Contraceptive Security: Incomplete without Long-Acting and Permanent Contraception (LA/PMs)

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Managing Partner: EngenderHealth; Associated Partners: Cicatelli Associates Inc; Family Health International; Futures Institute; John Hopkins Bloomberg School of Public Health Center for Communication Programs; Meridian Group International, Inc; Population Council

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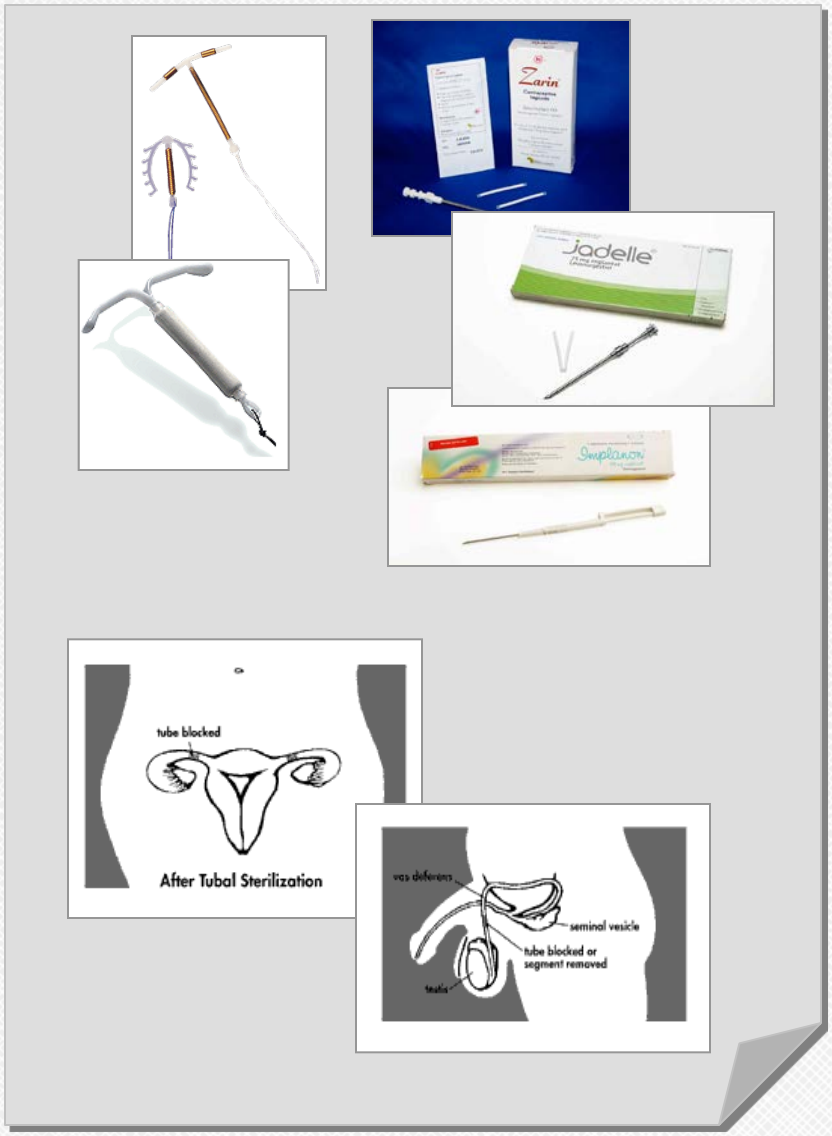
The twin pillars of family planning programs

Choice

Contraceptive security

The four long-acting and permanent methods (LA/PMs)

- **Long-Acting Reversible Methods**
  - **IUDs:**
    - > *CuT380A, ML-375*
    - > *LNG-IUS*
  - **Implants:**
    - > *Jadelle*
    - > *Sino-implant II (Zarin)*
    - > *Implanon*
- **Permanent Methods**
  - **Female Sterilization**
  - **Male Sterilization** (Vasectomy)



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The LA/PMs: Key characteristics

- Clinical methods
- "Provider-dependent"
  - Need skilled, motivated, enabled providers
  - "No provider, no program"
- Need essential medical instruments and expendable medical supplies
- Require suitable service setting
- Need to insure free and informed choice

Methodology of our analysis

- Review of key documents
  - 13 national & 2 regional contraceptive security strategies
  - Contraceptive security (CS) literature
  - Materials of key organizations working in CS
    - > *E.g. Reproductive Health Supplies Coalition, USAID/DELIVER, World Bank, UNFPA, IPPF*
- Secondary analysis of DHS data
  - Unmet need, met need & total demand, for both spacing births & for limiting births
  - FP method mix among spacers and limiters

Conclusion: LA/PMs underemphasized in CS

6 main reasons LA/PMs have been underemphasized in CS:

1. Planning tools are inadequate
2. LA/PMs are more difficult to deliver
3. Up-front costs of LA/PMs are higher (and difficult to "amortize")
4. Language used in CS strategies and plans is a barrier
5. Services, not only supplies and commodities, are needed
6. Better indicators are needed:
   - "What doesn't get measured, doesn't get done"
   - Not just "a range of methods," but "Resupply methods (specify yes/no: pills, injectables, condoms), LARCs (specify: yes/no: implants, IUDs), permanent methods (specify: yes/no: female sterilization, vasectomy)"

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Reason 1: Inadequate planning tools
Reason 2: LA/PMs are more difficult to provide

MEDICAL INSTRUMENTS NEEDED TO PROVIDE LONG-ACTING AND PERMANENT METHODS OF CONTRACEPTION

Hormonal Implant

Insertion *(Jadelle®, Sino-Implant II®)*
(1) Cup/bowl/gallipot
(1) Forceps, sponge-holding, straight, 5.5 inches (14 cm)
(1) Forceps, mosquito, delicate, curved, 5 inches (12.7 cm)
(1) Scalpel, handle, #3, graduated in cm
(1) Trocar (#10)

Insertion *(Implanon®)*
(1) Cup/bowl/gallipot
(1) Forceps sponge-holding, straight, 5.5 inches (14 cm)

Removal
(Implanon®, Jadelle®, Sino-Implant II®)
(1) Cup/bowl/gallipot
(1) Forceps sponge-holding, straight, 5.5 inches (14 cm)
(1) Scalpel, handle, #3, graduated in cm
(1) Forceps, mosquito, straight, 5 inches (12.7 cm)
(1) Forceps, mosquito, curved, 5 inches (12.7 cm)

Intrauterine Device (IUD)

Insertion
(1) Cup/bowl/gallipot
(1) Forceps, Schroeder-Braun uterine tenaculum, 9.75 inches (24.8 cm)
(1) Forceps, sponge, Foerster, straight, 9.5 inches (24.1 cm)
(1) Sound, uterine, Sims, 13 inches (33 cm)
(1) Scissors, operating, Mayo, curved, 6.75 inches (17.1 cm)
(1) Speculum, vaginal, Graves, medium (1.38 inches [3.5 cm] x 4 inches [10.2 cm])

Removal
(1) Forceps, sponge, Foerster, straight, 9.5 inches (24.1 cm)
(1) Speculum, vaginal, Graves, medium (1.38 inches [3.5 cm] x 4 inches [10.2 cm])
(1) Forceps, Bozeman uterine dressing, straight, 10.5 inches (26.7 cm)
(1) IUD removal forceps, alligator jaw, 8 inches*
(1) IUD string retriever*

* The alligator IUD removal forceps and IUD string retriever are needed only on rare occasions, when the IUD strings are not visible and the IUD cannot be removed by the Bozeman forceps alone.

Female Sterilization (via Minilaparotomy)

Abdominal Instruments
(1) Cup/bowl/gallipot
(1) Forceps, sponge, Foerster, straight, 9.5 inches (24.1 cm)
(1) Forceps, dressing, standard pattern, 5 inches (12.7 cm)
(1) Forceps, tissue, delicate pattern, 5.5 inches (14 cm)
(2) Forceps, artery, Kelly, straight, 5.5 inches (14 cm)
(2) Forceps, intestinal, Allis, delicate, (5x6 teeth) 6 inches (15.2 cm)
(2) Forceps, intestinal, baby Babcock, 5.5 inches (14 cm)
(1) Needle holder, Mayo Hegar, 7 inches (17.8 cm)
(2) Richardson-Eastman retractor, small **or** (1) Army-Navy retractor (2-pc.set), double-ended
(1) Scissors, tonsil, Metzenbaum, curved, 7 inches (17.8 cm)
(1) Scissors, Operating, Mayo, Curved, 6.75 inches (17.1 cm)
(1) Scalpel, handle, #3, graduated in cm
(1) Hook, tubal, Ramathibodi

