## Retail Health Clinics' Care Passes Limited Test

BY ALICIA AULT

Retail clinics appear to offer cost-effective, high-quality care, at least for three common conditions: urinary tract infections, otitis media, and pharyngitis, according to a recent study.

For insured patients, the cost of caring for these three illnesses was 30%-40% less at retail clinics than in physician offices and urgent care centers, and a

whopping 80% less than in emergency departments, according to researchers at the RAND Corp., the University of Pittsburgh, and HealthPartners Research Foundation of Minneapolis.

Care cost less at the retail clinics because they are reimbursed at a lower rate for evaluation and management and they order fewer tests and imaging studies, the authors wrote (Ann. Intern. Med. 2009;151:321-9). They analyzed claims

data from enrollees at HealthPartners, a Minneapolis-based health plan that covers care at retail clinics.

The study showed "that patients can feel safe in going to these retail health clinics for fairly limited, minor problems," Dr. Ted Epperly, president of the American Academy of Family Physicians, said in an interview. But the analysis did not show that retail clinics are appropriate for older patients who may

have more complex problems and a host of comorbidities, he said.

The study predominately covered enrollees who were aged 2-44 years, with a small percentage aged 45-64. There were only three enrollees over age 65 in the database. The authors compared the cost and quality of care and delivery of services for the three acute conditions in retail clinics with the cost and quality of care received in physician offices, urgent care centers, and emergency departments.

Dr. Yul D. Ejnes, a member of the American College of Physicians' board of regents and chair of the ACP's medical service committee, said he wasn't surprised by the findings for this population and for these three conditions.

But he said he did not think the findings would translate to older patients or even similar age groups at retail clinics elsewhere in the United States. Retail clinics began in Minnesota and are well-established there, according to the study authors.

The study is reassuring, Dr. Ejnes said in an interview, but "I don't think it puts



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One concern is that the retail clinics may usurp or interrupt a patient's relationship with his or her primary care physician. Both Dr. Ejnes and Dr. Epperly said that an acute care visit for a UTI, for example, provides an occasion for the physician to delve into other health issues, including chronic conditions. That would not occur at a retail clinic, they said.

Lead author Dr. Ateev Mehrotra of the University of Pittsburgh said the potential for undermining the patient's relationship with the primary care physician is a valid concern. He hopes to look at this aspect of retail clinics in future studies, Dr. Mehrotra said in an interview.

For this study, the costs were calculated by aggregating claims into episodes of care. Episodes were categorized according to where the first visit occurred. Retail clinic episodes were matched with episodes in the other settings. Overall, there were 15,170 episodes of care, with 2,100 occurring in retail settings, 6,211 in physician offices, 5,880 in urgent care centers, and 979 in emergency departments. The cost included the health plan reimbursement plus copayments.

To measure quality, the researchers created 14 indicators, derived from various sources. Aggregate quality scores were calculated by dividing all instances in which recommended care was delivered by the number of times patients were eligible to receive care in each setting.

The authors found that women and

## INDEX OF **ADVERTISERS**

Bayer HealthCare Pharmaceuticals Inc.	
Mirena	6-8
Yaz	55-56
BD Diagnostics	
SurePath	9
CooperSurgical, Inc.	
Fetal Monitor	5
Duramed Pharmaceuticals, Inc.	
(a subsidiary of Barr Pharmaceuticals)	
ParaGard	20a-20b
ETHICON ENDO-SURGERY, Inc.	
Fetal Monitor	43
Fujirebio Diagnostics, Inc.	
HE4	23
GlaxoSmithKline	
Cervarix	3
Graceway Pharmaceuticals, LLC  Aldara	1.2
Aldara	13
Eli Lilly and Company	
Evista	30-33
Novo Nordisk Inc.	
Activella	23-24
Vagifem	37-38
Pfizer Inc.	
Toviaz	19-20
Proctor & Gamble Pharmaceuticals	
Actonel	14-17
Qiagen	
digene HPV test	45
Sanofi Pasteur Inc.	
Adacel	35-36
Schering Plough HealthCare Products, Inc. MiraLAX	25
	23
Sciele Pharma, Inc.	
Prenate DHA	11-12

Watson Pharma, Inc.

high-income individuals accounted for the greatest number of retail clinic episodes.

The cost of care was "substantially" lower in retail clinics, at \$110, compared with \$166 in a physician's office, \$156 in an urgent care center, and \$570 in an emergency department. Total costs over 12 months were \$1,236 for the retail clinic, \$1,435 for the physician office, and \$2,157 for the emergency department. The largest portion of the cost was for evaluation and management. Followup visits were similar across settings. Lab and imaging costs were lower in retail clinics, primarily because they weren't ordered as often.

Of the total 15,170 episodes, there were only 11 hospitalizations; two of the hospitalized patients had first gone to a retail clinic.

The quality scores were almost the same for retail clinics, physician offices, and urgent care centers, with clinics meeting 63% of the measures, physicians 61%, and urgent care centers 63%. Aggregate quality scores were lower for emergency departments, at 55%.

