Intrauterine Contraception: Study to Evaluate Clinical Practice and to Increase Utilization

By Debbie Postlethwaite, RNP, MPH

Introduction

For the past decade, preventing unintended pregnancies has been an important issue for women's health. Against this background, the intrauterine device (IUD) has been established either as the most cost-effective method of contraception (in study models that span two or more years[1,2]) or the second most cost-effective reversible method (in studies that span two years or less[3]).

Nonetheless, despite the proven safety and cost-effectiveness of today's IUDs, women who have unintended pregnancies are relying on less effective methods of contraception,[4] many obstetrics/gynecology professionals in the United States remain reluctant to recommend use of the IUD, and fewer than 1% of women in the United States report using an IUD.[5] This statistic contrasts sharply with the nearly 12% mean rate of IUD use worldwide—a rate which has been measured as high as 33% in China and 18% in Scandinavia.[6] In the United States, at least 37% of couples rely on permanent sterilization for contraception,[7] although permanent sterilization is not as cost-effective as the IUD[1,2] and is associated with higher morbidity rates[8] and lower patient satisfaction rates.[9]

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Are we encouraging use of the most effective and cost-effective methods for patients who want a reversible contraceptive method? If cost is removed as a barrier to contraception, are members who do not want to become pregnant moved toward more cost-effective contraceptive methods? By providing evidence-based medical information about today's IUDs to professionals and patients, can we increase use of this most cost-effective method of contraception?

In 2002, the Kaiser Foundation Health Plan in California made a benefits change to cover the cost of the most cost-effective contraceptive methods, including IUDs, injectables, implantables (when available), and emergency contraception. This change was the result of years of advocacy work by committed physician-leaders in obstetrics/gynecology and adolescent health departments across both the Northern and the Southern California Kaiser Permanente (KP) Regions.

Understanding the potential of IUDs for reducing the number of unintended pregnancies and understanding perceived nationwide attitudes about IUDs, a team of investigators designed a study hypothesizing that a clinician-focused intervention offering evidence-based medical information to physicians, nurse practitioners, staff, and patients would result in greater utilization of IUDs than would removing the cost of the IUD as a barrier to its use. A secondary goal of the study was to decrease the rate of tubal sterilizations, the most common form of contraception in the United States. Funding was sought and obtained through the assistance of the Women's Health Research Institute (WHRI), and the study was approved by the Kaiser Permanente Northern California Institutional Review Board.

Study Design

In the quasi-experimental study design, a nonequivalent control group was used with pretest and posttest questionnaire instruments created to evaluate the intervention. This study design was used because randomly assigning persons to strict experimental and control groups was not practical. Before the study began, IUD insertions and tubal sterilizations from outpatient encounter records and surgery records for all KPNC Medical Service Areas spanning three calendar quarters were collected to determine baseline utilization rates. The denominator for those rates was based on the women at risk of pregnancy aged 15-44, within each service area, for each calendar quarter. Within each service area, IUD utilization rates varied widely, and there was clinician interaction between medical centers through department meetings. Travel distance to some service areas was impractical given the resources available to conduct the intervention. The six KP Northern California Medical Service Areas were then assigned to be either an intervention or comparison "usual

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care" site on the basis of matching utilization data and of resources to conduct the intervention. Before the intervention was conducted, a voluntary survey was administered to all (ie, more than 500) obstetrics/gynecology physicians and nurse practitioners across the KP Northern California Region to evaluate their knowledge, attitudes, and practice patterns regarding IUDs.

Intervention: Provider Education

The intervention was delivered in a grand rounds format and consisted of evidence-based continuing medical education (CME) about today's CU-T 380 IUD and the LGN-20 levonorgestrel-containing intrauterine system. The primary goal of the CME was to address common, published concerns about intrauterine contraceptive devices.

The CME offering was developed by all three investigators in conjunction with two additional physician-champions, all obstetrics/gynecology clinicians, and consisted of a 49-slide Powerpoint presentation. For both the CU-T 380 device and the LGN-20 system, the CME program addressed evidence-based issues regarding IUD safety, efficacy, risks, contraindications, mechanism of action, cost-effectiveness, and noncontraceptive benefits. The CME program also discussed appropriate patient selection, ways to reduce barriers to access, and several relevant case studies.

These grand rounds were conducted at ten different KP facilities by two KP clinician-presenters. Some of the presentations were given in videoconference format to satellite KP facilities so that all 17 intervention facilities were exposed to the educational intervention. Sign-in sheets reflected attendance of 352 clinicians from a variety of primary care departments; this number probably underestimated true attendance because not all participants signed in and because some facilities either required no attendance recording or no program evaluation. Clinicians who did not need CME credit were encouraged to attend the presentation solely to receive the information. Of the program evaluations received, more than 95% rated the CME offering as "very good" or "excellent," and more than 80% reported that they gained new knowledge and that the subject was relevant to their practice.