Vaginal instruments
(1) Forceps, sponge, Foerster, curved, 9.5 inches (24.1 cm)
(1) Jackson vaginal retractor (deep blade) 1.5 inches (3.8 cm) x 3 inches (7.6 cm) or (1) Speculum, vaginal, Graves, medium (1.38 inches [3.5 cm] x 4 inches [10.2 cm])
(1) Forceps, Schroeder-Braun uterine tenaculum, 9.75 inches (24.8 cm)
(1) Elevator, uterine, Ramathibodi

No-Scalpel Vasectomy (NSV)

(1) Cup/bowl/gallipot
(1) Forceps, sponge-holding, straight, 5.5 inches (14 cm)
(1) Needle holder, Mayo Hegar, 7 inches (17.8 cm)
(1) Scissors, operating, Mayo, straight, 5.5 inches (14 cm)
(1) NSV ringed clamp (forceps), 4 mm
(1) NSV dissecting forceps

Written by: Levent Cagatay, MD; Carmela Cordero, MD; and Roy Jacobstein, MD, MPH.
Information drawn from EngenderHealth medical/clinical staff and *Surgical Instruments Catalogue* (Miltex Instruments Company).

http://www.engenderhealth.org/files/pubs/family-planning/LAPM-Equipment-List.pdf

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… and

EXPENDABLE MEDICAL SUPPLIES NEEDED TO PROVIDE LONG-ACTING AND PERMANENT METHODS OF CONTRACEPTION

Hormonal Implant

- The implant (Implanon®, Jadelle® or Sino-implant II®)
- Soap and water or antiseptic agents (for hand washing)
- Sterile gloves
- Iodine (as an antiseptic)
- Sterile gauze sponges
- Sterile small drape (to rest the client's arm on)
- Sterile fenestrated drape
- Local anesthetic such as lidocaine, (without epinephrine, 1% or 2%)
- Distilled water to dilute lidocaine (if 2% lidocaine is used)
- 5 ml syringe with 1.5 inch needle
- Scalpel blade
- Band-aid
- Arm bandage (to apply pressure to the incision)
- Bleach (to prepare decontamination solution)
- Safety box
- Drape (for packing instruments)

Intrauterine Device (IUD)

- The IUD (TCu 380A or Multiload or LNG-IUS)
- Soap and water or antiseptic agents (for hand washing)
- Exam gloves
- Iodine (as an antiseptic)
- Sterile gauze sponges
- Drapes (to cover client's thighs)
- Bleach (to prepare decontamination solution)
- Drape (for packing instruments)
- Sanitary pad

Female Sterilization (via Minilaparotomy)

- Soap and water or antiseptic agents (for the surgical scrub)
- Alcohol rinse (recommended if plain soap is used for the surgical scrub)
- Sterile gloves
- Iodine (as an antiseptic)
- Sterile gauze sponges
- Scalpel blade
- Absorbable suture (on an atraumatic needle)
- Surgical adhesive tape
- Drape (for packing instruments)
- Small sterile towel (for hand drying after surgical scrub)
- Sterile surgical drapes
- Sterile surgeon's gown
- Cap and face mask
- Client's gown
- Bed sheet (plastic)

Pain management supplies

- Local anesthetic such as lidocaine, (without epinephrine, 1% or 2%)
- Distilled water to dilute lidocaine (if 2% lidocaine is used)
- 10–20 ml syringe with 1.5 inch or 27- gauge needle

Pain management drugs:

- Premedication such as *Atropine*
- Sedatives such as *Diazepam* or *Midazolam* or *Promethazine*
- Analgesics such as *Diclofenac* or *Ibuprofen*
- Narcotic analgesics such as *Fentanyl* or *Pentazocine* or *Meperidine (Pethidine)* or *Nalbuphine*
- Non-narcotic,dissociative anesthesia such as *Ketamine*

No-Scalpel Vasectomy (NSV)

- Soap and water or antiseptic agents (for the surgical scrub)
- Alcohol rinse (recommended if plain soap is used for the surgical scrub)
- Sterile gloves
- Adhesive tape (for positioning the penis)
- Sterile fenestrated drape
- Iodine (as an antiseptic)
- Sterile gauze sponges
- Local anesthetic such as lidocaine (without epinephrine, 1% or 2%)
- Distilled water to dilute lidocaine (if 2% lidocaine is used)
- 10 ml syringe with 1.5 inch or 27 gauge needle
- Chromic catgut or nonabsorbable silk or cotton suture (for ligation) or Cautery unit (if sutures are not used)
- Band-aid or adhesive tape
- Scrotal support (optional)
- Bleach (to prepare decontamination solution)
- Safety box
- Drape (for packing instruments)
- Small sterile towel (for hand drying after surgical scrub)
- Sterile surgical drapes
- Sterile surgeon's gown
- Cap and face mask
- Client's gown
- Bed sheet (plastic)

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http://www.engenderhealth.org/files/pubs/family-planning/LAPM-Equipment-List.pdf

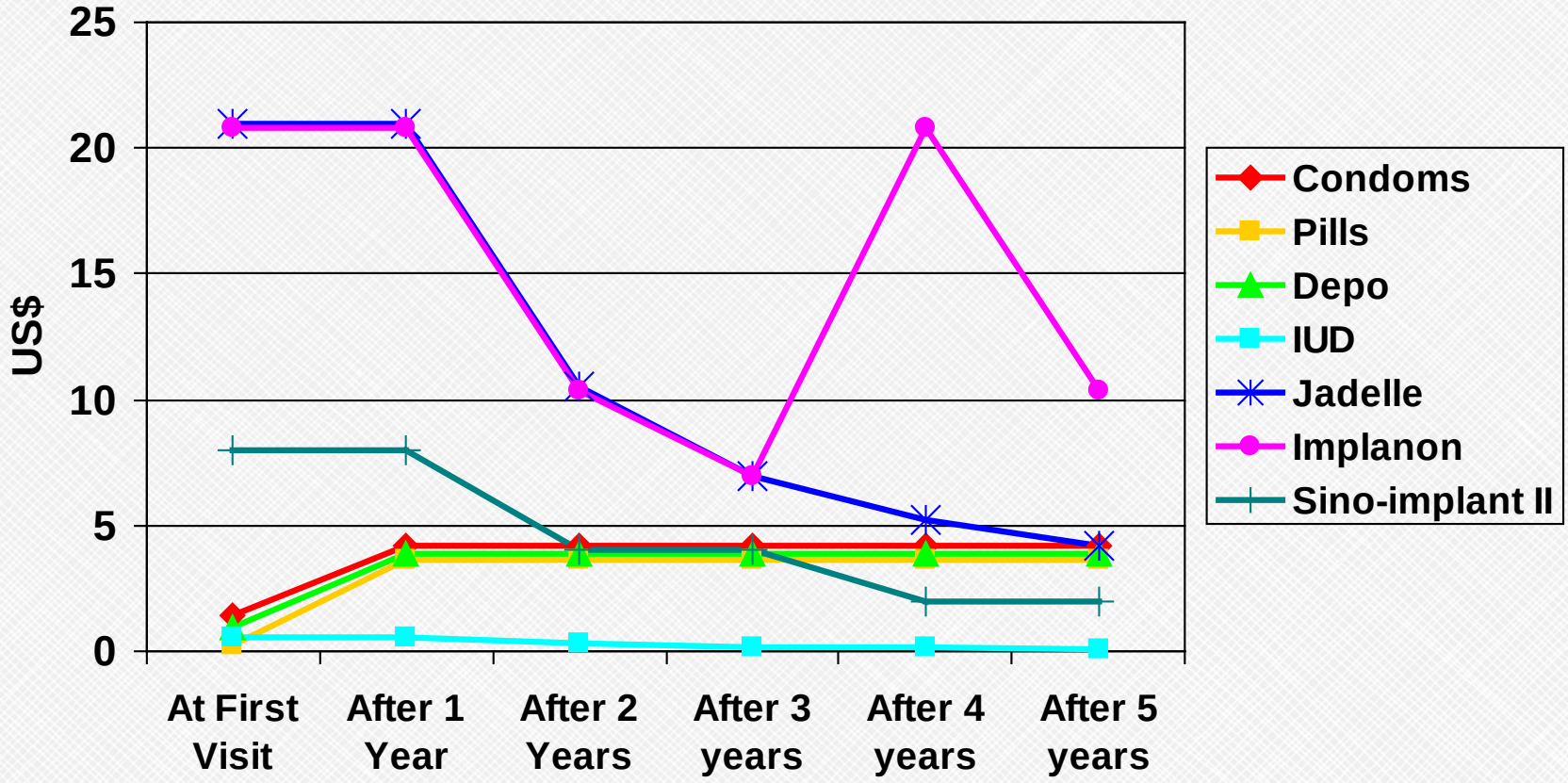
Reason 3: Unit costs of LA/PMs are high (except IUD)

Unit costs of contraceptive methods

Method	Unit Cost
Condoms	$0.025
Pill	$0.21
IUD	$0.37
Female condom	$0.77
Injectable	$0.87
Male sterilization	$4.95
Sino-implant II	$~$8.00
Female sterilization	$9.09
Implant (Jadelle; Implanon)	$24.089

Ross, Weissman, and Stover, 2009

Annual commodity costs, over 1 to 5 years



Source: UNFPA 2005. *Achieving the ICPD Goals: Reproductive Health Commodity Requirements 2000-2015*.

