Updating Couple Years of Protection:

Literature Review, Guidance for Updating Existing Methods, and Adding New Methods

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Introduction & Background

Couple Years of Protection (CYP)

CYP is the estimated protection provided by family planning (FP) methods during a one-year period, based upon the volume of all contraceptives sold or distributed free of charge to clients during that period. This includes permanent methods, such as sterilization, and the lactational amenorrhea method (LAM).

Couple years of protection (CYP) is an output indicator which was introduced into programming in 1973 [1] and is commonly used by international organizations and host-country governments to monitor the progress and measure the performance of family planning programs and to make assumptions about family planning coverage. The CYP for each contraceptive method is calculated by multiplying the number of units distributed to clients over a defined period, usually 12 months (could be calendar year or fiscal year of the reporting agency) by a conversion factor that quantifies the duration of contraceptive protection provided per unit distributed. For some methods like condoms, coital frequency and effectiveness are the most important inputs for the CYP calculation while for methods like intrauterine devices (IUDs) and implants, labelled duration of use and continuation rates are used in the calculation. Below we will go into greater detail how the CYP is derived for each method (summarized in Table 4).

This brief was developed to synthesize the latest findings relevant to CYP for USAID. We include background information about the CYP development and revision process for the broader family planning field. More information on CYP is available in a compendium of family planning/reproductive health indicators here.[2]

CYP Updates Conducted in 2000 and 2011

In 2011, an extensive update of CYPs of various contraceptive methods was conducted under the USAID-funded RESPOND Project, implemented by EngenderHealth, with the analysis led by sub-contractor Avenir Health.[3] The process included convening the authors of the previous CYP update conducted in 2000[4] as well as other key partners within the family planning community. The consultation resulted in two changes to the overall methodology for calculating CYPs and specific updates for four methods.

The update included a literature review and various analyses to determine if there were available data to update the factors included in the CYP calculations. These include: 1) use effectiveness (all methods); 2) duration of use (long acting and permanent methods and fertility awareness methods); 3) coital

frequency (condoms, spermicides, emergency contraception (EC)); 4) consistency of use (condoms, spermicides); 5) wastage when product is discarded prior to use (pills, condoms, spermicides); and 6) overlapping coverage (all methods).

In the 2000 update[4], the CYP calculation equations for all methods included an estimate of overlapping coverage, defined as use of more than one method of contraception at the same time or use of a method while the woman is less than six months postpartum, currently amenorrheic, and breastfeeding. The percentage of women that fell into this category was marginal in 2000 and updated estimates for 2011 showed that the method-specific percentages continued to be small. The inclusion of these data in the CYP factor calculations did not contribute to a difference in the final results. As the intent was not to "punish" postpartum family planning programs and the impact of their inclusion was marginal, the overlapping factor was removed from the calculation for all methods updated in 2011.

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The second overall change was the decision not to round the final CYP factors.[4] In addition, the 2011 group consensus was to not rely on US-based clinical trials to estimate continuation rates because these rates are typically higher than continuation rates from studies in low and middle-income (LMIC) countries. Moreover, studies in special populations (e.g., women using barrier methods primarily for sexually transmitted infection/HIV prevention) were also excluded for consideration.

Information to update calculations related to duration of use was identified, leading to changes in CYP factors for four methods - IUDs, implants, sterilization, and fertility awareness methods. In addition, consultations led to another change to the calculations of long-acting methods (IUD, implants). In 2000, the calculation included the method effectiveness (discounting the final CYP factor by the effectiveness percentage).[4] However, the data on method continuation used in 2011 included women who had discontinued due to pregnancy (i.e., method failure is one of the reasons for discontinuation). To ensure that the method effectiveness was not double counted, this information was removed from the calculation, but remained included in the continuation data. Additionally, the diaphragm was dropped because earlier models of the product were marginally used. Finally, CYP factors were calculated for two new methods – the vaginal ring and the hormonal patch. **Table 1** outlines the changes between the approaches used in 2011 versus 2000. **Table 4**, at the end, outlines the calculations and CYPs for all methods for 2000, 2011, and the proposed changes we outline in this document.

