the participants said that support by district managers and NGO staff was
25 344 available and acted as a facilitator to use FP guideline.

26
27
28 345 *We do have NGO partners who are coming regularly to check our services provisions,*
29 346 *availability of materials and contraceptive methods. They also checked the presence of*
30 347 *family planning guideline* [IDI₁₇].

31
32
33
34 348 Creating a culture within the facility where the guideline were seen as core to their service
35 349 provision was suggested by a number of participants as a facilitator. *If one needs providers to*
36 350 *use guideline, encouragement is necessary...* [IDI₆].

37 38 39 40 351 **Theme 5: Resource availability: time and workforce**

41
42 352 Resource related issues such as lack of time, shortage of trained providers, and high workload
43 353 were expressed as barriers to using FP guideline. Several of the participants reported that a
44 354 high client load interferes with using the guideline. The participants referred to long queues
45 355 of clients waiting outside of the clinics to receive FP services, which made referring to the
46 356 guideline during consultations difficult. In addition, the participants reported that limited time
47 357 available for each client meant that some providers prioritised using the 'consultation time' to
48 358 counsel the client based on what they already know rather than using the guideline. In one
49 359 participant's words: "*We do not have time... in order to read a text [guideline], really... you should*
50 360 *first get sufficient time*" [IDI₁₃].

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2
3 361 Additionally, the lack of appropriately trained staff added to the pressure on the existing staff
4 362 and so taking time to refer to the guideline was considered a barrier to dealing with patient
5
6 363 numbers. For example, participants stated:

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8
9 364 *In that case [in the absence of trained providers], they [untrained providers] may just*
10 365 *provide only counselling to them [clients] and appoint for myself or other trained provider*
11 366 *to see them when we get back... these providers are not referring to the document*
12 367 *[guideline]. In the facility, we do have only two trained providers, myself and another*
13 368 *midwife [IDI₈]*

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16
17 369 Another area of concern for one participant was the facilities' inability to retain those staff
18 370 who had been provided with training related to FP services and guideline:

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20
21 371 *There were many providers who have got the training but they moved to other places from*
22 372 *our facility for different reasons...there is a lot of providers' turnover here...that is a big*
23 373 *challenge [IDI₁₇].*

24
25
26 374 According to a health extension worker participant, it was difficult to use guideline during
27 375 provision of FP services because providers were required to provide a number of other
28 376 healthcare services along with FP services, to be involved with various meetings, and to work
29 377 in outreach activities in the local community.

30
31
32
33
34 378 *We do have meetings all the time, we should give counselling for the clients, we should also*
35 379 *need to report to district managers, and health centre... we are not in the office to read*
36 380 *available documents, usually in the morning time "we are always out" [IDI₁₃].*

37
38
39 381 Another nurse explained that working on a number of tasks that are not co-located in one
40 382 room but offered by a sole provider was also seen as a barrier to guideline use. In her words:

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42
43 383 *...if a midwife is assigned in one room, there is no reason that she does not use the guideline*
44 384 *properly. But, this will not happen here... we are going to antenatal, postnatal care, etc...*
45 385 *Sometimes, we are rushing to reach the clients coming for different services. [IDI₁₅].*

46 47 48 49 386 **Theme 6: Training**

50
51 387 Providers' lack of or inadequate training on the contents of the FP guideline was described as
52 388 a barrier to guideline use. For example, one participant mentioned that: "*If you are not*
53 389 *trained you cannot use the guideline" [IDI₃]. Other providers expressed:*

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2
3 390 *I took the training....it was long time ago... I took it in 2005E.C (just before 4 years [IDI₈]*

4
5 391 *Once we have been provided a training, nobody remembers you for refreshment training...*

6
7 392 *[IDI₂]*

8
9 393 In contrast, other participants referred to provision of training that targets the FP guideline as
10 394 a facilitator; for example one participant explained that discussing the contents of the
11
12 395 guideline during FP training provision may help to motivate providers to use the guideline.

13
14
15 396 *They [trainers] have highlighted some concepts in the guideline using PowerPoint*
16 397 *presentation. I guess, this can help providers to motivate for using them while getting back*
17 398 *to their facilities [IDI₁₆].*

18
19
20 399 As part of the capacity building activity, the participants described that being a FP trainer has
21
22 400 helped them to improve their use of guideline.

23
24 401 *...our facility is one of the practical attachment location for family planning trainings. I am*
25 402 *also part of the trainers' panel for the long term contraceptive methods. ...the guideline are*
26 403 *always in my hand for me to use... I am updating myself every time...maybe... I read the*
27 404 *book in weekly or monthly basis. I also ask other friends [colleagues] to use it [IDI₁₆].*

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29
30
31 405 Some participants acknowledged peer-learning from colleagues and identified this as a
32 406 facilitator. For example, a participant described that she and her colleagues did not use the
33 407 guideline until she attended an induction training on how to use the guideline and share the
34 408 knowledge to her colleagues.

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37
38 409 *...After I received the orientation [induction] on how to use it, I have also informed [on how*
39 410 *to use it] to all my staff and now we are using it in the same language [fashion]. The*
40 411 *guideline had been in our facility for three....or... four months without using it [IDI₂].*

41 412 **Discussion**

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45 413 This is the first study conducted to understand providers' perspectives on FP guideline use in
46 414 Ethiopia. While the providers' views point to both barriers and facilitators affecting FP
47 415 guideline use in FP services, more factors related to barriers were identified and described
48 416 than facilitators. Barriers that exist, from providers' perspective, are mainly inadequate
49 417 knowledge about the purpose of the guideline, relevance of the guideline for specific and
50 418 practical needs of the providers, personal factors such as beliefs and traditions, and

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2
3 419 organisational factors such as inadequate resources including time and staff, lack of
4 420 supervision and support.

6
7 421 Our findings that provider's lack of knowledge about the existence of the FP guideline and
8 422 unavailability of a copy of for healthcare providers support our previous study which found
9 423 more than half of the health facilities in Ethiopia do not have the FP guideline available.¹⁶
11 424 Lack of availability of the guideline in health facilities points to a concern about lack of
12 425 planning to distribute such resource to health facilities for use by healthcare providers.²⁸
13 426 Inadequate planning to effectively distribute guidelines and protocols is a persistent concern
14 427 across other countries as well; for example, a 2012 Ugandan study, found that more than 60%
15 428 of clinical guidelines developed by the government were not available at the service delivery
16 429 level, despite that these resources were available at national offices level.²⁹

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22 430 When guidelines were available in health facilities, other issues impeded their use, including
23 431 language and format of guidelines. Other studies have also identified these features of
24 432 guidelines as factors that negatively impact utilisation.³⁰⁻³²

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27
28 433 The present study also found that a lack of information in the guideline about common
29 434 community misconceptions relating to FP methods and lack of information about newly-
30 435 developed contraceptive methods such as *Implanon NXT* impacted on their effective use. In
31 436 Ethiopia, the current FP guideline was intended to serve various stakeholders ranging from
32 437 policy makers at the national level to FP providers at the services delivery point. As a result,
33 438 instead of providing specific and practical information to assist frontline healthcare providers
34 439 for effective counselling and contraceptive provision, the guideline provide relatively general
35 440 information about FP services. For example, the current version of the national FP guideline
36 441²² does not provides information about how to use contraceptive methods and
37 442 indications/contraindications. This finding suggests that at the health facility level, the
38 443 guideline needs to include specific information for the healthcare providers to use to provide
39 444 effective FP services. The guidelines by the Ministry of Public Health and Sanitation of
40 445 Kenya, for example, addressed this issue and provided current and up to date information on
41 446 FP methods.³³ These guidelines cover the advantages and disadvantages of FP methods,
42 447 medical eligibility criteria, management of common side effects, and how to address common
43 448 community misperceptions about FP methods.

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3 449 Healthcare providers continuing to apply, even after receiving guidelines and training, the
4 450 procedures they have been applying in the past is a well-known problem in the healthcare
5 451 sector, not only in developing countries, but throughout the world.^{34 35} Therefore, our study
6 452 findings that providers perceive traditional ways of doing things as a barrier to guideline use
7 453 is not surprising. This problem may be probably due, in part, to low levels of commitment on
8 454 the part of providers to implement best practices learned during technical training. A study
9 455 conducted in rural India found a clear gap between what the providers 'know' about the
10 456 standard practices to be provided/followed for patients and what they 'do' in their routine
11 457 practice during the provision of a healthcare services.³⁶ Therefore, while our findings suggest
12 458 that improving healthcare providers' use of FP guideline will require increased provider
13 459 knowledge and skill, in light of emerging literature on provider motivation suggesting that
14 460 these efforts be combined with regular supportive supervision and incentive mechanisms to
15 461 motivate healthcare providers.

16 462 This study informed about organisational factors including the role of management support
17 463 for providers to use the guideline and insufficient health workforce. Evidence shows that
18 464 managerial support is important to improve use of clinical practice guidelines.³⁷⁻³⁹ This alerts
19 465 to the need for a focus on support and supervision visits by healthcare services managers at
20 466 the regional level and at the facility level. Lack of sufficient health workforce was identified
21 467 as a main barrier for guidelines use. A previous study conducted in four low-income
22 468 countries, Uganda, Ethiopia, Tanzania and Myanmar, showed that shortage of health
23 469 workforce was one of the barriers impeding guidelines implementation in the provision of
24 470 maternal healthcare services across all these countries.⁴⁰ Participants in our study also
25 471 suggested that high staff turnover exacerbated the staff shortage problem in health facilities.
26 472 Our study has also pointed out that time pressure due to client overload and multiple tasks
27 473 was impeding guideline use in FP services. Several studies reported that time constraint was a
28 474 barrier for implementing clinical practice guidelines.⁴¹⁻⁴³

29 475 Healthcare providers in our study highlighted the importance of training to enhance skills for
30 476 effective use of guidelines and in turn provide quality of care in FP services. The need for
31 477 training and skill enhancement is noted in many other studies, across a range of health issues
32 478 and healthcare services provision. For example, multi-country studies, undertaken in low-and
33 479 middle-income countries such as Uganda, Malawi, Tanzania and Ethiopia conducted to
34 480 identify the barriers and facilitators for implementing various healthcare services guidelines

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3 481 including maternal healthcare services,^{28 40} and mental healthcare services⁴⁴ showed that lack
4 482 of or insufficient training was a barrier for implementing clinical guidelines.