Reason 4: The muddy waters of CS language

What is the problem with the language in CS?

- **Ambiguity**

  doubtfulness or uncertainty of meaning or intention

- **[Lack of] specificity**
  - **[lacking] having a special application, bearing, or reference; specifying, explicit, or definite**
- **Imprecision**
  - **not precise; not exact; vague or ill-defined**
- **Different words being used to mean the same thing**
- **Same words or phrases being used to mean different things**
- **Language of CS causes (inadvertent) bias against LA/PMs**

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Examples of the problem with the language in CS

- **Ambiguity, lack of specificity, imprecision**
  - **What is included in "supplies"? What in "commodities"?**
  - **Is it "FP" or "RH" we are talking about? (let's be clear & not hesitate to use FP if what is intended to be meant and understood is FP)**
  - **Consider:**
    - ***"supplies" vs. "medical instruments (e.g., forceps, scalpel handle, cup)"***
    - ***Consider "expendables" vs. "expendable medical supplies (e.g., scalpel blade, sterile gloves, syringes)"***
    - ***"Commodities" vs. "Family planning commodities (e.g., pill, injectable, implant, IUD)"***

Different words being used to mean same thing

International definitions of contraceptive security: equate it to "supplies"

"Ensuring that all people … can access and use affordable, high-quality **supplies** to ensure their better reproductive health."

(RH Supplies Coalition website)

"Reproductive health contraceptive security exists when people are able to choose, obtain and use the RH **supplies** they want….."

(JSI/DELIVER SPARHCS)

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Inexactness and incompleteness in national strategies

"Definition of Contraceptive Security"

"For family planning programs, the vital importance of contraceptives is often summed up by the slogan: *No Product, No Program.* Without contraceptive security, families will be unable to space their births, limit their family size, and time pregnancies."

(Albania, National Contraceptive Security Strategy, June 2003)

Different words being used to mean same thing … and same words being used to mean different things

- Commodities = supplies (= CS)
- Is "commodity security" larger or smaller than "contraceptive security"? [Can't be both, but I've seen it used both ways in major CS documents]
- *"The global reproductive health community **needs a common understanding** **of terms** such as **'commodities'** and **'supplies'"***

  —Meeting the Challenge: Defining Reproductive Health Supplies, PAI (2001)
- *"Within this document, the term **'RH supplies'** refers to all **materials** and **consumables** needed to provide sexual and RH care services. They include … contraceptives and family planning supplies … Although research suggests that **the terms "supplies"** and **"commodities"** may be **understood differently** by different audiences … the terms are **used interchangeably**."*

  -—RHSC Strategic Plan, 2007

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Language conditions thought: Language used in CS introduces bias against LA/PMs

- Language used in CS **introduces bias against LA/PMs** in favor of short-acting resupply methods:
  - **Is vasectomy a "product"? Is female sterilization?**
  - **Is sterilization or vasectomy a "commodity"?** (a thing, something tangible that you can hold in your hand)
  - There is a difference between a "contraceptive" (what you hold in your hand, not FS or V) and a "contraceptive method" (includes FS and V):
  - Even if some of the LA/PMs can be seen as a "product," e.g., the IUD & the implant, more is needed for them to be provided & used:
    - *For LA/PMs, "No provider, no program"*
- For FP services – and full/true "contraceptive security" – to choose, obtain, and use FP – it is "No access, no program"

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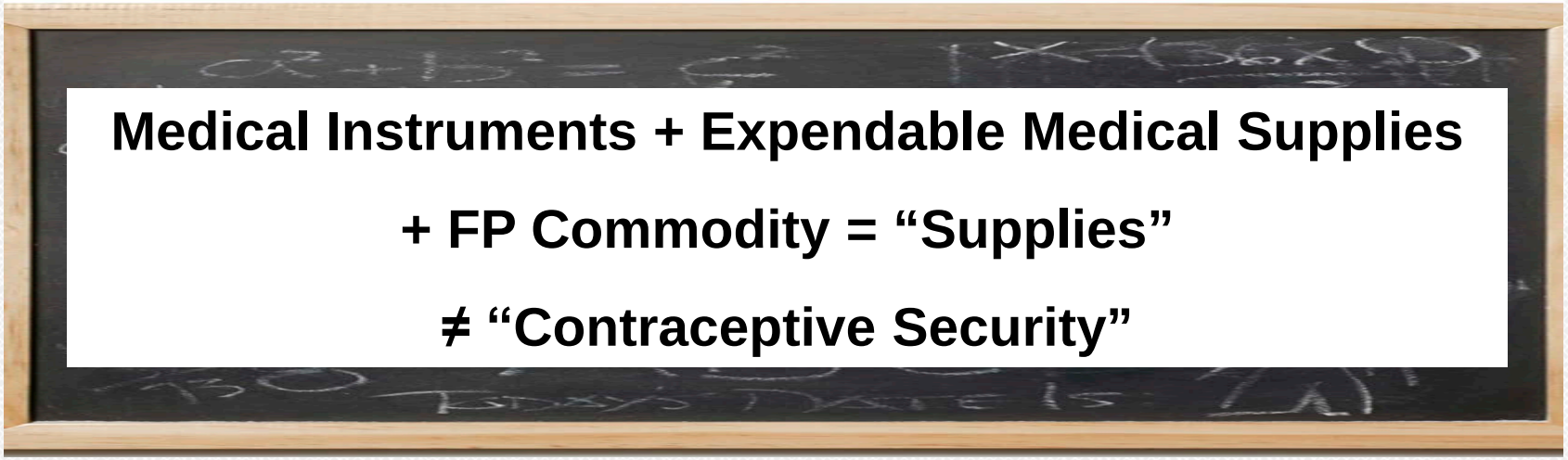
Reason 5: *Services*: Medical instruments and expendable medical supplies: necessary, but not sufficient (alone)



Services are needed

to provide clinical methods of family planning

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So, why does it matter (if LA/PMs are neglected)?

Photo by P. Perchal/EngenderHealth

Photo by Staff/EngenderHealth

1. LA/PMs are highly effective
2. There is high unmet need for delaying, spacing and limiting births
3. There is a sub-optimal fit between reproductive intent and method use
4. People want and use LA/PMs when they are made available
5. LA/PMs are cost effective
6. LA/PMs save lives, ↑health

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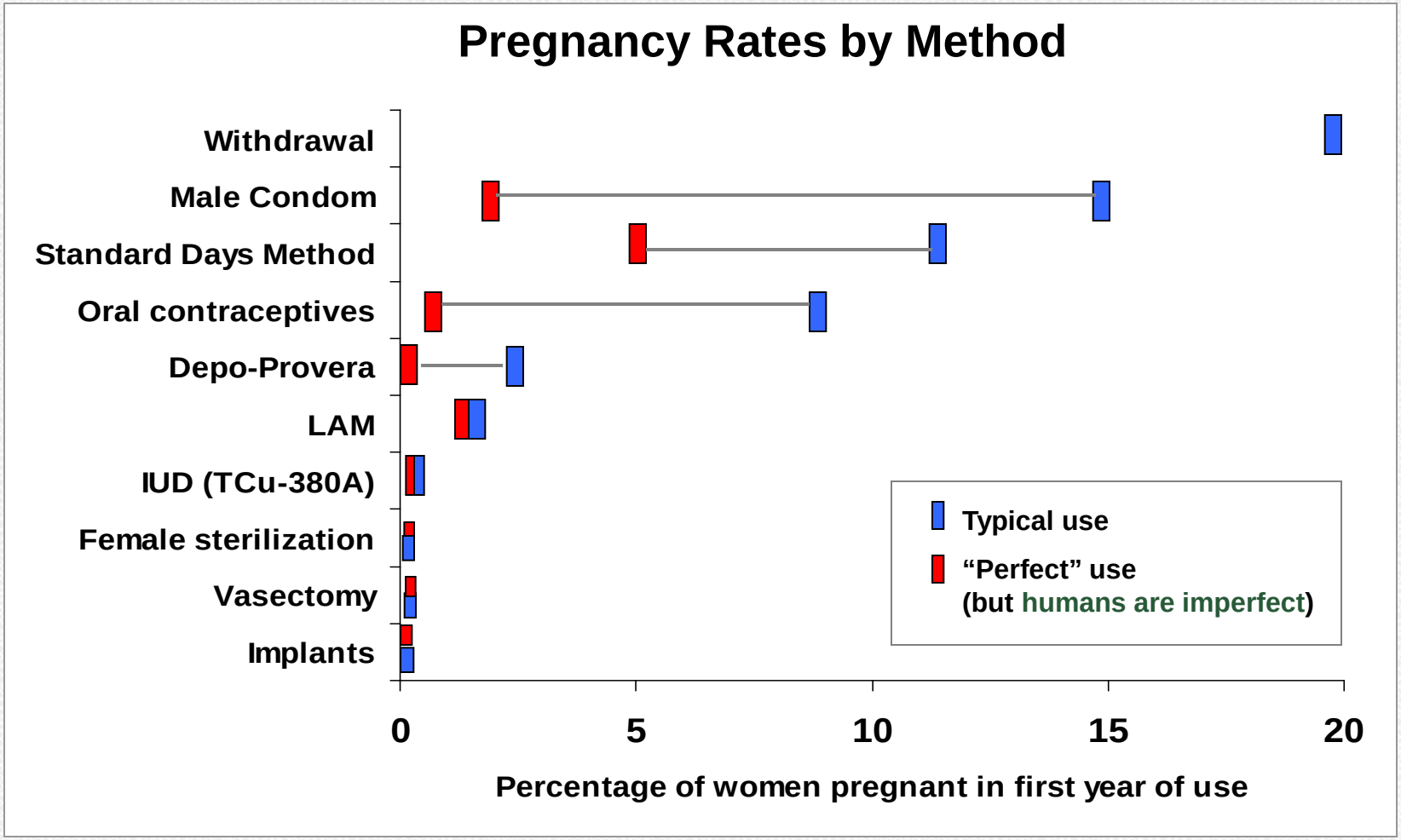
Rationale 1. LA/PMs are highly effective