Dr. Mehrotra acknowledged that the study had many limitations, including that the patients who were randomly selected happened to be healthier than the average HealthPartners enrollee. Also, there are no data indicating that the cost and quality findings for these conditions are true for other conditions. But Dr. Mehrotra said he had no reason to believe that the data could not be extrapolated to other simple, acute conditions.

The study was funded by the California HealthCare Foundation, an independent philanthropic organization. Dr. Mehrotra's research is also supported by a National Institutes of Health career development grant.

## Mirena®

(levonorgestrel-releasing intrauterine system)

BRIEF SUMMARY
CONSULT PACKAGE INSERT FOR FULL PRESCRIBING INFORMATION

PATIENTS SHOULD BE COUNSELED THAT THIS PRODUCT DOES NOT PROTECT AGAINST HIV INFECTION (AIDS) AND OTHER SEXUALLY TRANSMITTED DISEASES

INDICATIONS AND USAGE
Mirena is indicated for intrauterine contraception for up to 5 years. Thereafter, if continued contraception is desired, the system should be replaced. ommended for women who have had at least one child.

CONTRAINDICATIONS
Mirena is contraindicated when one or more of the following conditions exist:

- ne is contrainticated when one or more of the following conditions exist: Pregnancy or suspicion of pregnancy. Congenital or acquired uterine anomaly including fibroids if they distort the uterine cavity. Configuration of equipment unernic anomaly including fibroids if they distort the uterinic cortie).

  Acute pelvic inflammatory disease or a history of pelvic inflammatory disease unless there has been a subsequent intrauterine pregnancy.

  Postpartum endometritis or infected abortion in the past 3 months.

  Known or suspected uterine or evolval neoplasa or unresolved, abnormal Pap smear.

  Genital beleding of unknown etiology.

  Tultreated acute cervicitis or vaginitis, including bacterial vaginosis or other lower genital tract infections until infection is controlled.

  Acute liver disease or liver tumor (benign or malignant).

  Conditions associated with increased susceptibility to pelvic infections.

  A previously inserted IUD that has not been removed.

  Hypersensitivity to any component of this product.

  Known or suspected carcinoma of the breast.

  WARNINGS.

1. Ectopic Pregnancy Certualize women who become pregnant while using Mirena for ectopic pregnancy. Up to half of pregnancies that occur with Mirena in place are ectopic. The incidence of ectopic pregnancy in clinical trials that excluded women with risk factors for ectopic pregnancy was about 1 ectopic pregnancy per 1000 users per year. Tell women who choose Mirena about the risks of ectopic pregnancy, including the loss of fertility. Teach then to recognize and report to their physician promptly any symptoms of ectopic pregnancy. Women with a previous history of ectopic pregnancy, with a previous history of ectopic pregnancy, with a previous history of ectopic pregnancy.

The risk of ectopic pregnancy in women who have a history of ectopic pregnancy and use Mirena is unknown. Clinical trials of Mirena excluded women with a history of ectopic

pregnancy.

2. Intrauterine Pregnancy

fi pregnancy should occur with Mirena in place, Mirena should be removed. Removal or manipulation of Mirena may result in pregnancy loss. In the event of an intrauterine pregnancy with Mirena, consider the following:

- spetic abortion
  In patients becoming pregnant with an IUD in place, septic abortion—with septicemia, septic shock, and death—may occur.
- in paeties becoming piperain with a first out of the special control in pace, septic abondon—with septicents, septic shock, and death—may occur.

  Continuation of pregnancy

  If a woman becomes pregnant with Mirena in place and if Mirena cannot be removed or the woman chooses not to have it removed, she should be warned that failure to remove Mirena increases the risk of miscarriags, septis, premature labor and premature delivery. She should be followed closely and advised to report immediately any flui-like symptoms, lever, chills, cramping, pain, bleeding, veginal discharge or leakage of fluid. Long-term effects and congenital anomalies

  When pregnancy continues with Mirena in place, long-term effects on the offspring are unknown. As of September 2006, 390 live births out of an estimated 9.9 million Mirena users had been reported. Congenital anomalies in live births have occurred infrequently. No clear trend towards specific anomalies has been observed. Because of the intrauterine administration of levonorgesterial and local exposure of the fluts to the hormone, the possibility of teratogenicity following exposure to Mirena cannot be completely excluded. Some observational data support a small increased risk of masculinization of the external genitalia of the ternale fetus following exposure to progestins at dooses greater than those currently used for oral contraception. Whether these data apply to Mirena is unknown.

Sepsis
s of September 2006, 9 cases of Group A streptococcal sepsis (GAS) out of an estimated
9. million Mirena users had been reported. In some cases, severe pain occurred
within hours of insertion followed by sepsis within days. Because death from GAS is
note likely if treatment is delayed, it is important to be aware of these rare but serious
flections. Aseptic technique during insertion of Mirena is essential. GAS sepsis may
so occur postpartum, after surgery, and from wounds.

- infections. Aseptic technique during insertion of Mirena is essential. GAS sepsis may also occur postpartum, after surgery, and from wounds.