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Table 1: Summary of CYP calculations changes in 2011

Methods with Changes	Calculation (2011)	2011 Updates from 2000 Approach
IUD	CYPs per insertion = average duration of use. Average duration of use is estimated by fitting an exponential decay curve to continuation data $(R=ae^{-rt})$.*	Calculation was simplified by eliminating overlapping use and effectiveness. Effectiveness is accounted for in continuation because the data include women who discontinued due to pregnancy.
Implants	CYPs per insertion = average duration of use. Average duration of use is estimated by fitting an exponential decay curve to continuation data $(R=ae^{-rt})$.**	Calculation was simplified by eliminating overlapping use and effectiveness. Effectiveness is accounted for in continuation because the data include women who discontinued due to pregnancy.
Sterilization	CYPs per sterilization = mean age at time of sterilization, discounted for reduced fertility due to age (i.e., time from sterilization procedure until menopause), adjusted for higher parity (i.e., proxy measure for fertility) among women opting for sterilization.	Change to the mean age at time of sterilization per Demographic and Health Survey (DHS).
Fertility Awareness Methods	CYP per trained adopter = average duration of use. Average duration of use is estimated by fitting an exponential decay curve to continuation data $(R=ae^{-rt})$.***	Updated continuation data
Vaginal ring	Based on the CYP factor for the oral contraceptive pill	N/A
Hormonal patch	Based on the CYP factor for the oral contraceptive pill	N/A

* Continuation data from 4 articles (Ali et al. 2011 (secondary analysis of DHS data)[5], 2 WHO studies (clinical trials with 12 years of follow up)[6, 7], Jenabi et al 2006 (1 month continuation rates)[8]). Uses Ali for the first 3 years and then applies the curve from the WHO data for years 4-10. Truncated at 5 and 10 years for LNG-IUD and Copper T 380, respectively.
** Continuation data from 4 articles (Tuladhar et al. 1998, Fathonah et al. 2000, African Population and Health Research Center 2001 (secondary analysis of DHS data) and Ba et al. 1999 (real world use)[9-12]). Data are from Norplant use. Truncated at 3, 4, and 5 years Implanon, Sino-Implant (II) and Jadelle, respectively.
*** Continuation data from Institute for Reproductive Health.[13]

Since the 2011 update, there have been further changes and additions to the modern contraceptive method mix. The CYP working group in the USAID Office of Population and Reproductive Health, which convened in September 2020, recommended a literature review of current evidence for five methods – Levoplant (formerly called Sino-Implant (II))), progestin-only pill (POP) blister pack of 35 pills, Caya diaphragm, levonorgestrel (LNG) 1.5mg for pericoital use, and hormonal IUD - to determine the need for updating the CYPs for these methods. The rationale for selecting these five methods for

review was due to one of three reasons: 1) the method is new or newly available in LMICs (Caya diaphragm, LNG 1.5mg for pericoital use); 2) the labeled duration of use of the method has been changed by a regulatory body (Levoplant, hormonal IUD); or 3) the presentation of the method, defined as a change in the instructions for use or quantity of the product in a package, has changed (POP blister pack of 35 pills). This information is summarized in **Table 2**.

This literature review will serve as the background for updating CYP conversion factors taking into account the latest evidence.

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Table 2: Methods reviewed in 2021

Methods	Rationale for inclusion
1) New or newly available in LMICs	
Caya diaphragm	New diaphragm recently being introduced in LMICs by USAID. Different from older diaphragms because it does not require provider fitting as it is single size.
LNG 1.5 mg for pericoital use	New use of LNG as pericoital contraception.
2) Labeled duration of use change	
Levoplant	Method is now WHO prequalified with 3-year duration of use and registered globally as such; previously approved for 4-year duration of use.
Hormonal IUD	Mirena received FDA approval for pregnancy prevention for up to 7 years and we anticipate Liletta will be approved for 7 years soon (currently it is approved for 6). Approvals with national drug regulatory authorities in LMICs will be updated accordingly in the coming years. Ongoing trials may extend this duration further. Method was previously approved for 5 years.
3) Presentation change	
POP blister pack of 35 pills	USAID has long term agreements (LTAs) with two suppliers using blister packs of 35 pills (i.e., USAID programs only have 35 pill packs for POPs rather than the standard 28 pill packs).

We conducted two related activities:

1 Developed and documented a transparent process to determine when and whether to update the USAID-endorsed CYP Website.

2 Synthesized the available evidence on the five methods listed above to justify changes to the CYPs previously agreed upon in 2011 for current methods and justify the CYPs proposed for new methods.