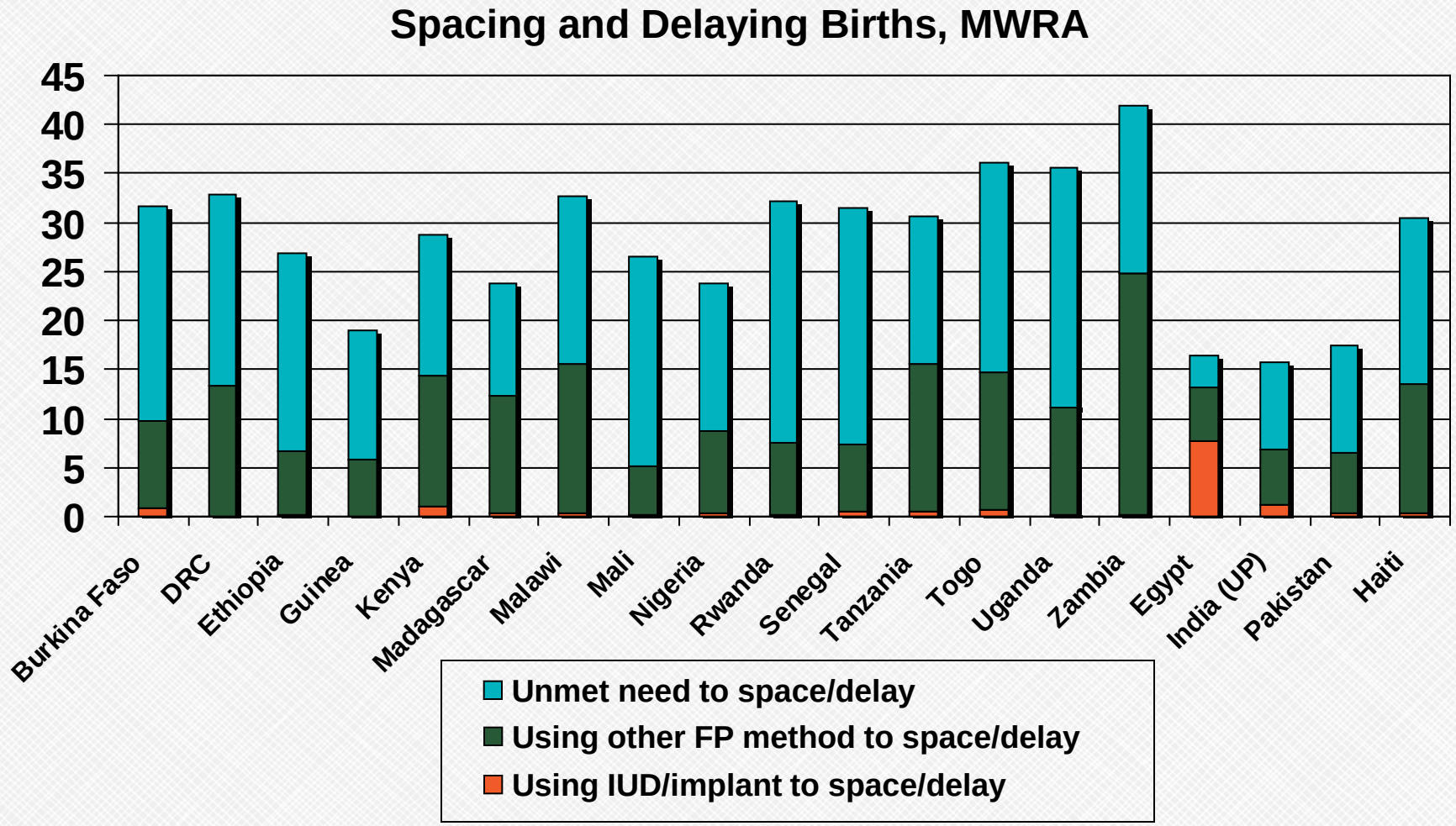
"Not all FP is the same": relative effectiveness

Relative effectiveness of various FP methods in preventing pregnancy

Method	# of unintended pregnancies among 1,000 women in 1st year of typical use
No method	850
Withdrawal	270
Female condom	210
Male condom	150
Pill	80
Injectable	30
IUD (CU-T 380A / LNG-IUS)	8 / 2
Female sterilization	5
Vasectomy	1.5
Implant	0.5

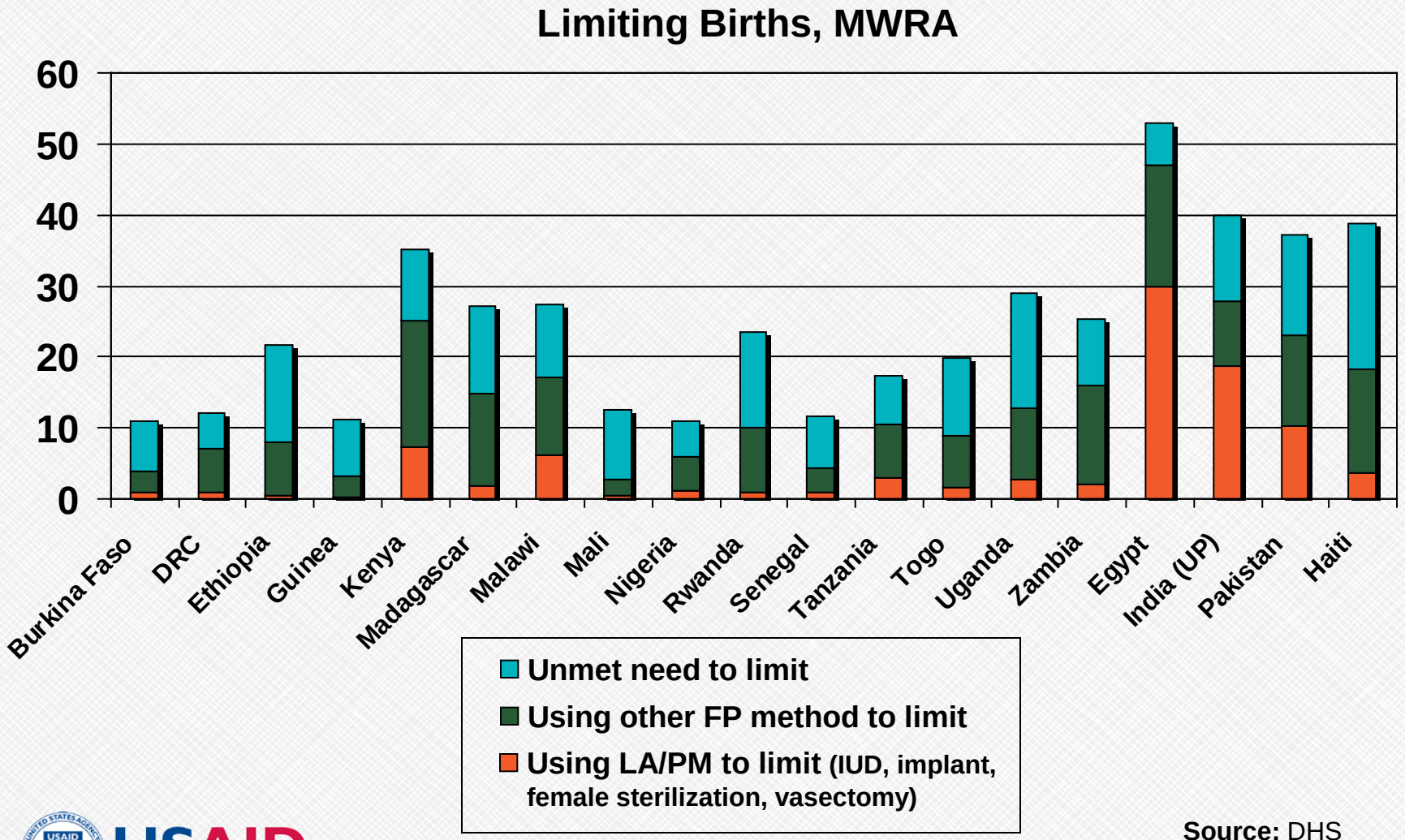
Source: Trussell J. Contraceptive efficacy. In Hatcher RA, et al. *Contraceptive Technology: Nineteenth Revised Edition*. New York NY: Ardent Media, 2007.