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Reinforcement Activity: Patient Education

The study developed or revised four separate patient education products to include the same evidence-based information about IUDs that was included in the clinician education materials. The new products or revisions were made in cooperation with the KP Northern California Regional Health Education Department. One product developed was the *Intrauterine Contraception Health Matters* tipsheet, available in English, Spanish, and Chinese versions. The IUD tipsheets were proactively provided to all intervention facilities at no cost, but obstetrics/gynecology departments at the comparison sites were notified that the tipsheets were available at a cost of $3.19 per pack of 50 sheets.

Revisions were made also to three other available products: 1) *Healthy Beginnings* newsletters (prenatal education program); 2) the KP *Healthphone* tape titled "The IUD & IUS Method of Birth Control"—there is a separate IUD tape No. 401 [English] in both English and Spanish within the section of tapes called birth control methods;[10] and 3) the KP *Healthwise Handbook,* also available in both English and Spanish versions.[11] The revised *Healthy Beginnings* newsletters were placed in all obstetrics/gynecology departments regardless of whether the department was included in the intervention or comparison sites. The revised *Healthphone* tapes and *Healthwise Handbook* are available to all KP members.

Education Activity: Raising Member Awareness

For each of the three KP Medical Service Areas exposed to the intervention, the KPNC Member Communications Department produced a *Member News* story about IUDs. In each of these publications, one of the physician-trainers provided a quote about IUDs that customized the awareness-raising story to that particular service area. The purpose of the awareness-raising stories was to clarify myths about IUD safety, to alert women that the IUD was available at no cost, and to invite appropriate candidates—especially women considering permanent sterilization—to discuss IUDs as a contraceptive option. These *Member News* articles were sent to approximately 1.5 million KP members in Northern California.

Survey and Education Activity for Appointment and Advice Call Centers

Appointments and medical advice for the obstetrics/gynecology, internal medicine, and pediatric departments are available to KPNC

members through three KP Appointment and Advice Call Centers (AACCs). In reviewing the AACC protocols regarding IUDs, the study team found inaccurate and outdated information. The AACC advisory group was then given recommendations for revisions to the scripted advice delivered by registered nurses at the AACCs regarding IUD safety, efficacy, timing of insertion, and appropriate candidate selection.

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Reinforcement Activities for Clinicians and Staff

The study design included reinforcement activities conducted at the intervention sites for the obstetrics/gynecology clinicians and for their support staff. These activities included an obstetrics/gynecology department meeting (an educational follow-up session) conducted by a member of the study team and one of the physician-champions. Before these meetings, the study team (including the physician-trainers) attended a peer-to-peer training session designed to help the team assess readiness for change, confront adversity, and facilitate change in their practice. The follow-up session allowed clinicians to discuss case studies with the physician-champions and to address perceived barriers to IUD use (eg, nulliparity and timing IUD insertion to occur only during menstruation). IUD insertion training sessions were held at four facilities and were attended by 30 clinicians. Techniques for inserting the CU-T380 and LNG-20 devices were described and practice models provided.

The *IUD Health Matters* tipsheets and clinician/staff incentives were distributed proactively at the third facility visit made by the study team. The incentives consisted of a coffee mug and Post-It notes imprinted with the KP Regional Women's Health logo, Web site address, and the following message: "Give Her the Choice to Change Her Mind: Intrauterine Contraception." All clinicians and support staff received the incentives (788 coffee mugs and 1500 notepads) and a handout containing a thank-you message for participating in the study. Experience from other studies has shown the importance of acknowledging the contribution made by support staff to a patient's medical care experience and health education. In December 2002, a final follow-up interoffice mailing of additional *IUD Health Matters* tipsheets to all intervention sites completed the intervention.

A postintervention survey was voluntarily administered to all obstetrics/gynecology clinicians one year after they received the clinician educational intervention. Data regarding IUD and tubal sterilization utilization were collected throughout the nine-month intervention period and for a year after the intervention to assess sustainability. Analysis of responses to both the preintervention and postintervention surveys and analysis of the data regarding IUD and tubal sterilization utilization are in process. Publication of the full study results is planned for 2005.

Future Activities

The study team plans to share the CME-approved IUD grand rounds presentation with the comparison sites and is willing to share the presentation with other KP Regions as well as with our community partners. Various formats for dissemination are under consideration and would include the evidence-based PowerPoint slides, CME objectives, and references cited. With the cooperation of Northern California Regional Health Education, member education materials are available in English, Spanish, and Chinese to other regions. ❖

For more information about the study or to request the CME-approved IUD Powerpoint slide presentation and samples of the member education materials, please contact Debbie Postlethwaite at debbie.a.postlethwaite@kp.org.

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A Great Teacher

… can explain with passion that the subject matter
is worth the effort required to master it …
shares practical rather than esoteric information …
is free of bias, or discloses potential conflicts of interest …
is evidence-based when evidence exists.

— Paul Wallace, MD, Care Management Institute, The Permanente Federation
Presentation at the Faculty Development Workshop, Santa Cruz, January 2001