For three methods (diaphragm, Levoplant and LNG as pericoital contraception) we relied on recent systematic reviews[14-16] and reviewed the literature since then by searching PubMed and looking at references of published and unpublished papers, and two textbooks[17,18]. We also contacted internal subject matter experts and manufacturers/product developers to see if there were additional papers to consider. For the hormonal IUD we used the same approach though we were unable to find any recent systematic reviews with continuation rates. For POPs, no literature review was required because the product is now being provided in 35-day blister packs instead of 28-day packs and we simply adapted the CYP calculation from oral contraceptive pills that has been used since 2000.

Results & Recommended CYPs

Process for determining if CYP update is needed
The flowchart in **Diagram 1** outlines the criteria used to determine if updating the currently assigned CYP is warranted.

Calculating CYP
For **new methods**, we propose to rely on approaches used for similar related products to determine the CYP (e.g., the calculation for pericoital contraception relies on previous COC methodology). For **existing methods**, we propose to use past approaches of calculating CYP of either the method or related methods to calculate an updated CYP.

Estimating method effectiveness
For CYP calculations that take method effectiveness into account, we propose for all new CYP calculations the use of method-specific effectiveness rates (as commonly used) from the WHO Family Planning - A global handbook for providers.[18] If no method specific rates are available from this reference, we recommend the use of the best available data source in consultation with subject matter experts.
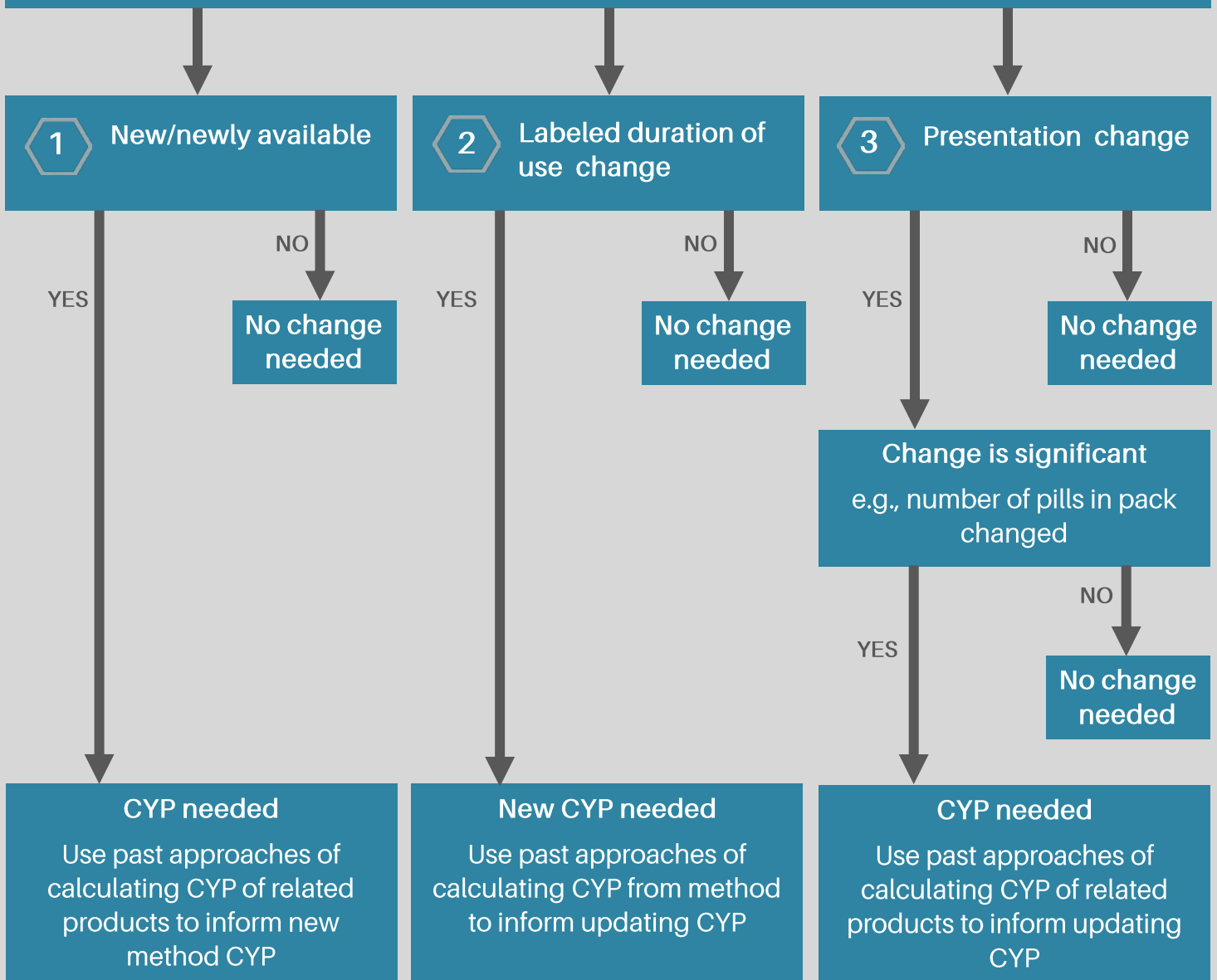
Credit: Jessica Scranton, FHI 360