Rationale 2. High unmet need: Spacers & delayers worldwide: Low use of long-acting contraception (IUDs & implants)



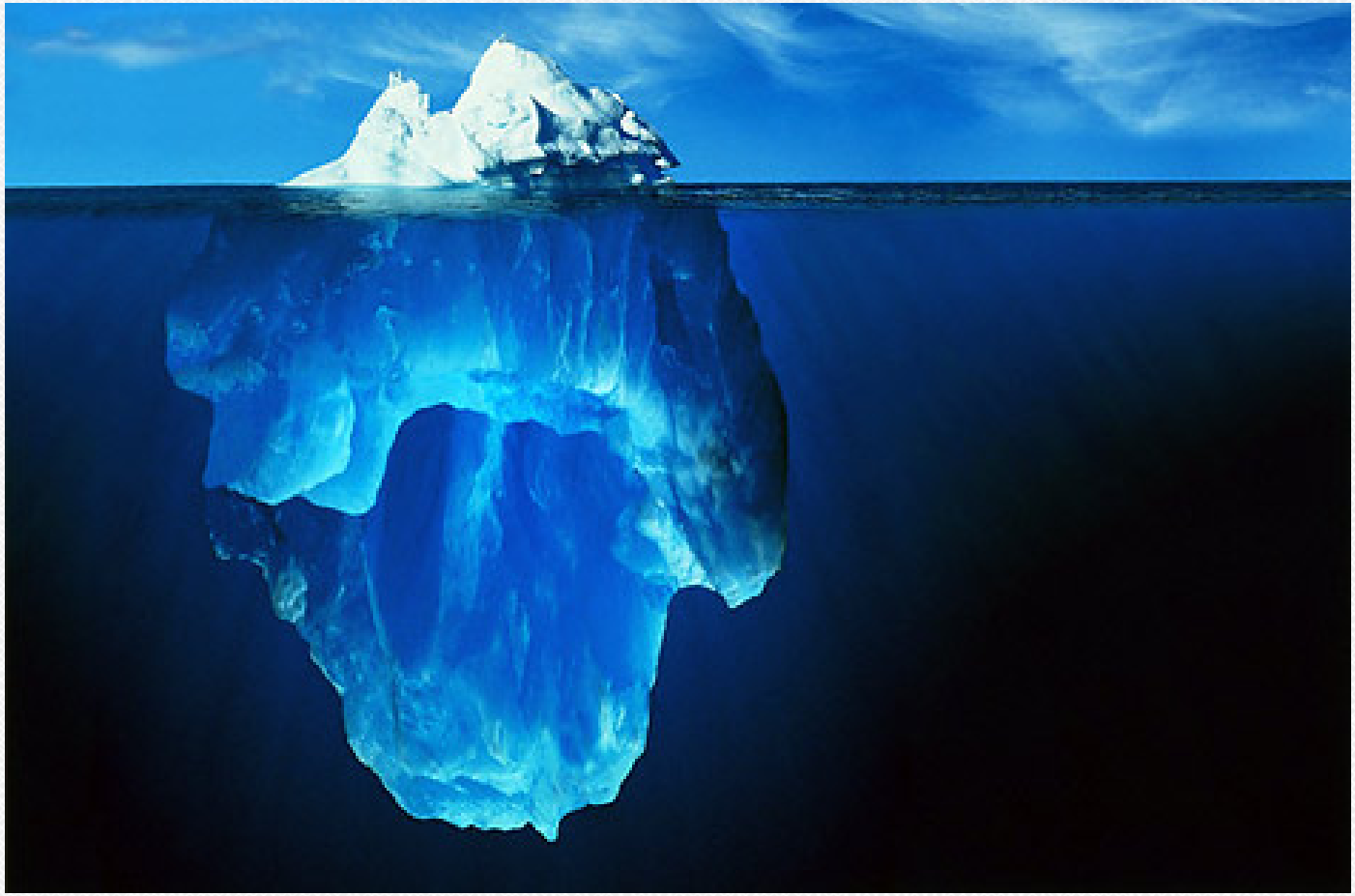
Source: DHS

Limiters worldwide:
High unmet need to limit, low LAPM use



Source: DHS

High unmet need—only tip of iceberg



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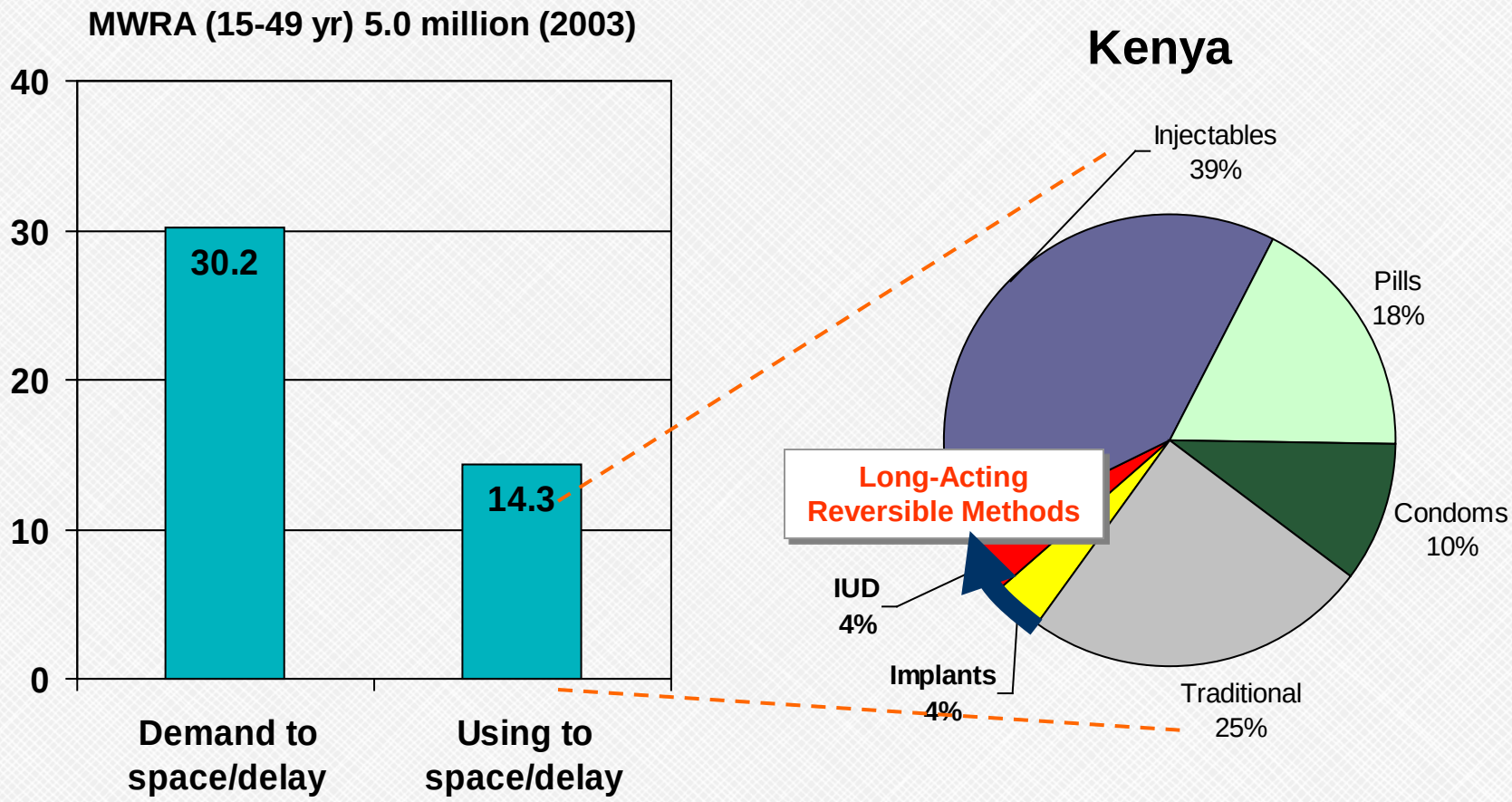
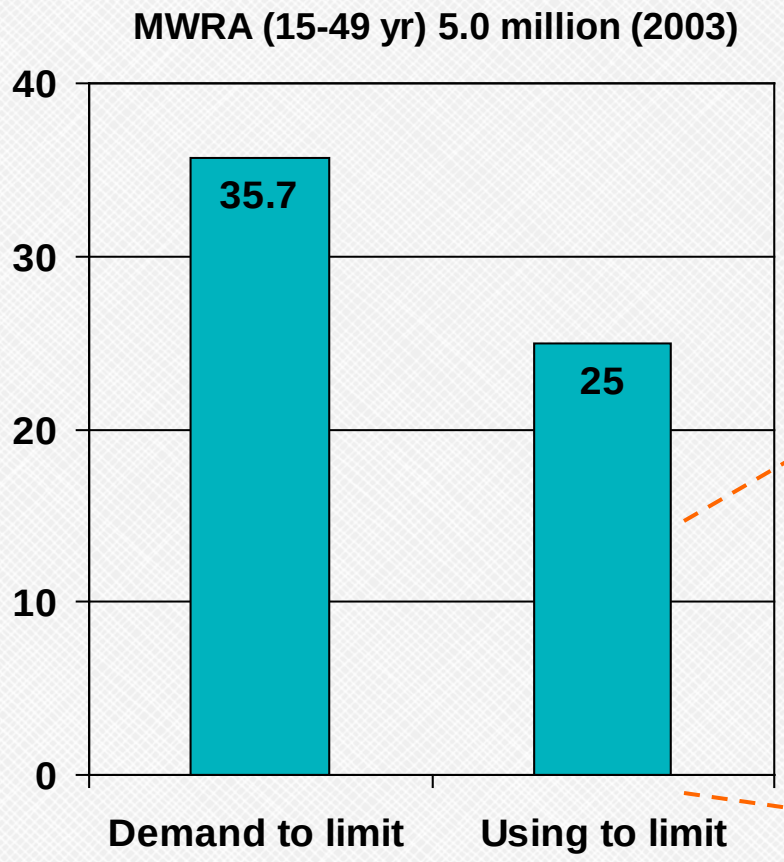
Rationale 3. Reproductive intentions and contraceptive choice: Only 8% of delayers and spacers using LARC