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7 483 Considering limitations of this study, the first study was conducted with participants from
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9 484 only urban health facilities in one geographic region of Ethiopia. Hence, as expected in
10 485 qualitative studies, the results may not be representative of rural health facilities and other
11 486 regions of Ethiopia. However, we continued interviewing until data saturation, and therefore
12 487 the barriers and facilitating factors that we identified may be similar in other facilities,
13 488 particularly within the Amhara region. In fact, as facilities being located in rural and remote
14 489 areas pose additional challenges in terms of adequate human resource, training and access to
15 490 resources such as guideline, we believe that the barriers highlighted by the study participants
16 491 in Amhara region may be even more pronounced in rural and remote areas. Second, while the
17 492 lead author (GAT) has been working in FP research in Ethiopia, there might be a potential
18 493 bias in the research. However, the lead author was careful not to impose his own perspectives
19 494 about barriers/ facilitators of FP guideline use during data collection and analysis. The use of
20 495 a single transcriber and translator limited our ability to conduct a quality assurance of
21 496 transcript translations. As the co-authors, JSG, COL and AMM, have no experience in
22 497 Ethiopia and they have little or no bias in the research. They were also careful not to impose
23 498 their own perspectives about barriers/ facilitators of FP guideline use during data collection
24 499 and analysis. The use of a single transcriber and translator limited our ability to conduct a
25 500 quality assurance of transcript translations.

36 37 501 **Policy and research implications**

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39
40 502 The findings of this study have important policy and research implications. While the
41 503 Ethiopian government took an important initiative in developing the FP guideline, its
42 504 utilisation could be improved by implementing the following steps: (1) The guideline should
43 505 be translated into the local language and ensure that it is distributed to health facilities; (2)
44 506 Provision of additional training for healthcare providers to improve their knowledge about the
45 507 guideline is required. The trainings should focus more on encouraging/incentivizing
46 508 providers to use the guideline and to build their confidence in referring to the guideline in
47 509 front of the clients. It should also be emphasised that the guideline is not only to be used as a
48 510 training material but also are actually a reference guide to be used continuously throughout
49 511 their career; (3) Steps need to be taken to ensure that the guideline is easily available, and that
50 512 providers and managers have the time to participate in relevant trainings, as well as to deliver

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3 513 the standard and range of services set out in the guideline. 4) The current national FP
4 514 guideline is out-of-date in terms of addressing new FP methods and technologies, so the
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6 515 government should consider revising this guideline. During the guideline revision, it could be
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8 516 important to include more practical information required by healthcare providers which
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10 517 includes how to use each FP method, advantages and disadvantages, contraindications, side
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12 518 effects, and common community misconceptions. It would also be useful for the guideline to
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14 519 be more concise and simple to carry, transfer and share and have better indexed content so
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16 520 that providers can find what they need to know more quickly, and with more up to date
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18 521 information so that providers do not fear they are acting on outdated knowledge. 5) It is also
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20 522 necessary to establish better systems for managers to provide effective monitoring and
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22 523 supervision of providers and to use the opportunity to check the availability guideline in the
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24 524 facilities and if the providers are properly implementing the guideline.

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26 525 Further studies examining providers' perspectives of guideline use involving participants
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28 526 from other regions in Ethiopia may be required to build a comprehensive understanding of
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30 527 barriers and facilitators, and how to support utilisation of the FP guideline throughout the
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32 528 health system. While some of the barriers identified in this study such as lack of managerial
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34 529 support and training could be better explored by including healthcare managers, further study
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36 530 targeting healthcare managers is recommended to provide additional insight on these factors.

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531 **Conclusion**

532 Provider perspectives confirmed that a range of barriers contribute to lack of use of the
533 guideline in FP services in some health facilities in Ethiopia. The barriers observed included
534 lack of knowledge about the existence and purpose of the guideline, lack of sufficient copies
535 of the guideline, providers' personal religious beliefs, a desire amongst providers to deliver
536 services based on prior knowledge and tradition rather than protocols and guideline,
537 insufficient time (resource issues), lack of knowledge about the guideline and inadequate
538 training on how to use them. Ensuring that the guideline was easy to access and implement
539 and incentives for their use (e.g. recognition) were the main facilitators intended by providers
540 in this qualitative study. While the Federal Ministry of Health of Ethiopia needs to work on
541 revising the current FP guideline, strategies must be designed to properly distribute the
542 guideline to health facilities providing FP services. Future FP guideline development needs to
543 focus on providing concise, easy to carry guideline with a more practical information for
544 healthcare providers.

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3 545 **Data sharing statement**
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5 546 All the required data used in the research is included in the text.
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9

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17 552 **Contributors**
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20 553 GAT contributed to the study concept and design; acquisition, analysis and interpretation of
21 554 data; drafting and critical revision of the manuscript. JSG, COL, MAM contributed to the
22 555 study concept and design, as well as the critical revision of the manuscript. All the authors
23 556 have approved the manuscript.
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28

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35 561 **Competing interest** None
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38 562 **References**
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- 40 563 1. Central Statistical Agency (CSA) and ICF International. Ethiopia Demographic and Health
41 564 Survey 2016. Addis Ababa, Ethiopia, and Rockville, Maryland, USA: CSA and ICF
42 565 International,, 2016.
43 566 2. Kassebaum NJ, Barber RM, Bhutta ZA, et al. Global, regional, and national levels of
44 567 maternal mortality, 1990-2015: a systematic analysis for the Global Burden of
45 568 Disease Study 2015. *Lancet* 2016;**388**(10053):1775-812.
46 569 3. Chola L, McGee S, Tugendhaft A, et al. Scaling Up Family Planning to Reduce Maternal
47 570 and Child Mortality: The Potential Costs and Benefits of Modern Contraceptive Use
48 571 in South Africa. *PloS One* 2015;**10**(6):e0130077.
49 572 4. Cleland J, Conde-Agudelo A, Peterson H, et al. Contraception and health. *Lancet*
50 573 2012;**380**(9837):149-56.
51 574 5. Ali M. Quality of care and contraceptive pill discontinuation in rural Egypt. *J Biosoc Sci*
52 575 2001;**33**(2):161-72.
53 576 6. Askew I, Mensch B, Adewuyi A. Indicators for Measuring the Quality of Family Planning
54 577 Services in Nigeria. *Stud Fam Plann* 1994;**25**(5):268-83.
55
56
57
58
59
60

- 578 7. Blanc A, Curtis S, Croft T. Monitoring contraceptive continuation: links to fertility
579 outcomes and quality of care. *Stud Fam Plann* 2002;**33**(2):127-40.
- 580 8. Kaufman J, Zhang Z, Qiao X, et al. The quality of family planning services in rural China.
581 *Stud Fam Plann* 1992;**23**(2):73-84.
- 582 9. Koenig M, Hossain M, Whittaker M. The Influence of Quality of Care upon Contraceptive
583 Use in Rural Bangladesh. *Stud Fam Plann* 1997;**28**(4):278-89.
- 584 10. RamaRao S, Mohanam R. The quality of family planning programs: concepts,
585 measurements, interventions, and effects. *Stud Fam Plann* 2003;**34**(4):227-48.
- 586 11. Sanogo D, RamaRao S, Jones H, et al. Improving Quality of Care and Use of
587 Contraceptives in Senegal. *Afr J Reprod Health* 2003;**7**(2):57-73.
- 588 12. Woolf S, Schünemann HJ, Eccles MP, et al. Developing clinical practice guidelines:
589 types of evidence and outcomes; values and economics, synthesis, grading, and
590 presentation and deriving recommendations. *Implement Sci* 2012;**7**:61.
- 591 13. Grimshaw JM, Thomas RE, MacLennan G, et al. Effectiveness and efficiency of
592 guideline dissemination and implementation strategies. *Health Technol Assess*
593 2004;**8**(6):iii-iv, 1-72.
- 594 14. Grol R, Grimshaw J. From best evidence to best practice: effective implementation of
595 change in patients' care. *Lancet* 2003;**362**(9391):1225-30.
- 596 15. Institute of Medicine. In: Graham R, Mancher M, Miller Wolman D, et al., eds. Clinical
597 Practice Guidelines We Can Trust. Washington DC: The National Academy of
598 Sciences, 2011.
- 599 16. Tessema GA, Mahmood MA, Gomersall JS, et al. Client and facility level determinants
600 of quality of care in family planning services in Ethiopia: Multilevel modelling. *PloS*
601 *One* 2017;**12**(6):e0179167.
- 602 17. Stanback J, Griffey S, Lynam P, et al. Improving adherence to family planning guidelines
603 in Kenya: an experiment. *Int J Qual Health Care* 2007;**19**(2):68-73.
- 604 18. National Health and Medical Research Council (NHMRC) Australia. Guide to the
605 Development, Implementation and Evaluation of Clinical Practice Guidelines.
606 Canberra: The Commonwealth of Australia, 1999.
- 607 19. World Health Organization (WHO). *Medical eligibility criteria for contraceptive use- 5th*
608 *Ed.* Geneva, Switzerland: WHO, 2015.
- 609 20. World Health Organization (WHO), Johns Hopkins Bloomberg School of Public
610 Health/Center for Communication Programs (CCP), Knowledge for Health Project.
611 Family planning: A Global Handbook for Providers (2011 Update). Evidence-based
612 guidance developed through worldwide collaboration. Baltimore and Geneva: CCP
613 and WHO, 2011.
- 614 21. Federal Ministry of Health (FMOH). Guidelines for FP services in Ethiopia. Addis
615 Ababa: FMOH, 1996.
- 616 22. Federal Ministry of Health (FMOH). National Guideline for Family Planning Services in
617 Ethiopia. Addis Ababa: FMOH, 2011.
- 618 23. Central Statistical Agency (CSA). Population Projections for Ethiopia 2007-2037. Addis
619 Ababa, Ethiopia: CSA, 2013.
- 620 24. Amhara Regional Health Bureau (ARHB) and I-TECH Ethiopia. Institutionalization plan
621 for mentoring program Amhara Regional Health Bureau 2013-2014. Bahir Dar:
622 ARHB and I-TECH, 2013.
- 623 25. Guest G, Namey E, Mitchell M. Collecting Qualitative Data: A Field Manual for Applied
624 Research. 55 City Road, London: SAGE Publications, Ltd, 2013.
- 625 26. QSR International. NVivo 11 pro for windows: Getting Started Guide (Version 11.2).
626 Secondary NVivo 11 pro for windows: Getting Started Guide (Version 11.2) 2016.
627 www.qsrinternational.com.