Diagram 1: Flowchart for determining if CYP change is needed

Have any of the following occurred:

1. Method is new or newly available in LMICs;

2. Labeled duration of use has been changed by a regulatory body; or

3. Presentation of method (instructions for use or change in quantity of product in package) has been changed?

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1. New/newly available

YES → **CYP needed** — Use past approaches of calculating CYP of related products to inform new method CYP

NO → No change needed

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2. Labeled duration of use change

YES → **New CYP needed** — Use past approaches of calculating CYP from method to inform updating CYP

NO → No change needed

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3. Presentation change

YES → Change is significant e.g., number of pills in pack changed

NO → No change needed

- Change is significant: YES → **CYP needed** — Use past approaches of calculating CYP of related products to inform updating CYP
- Change is significant: NO → No change needed

Results: Evidence and recommendations for five methods

 Methods that are new or newly available in LMICs

Diaphragm

In 2000, Stover et. al.[4] assigned the diaphragm 1 CYP per device based on "'no empirical data available". The estimated CYP was "an educated guess" at the time based on how long a typical woman may use her diaphragm.[4] Subsequently, in 2011, the diaphragm was removed from the CYP chart because of low use of the product in USAID-funded programs.

A 2020 systematic review of the diaphragm by Lindh et. al.[19] reviewed the pivotal Caya diaphragm trial[20] and approximately 54% of participants completed the 6-month study yielding a 6-month Kaplan-Meier cumulative typical-use pregnancy probability of 10.4%. The corresponding extrapolated 12-month typical use pregnancy rate is 17.8%[20] which is almost identical to the commonly used rate (17%) from the WHO Global Handbook[18].

The only published study since Stover's systematic review in 2000 meeting the criteria for consideration was by Bulut et. al. assessing the diaphragm in Colombia, the Philippines and Turkey.[21] The overall 12-month continuation rate across the 3 countries was 57.2% with women in Turkey 1.7 times more likely to discontinue the method than women in the Philippines. The only additional data source is an unpublished study by the USAID ECCO Project in Niger with a continuation rate of 84% at 6 months. (ECCO Project, unpublished).

These sparse data points are in a large part consistent with the estimated **1 CYP per diaphragm** and we recommend reverting back to the estimate from 2000.

Pericoital Contraception

The 2014 Cochrane Review *Repeated use of pre- and postcoital hormonal contraception for prevention of pregnancy* presented average pills per cycle/month only for a subset of the studies evaluating LNG and none of these were for pericoital use.[22]

Since then, two studies examining pericoital contraception have collected information on average pill use per month and pregnancy rates (Festin et. al.[14], Camber Collective Ghana, unpublished) with a further study in Kenya sponsored by Camber Collective expected to have results by August 2021. **Table 3** summarizes results relevant to CYP calculation and presents a weighted average by study size . In consultation with Camber Collective and in the absence of additional data, we decided to use the weighted average of the two studies in the CYP calculations.

