

## Countering myths and misperceptions about contraceptives



Photo courtesy of the David and Lucile Packard Foundation

Misperceptions about contraceptive methods have long been cited as an important influence on women's and men's decisions to adopt and continue contraception. Unsubstantiated fears about contraceptive methods—for example, that certain contraceptive methods cause permanent infertility or cancer—are not supported by the extensive research about contraceptive safety. This issue of *Outlook* examines the scope and impact of misperceptions about contraception, the science behind debunking misperceptions, and some approaches that programs are using to address this persistent problem.

### SCOPE AND IMPACT OF CONTRACEPTIVE MISPERCEPTIONS

#### Misperceptions affect all methods

Misperceptions are defined here as specific and widespread beliefs about the effects or purpose of contraceptives that are false or unsupported by the best available evidence. No contraceptive method is exempt from misperceptions, and false beliefs appear to extend across socioeconomic groups, cultures, and regions.<sup>1-21</sup> Myths and misinformation about contraception are different from women's concerns about documented or experienced method-related side effects, though there is some overlap and they are often lumped together in analysis of the problem (see box on page 3).

Fear of infertility resulting from contraceptive use is a prominent, overarching concern.<sup>3,5,13-16,22-23</sup> Additional recurring themes include that disruption of normal bleeding patterns (caused by some contraceptives) is harmful to health<sup>4-6,8,16</sup> and that contraceptives cause cancer.<sup>1,3,8-9,13,23</sup> Women, men, and providers may have misperceptions about the suitability of methods or availability of services for particular audiences, such as when providers view long-acting methods as unsuitable for younger women despite the

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lack of contraindications in this age group.<sup>16,24-25</sup>

Misperceptions can lead people to make decisions that are not in their best interest, often resulting in both personal and societal costs.<sup>26</sup> Unsubstantiated fears about contraceptive safety can lead women to forgo contraceptive use altogether, use a less effective method, or use effective methods incorrectly (likely increasing their overall health risk). For example, Cambodian women reported being willing to accept the lower efficacy of withdrawal to avoid perceived health effects of hormonal methods.<sup>3</sup> Likewise, Nigerian youth reported having more confidence in the safety of an abortion procedure than in taking daily pills.<sup>17</sup> Examples of incorrect use based on misperceptions include taking a rest from pills to prevent them from accumulating in the uterus.<sup>4</sup>

### Misperceptions have multiple sources, including providers

Misperceptions about contraceptives appear to stem from multiple sources. Women's experience of side effects may lead to misperceptions about methods.<sup>4,7,15</sup> For example, the myth that hormonal contraceptives cause blood to accumulate in the body and cause tumors may have its origin in menstrual disturbances/amenorrhea that is a documented side effect of some methods. When women experience this side effect in the absence of correct information, they may create a narrative that explains it.<sup>5</sup>

Social networks also have been identified as a key source of misinformation.<sup>7,19,27</sup> For example, women in rural Kenya sought information from women whose bodies and circumstances were similar to their own to supplement the information received from providers.<sup>19</sup> The Internet is another source of information that may contribute to contraceptive misperceptions among both clients and providers.<sup>28</sup>

Providers themselves have been identified by women and men

as sources of misinformation, with provider warnings about unsubstantiated adverse health effects of contraceptive methods contributing to client fears and misperceptions.<sup>2-3,7,10-12,24,29-30</sup> Providers may hold misperceptions about methods as a result of personal biases or simply be misinformed about the latest medical recommendations.

### Understanding the size of the problem

Determining the overall size of the contraceptive misperceptions problem is difficult. Most available quantitative data do not distinguish women's fears about documented side effects from unsubstantiated fears about adverse health effects (e.g., that contraceptives cause cancer<sup>18</sup>). Because these issues are closely linked, collecting data that distinguish one from the other is difficult. Analyses of Demographic and Health Survey (DHS) data often combine reasons for contraceptive discontinuation into one category of "method-related issues" that may include misperceptions, experienced side effects, health concerns, and other issues (e.g., problems of access and

availability).<sup>31</sup> Some DHS analyses specify categories of "side effects and health concerns" or "health-related fears," but these descriptors fail to distinguish concerns about side effects from unsubstantiated fears. In the absence of conclusive data, opinions are mixed about the relative impact of documented side effects versus misperceptions on contraceptive use (see box on page 3).