- 1
2
3 628 27. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*
4 629 2006;**3**(2):77-101.
- 5 630 28. Puchalski Ritchie LM, Khan S, Moore JE, et al. Low- and middle-income countries face
6 631 many common barriers to implementation of maternal health evidence products. *J*
7 632 *Clin Epidemiol* 2016;**76**(Supplement C):229-37.
- 8 633 29. Nabyonga Orem J, Bataringaya Wavamunno J, Bakeera SK, et al. Do guidelines
9 634 influence the implementation of health programs?--Uganda's experience. *Implement*
10 635 *Sci* 2012;**7**:98.
- 11 636 30. Lee PY, Liew SM, Abdullah A, et al. Healthcare Professionals' and Policy Makers'
12 637 Views on Implementing a Clinical Practice Guideline of Hypertension Management:
13 638 A Qualitative Study. *PloS One* 2015;**10**(5):e0126191.
- 14 639 31. Donnellan C, Sweetman S, Shelley E. Implementing clinical guidelines in stroke: a
15 640 qualitative study of perceived facilitators and barriers. *Health Policy*
16 641 2013;**111**(3):234-44.
- 17 642 32. Luitjes S, Wouters MG AJ, Franx A, et al. Study protocol: Cost effectiveness of two
18 643 strategies to implement the NVOG guidelines on hypertension in pregnancy: An
19 644 innovative strategy including a computerised decision support system compared to a
20 645 common strategy of professional audit and feedback, a randomized controlled trial.
21 646 *Implement Sci* 2010;**5**(1):68.
- 22 647 33. Kenyan Ministry of Public Health and Sanitation (KMOPHS). National Family Planning
23 648 Guidelines for Service Providers Updated to reflect the 2009 Medical Eligibility
24 649 Criteria of the World Health Organization. Nairobi, Kenya: KMOPHS, 2010.
- 25 650 34. Williams B, Perillo S, Brown T. What are the factors of organisational culture in health
26 651 care settings that act as barriers to the implementation of evidence-based practice? A
27 652 scoping review. *Nurse Educ Today* 2015;**35**(2):e34-41.
- 28 653 35. Spallek H, Song M, Polk D, et al. Barriers to implementing evidence-based clinical
29 654 guidelines: A survey of early adopters. *J Evid Based Dent Pract* 2010;**10**(4):195-206.
- 30 655 36. Mohanan M, Vera-Hernandez M, Das V, et al. The know-do gap in quality of health care
31 656 for childhood diarrhea and pneumonia in rural India. *JAMA Pediatr* 2015;**169**(4):349-
32 657 57.
- 33 658 37. Steinberg E, Greenfield S, Wolman DM, et al. *Clinical practice guidelines we can trust*:
34 659 National Academies Press, 2011.
- 35 660 38. Marchionni C, Ritchie J. Organizational factors that support the implementation of a
36 661 nursing best practice guideline. *J Nurs Manag* 2008;**16**(3):266-74.
- 37 662 39. Stetler CB, Ritchie JA, Rycroft-Malone J, et al. Institutionalizing evidence-based
38 663 practice: an organizational case study using a model of strategic change. *Implement*
39 664 *Sci* 2009;**4**:78.
- 40 665 40. Vogel JP, Moore JE, Timmings C, et al. Barriers, Facilitators and Priorities for
41 666 Implementation of WHO Maternal and Perinatal Health Guidelines in Four Lower-
42 667 Income Countries: A GREAT Network Research Activity. *PloS One*
43 668 2016;**11**(11):e0160020.
- 44 669 41. Gravel K, Legare F, Graham I. Barriers and Facilitators to Implementing Shared
45 670 Decision-Making in Clinical Practice: A Systematic Review of Health Professionals'
46 671 Perceptions. *Implement Sci* 2006;**1**:16.
- 47 672 42. Taba P, Rosenthal M, Habicht J, et al. Barriers and facilitators to the implementation of
48 673 clinical practice guidelines: A cross-sectional survey among physicians in Estonia.
49 674 *BMC Health Serv Res* 2012;**12**:455.
- 50 675 43. Munce SEP, Graham ID, Salbach NM, et al. Perspectives of health care professionals on
51 676 the facilitators and barriers to the implementation of a stroke rehabilitation guidelines
52 677 cluster randomized controlled trial. *BMC Health Serv Res* 2017;**17**(1):440.

1
2
3 678 44. Kane JC, Adaku A, Nakku J, et al. Challenges for the implementation of World Health
4 679 Organization guidelines for acute stress, PTSD, and bereavement: a qualitative study
5 680 in Uganda. *Implement Sci* 2016;**11**:36.
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682 Table 1. Summary of the 2011 national guideline for family planning services in Ethiopia²²

Developed by:	A panel of experts from: <ul style="list-style-type: none"> • Government (Ministry of Health of Health) • Addis Ababa University • Non-governmental organisations working in Ethiopia (DKT, EngenderHealth, FHI, Ipas, WHO, Marie Stopes International, IFHP, UNFPA, Venture Strategy, JSI/Deliver)
Intended users:	<ul style="list-style-type: none"> • Policy makers • Health managers • FP program coordinators and managers at all levels • All cadres of health care providers and instructors at health training institutions • FP researchers, monitors and evaluators • Donors, other stakeholders and implementers of FP programs in government, non-government and private sectors
Objectives:	<ul style="list-style-type: none"> • Guide FP programmers and implementers at government, non-government, bilateral and multilateral organisations, private sector as well as charity and civic institutions • Guide to all cadres of health care providers directly or indirectly involved in the provision of FP services including pre-service and in-service training • Set standards for FP programs and services • Standardise various components of FP services at all levels • Expand and improve quality of FP services to be offered • Direct integration of FP services with other reproductive health services, and • Serve as a general directive and management tool.
Main content:	<ul style="list-style-type: none"> • Goals and objectives of the Family Planning Guideline • FP Services* • FP Service Strategies • Services for Clients with Special Needs • Advocacy communications and social mobilisation • Contraceptive supplies and management • Quality of Care in Family Planning • Health Management Information System

683 Source: Ministry of Health. National Guideline for Family Planning Services in Ethiopia. Addis
684 Ababa: Ministry of Health, 2011.

685 **This section describes the range of FP services provided in the health facilities. The services specified are*
686 *counselling, provision of contraceptive methods, screening services for sexual transmitted infections, HIV and*
687 *reproductive organ cancers, prevention and management of fertility treatment*

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3 688 *FP- Family Planning FHI- Family Health International IFHP- Integrated Family Health Program*
4 689 *JSI- John Snow Incorporation UNFPA- United Nations Fund for Population Agency WHO- World Health*
5 690 *Organization*
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691 Table 2. Characteristics of participants

Characteristics	Number	Percent
Sex		
Female	18	85.7
Male	3	14.3
Age (years)		
25-30	10	47.6
>30	11	52.4
Mean age	30 (SD=4.9)	
Range	Min=25, max=49	
Profession		
HEW	4	19.0
Midwife	10	47.6
Nurse	7	33.3
Highest qualification		
BSc	8	38.1
Diploma	13	61.9
Facility in which provider provided FP services		
Ayer-marefia Health Post	2	9.5
Azezo Health Centre	3	14.3
Belay Zeleke Health Post	2	9.5
Felege-hiwot Hospital	2	9.5
Gebriel Health centre	2	9.5
Gondar Health centre	1	4.8
Han Health Centre	2	9.5
Maraki Health Centre	2	9.5
University of Gondar Hospital	5	23.8
Types of facility from which participants were recruited		
Health Centre	10	47.6
Hospital	7	33.3
Health Post	4	19.0
Total number of work experience in the provision of FP services		
Mean	2.85 (SD=1.7), Min=1, Max=7	

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693 Table 3. Summary of provider perceptions of factors (barriers and facilitators) related to
694 implementation of FP guideline

Theme	Sub-themes
Knowledge and access	<ul style="list-style-type: none"> • Awareness of guideline existence • Understanding of guideline purpose • Dissemination / availability of the guideline • Size of the guideline • Language and layout of the guideline
Quality of the guideline	<ul style="list-style-type: none"> • Scope of the guideline • Content of the guideline
Provider behaviour and values	<ul style="list-style-type: none"> • Beliefs of providers (e.g. views about what should be provided based on religion) • Values (e.g. commitment to use of health standards) • Habits (e.g. practice according to traditional ways of doing things and expert knowledge of providers)
Support and supervision from managers	<ul style="list-style-type: none"> • Supervision • Monitoring of guideline implementation • Incentives created for guideline implementation
Resource availability: time and workforce	<ul style="list-style-type: none"> • Availability of trained providers • Time pressure • Required activities
Training	<ul style="list-style-type: none"> • Frequency of training • Content of training • Peer-learning

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BMJ Open

Healthcare providers perspectives on use of the national guideline for family planning services in Amhara Region, Ethiopia: A qualitative study

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Keywords:	family planning, quality of care, clinical guidelines, qualitative study, Ethiopia

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4 **1 Healthcare providers perspectives on use of the national guideline for**
5 **2 family planning services in Amhara Region, Ethiopia: A qualitative study**
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13 Abstract

14 **Objective:** To explore healthcare providers' views on barriers to and facilitators of use of the
15 national family planning (FP) guideline for FP services in Amhara Region, Ethiopia.

16 **Design:** Qualitative study

17 **Setting:** Nine health facilities including two hospitals, five health centres, and two health
18 posts in Amhara region, Northwest Ethiopia.

19 **Participants:** Twenty-one healthcare providers working in the provision of FP services in
20 Amhara region.

21 Primary and secondary outcome measures:

22 Semi-structured interviews were conducted to understand healthcare providers' views on
23 barriers to and facilitators of the FP guideline use in the selected FP services.

24 **Results:** While the healthcare providers' views points to a few facilitators that promote use of
25 the guideline, more barriers were identified. The barriers included: lack of knowledge about
26 the guideline's existence, purpose and quality, healthcare providers' personal religious
27 beliefs, reliance on prior knowledge and tradition rather than protocols and guidelines, lack of
28 availability or insufficient access to the guideline, and inadequate training on how to use the
29 guideline. Facilitators for the guideline use were ready access to the guideline, convenience
30 and ease of implementation and incentives.

31 **Conclusions:** While development of the guideline is an important initiative by the Ethiopian
32 government for improving quality of care in FP services, continued use of this resource by all
33 healthcare providers requires planning to promote facilitating factors and address barriers to
34 use of the FP guideline. Training that includes a discussion about healthcare providers'
35 beliefs and traditional practices as well as other factors that reduce guideline use, and
36 increasing the sufficient number of guideline copies available at the local level, as well as
37 translation of the guideline into local language are important to support provision of quality
38 care in FP services.

39 Strengths and limitations of this study

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3 40 ▪ Strength: This is the first qualitative study assessing barriers to and facilitators of
4 national FP guideline use in Ethiopia.
5 41
6 42 ▪ Strength: The study explored views of healthcare providers working in different
7 types/levels of health facilities such as health posts, health centre, and hospitals.
8 43
9 44 ▪ Limitation: the study was conducted with participants from urban health facilities in one
10 geographic region of Ethiopia only.
11 45
12 46 ▪ Limitation: the use of a single transcriber and translator, however the lead investigator
13 was careful not to impose his own perspectives about barriers/ facilitators of FP
14 guideline use.
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49 Introduction

50 Similar to other low income countries in Africa, Ethiopia has a high maternal mortality rate,
51 with 412 deaths per 100,000 live births.¹ This compares with an average of 196 per 100,000
52 live births at a global level.² Ensuring that all women can easily access and use appropriate
53 and effective family planning (FP) services is widely regarded as critical in reducing maternal
54 mortality ^{3 4}. However, the rate of FP service utilisation remains low in Ethiopia, with only
55 35% of married women using FP services.¹

56 Ensuring quality of care is critical in improving and maintaining high levels of FP services
57 utilisation. ⁵⁻¹¹ Developing evidence-based clinical practice guidelines and implementing
58 those guidelines throughout the health system, is a key to building quality of care. ¹²⁻¹⁴
59 Clinical practice guidelines are “statements that include recommendations intended to
60 optimize patient care that are informed by a systematic review of evidence and an assessment
61 of the benefits and harms of alternative care options”.^{15p4} Studies conducted in Ethiopia and
62 Kenya have shown that availability of FP guidelines is positively associated with improved
63 quality of care in FP service delivery.^{16 17} For example, Stanback et al.¹⁷ showed that when
64 FP guidelines are properly distributed to healthcare facilities offering FP services, the reliable
65 presence of these guidelines helps to improve healthcare providers’ sustained use of the
66 guidelines and thereby the quality of FP service delivery. For guidelines to be effectively
67 implemented and improve quality of care, they should be based on the findings of systematic
68 reviews that include quality evidence; developed by a knowledgeable, multidisciplinary panel
69 of experts and representatives from key affected groups, and consider important patient
70 subgroups and patient preferences. ^{15 18}

71 To support the improvement of quality of care in FP services, the World Health Organization
72 (WHO) has developed guidelines, including the medical eligibility criteria (MEC) for
73 contraceptive use. ^{19 20} Informed by the MEC, several countries, including Ethiopia, have
74 developed the national guideline for FP services. This guideline was first developed in 1996,
75 and last updated in 2011, and is the only FP guideline available in Ethiopia. ^{21 22} A summary
76 of the 2011 national FP guideline ²² considered in the present study is provided in Table 1.
77 The guideline is intended to be used by policy makers and health professionals involved in
78 the provision of FP services at all levels of the health system in Ethiopia.