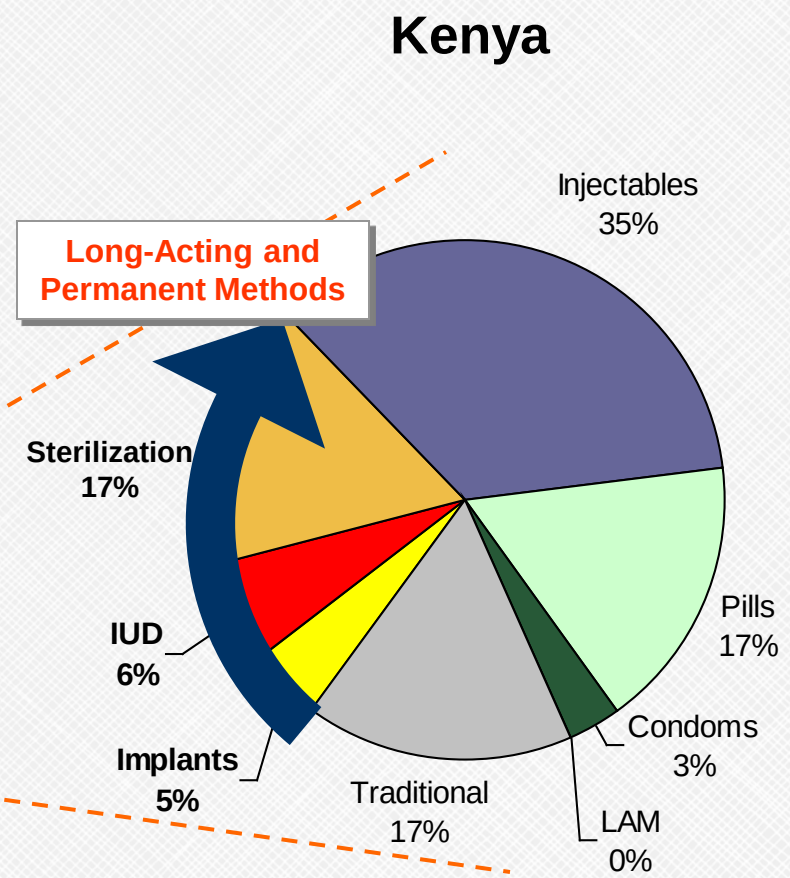


Source: MEASURE/DHS, Kenya DHS Survey, 2003; World Population Prospects: The 2008 Revision.

Only 8% of spacers/delayers use an IUD or implant

Poor fit of reproductive intent with method used:
Among limiters in Kenya LA/PMs are underutilized

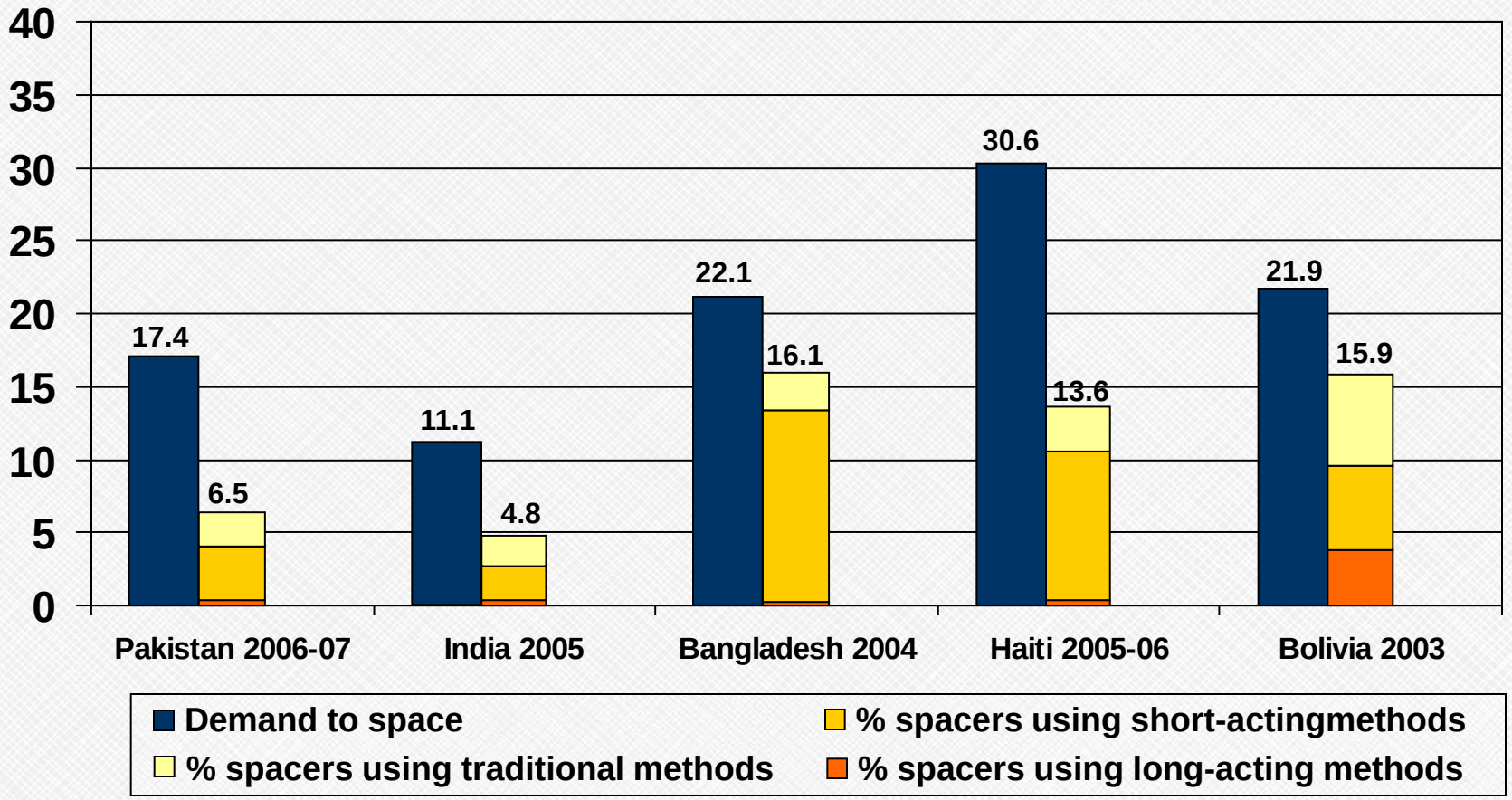




Source: MEASURE/DHS, Kenya 2003 DHS Survey.
World Population Prospects: The 2008 Revision.