Analyses of survey data indicate that the overall problem of side effects and health concerns is a significant barrier to adoption and continued use of contraception.<sup>31-35</sup> An analysis of DHS data from 35 countries found that side effects and health concerns were cited as the reason for non-use by 37.3 percent of women;<sup>35</sup> they are also the primary reasons for discontinuation.<sup>34</sup> The level of concern about side effects and health risks is somewhat higher in countries with high overall unmet need compared with countries with low unmet need.<sup>36</sup>

Both documented side effects and unsubstantiated fears about methods feature prominently in the qualitative literature about women's contraceptive decision-making, and it is likely that the two factors interact closely.<sup>37</sup> A study involving Iraqi women found that, while side effects were the most common reason given for intrauterine device (IUD) removal requests (mentioned by 45.7 percent of women), some 12.6 percent mentioned fears and misperceptions as the reason for discontinuing. In addition, early IUD removal was more likely among women who reported having fears (64.6 percent) compared to women without fears (30.8 percent).<sup>38</sup>

Further complicating the discussion of the impact of misperceptions on contraceptive use is a lack of clarity about how much trust people put in misinformation.<sup>15,39</sup> For example, in a study of men's and women's perceptions about sterilization in Tanzania, although many potential vasectomy and tubal ligation clients discussed rumors that vasectomy causes loss of virility, only a few said they believed them.<sup>1</sup>



This advertisement from the USAID-funded RESPOND Project in Uganda uses words and images to challenge the perception that the IUD (locally called "the Coil") causes weakness. ©EngenderHealth, reprinted with permission.

## Women are concerned about side effects

Misperceptions are only one aspect of the complex set of factors influencing contraceptive decision-making. The literature about side effects and misperceptions contains rich information about women's other concerns about contraception, some of which may be even stronger deterrents to contraceptive use than misperceptions or may strengthen misperceptions.<sup>16,21-22,35,40</sup>

A particularly strong theme in the literature about misperceptions is that women are concerned about the impact of side effects on their health and lives. In much of the qualitative literature about misperceptions, women cited their experiences with side effects as being very problematic and a significant reason for discontinuing methods.<sup>6,39,41-42</sup> The words of a woman in Cambodia—"If we can endure, we continue"—highlight the very real tradeoff women make in using less-than-perfect methods for the sake of preventing pregnancy.<sup>39</sup>

Many women and men report concerns about how side effects affect their sexual relationships and societal status. For instance, injectable users have noted a tangible impact on their sexual relationships due to decreased desire and pleasure (resulting from vaginal dryness and lower libido) as

well as reduced opportunity for sex (due to irregular bleeding that interfered with sexual relations). In Uganda, 26 women participated in a study that explored women's experience with injectable contraceptives. Of the 16 women who discontinued using injectables, all but one (who wanted to conceive) reported discontinuing use mainly because of the impact of side effects on their lives and relationships. A delay in return to fertility after discontinuing the injectable was also perceived to threaten their relationship stability as well as their status with in-laws, who may label them as infertile.<sup>41</sup> Muslim women may face stigma if irregular bleeding disrupts their ability to pray.<sup>43</sup>

The quality of provider interactions with clients about these broader concerns may have important implications related to addressing misperceptions. For instance, women report that providers are often dismissive about side effects, counseling that they are "normal" or "nothing to worry about." Providers also may tend to emphasize effectiveness as much more important than side effects.<sup>16,41</sup> However, when providers dismiss side effects, it trivializes the disruption that they can have on women's lives<sup>41</sup> and may cause clients to "give up" on the health care system, instead seeking services or information from less reliable sources.<sup>44</sup>

### THE SCIENCE BEHIND ADDRESSING MISPERCEPTIONS

Results from cognitive science research on a broad range of topics, including public health issues, suggest that misperceptions are extremely difficult to change. Research suggests that, at best, efforts to correct misperceptions may have only a limited impact. At worst, there is a possibility that providing information that directly addresses a misperception—even information that is evidence-based—runs the risk of strengthening the misperception.<sup>26</sup>