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3 79 A recent quantitative study assessing factors associated with quality of care in FP services in
4
5 80 Ethiopia reports that less than half of the facilities (46%) had FP guidelines/protocols,
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7 81 suggesting inadequate dissemination and uptake of FP guidelines.¹⁶ No study has explored
8
9 82 factors influencing utilisation of the national FP guideline for FP services in Ethiopia.
10
11 83 Understanding healthcare provider experiences of the national guideline for FP services can
12
13 84 help inform initiatives to improve the guideline implementation and thus quality of care
14
15 85 provision in Ethiopia. The aim of this study was to explore healthcare providers' views on the
16
17 86 use of the FP guideline in Amhara Region, Ethiopia, focusing on barriers and facilitators.

18 87 **Methods**

20 88 **Study design and setting**

23 89 This study used in-depth interviews guided by a semi-structured interview guide for data
24
25 90 collection. The study was conducted in two big cities- Bahir Dar city and Gondar city-
26
27 91 located in Amhara region, Northwest Ethiopia between April and June 2017. Participants for
28
29 92 the study were recruited from nine health facilities including two hospitals, five health
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31 93 centres, and two health posts. The Amhara region is the second largest of the 11
32
33 94 administration areas in Ethiopia, with a population of approximately 21 million, 23% of
34
35 95 Ethiopia's total population.²³ The region has 19 hospitals, 796 health centres, and 3267
36
37 96 health posts.²⁴ FP services are provided in all the health facilities in this region. In hospitals,
38
39 97 FP services are provided in gynecology departments by midwives, nurses, or doctors, and in
40
41 98 health centres, through maternal and child health (MCH) departments by nurses, midwives,
42
43 99 or health officers. Health Extension Workers provide FP services in health posts. The
44
45 100 reporting of this study follows the guideline provided by the Standards for Reporting
46
47 101 Qualitative Research (SRQR).²⁵ (see Supplementary file 1)

48 102 **Participants**

49 103 Before contacting the study participants, we selected health facilities purposively, to include
50
51 104 three types of health facilities - hospitals, health centres, and health posts. In the selected
52
53 105 health facilities, potential study participants were approached at staff meetings, where they
54
55 106 were provided information about the study and requested to express their willingness to
56
57 107 participate. Those staff who expressed willingness to be part of the study were contacted by
58
59 108 telephone to further discuss the study, including the study objectives, potential risks to
60
109 participants, other ethical issues, and to arrange a convenient time and place for the interview.

1
2
3 110 To be part of the study, potential participants had to be healthcare providers who had worked
4
5 111 a minimum of six months providing FP services. This helped to explore healthcare providers'
6
7 112 direct/real experiences on factors affecting use of FP guideline in FP services. While it was
8
9 113 initially anticipated to include up to 15 participants, recruitment of participants was
10
11 114 conducted until the interviewer perceived data saturation in that no new barrier or facilitator
12
13 115 were identified. As a result, a total of 21 healthcare providers (18 female, 3 males) were
14
15 116 interviewed (See Table 2 for further details on participant characteristics).

16 117 **Data collection**

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18
19 118 Data were collected through face-to-face in-depth interviews in the local language (Amharic)
20
21 119 by the lead author (GAT). In-depth interviews were used as this approach allows exploring
22
23 120 individual experiences/views/perceptions of healthcare providers working in the provision of
24
25 121 FP services. Unlike the focus group discussion, the findings in the in-depth interviews are not
26
27 122 influenced by the views of other participants.²⁶ All except one of the interviews were audio-
28
29 123 recorded. For the one interview in which the participant declined to give consent for audio-
30
31 124 recording, notes were taken. The interview guide included questions inquiring about barriers
32
33 125 and facilitators of guideline utilisation in FP services as well as questions on participant
34
35 126 characteristics. The interview guide is available from the lead author.

36 127 **Data management and analysis**

37
38 128 The audio-recorded interviews and notes taken were translated and transcribed into English
39
40 129 by the lead author and entered into NVivo 11™ for analysis.²⁷ Thematic analysis according
41
42 130 to the approach described by Braun and Clarke²⁸ was employed. The epistemological
43
44 131 framework for this analysis was essentialist/realist, aiming to understand and report the
45
46 132 experiences, meaning, and reality of study participants regarding barriers and facilitators in
47
48 133 using the FP guideline in the provisions of FP services.²⁸ Data analysis was led by GAT who
49
50 134 first read and re-read the transcripts to familiarise himself with the data, and then
51
52 135 systematically coded the data related to barriers and facilitators. GAT is a reproductive health
53
54 136 researcher who has been working in family planning research in Ethiopia. His knowledge
55
56 137 about the local culture, values and context of the study setting enhanced the research in terms
57
58 138 of enabling probing questions during the interviews and appropriate interpretation of the data
59
60 139 and identification of the barriers/facilitators. The co-authors, JSG, COL, MAM were involved
140
141 in the data analysis by reading and coding a sample of three transcripts, and discussing the

1
2
3 141 emerging themes and sub-themes. JSG has knowledge of the context surrounding guidelines
4
5 142 utilisation and healthcare delivery in resource-limited African settings which assists in the
6
7 143 conceptualisation and designing of the study, data analysis and interpretation of the findings.
8
9 144 COL and MAM are also well-experienced in qualitative research and helped in the
10
11 145 conceptualisation and designing of the study, data analysis and interpretation of the findings.
12
13 146 The coding was conducted inductively through an iterative process; with codes informed by
14
15 147 the data rather than pre-existing frameworks. Disagreements and discrepancies around codes,
16
17 148 themes, and sub-themes were resolved by consecutive discussions and reference to the
18
19 149 original transcript document. Finally, the codes were grouped based on similarities into
20
21 150 themes and sub-themes.

21 151 **Ethical considerations**

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23
24 152 Ethical approvals were obtained from the Human Research Ethics Committee (HREC) at the
25
26 153 University of Adelaide (Protocol # H-2017-023) and the Institutional Review Board (IRB) at
27
28 154 the University of Gondar, Ethiopia (Protocol # O/V/P/RCS/05/562/2017). Informed written
29
30 155 consent was obtained from each study participant before the start of the interviews.

31 32 156 **Patient and public involvement**

33
34 157 Patients or members of the public were not involved in the development, design or conduct of
35
36 158 this study.

37 38 39 159 **Results**

40
41 160 Overall, six main barriers and facilitators relating to use of the national FP guideline for FP
42
43 161 services were identified, summarised in Table 3.

44 45 46 162 **Theme 1: Knowledge and access to the guideline**

47
48 163 Healthcare providers' knowledge of and access to the FP guideline were identified as a key
49
50 164 theme impacting use of the FP guideline in the study services. Lack of awareness about the
51
52 165 FP guideline was perceived as a barrier preventing guideline use. In this regard, three
53
54 166 participants reported that they were not aware of the existence of the national guideline for
55
56 167 the provisions of FP services; as one provider said "*I have not heard about it [national family*
57
58 168 *planning guideline] ...*" [In-depth Interviewee (IDI)₁₄].

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2
3 169 Several other providers indicated that they were aware of the guideline, but did not
4
5 170 understand its purpose adequately. They said that they perceived the guideline as ‘training
6
7 171 material/manual’, only provided during training, rather than health standards to be used at
8
9 172 their health facility. This view of the guideline was demonstrated when a participant
10
11 173 described it as ‘compilation of printed training materials’ provided in FP trainings. Another
12
13 174 participant said:

14
15 175 *...it is because of the guideline... it is large...we got it from Ipas NGO... it was a collection*
16 176 *[compilation] of training materials... laminated together in a book form [IDI₁₈].*

17
18
19 177 Other providers who indicated that they were aware of the guideline’s existence, referred to
20
21 178 inadequate knowledge about how to use the guideline: “*Since we did not understand on how to*
22
23 179 *use it... we have not been using it [guideline] for so long...*” [IDI₂].

24
25 180 A lack of access to the guideline was described as not having the guideline available in the
26
27 181 facility, insufficient copies of the guideline or the guideline not placed in a convenient
28
29 182 location in the facility.

30
31 183 *I think, this guideline has to be accessible to various rooms. We have only a copy. [IDI₁₉].*

32
33 184 *We do not have family planning guideline. We just work by looking into what other*
34
35 185 *providers do and by asking them if there are concerns that we are not sure. That is how we*
36
37 186 *do. [IDI₁₁].*

38
39 187 *We wish to use it, but we do not have it... that is the reason we are not using. [IDI₁].*

40
41
42 188 In some instances, where the facility provided copies of the FP guideline, the participants
43
44 189 explained that copies of the guideline were often taken away or lost. In this regard, a midwife
45
46 190 expressed his concern that students or someone else removes the guideline from the facility.

47
48 191 *The hospital may prepare it or got it from somewhere else [other organizations]...but*
49
50 192 *someone may put it at some place for a provider to access it easily. ...and then a provider*
51
52 193 *has accessed it for use but failed to put it back... and lost from the facility... that is my*
53
54 194 *assumption. He [provider] just put [it] somewhere or may take it to his home and finally*
55
56 195 *forget it... forgot to bring back. It may also mixed up with other documents and then it*
57
58 196 *became a difficult job to find it for use. [IDI₁₅].*

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2
3 197 Another participant described how some healthcare providers from the facility received
4
5 198 copies of the guideline during training sessions, however left them in their homes, rather than
6
7 199 using them in the facility.