Table 3: Pericoital contraception study summaries

Study	Average monthly use	Effectiveness *(as commonly used)*
Festin et. al. (n=303)	4.85	92.9
Camber Ghana (n=837)	1.72	97.9
Weighted average	2.5	96.6

To calculate the CYP for pericoital methods, we recommend adapting the approach for calculating oral contraceptive pills. The approach for calculation has remained unchanged since 2000:

$$\frac{\text{number required (biological basis)}}{} \div \text{effectiveness} \div \frac{\text{proportion not overlapping}}{} = CYP$$

13 cycles per year ÷ 92.4% ÷ 98.3% = 14 cycles

Note: USAID rounded this estimate to **15 cycles per CYP** to reflect "USAID's interest in simplicity (rounding), continuity (with previously used values), & adjustment for suspected wastage."[4]

Pericoital Contraception (continued)

We propose eliminating the proportion overlapping from the calculation for pericoital methods to remain consistent with the recommendation from 2011 to remove it from the calculations going forward. Thus, we recommend the following formula to calculate the CYP for pericoital methods:

number required (biological basis) ÷ effectiveness ÷ = CYP

$$\left(\begin{array}{l} 2.5 \text{ average} \\ \text{pills per} \quad x\ 12\ months \\ \text{month} \end{array} \right) \div\ 96.6\ \%\ effectiveness\ =\ 31\ pills\ per\ CYP$$

Given the crude estimate of CYP because of sparsity of data and in keeping with USAID's interest in simplicity, our recommended <u>CYP is 30 pills (0.033 CYP per pill)</u> for pericoital contraception.

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2 *Methods that had a labeled duration of use change*

Levoplant

Levoplant is distributed globally and procured by both USAID and UNFPA. Levoplant was WHO prequalified on June 30, 2017[23] based on a Phase 3 trial conducted in the Dominican Republic[15] and is now registered as a 3-year product in all countries where USAID procures the implant (China still has 4-year duration of use). Similar proportions of Levoplant and Jadelle users completed the trial (41% and 38%, respectively) – both implants contain 150 mg levonorgestrel (LNG).

As Levoplant had a duration of use change, we recommend following the second path in the flowchart above and using past approaches of calculating CYPs for implants (Table 1) to inform the new CYP calculation. Thus, we recommend that Levoplant now be grouped with "3-year implant (e.g. Implanon)" with <u>2.5 CYPs per implant.</u>

While Implanon has been replaced by Nexplanon/Implanon NXT, the new radiopaque implant with a different inserter is bioequivalent and has the same effectiveness and duration as Implanon.[25] We suggest that these terms be added (there may be a few women who still have Implanon, so that should remain).

Hormonal IUD

The US FDA recently extended the duration of use from five years to seven years for Mirena (2021) and we anticipate the same for Liletta[†] in the near future; approvals with national drug regulatory authorities in LMICs will be updated accordingly in the coming years. This duration of use change requires updating this method's CYP now because women who are currently receiving the method will be due for a new reinsertion when the longer duration of use will likely be approved and incorporated into national service guidelines.

The CYP calculation for the hormonal IUD (with 5-year duration of use) in 2011 relied on the continuation rates of the Copper-T 380-A (Table 1) and resulted in 3.3 CYP per inserted hormonal IUD. At that time, there were no continuation rate data from LMICs for the hormonal IUD and US data were largely limited to clinical trials with the general consensus that the hormonal IUD has similar continuation rates to copper IUDs and implants.[17]

Since then, the US-based CHOICE study provides robust comparative data between the Copper-T 380-A and the hormonal IUD among family planning clients in the greater St. Louis area.[26-28] These data show higher 1- and 2-year continuation rates for the hormonal IUD (88%, 79%) than the Copper-T 380-A (84%, 77%) and equivalent 3-year continuation rates (70% for both methods); and near perfect agreement of the hormonal IUD over the first three years with the continuation rates used in 2011 for contraceptive implants.

[†]The Liletta product is sold under the name "Avibela" in LMIC markets.

Hormonal IUD (continued)

A study conducted in Zambia and Nigeria show similarly higher continuation rates for the hormonal IUD (95%) compared to the Copper-T 380-A (89%) in Zambia in the first year and the same continuation rate (87%) for both IUDs in Nigeria.[29] A randomized trial conducted in nine countries with a majority of participants from China (56%) had high continuation rates for the Copper-T 380-A over 1, 3 and 5 years (90%, 80%, 69%) and a lower continuation rate for the LNG-IUD (84%, 62%, 48%);[30] how much of these results can be explained by non-hormonal IUDs being the predominant form of reversible contraception in China (e.g., site staff not appropriately counseling participants about side effects of the hormonal IUD) is not known. Finally, a prospective observational study conducted in China found a high 1-year continuation rate for hormonal IUD users (93%).[31]

In summary, these most recent data support the general consensus among experts that hormonal IUDs are likely to have higher continuation rates than the Copper-T-380-A in LMICs; with continuation rates more similar to hormone-releasing implants. Thus, we recommend using the modeled continuation curve for hormone-releasing implants (Table 1). With US FDA labelled duration of use of now 7 years, we truncated at 7 years to estimate average duration of use resulting in <u>4.8 CYPs per device inserted</u>.