Having a better understanding of how people process information and which strategies effectively debunk misinformation can be a starting point for considering how to address contraceptive misperceptions. Cognitive scientists have used their understanding about how people think to identify a number of

strategies for "debiasing" people who hold misperceptions:<sup>26,45</sup>

- Focus on providing correct information rather than negating myths.
- Keep the information simple and limited (for example, three pieces of information can have more impact than ten).
- Create an alternate, compelling explanation to replace the myth.
- Present messages through sources that are trusted by the intended audience.
- Present information graphically, when possible.
- Repeat the correct messages frequently.

The rationale for these strategies is complex. While many people assume that simply providing correct, evidence-based information will change perceptions, research has

demonstrated that people interpret information within the context of their personal experiences and worldview.<sup>45,46</sup>

Another difficulty is presented by what cognitive scientists call "stickiness" of information, meaning that misinformation remains embedded in memory even when a person is presented with subsequent information that corrects it. Misinformation that has an emotional component, such as rumors that contraceptives cause sterility or cancer, is particularly "sticky."<sup>46</sup>

Corrective information can backfire in several ways. First, statements that repeat the misinformation in the process of trying to correct it can inadvertently strengthen the belief in the misinformation by making it more familiar. This familiarity bias results in people being more likely to accept familiar information as true.



Thus, the “myth versus fact” approach that is sometimes used to address contraceptive misinformation may actually reinforce misinformation. One exception to this is that in-depth study of misperceptions with corrective information—as in an extended provider training program—can have a positive impact on correcting misperceptions.<sup>26</sup>

A second factor influencing the success of corrections is the complexity of the correction, with more complex corrections being less likely to succeed than simpler ones.<sup>45</sup> Processing a large amount of information takes more effort than processing a few pieces of information. Since rumors and myths are generally simple, they are easier for the brain to remember than complex rebuttals.

Finally, corrections can backfire when they challenge a person’s worldview. Research has found that people naturally gravitate toward information

that supports their existing views, even when these views are false. Furthermore, providing contradictory information to those who strongly hold erroneous beliefs is likely to further strengthen their beliefs.<sup>47</sup>

### APPROACHES FOR CHANGING MISPERCEPTIONS ABOUT CONTRACEPTION

Addressing misperceptions about contraception represents a significant challenge for family planning programs and providers. Efforts to address misperceptions need to occur at multiple levels; include correct, consistent, and repeated messages; and be ongoing. To be effective, this will likely require a significant and sustained financial commitment. The need to address contraceptive misperceptions as an element of informed choice was the focus of an expert meeting convened by PATH and Ibis Reproductive Health earlier this year (see box, below).

Although research evaluating approaches to changing misperceptions about contraceptives is limited, promising approaches include provider training and communication campaigns. In general, approaches that may be helpful for addressing misperceptions are consistent with providing high-quality, client-centered care, including offering accurate information, supportive counseling, a broad range of contraceptive options, and access to follow-up services (for help managing side effects or switching to a more acceptable method). These approaches also may be useful in addressing women’s concerns about side effects, which could in turn reduce misperceptions and fears.

#### Provider training and support

At the program level, efforts are needed to address provider misperceptions about contraceptives as well as to inform providers

## Revitalizing the discussion about contraceptive misperceptions

In February 2015, PATH and Ibis Reproductive Health convened a meeting of about 30 researchers and practitioners with expertise in reproductive health and family planning to discuss the persistent problem of contraceptive misperceptions.

Participants emphasized a need to revitalize discussion on this issue from the perspective of supporting informed contraceptive choices for clients.<sup>48</sup> Identified research gaps about the scope and impact of misperceptions included:

- Need for quantitative data that distinguish fears that stem from documented side effects from those that result from rumors and misperceptions.
- Need for information about how women weigh their contraceptive options and the extent to which misperceptions affect method choice.

Meeting participants also identified the following program areas in need of tested strategies:

- How to address health care providers’ biases and misperceptions through pre-service and in-service training

(and how to reach pharmacists and drug sellers in the private sector, who are often a prime source of information and contraceptives).