8
9 200 *I had been working in health centre... far from this town...small town. By that time, we [I*
10 201 *and colleagues] had been provided the guideline at the training but we dropped it in our*
11 202 *homes [instead of bringing it for use in the facility], we did not bring it to the facility.*
12 203 *[IDI₁₂].*

13
14
15
16 204 Lack of easy access to copies of the guideline for immediate referral during services
17
18 205 provision was mentioned as a barrier by some participants – “*One problem is that we are not*
19 206 *putting the guideline in our nearby areas*” [IDI₁₂].

20
21
22
23 207 Several participants expressed that because of the large size of the guideline, they were not
24
25 208 only unable to locate specific information in the text but also found it difficult to carry to
26
27 209 outreach areas.

28
29 210 *...it is somehow difficult to get the exact page where the information we are looking for is*
30 211 *located [IDI₂].*

31
32
33 212 *It is also difficult to bring the guideline to use in the villages along other stuff. It is heavy for*
34 213 *us... we are also carrying our own stuff in the bag. Most of the time, we are forced not to*
35 214 *take it with us [IDI₁₃].*

36
37
38
39 215 The guideline was identified as provided in English only, and this was perceived by some of
40
41 216 the participants as a barrier to their use.

42
43 217 *There might be some healthcare providers that could not easily understand English. For*
44 218 *them, it is better to have Amharic version or guideline in both languages [Amharic and*
45 219 *English] [IDI₄].*

46
47
48
49 220 Considering perception of facilitators of guideline utilisation, convenient access to the
50
51 221 guideline, ease of use and the format of the guideline were referred by participants as
52
53 222 important enablers. For example, a participant said that the FP guideline was conveniently
54
55 223 available in the facilities, which made it easy to use.

56
57 224 *The guideline is always available in our room, it is just located on the table, anyone who*
58 225 *want to refer it can found easily [IDI₈].*

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2
3 226 Moreover, a nurse from a health centre felt that passing the guideline to the next colleague
4
5 227 when a provider is changing shifts or travelling to another area was helpful in improving use
6
7 228 of the guideline.

8
9 229 *I also pass the guideline for the next person if I am going to travel somewhere. That is what*
10
11 230 *I think. I believe, following the guideline would help a provider to provide a proper*
12
13 231 *counselling...which is really a key issue for a client and for providers to remind him to use*
14
15 232 *the guideline. That is what I believe [IDI₂₁].*

16
17 233 Ensuring ease of use and its carrying convenience were also demonstrated as a facilitator for
18
19 234 the use of the guideline. From a provider's perspective, several participants described how
20
21 235 they were inclined to use the WHO eligibility criteria rather than the FP guideline as the
22
23 236 former was easier to get the intended information and being smaller in size made it lighter to
24
25 237 carry on when they travelled to villages for outreach services.

26
27 238 *For example, the WHO guideline is very simple and easy. Just you need to put on the table*
28
29 239 *and then look at the notes inside the circle while national guideline is a book and it needs*
30
31 240 *[us] to search for a page. So making it easier to use is good for providers [IDI₃].*

32
33 241 In line with this, some of the participants suggested that for the guideline to be easier to use
34
35 242 by the healthcare providers, different colours and pictures should be used within the
36
37 243 guideline.

38
39 244 *... it would also be good if they use different colours...green, red, pink to denote which*
40
41 245 *methods should not be taken for some diseases. If you see red, you do not give...but for*
42
43 246 *green marked one... you can do....you know, making it something like the WHO eligibility*
44
45 247 *criteria [IDI₁₂].*

46
47 248 *I need a guideline having different pictures [figures]... do you know what I mean, for*
48
49 249 *examplea guideline with a U-shape pictures [to indicate] for five-year family planning*
50
51 250 *[IUCD]. ...sometimes you will forget what you have been told in training... it will not stay*
52
53 251 *long after a year or two... it will be forgotten. The guideline shall also have a clear*
54
55 252 *indications on landmarks [anatomical] for the measurement before inserting the*
56
57 253 *contraceptive methods [IDI₉].*

58
59 254 Additionally, the participants indicated providing copies of the guideline in the local
60
255 language can improve its utilisation.

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2
3 256 *But, I prefer to have an Amharic version ...and in that case, I can go and read the Amharic*
4
5 257 *version if the English version is not clear for me [IDI₁₅]*
6

7 258 **Theme 2: Quality of the guideline**
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10 259 Another theme arising from the interviews related to the national guideline's scope, content
11
12 260 and currency (being up to date) which the FP information contained.

13
14 261 The participants reported that the guideline included a large number of health issues beyond
15
16 262 FP, making it difficult to navigate.

17
18
19 263 *We have a guideline that included everything in it. It also deals about malaria... HIV...
20
21 264 sanitation, nutrition besides family planning for families in the community... It was not
22
23 265 possible to easily get the information about family planning services in it [guideline]
24
25 266 [IDI₁₃].*

26 267 Another barrier to the use of the FP guideline was that the guideline was often considered out
27
28 268 of date and not covering the latest contraceptive methods. A nurse from a health centre
29
30 269 expressed:

31
32 270 *Plus, it [the current guideline] did not include information about the newly developed and
33
34 271 available methods... there is a new implant method which is called "Implanon NXT". This
35
36 272 method is now under distribution for health facilities. This method has its own insertion
37
38 273 procedure, but you could not get it in the current version of the guideline [IDI₁₇].*

39
40 274 Finally, the participants informed that the guideline did not provide the important information
41
42 275 to assist FP providers to undertake their work effectively. For example, no guidance was
43
44 276 provided on dealing with community misconceptions about contraception.

45
46 277 *In the guideline... I found there is lacking about the common misconceptions [about the
47
48 278 family planning methods] in the community... if you know them... you will be ready to
49
50 279 address during the counselling session... sometimes, you will face with emergency questions
51
52 280 in such a way that... "does it lead to this or that?"... if these information are available in
53
54 281 the guideline, a provider will be aware of them and getting ready to handle [answer] them
55
56 282 [IDI₁₇].*

57 283 **Theme 3: Provider behaviour, values and beliefs**
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2
3 284 More than half of the participants described that many healthcare providers tend to rely on
4
5 285 their prior knowledge and practices learnt throughout their career rather than using the
6
7 286 guideline. The participants felt that the providers keep doing things the usual way, as in the
8
9 287 past, even after attending FP trainings on the guideline implementation.

10
11 288 *...health professionals are providing family planning services just by tradition...without*
12
13 289 *updating him/herself [by reading guideline]. Especially...the so-called 'chronic*
14
15 290 *staff" ...those staff who upgraded themselves gradually from health assistant to junior nurse*
16
17 291 *and then to [diploma]nurse...and then to bachelor degree nurse...they do not want to be*
18
19 292 *guided by guideline...not at all...they just follow what they have been doing for 10...20 or*
20
21 293 *more years in the past [IDI₂₁].*

22 294 Some of the participants who had worked for many years in FP services continue to rely on
23
24 295 their prior knowledge and experience rather than referring to the guideline.

25
26 296 *We are working here by our experiences. I have been working here for long time...so I do*
27
28 297 *not use anything for providing family planning services (IDI₁).*

29
30 298 It was also described by some participants that a lack of commitment to use health standards
31
32 299 by the healthcare providers influenced their use of the FP guideline.

33
34 300 *Additionally [another reason for not using guideline] ...it is because of carelessness of the*
35
36 301 *healthcare provider... providing family planning services just by tradition...without*
37
38 302 *updating himself. [IDI₂₁]*

39
40 303 *...those providers who got the training are aware of that fact... that they should use the*
41
42 304 *guideline...but they are not following[using] the laws or legislations [guideline]... there is*
43
44 305 *ignorance ... [IDI₁₂].*

45
46 306 Other participants expressed the view that some providers perceive themselves as having
47
48 307 sufficient knowledge and a belief that they can provide services without the need of any
49
50 308 guideline. For example, a provider said "We thought...we know everything in the document
51
52 309 [guideline]" [IDI₁₄].

53
54 310 For some of the participants, the habit of not reading any material provided was a barrier.
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56 311 One of the participants mentioned that "Most of our people [including providers] do not have a
57
58 312 good culture [habit] of reading books... let alone family planning guideline. [IDI₁₆].
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3 313 It was also noted that some providers were not comfortable reading the guideline in front of
4
5 314 the clients. They would rather rely on their personal experiences.

6
7
8 315 *When you have clients sitting in front of you, it is boring to do [refer guideline] that. That is*
9 316 *why I prefer providing the services from my experiences [IDI₄]*

10
11 317 One of the participants described his personal change in terms of commencing to use FP
12
13 318 guideline.

14
15
16 319 *I am using it [guideline] rather than following the traditional [practice based on prior*
17 320 *knowledge]... I tried to abandon [change] the old tradition to work without referring to*
18 321 *family planning guideline... [IDI₁₆].*

19
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21 322 Another participant presented the view that the religious beliefs of some providers were a
22
23 323 barrier to utilisation of the FP guideline:

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25
26 324 *...quite a number of providers do have a negative attitude for family planning and safe*
27 325 *abortion. They consider it as a religiously prohibited thing...they always associate it with*
28 326 *religion...and they do not accept it. Overall, I can say, their utilisation of the guideline is*
29 327 *limited. [IDI₁₆]*

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32
33 328 The same participant described how in some instances providers' motivation to attend FP
34
35 329 related training was the provision of per-diems rather than obtaining knowledge about the FP
36
37 330 services and learn about the guideline to support FP services.

38
39 331 *Many providers are going to the training...not just for learning new knowledge on it [family*
40 332 *planning services and use of guideline], it is rather to get the per-diems during the*
41 333 *training...They do not seem to provide the [family planning] services properly using the*
42 334 *guideline...we are observing that every time [IDI₁₆].*

43 44 45 46 335 **Theme 4: Manager support and supervision**

47
48 336 Another theme arising from the interviews concerns the role of supervisors, including district
49
50 337 managers and staff from non-governmental organisation (NGO). One midwife said that
51
52 338 supervisors' lack of emphasis on the guideline when monitoring service delivery was an
53
54 339 issue. More particularly, the midwife participant from a health centre expressed the view that:
55
56 340 "[when healthcare managers from the district and regional health bureau visited their facility]
57 341 *no one has checked whether we have been using it [guideline] or not" [IDI₁₉].*

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2
3 342 Another participant reported that some healthcare managers were not concerned about
4
5 343 availability or use of the guideline.
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7
8 344 *When they come to us they are asking us about the drugs, and contraceptive methods,*
9
10 345 *vaccinations... They are not asking about the guideline or if we use them or not. They are*
11 346 *always asking on the numbers on the report... for example they ask us, “why only few people*
12 347 *are getting family planning services in a certain month” [IDI₁₄].*
13
14

15 348 However, some of the participants said that support by district managers and NGO staff was
16
17 349 available, and that availability of this support served as a facilitator to use of the FP guideline.
18

19 350 *We do have NGO partners who are coming regularly to check our services provisions,*
20
21 351 *availability of materials and contraceptive methods. They also checked the presence of*
22 352 *family planning guideline [IDI₁₇].*
23
24