Trials are in place to potentially extend the duration of use beyond 7 years so this CYP may need to be updated further.[32,33]

⬡ 3   *Methods that had a presentation change*

USAID supplied POPs

The current USAID CYP table assigns "Oral Contraceptives" 15 cycles (pill packs) per CYP based on COCs being packaged in packs of 28 pills. The approach for calculation has remained unchanged since 2000:

$$\frac{\text{number required}}{\text{(biological basis)}} \div \text{effectiveness} \div \frac{\text{proportion not}}{\text{overlapping}} = \text{CYP}$$

$$13 \text{ cycles per year} \div 92.4\% \div 98.3\% = 14 \text{ cycles}$$

*Note: USAID rounded this estimate to **15 cycles per CYP** to reflect "USAID's interest in simplicity (rounding), continuity (with previously used values), & adjustment for suspected wastage."* [4]

USAID currently has LTAs with suppliers who package their POPs in packets of 35 pills and does not provide any POPs in 28-day packs. As a result, separating oral contraceptives into COCs and POPs is now necessary.

As discussed in the calculations for pericoital methods, we propose eliminating the proportion overlapping from the calculation to remain consistent with the recommendation from 2011. Adapting the previous formula for POPs results in:

$$\frac{\text{number required}}{\text{(biological basis)}} \div \text{effectiveness} \div \quad = \text{CYP}$$

$$\left(\frac{365 \text{ days per year}}{35 \text{ pills per pack}} \right) \div 93\% \text{ effectiveness} = 11.18 \text{ cycles}$$

With subsequent rounding up due to suspected wastage, the recommended CYP for POPs is <u>12 cycles per CYP (0.0833 CYP per pack).</u>

Table 4: CYP conversion factors for 2000, 2011, and proposed 2021 updates

Methods	2000		2011		2021	
	Conversion Factor	Result	Conversion Factor	Result	Conversion Factor	Result
Sterilization	CYPs per sterilization = mean age at time of sterilization, discounted for reduced fertility due to age, adjusted for higher parity among women opting for sterilization.	see Stover [4], varies by country	no change in methods, change in average age at time of sterilization	10 CYP per procedure Globally (13 CYP per procedure India, Nepal, Bangladesh)	no change	10 CYP per procedure Globally (13 CYP per procedure India, Nepal, Bangladesh)
Copper IUD	CYPs per insertion = average duration of use x effectiveness x proportion not overlapping (3.9 years x 96.4% x 97.4%)	3.7 CYP per insertion	CYPs per insertion = average duration of use. Average duration of use is estimated by fitting an exponential decay curve to continuation data ($R=ae^{-rt}$).	4.6 CYP per insertion	no change	4.6 CYP per insertion
Hormonal IUD	N/A	N/A	CYPs per insertion = average duration of use. Average duration of use is estimated by fitting an exponential decay curve to continuation data ($R=ae^{-rt}$).	3.3 CYP per insertion	no change in method, change in duration of use	4.8 CYP per insertion
Pills	Cycles per CYP = number required (biological basis) / effectiveness / proportion not over-lapping (13 cycles per year / 92.4% / 98.3%)	14 cycles per year (rounded to 15 cycles per year by USAID)	no change	15 cycles per CYP	no change	15 cycles per CYP (0.667 CYP per cycle)
POPs blister packs of 35 pills	N/A	N/A	N/A	N/A	10.4 cycles/ packs per year (biologic basis 365/35) ÷ 93% effectiveness from WHO Handbook	11.18 cycles per CYP rounded to 12 cycles per CYP (0.0833 CYP per cycle)

Table 4: CYP conversion factors for 2000, 2011, and proposed 2021 updates (continued)