- How to improve counseling to help address discontinuation that occurs due to both side effects and misperceptions.
- Strategies for communication campaigns to address misperceptions, including where and when to direct messaging, which messengers are most credible, how to fund ongoing repetition of messages, and how to harness the power of newer communication technologies.
- Extent to which adolescent programs, which focus on changing norms and may reach clients before misperceptions set in, could be effective platforms for addressing misperceptions.
- Extent to which media can be engaged to present evidence-based information about contraception (and refrain from sensationalizing misperceptions about contraception).
- How to prevent misperceptions from attaching to new methods as they are introduced.

and program managers about effective strategies for correcting misperceptions held by clients. A particular challenge is that misperceptions held by providers may be just as hard to change as those held by clients. Program and provider resources that have been developed over the years to help separate contraceptive myth from fact<sup>49-51</sup> are largely based on the assumption that providing detailed, evidence-based information effectively corrects misinformation, which may not be the case. Provider training materials may need to be reformulated to follow the debunking principles outlined above, focusing on simple and correct information that does not repeat or reinforce myths, and addressing the ideas and emotions that contribute to misperceptions.

At the service delivery level, efforts to correct contraceptive misperceptions often are focused on providing information and counseling. Research about the impact of counseling on contraceptive continuation suggests that even specialized counseling may have only limited impact in the absence of frequent follow-up contacts.<sup>52</sup> One strategy that bears testing is building provider skills to be responsive to women's concerns and fears about using contraceptives. Responsiveness includes not just listening to and acknowledging women's concerns but also helping women strategize practical ways to manage possible side effects, which could include switching to a different method. Because many misperceptions stem from an inaccurate perception of risk, job aids—such as visuals that help to explain the health benefits and low risks associated with using contraceptive methods—also may be helpful to providers in combating misperceptions.

### Communication campaigns

Communication campaigns also have been widely used as a strategy to increase awareness of family planning in general as well as to address



This advertisement from the RESPOND Project in Honduras—entitled “Why is this man smiling?”—uses the concept of a “permanent smile” to challenge the misperception that vasectomy affects sexual ability. ©EngenderHealth, reprinted with permission.

misperceptions more specifically. For example, the RESPOND Project, led by EngenderHealth and funded by the US Agency for International Development (USAID), used several evidence-based strategies for debunking myths about long-acting methods through mass communication campaigns paired with a community-based outreach strategy in eight countries (Bangladesh, Ethiopia, Ghana, Guinea, Honduras, Kenya, Tanzania, and Uganda; see photos on pages 2 and 5 for examples). Strategies included:

- Repositioning methods in a positive light rather than directly countering the misperception.
- Using simple, catchy messages.
- Presenting information graphically.
- Repeating messages frequently and in different formats (e.g., television, radio, brochures, posters).

Examples from messaging in India to address misperceptions about non-scalpel vasectomy (NSV) include:

- “Most importantly—our sex life hasn’t changed,” which directly addresses a common misperception (that vasectomy affects sexual

function) without repeating and possibly reinforcing the myth.

- “The nerves and vessels that control erection are not tampered with during NSV. Hence, after NSV, the beneficiary has a normal erection,” provides an alternate explanation to take the place of the myth that vasectomy affects sexual function.

A RESPOND campaign in West Africa to encourage discussion about long-acting methods also incorporated the debiasing principles described above: for example, messaging framed long-acting methods as “birth spacing,” a term that implies future fertility and connects with the strongly held worldview that preserving fertility is important. Messages such as “The Coil is good for us to 12 years—but it can be easily removed, anytime I want another child” provided practical, reassuring information about returning to fertility. Videos told the stories of real people, another way of framing the message to be consistent with the recipient’s worldview. Although the impact of these campaigns on overcoming misperceptions was not specifically evaluated, the campaigns did boost method acceptance and resulted in some lasting influence on acceptance.<sup>53</sup>