25 353 Creating a culture within the facility where the guideline was seen as core to their service
26
27 354 provision was suggested by a number of participants as a facilitator. *If one needs providers to*
28 355 *use guideline, encouragement is necessary... [IDI₆].*
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31 356 **Theme 5: Resource availability: time and workforce**

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33 357 Resource related issues such as lack of time, shortage of trained providers, and high workload
34
35 358 were expressed as barriers to using FP guideline. Several of the participants reported that a
36
37 359 high client load interferes with using the guideline. The participants referred to long queues
38
39 360 of clients waiting outside of the clinics to receive FP services, which made referring to the
40
41 361 guideline during consultations difficult. In addition, participants said that limited time
42
43 362 available for each client meant that some providers prioritised using the ‘consultation time’ to
44
45 363 counsel the client based on what they already know rather than using the guideline. In one
46
47 364 participant’s words: *“We do not have time... in order to read a text [guideline], really... you should*
48 365 *first get sufficient time” [IDI₁₃].*

49 366 Additionally, lack of appropriately trained staff added to the pressure on the existing staff and
50
51 367 so taking time to refer to the guideline was considered a barrier to dealing with patient
52
53 368 numbers. For example, a participant stated:

54
55 369 *In that case [in the absence of trained providers], they [untrained providers] may just*
56
57 370 *provide only counselling to them [clients] and appoint for myself or other trained provider*
58 371 *to see them when we get back... these providers are not referring to the document*
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3 372 *[guideline]. In the facility, we do have only two trained providers, myself and another*
4 *midwife [IDI₈]*
5 373

6
7 374 Another area of concern for one participant was the facilities' inability to retain those staff
8 who had been provided with training related to FP services and guideline:
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10
11 376 *There were many providers who have got the training but they moved to other places from*
12 *our facility for different reasons...there is a lot of providers' turnover here...that is a big*
13 *challenge [IDI₁₇].*
14 377
15 378

16
17 379 According to a health extension worker participant, it was difficult to use guideline during
18 provision of FP services because providers were required to provide a number of other
19 380 healthcare services along with FP services, to be involved with various meetings, and to work
20 381 in outreach activities in the local community.
21 382

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23
24
25 383 *We do have meetings all the time, we should give counselling for the clients, we should also*
26 *need to report to district managers, and health centre... we are not in the office to read*
27 *available documents, usually in the morning time "we are always out" [IDI₁₃].*
28 384
29 385

30
31 386 Another nurse participant explained that working on a number of tasks that are not co-located
32 in one room but offered by a sole provider was also seen as a barrier to guideline use. In her
33 387 words:
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36
37 389 *...if a midwife is assigned in one room, there is no reason that she does not use the guideline*
38 *properly. But, this will not happen here... we are going to antenatal, postnatal care, etc...*
39 390 *Sometimes, we are rushing to reach the clients coming for different services. [IDI₁₅].*
40 391

41 42 43 392 **Theme 6: Training**

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45 393 Providers' lack of or inadequate training on the contents of the FP guideline was described as
46 a barrier to guideline use. For example, one participant mentioned that: *"If you are not*
47 394 *trained you cannot use the guideline" [IDI₃]. Other providers expressed:*
48 395

49
50
51 396 *I took the training....it was long time ago... I took it in 2005E.C (just before 4 years [IDI₈]*
52 *Once we have been provided a training, nobody remembers you for refreshment training...*
53 397 *[IDI₂]*
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399 In contrast, other participants referred to provision of training that targets the FP guideline as
400 a facilitator; for example one participant explained that discussing the contents of the
401 guideline during FP training provision may help to motivate providers to use the guideline.

402 *They [trainers] have highlighted some concepts in the guideline using PowerPoint*
403 *presentation. I guess, this can help providers to motivate for using them while getting back*
404 *to their facilities [IDI₁₆].*

405 As part of the capacity building activity, the participants described that being a FP trainer has
406 helped them to improve their use of guideline.

407 *...our facility is one of the practical attachment location for family planning trainings. I am*
408 *also part of the trainers' panel for the long term contraceptive methods. ...the guideline are*
409 *always in my hand for me to use... I am updating myself every time...maybe... I read the*
410 *book in weekly or monthly basis. I also ask other friends [colleagues] to use it [IDI₁₆].*

411 Some participants acknowledged peer-learning from colleagues and identified this as a
412 facilitator. For example, a participant related that she and her colleagues did not use the
413 guideline until she attended an induction training on how to use the guideline and share the
414 knowledge to her colleagues.

415 *...After I received the orientation [induction] on how to use it, I have also informed [on how*
416 *to use it] to all my staff and now we are using it in the same language [fashion]. The*
417 *guideline had been in our facility for three....or... four months without using it [IDI₂].*

418 Discussion

419 This is the first study conducted to understand healthcare providers' perspectives on use of
420 the national guideline developed to support standardised and quality care in FP services in
421 Ethiopia. While the healthcare providers' views point to both barriers and facilitators
422 affecting FP guideline use in FP services, more factors related to barriers were identified and
423 described than facilitators. Barriers that exist, from healthcare providers' perspective, are:
424 inadequate knowledge about the purpose of the guideline, irrelevance of the guideline for
425 some specific and practical needs of the healthcare providers, personal factors such as beliefs
426 and traditions, and organisational factors such as inadequate resources including time and
427 staff, lack of supervision and support.

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3 428 Our findings that healthcare provider's lack of knowledge about the existence of the FP
4 guideline and unavailability of a copy of for healthcare providers support our previous study
5 429 which found more than half of the health facilities in Ethiopia do not have the FP guideline
6 430 available.¹⁶ Lack of availability of the guideline in health facilities points to a concern about
7 431 lack of planning to distribute such resource to health facilities for use by healthcare providers.
8 432
9 433 ²⁹ Inadequate planning to effectively distribute guidelines and protocols is a persistent
10 434 concern across other countries as well; for example, a 2012 Ugandan study, found that more
11 435 than 60% of clinical guidelines developed by the government were not available at the
12 436 service delivery level, despite that these resources were available at national offices level.³⁰

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20 437 When the guideline was available in health facilities, other issues were identified as impeding
21 438 their use, including language and format of guidelines. Other studies have also identified
22 439 these features of guidelines as factors that negatively impact utilisation.³¹⁻³³

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26 440 The present study also found that a lack of information in the guideline about common
27 441 community misconceptions relating to FP methods and lack of information about newly-
28 442 developed contraceptive methods such as *Implanon NXT* impacted effective use of the
29 443 guideline. In Ethiopia, the current FP guideline was intended to serve various stakeholders
30 444 ranging from policy makers at the national level to FP providers at the services delivery
31 445 point. As a result, instead of providing specific and practical information to assist frontline
32 446 healthcare providers for effective counselling and contraceptive provision, the guideline
33 447 provides relatively general information about FP services. For example, the current version of
34 448 the national FP guideline²² does not provide information about how to use contraceptive
35 449 methods, and indications/contraindications. This finding suggests that at the health facility
36 450 level, the guideline needs to include specific information for the healthcare providers to use
37 451 to provide effective FP services. The guideline developed by the Ministry of Public Health
38 452 and Sanitation of Kenya, for example, addressed this issue and provided current and up to
39 453 date information on FP methods.³⁴ The guideline developed in Kenya cover the advantages
40 454 and disadvantages of FP methods, medical eligibility criteria, management of common side
41 455 effects, and how to address common community misperceptions about FP methods.

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54 456 Healthcare providers continuing to apply, even after receiving guidelines and training, the
55 457 procedures they have been applying in the past is a well-known problem in the healthcare
56 458 sector, not only in developing countries, but throughout the world.^{35 36} Therefore, our study
57 459 findings that providers perceive traditional ways of doing things as a barrier to guideline use

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3 460 is not surprising. This problem may be probably due, in part, to low levels of commitment on
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5 461 the part of providers to implement best practices learned during technical training. A study
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7 462 conducted in rural India found a clear gap between what the providers ‘know’ about the
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9 463 standard practices to be provided/followed for patients and what they ‘do’ in their routine
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11 464 practice during the provision of a healthcare services.³⁷ Therefore, while our findings suggest
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13 465 that improving healthcare providers’ use of FP guideline will require increased healthcare
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15 466 provider knowledge and skill, in light of emerging literature on provider motivation
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17 467 suggesting that these efforts be combined with regular supportive supervision and incentive
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19 468 mechanisms to motivate healthcare providers.

20 469 This study informed about organisational factors including the role of management support
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22 470 for healthcare providers to use the guideline and insufficient health workforce. Evidence
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24 471 shows that managerial support is important to improve use of clinical practice guidelines.³⁸⁻⁴⁰
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26 472 This alerts to the need for a focus on support and supervision visits by healthcare services
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28 473 managers at the regional level and at the facility level. Lack of sufficient health workforce
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30 474 was identified as a main barrier for guidelines use. A previous study conducted in four low-
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32 475 income countries, Uganda, Ethiopia, Tanzania and Myanmar, showed that shortage of health
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34 476 workforce was one of the barriers impeding guidelines implementation in the provision of
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36 477 maternal healthcare services across all these countries.⁴¹ Participants in our study also
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38 478 suggested that high staff turnover exacerbated the staff shortage problem in health facilities.
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40 479 Our study has also pointed out that time pressure due to client overload and multiple tasks
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42 480 was impeding guideline use in FP services. Several studies reported that time constraint was a
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44 481 barrier for implementing clinical practice guidelines.⁴²⁻⁴⁴

45 482 Healthcare providers in our study highlighted the importance of training to enhance skills for
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47 483 effective use of guidelines and in turn provide quality of care in FP services. The need for
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49 484 training and skill enhancement is noted in many other studies, across a range of health issues
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51 485 and healthcare services provision. For example, multi-country studies, undertaken in low-and
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53 486 middle-income countries such as Uganda, Malawi, Tanzania and Ethiopia conducted to
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55 487 identify the barriers and facilitators for implementing various healthcare services guidelines
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57 488 including maternal healthcare services,^{29 41} and mental healthcare services⁴⁵ showed that lack
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59 489 of or insufficient training was a barrier for implementing clinical guidelines.

60 490 Considering limitations of this study, the first study was conducted with participants from
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62 491 only urban health facilities in one geographic region of Ethiopia. Hence, as expected in

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3 492 qualitative studies, the results may not be representative of rural health facilities and other
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5 493 regions of Ethiopia. However, we continued interviewing until data saturation, and therefore
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7 494 the barriers and facilitating factors that we identified may be similar in other facilities,
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9 495 particularly within the Amhara region. In fact, as facilities being located in rural and remote
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11 496 areas pose additional challenges in terms of adequate human resource, training and access to
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13 497 resources such as guideline, we believe that the barriers highlighted by the study participants
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15 498 in Amhara region may be even more pronounced in rural and remote areas. Second, while the
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17 499 lead author (GAT) has been working in FP research in Ethiopia, there might be a potential
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19 500 bias in the research. However, the lead author was careful not to impose his own perspectives
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21 501 about barriers/ facilitators of FP guideline use during data collection and analysis. As the co-
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23 502 authors, JSG, COL and AMM, have no experience in Ethiopia and they have little or no bias
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25 503 in the research. They were also careful not to impose their own perspectives about barriers/
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27 504 facilitators of FP guideline use during data collection and analysis. The use of a single
28
29 505 transcriber and translator limited our ability to conduct a quality assurance of transcript
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31 506 translations.