Only 28% of limiters use any of the LA/PMs

Demand to space, using to space, and use of LA/PMs: ASIA & LAC



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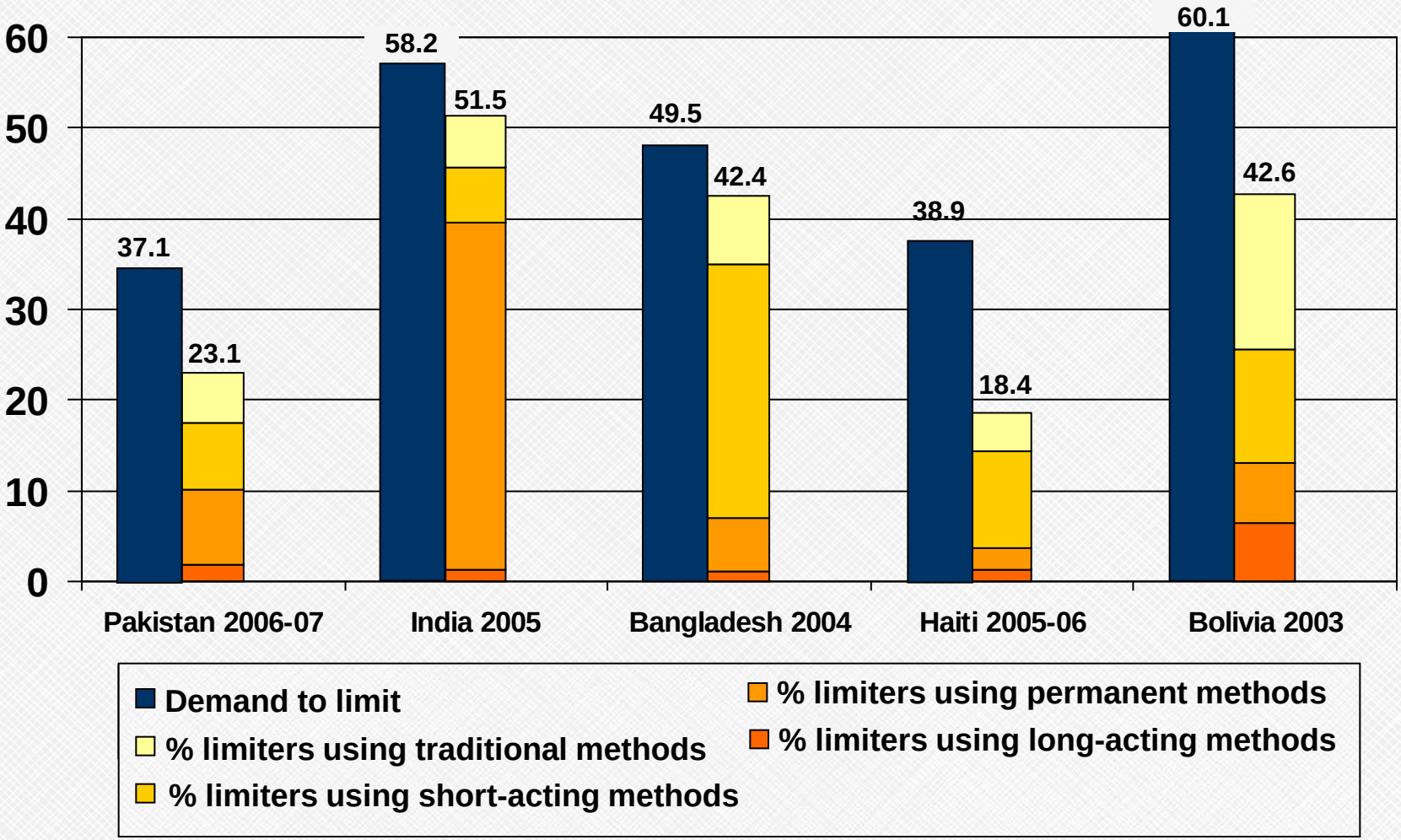
Total demand to limit high, use of LA/PMs to liit low among limiters in ASIA & LAC



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Rationale 4: When LA/PMs are made available, people choose them and like them [this fact under-known]

Kenya focuses on IUDs, in context of full choice, and "FP revitalization"	More than 200,000 women use an IUD. Satisfaction is high.
Ghana's midwives are trained and allowed to insert implants	CPR for implants rose 10-fold from 0.1% to 1.0% [1998-2003]
Ethiopia makes greater commitment to FP services	Procurement of implants rises from 31,000 to 830,000 units (2005-2009)
Malawi's clinical officers allowed to perform female sterilization	CPR for female sterilization more than triples to 6%. Rises in all 5 wealth quintiles.
FP access high for all methods in South Africa; modern CPR: 58%	1 of every 4 women in union (14%) relies on sterilization.
In United Kingdom, few access barriers, wide range of methods, CPR 75%	14% rely on vasectomy; 8% female sterilization, 2% implants; 7% IUD

Sources: DHS; Reproductive Health Supplies Coalition

Popularity reflected in high continuation rates

% Women or men **continuing** FP methods at one year

Tubal ligation	**~100%**
Vasectomy	**~100%**
Implants	**94%**
IUD	**84%**
OCs	**52%**
Injectables	**51%**
Periodic abstinence	**51%**
Condoms	**44%**