Communication campaigns may boost acceptance of some methods, but they may not address all of the concerns that cause clients to discontinue methods. For example, an evaluation of a communication campaign to encourage continued use of injectables among first-time users in Kenya found that there was no significant difference in continuation rates between women exposed to the campaign and the control group. The evaluators noted that the overriding factor leading women to discontinue injectable use was their experience of method side effects, suggesting that helping women manage side effects or developing methods with fewer side effects might have more impact on continuation than overcoming misperceptions.<sup>54</sup> Another challenge of communication campaigns is that

## Addressing beliefs, ideas, and feelings that influence contraceptive use in Nigeria

The Nigerian Urban Reproductive Health Initiative (NURHI) is testing the theory that communication can influence not only the informational aspects of contraceptive use (what the methods are, effectiveness, availability, etc.) but also the ideational aspects of contraceptive use (the beliefs, ideas, and feelings that influence use). The six-year project operates in four cities: Abuja, Ibadan, Ilorin, and Kaduna.

Using formative research with men, women, and service providers to identify factors predictive of contraceptive success—including spousal communication, perceived peer support, and self-efficacy—the project identified a number of myths and misperceptions and found that people were fearful about using contraceptives. Service providers also held misperceptions, with many believing that women should not use contraceptives for birth spacing until they had a large family. Providers also had biases about individual contraceptive methods and only discussed and dispensed those methods that were familiar to them. They also restricted access to certain methods based on age, marital status, or parity.

The project used a multipronged approach to address misperceptions. Interventions aimed at providers included training in clinical skills, interpersonal communication, and counseling to address the underlying biases in how health care workers recommend methods and provide services. Communication interventions aimed at clients included TV, radio, entertainment education, and social mobilization. The content was designed to communicate correct information (rather than to restate myths), with messages carefully crafted to change beliefs. The project is currently studying how interpersonal communication and counseling approaches can address misperceptions.

After three years, positive beliefs and attitudes about family planning among women and men increased significantly, from 53 percent at baseline to 70 percent, and reported incorrect beliefs about contraception were significantly reduced.<sup>56</sup> The project also found that as the misperceptions decreased, the desire to use contraception increased; the percentage of married women using contraceptives from baseline to endline increased in each of the four project locations.

their impact may be only temporary, with results closely tied to the frequency of messaging and sustained efforts required to achieve lasting normative change.<sup>53,55</sup> One promising intervention being tested is to tailor communication campaigns to address the underlying beliefs and feelings that affect contraceptive decision-making (see box, above).

### CONCLUSION AND RECOMMENDATIONS

Misperceptions about contraceptives appear to be common across cultures and socioeconomic groups and may have a significant effect on clients' choice and use of various methods. Method side effects also appear to be a significant problem that is linked to misperceptions. In addition to the research needs already identified (see box on page 4), potential areas for further research include:

- Identifying the ideas and emotions that fuel misperceptions, the sources of misperceptions, and

the role of provider biases and misinformation in perpetuating contraceptive misperceptions in specific locations.

- Developing and evaluating innovative, evidence-based strategies to overcome myths and misperceptions.

Even in the absence of additional research, family planning programs and providers can address misperceptions using the following approaches:

- Focus on providing correct information, including that contraceptives are safe and can help women and men achieve their fertility and life goals. The fact that misperceptions are hard to change once established makes it especially important to get it right the first time—for example, when new methods are being introduced.
- Avoid restating misperceptions during counseling or in client education materials and campaigns.

- Provide simple, alternate explanations for common misperceptions.
- Recognize that side effects can be significant client concerns (that can lead to or reinforce misperceptions), help clients manage them, and normalize the process of switching to a different method, if needed.
- Address provider misperceptions through pre-service and in-service training, preferably using materials that are designed based on cognitive science principles for addressing misperceptions.
- Pretest messages and materials prior to implementation, not only for comprehension by clients but for immediate impact countering common misperceptions.

Given the pervasiveness of myths and misperceptions about contraceptives, this remains a critical area for investment to best serve the more than 200 million women with unmet need for contraception. As programs develop and test strategies to counter



misperceptions, interventions that apply lessons learned from cognitive science to address the emotions and ideas behind misperceptions may have the best chance of addressing this persistent problem.

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