32 33 507 **Policy and research implications**

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35 508 The findings of this study have important policy and research implications. While the
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37 509 Ethiopian government took an important initiative in developing the FP guideline, its
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39 510 utilisation could be improved by implementing the following steps: (1) The guideline should
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41 511 be translated into the local language and ensure that it is distributed to health facilities; (2)
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43 512 Provision of additional training for healthcare providers to improve their knowledge about the
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45 513 guideline is required. The trainings should focus more on encouraging/incentivising providers
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47 514 to use the guideline and to build their confidence in referring to the guideline in front of the
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49 515 clients. It should also be emphasised that the guideline is not only to be used as a training
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51 516 material but also are actually a reference guide to be used continuously throughout their
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53 517 career; (3) Steps need to be taken to ensure that the guideline is easily available, and that
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55 518 providers and managers have the time to participate in relevant trainings, as well as to deliver
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57 519 the standard and range of services set out in the guideline. 4) The current national FP
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59 520 guideline is out-of-date in terms of addressing new FP methods and technologies, so the
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521 government should consider revising this guideline. During the guideline revision, it would
522
523 be important to include more practical information required by healthcare providers which
includes how to use each FP method, advantages and disadvantages, contraindications, side

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3 524 effects, and common community misconceptions. It would also be useful for the guideline to
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5 525 be more concise and simpler to carry, transfer and share and have better indexed content so
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7 526 that providers can find what they need to know more quickly, and with more up to date
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9 527 information so that providers do not fear they are acting on outdated knowledge. 5) It is also
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11 528 necessary to establish a better system for managers to provide effective monitoring and
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13 529 supervision of providers and to use the opportunity to check the availability guideline in the
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15 530 facilities and if the providers are properly implementing the guideline.

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17 531 Further studies examining healthcare providers' perspectives of guideline use involving
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19 532 participants from other regions in Ethiopia may be required to build a comprehensive
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21 533 understanding of barriers and facilitators, and how to support utilisation of the FP guideline
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23 534 throughout the health system. While some of the barriers identified in this study such as lack
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25 535 of managerial support and training could be better explored by including healthcare
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27 536 managers, further study targeting healthcare managers is recommended to provide additional
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29 537 insight on these factors.

30 538 **Conclusion**

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32 539 Healthcare provider perspectives confirmed that a range of barriers contribute to lack of use
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34 540 of the guideline in FP services in some health facilities in Ethiopia. The barriers observed
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36 541 included lack of knowledge about the existence and purpose of the guideline, lack of
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38 542 sufficient copies of the guideline, providers' personal religious beliefs, a desire amongst
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40 543 providers to deliver services based on prior knowledge and tradition rather than protocols and
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42 544 guideline, insufficient time (resource issues), lack of knowledge about the guideline and
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44 545 inadequate training on how to use them. Ensuring that the guideline was easy to access and
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46 546 implement and incentives for their use (e.g. recognition) were the main facilitators indented
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48 547 by providers in this qualitative study. While the Federal Ministry of Health of Ethiopia needs
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50 548 to work on revising the current FP guideline, strategies must be designed to properly
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52 549 distribute the guideline to health facilities providing FP services. Future FP guideline
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54 550 development needs to focus on providing concise, easy to carry guideline with a more
55
56 551 practical information for healthcare providers.

57 552 **Data sharing statement**

58 553 All the required data used in the research is included in the text.
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559 **Contributors**

560 GAT contributed to the study concept and design, acquisition, data collection, translation and
561 transcription, analysis and interpretation of data; drafting and critical revision of the
562 manuscript. JSG, COL, MAM contributed to the study concept and design, analysis and
563 interpretation of data as well as the critical revision of the manuscript. All the authors read
564 and approved the manuscript.

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569 **Competing interest** None

570 **References**

- 571 1. Central Statistical Agency (CSA) and ICF International. Ethiopia Demographic and Health
572 Survey 2016. Addis Ababa, Ethiopia, and Rockville, Maryland, USA: CSA and ICF
573 International,, 2016.
- 574 2. Kassebaum NJ, Barber RM, Bhutta ZA, et al. Global, regional, and national levels of
575 maternal mortality, 1990-2015: a systematic analysis for the Global Burden of
576 Disease Study 2015. *Lancet* 2016;**388**(10053):1775-812
- 577 3. Chola L, McGee S, Tugendhaft A, et al. Scaling Up Family Planning to Reduce Maternal
578 and Child Mortality: The Potential Costs and Benefits of Modern Contraceptive Use
579 in South Africa. *PLoS One* 2015;**10**(6):e0130077
- 580 4. Cleland J, Conde-Agudelo A, Peterson H, et al. Contraception and health. *Lancet*
581 2012;**380**(9837):149-56
- 582 5. Ali MM. Quality of care and contraceptive pill discontinuation in rural Egypt. *J Biosoc Sci*
583 2001;**33**(2):161-72
- 584 6. Askew I, Mensch B, Adewuyi A. Indicators for Measuring the Quality of Family Planning
585 Services in Nigeria. *Stud Fam Plann* 1994;**25**(5):268-83
- 586 7. Blanc A, Curtis S, Croft T. Monitoring contraceptive continuation: links to fertility
587 outcomes and quality of care. *Stud Fam Plann* 2002;**33**(2):127-40

- 1
2
3 588 8. Kaufman J, Zhang Z, Qiao X, et al. The quality of family planning services in rural China.
4 589 *Stud Fam Plann* 1992;**23**(2):73-84
- 5 590 9. Koenig M, Hossain M, Whittaker M. The Influence of Quality of Care upon Contraceptive
6 591 Use in Rural Bangladesh. *Stud Fam Plann* 1997;**28**(4):278-89
- 7 592 10. RamaRao S, Mohanam R. The quality of family planning programs: concepts,
8 593 measurements, interventions, and effects. *Stud Fam Plann* 2003;**34**(4):227-48
- 9 594 11. Sanogo D, RamaRao S, Jones H, et al. Improving Quality of Care and Use of
10 595 Contraceptives in Senegal. *Afr J Reprod Health* 2003;**7**(2):57-73
- 11 596 12. Woolf S, Schünemann HJ, Eccles MP, et al. Developing clinical practice guidelines:
12 597 types of evidence and outcomes; values and economics, synthesis, grading, and
13 598 presentation and deriving recommendations. *Implement Sci* 2012;**7**:61-61
- 14 599 13. Grimshaw JM, Thomas RE, MacLennan G, et al. Effectiveness and efficiency of
15 600 guideline dissemination and implementation strategies. *Health Technol Assess*
16 601 2004;**8**(6):iii-iv, 1-72
- 17 602 14. Grol R, Grimshaw J. From best evidence to best practice: effective implementation of
18 603 change in patients' care. *Lancet* 2003;**362**(9391):1225-30
- 19 604 15. Institute of Medicine. In: Graham R, Mancher M, Miller Wolman D, et al., eds. Clinical
20 605 Practice Guidelines We Can Trust. Washington DC: The National Academy of
21 606 Sciences, 2011.
- 22 607 16. Tessema GA, Mahmood MA, Gomersall JS, et al. Client and facility level determinants
23 608 of quality of care in family planning services in Ethiopia: Multilevel modelling. *PLoS*
24 609 *One* 2017;**12**(6):e0179167
- 25 610 17. Stanback J, Griffey S, Lynam P, et al. Improving adherence to family planning guidelines
26 611 in Kenya: an experiment. *Int J Qual Health Care* 2007;**19**(2):68
- 27 612 18. National Health and Medical Research Council (NHMRC) Australia. Guide to the
28 613 Development, Implementation and Evaluation of Clinical Practice Guidelines.
29 614 Canberra: The Commonwealth of Australia, 1999.
- 30 615 19. World Health Organization (WHO). *Medical eligibility criteria for contraceptive use- 5th*
31 616 *Ed.* Geneva, Switzerland: WHO, 2015.
- 32 617 20. World Health Organization (WHO), Johns Hopkins Bloomberg School of Public
33 618 Health/Center for Communication Programs (CCP), Knowledge for Health Project.
34 619 Family planning: A Global Handbook for Providers (2011 Update). Evidence-based
35 620 guidance developed through worldwide collaboration. Baltimore and Geneva: CCP
36 621 and WHO, 2011.
- 37 622 21. Federal Ministry of Health (FMOH). Guidelines for FP services in Ethiopia. Addis
38 623 Ababa: (FMOH), 1996.
- 39 624 22. Federal Ministry of Health (FMOH). National Guideline for Family Planning Services in
40 625 Ethiopia. Addis Ababa: FMOH, 2011.
- 41 626 23. Central Statistical Agency (CSA). Population Projections for Ethiopia 2007-2037. Addis
42 627 Ababa, Ethiopia: CSA, 2013.
- 43 628 24. Amhara Regional Health Bureau (ARHB) and I-TECH Ethiopia. Institutionalization plan
44 629 for mentoring program Amhara Regional Health Bureau 2013-2014. Bahir Dar:
45 630 ARHB and I-TECH, 2013.
- 46 631 25. O'Brien BC, Harris IB, Beckman TJ, et al. Standards for reporting qualitative research: a
47 632 synthesis of recommendations. *Acad Med* 2014;**89**(9):1245-51
- 48 633 26. Guest G, Namey E, Mitchell M. *Collecting Qualitative Data: A Field Manual for Applied*
49 634 *Research*. 55 City Road, London: SAGE Publications, Ltd, 2013.
- 50 635 27. QSR International. NVivo 11 pro for windows: Getting Started Guide (Version 11.2).
51 636 Secondary NVivo 11 pro for windows: Getting Started Guide (Version 11.2) 2016.
52 637 www.qsrinternational.com.