Source: The ACQUIRE Project 2007. Reality Check, from DHS data, worldwide

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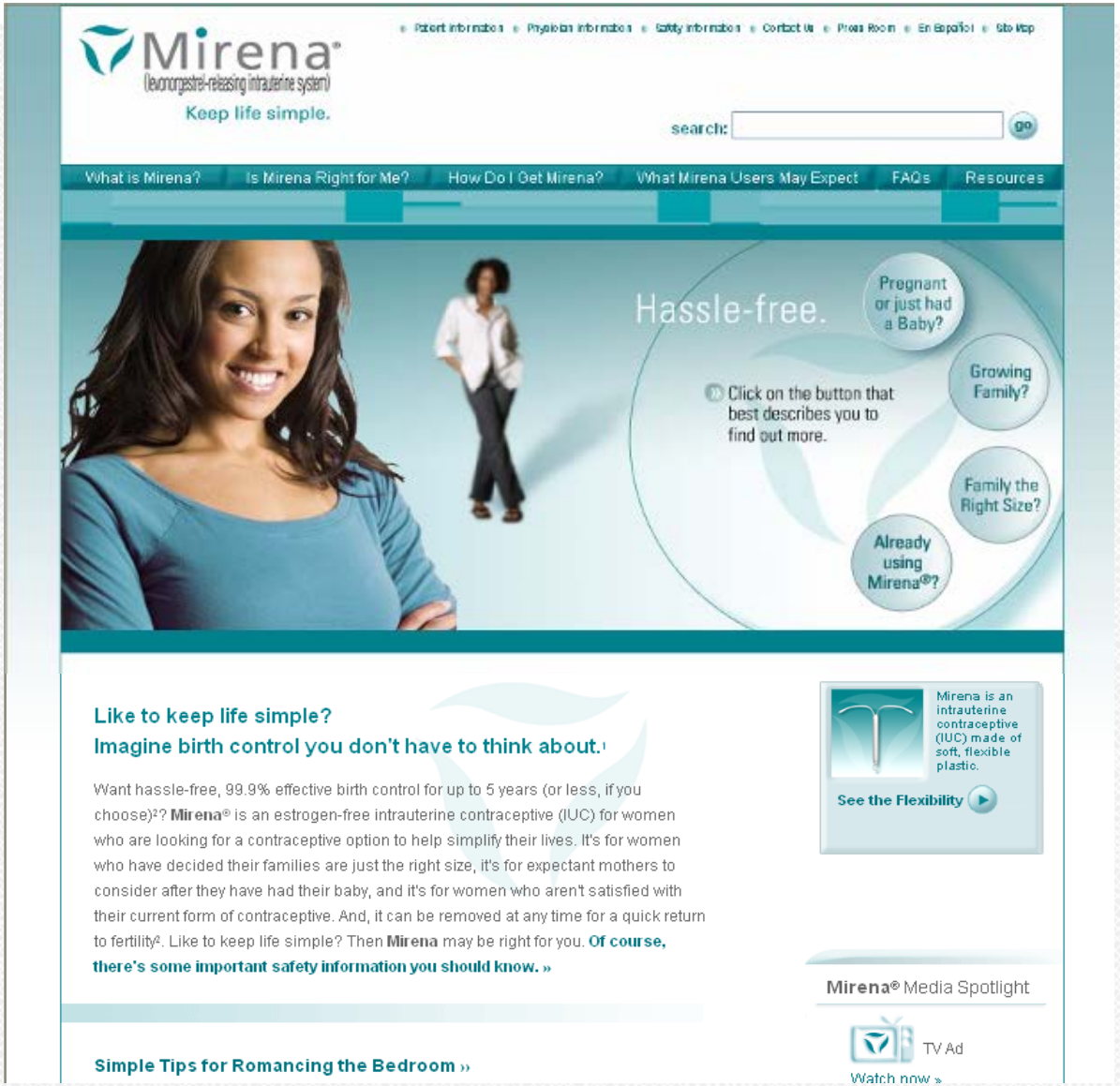
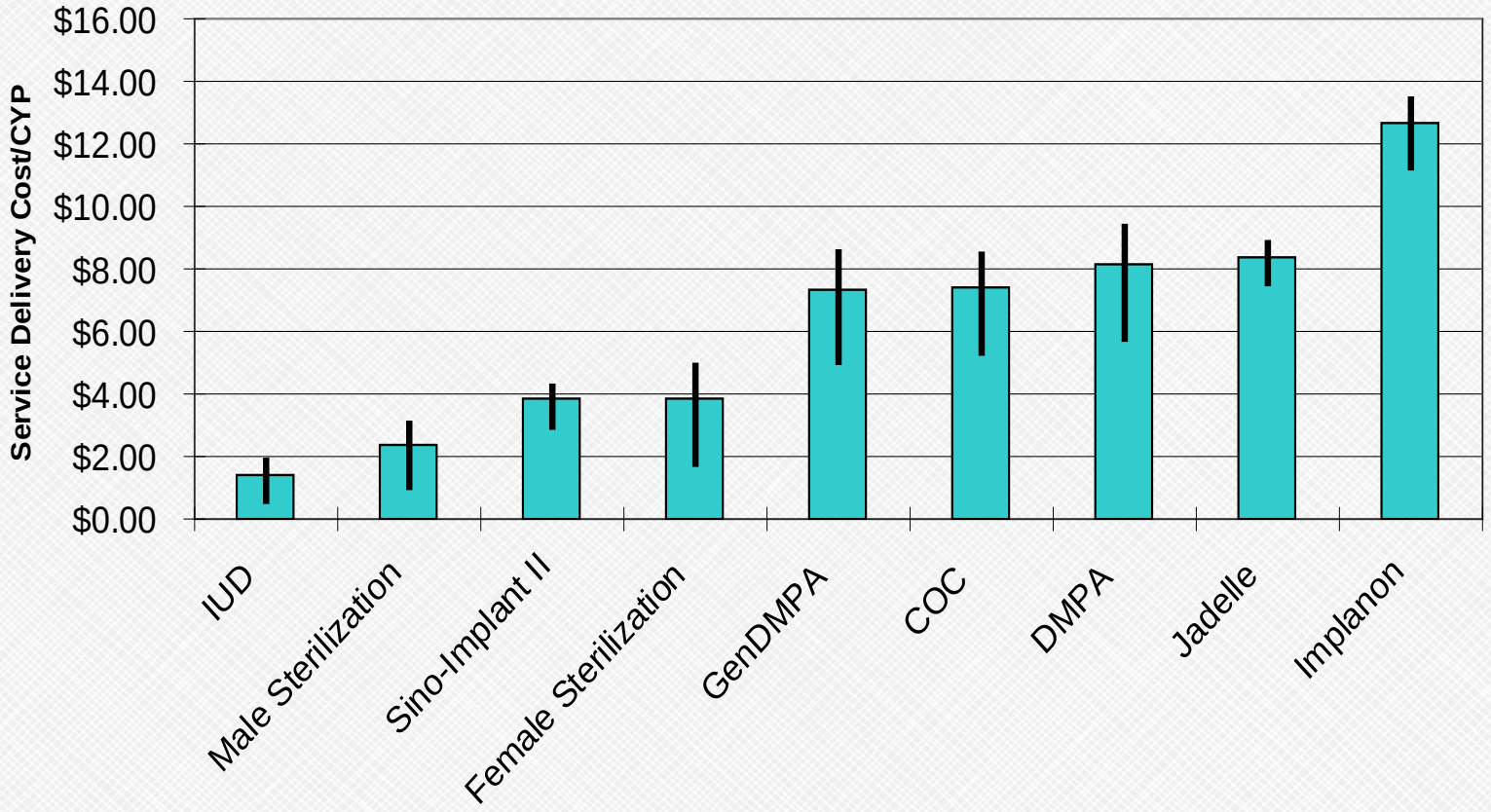
Growing popularity of the IUD in the U.S.
Advertising for Mirena® (the LNG-IUS)



Rationale 5. High cost effectiveness: Service delivery costs per CYP by method (13 USAID FP/RH priority countries)



Janowitz et al. 2009

* Costs include the commodity, materials and supplies, labor time inputs and annual staff salaries. The height of each bar shows the average value of costs per CYP across the 13 USAID priority countries, while the height of the line represents the range of costs across the same countries.

Comparison of available hormonal implants

	Sino-implant (II)	Jadelle	Implanon
			
Manufacturer	Shanghai Dahua Pharmaceutical	Bayer HealthCare	Schering Plough / Organon
Formulation	150 mg levonorgestrel in 2 rods	150 mg levonorgestrel in 2 rods	68 mg etonogestrel in 1 rod
Mean Insertion & Removal time	Insertion: 2 min Removal: 4.9 min	Insertion: 2 min Removal: 4.9 min	Insertion: 1.1 min Removal: 2.6 min
Labeled duration of product use	4 years	5 years	3 years
Trocars	Disposable	Autoclavable / Disposable	Pre-loaded disposable
Cost of implant (US$)*	$7.50 - 8.50	$21.00 - 23.00	$20.00 – 28.00
Cost per Year (if used for duration)	$1.90 - 2.10	$4.20 – 4.60	$6.70 – 9.30

*Costs from Reproductive Health Supplies Coalition database, 2009.

Rationale 6: LA/PMs save lives & improve health

- Modeling study of unintended pregnancy in sub-Saharan Africa:
  - Poor (typical) use of short-acting hormonal methods leads to
    - *Early discontinuation*
    - *High failure*
    - *14 million unintended pregnancies*
- If 20% of women who use pills and injectables in Africa wanted more secure contraception, & switched to implants, would avert, over 5 yrs:
  - 1.8 million unintended pregnancies
  - 576,000 abortions (many of them unsafe)
  - 10,000 maternal deaths
  - 300,000 cases of serious maternal morbidity (e.g., obstetric fistula)
- Same benefits accrue from switch to any other LA/PM—and this was only if 1 in 5 women switched to an LA/PM; if 2 in 5 switch, double the above #s

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Hubacher D, Mavranezouli I, McGinn E. *Contraception* 2008.

So, what to do? 8 recommendations for LA/PM CS

- **Recommendation 1:** ***Advocate for LA/PMs within CS efforts***
- **Recommendation 2:** ***Secure financing for LA/PMs***
- **Recommendation 3:** ***Include LA/PMs fully on essential drug and equipment lists***
- **Recommendation 4:** ***Expand and update CS tools and indicators***
- **Recommendation 5:** ***Refine logistics management and training to include LA/PMs***
- **Recommendation 6:** ***Build program capacity to provide LA/PMs***
- **Recommendation 7:** ***Encourage task-shifting and task-sharing***
- **Recommendation 8:** ***Use precise, consistent, and unambiguous language that encompasses LA/PMs***

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Language conditions thought: Use precise, consistent & unambiguous language that encompasses LA/PMs

- Be specific in definitions and terms: use adjectives, examples, lists:
  - "Expendable medical supplies"—not just "supplies"
  - "Medical instruments" ("… such as …")
  - "Family planning commodities (e.g., IUD, injectable, implant, pill)," not just "commodities"
  - "Contraceptive method" (rather than "contraceptive," which sounds, to some people, like a tangible thing, so excludes the permanent methods)
- Be unambiguous—do not use two words to mean the same thing (e.g., "commodities" and "supplies")
- Be careful and be consistent: "commodity security" vs "contraceptive security": which is intended?
- So too with "RH" and "FP" and RH/FP" (or "FP/RH")
- Use language to fit situation: "product" is a marketing / pharmaceutical / logistics / private sector term; but not a term used in the clinical milieu

Proposed New Definition of Contraceptive Security

"Contraceptive security exists when people are able to choose, obtain and use the contraceptive method they want, in order to meet their reproductive intentions across their life cycle"

In sum, contraceptive security is incomplete without LA/PMs

- Countries and donors increasingly interested in FP (MDG 5 and other MDGs)
- There is high demand and unmet need for LA/PMs to better meet individuals' and couples' RH intentions
- LA/PMs need to be included explicitly and fully in CS definitions, strategies, plans, indicators, and programming
- For full CS including LA/PMs, need:
  - Medical instruments and supplies
  - Skilled, motivated, enabled providers
  - Suitable service setting
  - Supportive service systems (e.g., training; supervision; logistics & supply; management)

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THE respond PROJECT

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