Methods	2000		2011		2021	
	Conversion Factor	Result	Conversion Factor	Result	Conversion Factor	Result
Implants 3-year (Implanon/ ImplanonNXT, Levoplant)	N/A	N/A	CYPs per insertion = average duration of use. Average duration of use is estimated by fitting an exponential decay curve to continuation data ($R=ae^{-rt}$).	2.5 CYP per implant	Levoplant now approved for 3-years rather than 4, see 4-year implant calculation below	2.5 CYP per implant
Implants 4-year (Levoplant)	N/A	N/A	as above for 3-year implant	3.2 CYP per implant	Levoplant now approved for 3-years rather than 4; moved to 3-year implant calculation above	N/A
Implants 5-year (Jadelle)	N/A	N/A	as above for 3-year implant	3.8 CYP per implant	no change	3.8 CYP per implant
Injectables	Injections per CYP = average duration (biologically determined) / effectiveness / proportion not overlapping. Depo Provera (DMPA) = 4 / 100% / 94.6%. Noristerat = 6 /100% / 94.6%) Cyclofem = 13 / 100% / 94.6%	4.2 DMPA (USAID rounded to 4) injections per CYP. 6.3 Noristerat injections per CYP (USAID rounded to 6). 13.7 Cyclofem (USAID rounded to 13) injections per CYP	no change	4 doses per CYP (DMPA). 6 doses per CYP (Noristerat). 13 doses per CYP (Cyclofem)	no change	DMPA: 4 doses per CYP (0.25 CYP per dose). Noristerat: 6 doses per CYP (0.167 CYP per dose). Cyclofem: 13 doses per CYP (0.077 CYP per dose)
Condoms	Units per CYP = condoms required (coital frequency = 5.6, consistency = 50%) / proportion not overlapping (98 / 94.1%)	105 condoms per CYP (USAID rounded to 120)	no change	120 units per CYP	no change	120 units per CYP (0.00833 CYP per unit)
Vaginal Foaming Tablets (VFT)	Units per CYP = VFT required (coital frequency = 5.6, consistency = 50%) / proportion not overlapping (98 /94.1%)	105 VFT per CYP (USAID rounded to 120)	no change	120 units per CYP	no change	120 units per CYP (0.00833 CYP per unit)

Table 4: CYP conversion factors for 2000, 2011, and proposed 2021 updates (continued)

Methods	2000		2011		2021	
	Conversion Factor	Result	Conversion Factor	Result	Conversion Factor	Result
Standard Days Method (SDM)*	Limited available data are consistent with previous estimate; no change recommended	2 CYP per trained user	CYP per trained adopter = average duration of use. Average duration of use is estimated by fitting an exponential decay curve to continuation data (R=ae^{-rt}).	1.5 CYP per trained adopter	no change	1.5 CYP per trained adopter
Lactational Amenorrhea Method (LAM)	Limited available data are consistent with previous estimate; no change recommended	0.25 CYP per user	no change	0.25 CYP per user	no change	0.25 CYP per user
Diaphragm‡	No empirical data available; value proposed is an educated guess	1 CYP per diaphragm	N/A	N/A	no change (maintain 2000 conversion factor)	1 CYP per diaphragm
LNG 1.5mg for pericoital use	N/A	N/A	N/A	N/A	2.5 average pills per month x 12 months = 30 pills per year / 96.6 effectiveness	31 pills per CYP (rounded to 30 pills per CYP) (0.033 CYP per pill)
Hormonal patch	N/A	N/A	Cycles per CYP = number required (biological basis) / effectiveness / proportion not overlapping (13 cycles per year / 92.4% / 98.3%)	14 cycles per year (rounded to 15 cycles per year by USAID)	no change	14 cycles per year (rounded to 15 cycles per year by USAID) (0.067 CYP per cycle)
Vaginal ring	N/A	N/A	Cycles per CYP = number required (biological basis)/ effectiveness / proportion not overlapping (13 cycles per year / 92.4% / 98.3%)	14 cycles per year (rounded to 15 cycles per year by USAID)	no change	14 cycles per year (rounded to 15 cycles per year by USAID) (0.067 CYP per cycle)
EC	15 CYP for pills X 75% effectiveness for EC§	20 doses per CYP	no change	20 doses per CYP	no change	20 doses per CYP (0.05 CYP per dose)

* The calculation from 2011 onward is for SDM specifically, previously it was for natural family planning.
§ This calculation was developed after 2000 but before 2011
‡ Applies to all brands of diaphragms including the Caya diaphragm

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