- 1
2
3 638 28. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative research in*
4 639 *psychology* 2006;**3**(2):77-101
- 5 640 29. Puchalski Ritchie LM, Khan S, Moore JE, et al. Low- and middle-income countries face
6 641 many common barriers to implementation of maternal health evidence products. *J*
7 642 *Clin Epidemiol* 2016;**76**(Supplement C):229-37
- 8 643 30. Nabyonga Orem J, Bataringaya Wavamunno J, Bakeera SK, et al. Do guidelines
9 644 influence the implementation of health programs?--Uganda's experience. *Implement*
10 645 *Sci* 2012;**7**:98
- 11 646 31. Lee PY, Liew SM, Abdullah A, et al. Healthcare Professionals' and Policy Makers'
12 647 Views on Implementing a Clinical Practice Guideline of Hypertension Management:
13 648 A Qualitative Study. *PLOS ONE* 2015;**10**(5):e0126191
- 14 649 32. Donnellan C, Sweetman S, Shelley E. Implementing clinical guidelines in stroke: a
15 650 qualitative study of perceived facilitators and barriers. *Health Policy*
16 651 2013;**111**(3):234-44
- 17 652 33. Luitjes S, Wouters MG AJ, Franx A, et al. Study protocol: Cost effectiveness of two
18 653 strategies to implement the NVOG guidelines on hypertension in pregnancy: An
19 654 innovative strategy including a computerised decision support system compared to a
20 655 common strategy of professional audit and feedback, a randomized controlled trial.
21 656 *Implement Sci* 2010;**5**(1):68
- 22 657 34. Kenyan Ministry of Public Health and Sanitation (KMOPHS). National Family Planning
23 658 Guidelines for Service Providers Updated to reflect the 2009 Medical Eligibility
24 659 Criteria of the World Health Organization. In: Division of Reproductive Health, ed.
25 660 Nairobi, Kenya: KMOPHS, 2010.
- 26 661 35. Williams B, Perillo S, Brown T. What are the factors of organisational culture in health
27 662 care settings that act as barriers to the implementation of evidence-based practice? A
28 663 scoping review. *Nurse Educ Today* 2015;**35**(2):e34-41
- 29 664 36. Spallek H, Song M, Polk D, et al. Barriers to implementing evidence-based clinical
30 665 guidelines: A survey of early adopters. *J Evid Based Dent Pract* 2010;**10**(4):195-206
- 31 666 37. Mohanan M, Vera-Hernandez M, Das V, et al. The know-do gap in quality of health care
32 667 for childhood diarrhea and pneumonia in rural India. *JAMA Pediatr* 2015;**169**(4):349-
33 668 57
- 34 669 38. Steinberg E, Greenfield S, Wolman DM, et al. *Clinical practice guidelines we can trust*.
35 670 National Academies Press, 2011.
- 36 671 39. Marchionni C, Ritchie J. Organizational factors that support the implementation of a
37 672 nursing best practice guideline. *J Nurs Manag* 2008;**16**(3):266-74
- 38 673 40. Stetler CB, Ritchie JA, Rycroft-Malone J, et al. Institutionalizing evidence-based
39 674 practice: an organizational case study using a model of strategic change. *Implement*
40 675 *Sci* 2009;**4**:78
- 41 676 41. Vogel JP, Moore JE, Timmings C, et al. Barriers, Facilitators and Priorities for
42 677 Implementation of WHO Maternal and Perinatal Health Guidelines in Four Lower-
43 678 Income Countries: A GREAT Network Research Activity. *PLoS ONE*
44 679 2016;**11**(11):e0160020
- 45 680 42. Gravel K, Legare F, Graham I. Barriers and Facilitators to Implementing Shared
46 681 Decision-Making in Clinical Practice: A Systematic Review of Health Professionals'
47 682 Perceptions. *Implement Sci* 2006;**1**:16
- 48 683 43. Taba P, Rosenthal M, Habicht J, et al. Barriers and facilitators to the implementation of
49 684 clinical practice guidelines: A cross-sectional survey among physicians in Estonia.
50 685 *BMC Health Serv Res* 2012;**12**:455-55
- 51
52
53
54
55
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57
58
59
60

- 1
2
3 686 44. Munce SEP, Graham ID, Salbach NM, et al. Perspectives of health care professionals on
4 687 the facilitators and barriers to the implementation of a stroke rehabilitation guidelines
5 688 cluster randomized controlled trial. *BMC Health Services Research* 2017;**17**(1):440
6 689 45. Kane JC, Adaku A, Nakku J, et al. Challenges for the implementation of World Health
7 690 Organization guidelines for acute stress, PTSD, and bereavement: a qualitative study
8 691 in Uganda. *Implement Sci* 2016;**11**:36
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17
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21
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For peer review only

694 Table 1. Summary of the 2011 national guideline for family planning services in Ethiopia ²²

Developed by:	<p>A panel of experts from:</p> <ul style="list-style-type: none"> • Government (Ministry of Health of Health) • Addis Ababa University • Non-governmental organisations working in Ethiopia (DKT, EngenderHealth, FHI, Ipas, WHO, Marie Stopes International, IFHP, UNFPA, Venture Strategy, JSI/Deliver)
Intended users:	<ul style="list-style-type: none"> • Policy makers • Health managers • FP program coordinators and managers at all levels • All cadres of healthcare providers and instructors at health training institutions • FP researchers, monitors and evaluators • Donors, other stakeholders and implementers of FP programs in government, non-government and private sectors
Objectives:	<ul style="list-style-type: none"> • Guide FP programmers and implementers at government, non-government, bilateral and multilateral organisations, private sector as well as charity and civic institutions • Guide to all cadres of healthcare providers directly or indirectly involved in the provision of FP services including pre-service and in-service training • Set standards for FP programs and services • Standardise various components of FP services at all levels • Expand and improve quality of FP services to be offered • Direct integration of FP services with other reproductive health services, and • Serve as a general directive and management tool.
Main content:	<ul style="list-style-type: none"> • Goals and objectives of the Family Planning Guideline • FP Services* • FP Service Strategies • Services for Clients with Special Needs • Advocacy communications and social mobilisation • Contraceptive supplies and management • Quality of Care in Family Planning • Health Management Information System

695 Source: Ministry of Health. National Guideline for Family Planning Services in Ethiopia. Addis
 696 Ababa: Ministry of Health, 2011.

697 **This section describes the range of FP services provided in the health facilities. The services specified are*
 698 *counselling, provision of contraceptive methods, screening services for sexual transmitted infections, HIV and*
 699 *reproductive organ cancers, prevention and management of fertility treatment*

700 *FP- Family Planning FHI- Family Health International IFHP- Integrated Family Health Program*

701 *JSI- John Snow Incorporation UNFPA- United Nations Fund for Population Agency WHO- World Health*
 702 *Organization*

703 Table 2. Characteristics of participants

Characteristics	Number	Percent
Sex		
Female	18	85.7
Male	3	14.3
Age (years)		
25-30	10	47.6
>30	11	52.4
Mean age	30 (SD=4.9)	
Range	Min=25, max=49	
Profession		
HEW	4	19.0
Midwife	10	47.6
Nurse	7	33.3
Highest qualification		
BSc	8	38.1
Diploma	13	61.9
Facility in which provider provided FP services		
Ayer-marefia Health Post	2	9.5
Azezo Health Centre	3	14.3
Belay Zeleke Health Post	2	9.5
Felege-hiwot Hospital	2	9.5
Gebriel Health centre	2	9.5
Gondar Health centre	1	4.8
Han Health Centre	2	9.5
Maraki Health Centre	2	9.5
University of Gondar Hospital	5	23.8
Types of facility from which participants were recruited		
Health Centre	10	47.6
Hospital	7	33.3
Health Post	4	19.0
Total number of work experience in the provision of FP services		
Mean	2.85 (SD=1.7), Min=1, Max=7	

705 Table 3. Summary of healthcare providers perceptions of factors (barriers and facilitators)
 706 related to implementation of FP guideline

Theme	Sub-themes
Knowledge and access	<ul style="list-style-type: none"> • Awareness of guideline existence • Understanding of guideline purpose • Dissemination / availability of the guideline • Size of the guideline • Language and layout of the guideline
Quality of the guideline	<ul style="list-style-type: none"> • Scope of the guideline • Content of the guideline
Provider behaviour and values	<ul style="list-style-type: none"> • Beliefs of providers (e.g. views about what should be provided based on religion) • Values (e.g. commitment to use of health standards) • Habits (e.g. practice according to traditional ways of doing things and expert knowledge of providers)
Support and supervision from managers	<ul style="list-style-type: none"> • Supervision • Monitoring of guideline implementation • Incentives created for guideline implementation
Resource availability: time and workforce	<ul style="list-style-type: none"> • Availability of trained providers • Time pressure • Required activities
Training	<ul style="list-style-type: none"> • Frequency of training • Content of training • Peer-learning

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Standards for Reporting Qualitative Research (SRQR)*

<http://www.equator-network.org/reporting-guidelines/srqr/>

Page/line no(s).

Title and abstract

<p>Title - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended</p>	Page 1
<p>Abstract - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions</p>	Page 2

Introduction

<p>Problem formulation - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement</p>	Pages 4-5
<p>Purpose or research question - Purpose of the study and specific objectives or questions</p>	Page 5

Methods

<p>Qualitative approach and research paradigm - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**</p>	Page 6
<p>Researcher characteristics and reflexivity - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability</p>	Page 6
<p>Context - Setting/site and salient contextual factors; rationale**</p>	Page 5
<p>Sampling strategy - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**</p>	Pages 5-6
<p>Ethical issues pertaining to human subjects - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues</p>	Page 7
<p>Data collection methods - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**</p>	Page 6

1		
2	Data collection instruments and technologies - Description of instruments (e.g.,	
3	interview guides, questionnaires) and devices (e.g., audio recorders) used for data	
4	collection; if/how the instrument(s) changed over the course of the study	Page 6
5		
6	Units of study - Number and relevant characteristics of participants, documents,	
7	or events included in the study; level of participation (could be reported in results)	Page 5 and
8		Table 2
9	Data processing - Methods for processing data prior to and during analysis,	
10	including transcription, data entry, data management and security, verification of	
11	data integrity, data coding, and anonymization/de-identification of excerpts	Pages 6-7
12		
13	Data analysis - Process by which inferences, themes, etc., were identified and	
14	developed, including the researchers involved in data analysis; usually references a	
15	specific paradigm or approach; rationale**	Pages 6-7
16		
17	Techniques to enhance trustworthiness - Techniques to enhance trustworthiness	
18	and credibility of data analysis (e.g., member checking, audit trail, triangulation);	
19	rationale**	Pages 6-7
20		

Results/findings

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22		
23	Synthesis and interpretation - Main findings (e.g., interpretations, inferences, and	
24	themes); might include development of a theory or model, or integration with	
25	prior research or theory	Pages 7-16
26		
27	Links to empirical data - Evidence (e.g., quotes, field notes, text excerpts,	
28	photographs) to substantiate analytic findings	Pages 7-16
29		

Discussion

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31		
32	Integration with prior work, implications, transferability, and contribution(s) to	
33	the field - Short summary of main findings; explanation of how findings and	
34	conclusions connect to, support, elaborate on, or challenge conclusions of earlier	
35	scholarship; discussion of scope of application/generalizability; identification of	
36	unique contribution(s) to scholarship in a discipline or field	Pages 16-18
37		
38	Limitations - Trustworthiness and limitations of findings	Pages 18-19
39		

Other

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41		
42	Conflicts of interest - Potential sources of influence or perceived influence on	
43	study conduct and conclusions; how these were managed	Page 21
44		
45	Funding - Sources of funding and other support; role of funders in data collection,	
46	interpretation, and reporting	Page 21
47		

*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

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**The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

Reference:

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. **Standards for reporting qualitative research: a synthesis of recommendations.** *Academic Medicine*, Vol. 89, No. 9 / Sept 2014
DOI: [10.1097/ACM.0000000000000388](https://doi.org/10.1097/ACM.0000000000000388)

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