  4. Pelvic Inflammatory Disease (PID)
  Mirena is contraindicated in the presence of known or suspected PID or in women with a history of PID unless there has been a subsequent intrauterine pregnancy. Use of IUDs has been associated with an increased risk of PID. The highest risk of PID occurs shortly after insertion (usually within the first 20 days thereafter) (see PRECAUTIONS, Insertion Precautions). A decision to use Mirena must include consideration of the risks of PID.

  a. Women at increased risk for PID
  PID is often associated with a sexually transmitted disease, and Mirena does not protect against sexually transmitted disease. The risk of PID is greater for women who have multiple sexual partners, and also for women whose sexual partners(s) have multiple sexual partners, women who have had PID are at increased risk for a recurrence or re-infection.

  b. PID warning to Mirena users. All women who choose Mirena must be informed prior to insertion about the possibility of PID and that PID can cause tubal damage leading to ectopic pregnancy or infertility, or infertigently can necessitate hysterectumy, or cause death. Patients or infertility, or infertigently can necessitate hysterectumy, or cause death. Patients or interitum decision promition of the properties of evident filmamitatory disease. These symptoms include development of mediatual discretes (protogoged or heavy bleeding), unusual regnal discharge, abdominal or pelvic pain or tendemess, dyspareunia, chilis, and fover.

  c. Asymptomatic PID

Treatment of PID Following a diagnosis of PID, or suspected PID, bacteriologic specimens should be obtained and antibiotic therapy should be initiated promptly. Removal of Mirena after ontained and antibiotic therapy should be initiated promptly. Removal of Mirriar after initiation of antibiotic therapy is usually appropriate, Guidelines for PDI treatment are available from the Centers for Disease Control (CDC), Atlanta, Georgia. Actinomycosis has been associated with IUDs. Symptomatic women with IUDs should have the IUD removed and should receive artibiotics. However, the management have the IUD removed and should receive antibiotics. However, the management of the asymptomatic carrier is controversial because actionnyectes can be found normally in the genital tract cultures in healthy women without IUDs. False positive findings of actinonycosis on Pap smears can be a problem. When possible, confirm the Pap smear diagnosis with cultures.

the Pap smear diagnosis wim curures.

regular Bleeding and Amenorrhea
ena can after the bleeding pattern and result in spotting, irregular bleeding, heavy
siding, oligomenorrhea and memorrhea. During the first three to sk months of Mirena
i, the number of bleeding and spotting days may be increased and bleeding patterns may
irregular. Thereafter the number of bleeding and spotting days usually decreases but
deling may remain irregular. If bleeding irregularties develop during prolonged treatment,
propriate diagnostic measures should be taken to rule out endometrial pathology.

Amenorrhea develops in approximately 20% of Mirena users by one year. The pos-pregnancy should be considered if mensituation does not so cour within six wor-noset of previous mensituation. Once pregnancy has been excluded, repeated po-tests are generally not necessary in amenormied women unless indicated, for exa other signs of pregnancy or by peak pain.

plete expulsion of Mirena may occur (see PRECAUTIONS, Conti

IR emmoval).

If providing the partial or complete expulsion of any IUD may include bleeding or pain, imploms of the partial or complete expulsion of any IUD may include bleeding or pain, reverer, the system can be expelled from the uterine cavity without the woman noticing it, that expulsion may discrease the effectioness of Milmra. As menstrain flow hypically creases after the first 3 to 6 months of Mirma use, an increase of menstrual flow may indicative of an expulsion. If expulsion has occurred, Mirman may be replaced within ays of a menstrual period after pregnancy has been ruled out.

7 days of a mensural period and programs.

9 Ovarian (System) we effect of Mirena is mainly due to its local effect, ovulatory cycles with follicular rupture usually occur in women of fertile age using Mirena. Sometimes atresia of the follicle is delayed and the follicle may continue to grow. Enlarged follicles have been diagnosed in about 12% of the subjects using Mirena. Most of these follicles are asymptomatic, although some may be accompanied by pelvic pain or dysparenula. In most cases the enlarged follicles disappears spontaneously during two to three months observation. Persistent enlarged follicles should be evaluated. Surgical intervention is not usually required.

10. Breast Cancer Women when the breast cancer, or have a suspicion of preast cancer, should not use hormonal contraception because breast cancer is a normone-sensitive tumor. Spontaneous reports of breast cancer have been received during postmarketing specified with filmen Because spontaneous reports are voluntary and form a population of uncertain size, it is not possible to use post-marketing data to reliably estimate the requency or establish causal relationship to drug exposure. I've observational studies awe not provided evidence of an increased risk of breast cancer during the use of Mirena.

Table 1: Annual Number of Birth-Related or Method-Related Deaths Associated with Control of Fertility per 100,000 Nonsterile Women, by Fertility Control Method According to Age

AGE GROUP							
METHODS	15–19 years	20-24 years	25–29 years	30-34 years	35-39 years	40-44 years	
No Birth Control Method/Term	4.7	5.4	4.8	6.3	11.7	20.6	
No Birth Control Method/Abortion	2.1	2.0	1.6	1.9	2.8	5.3	
IUD Periodic Abstinence Withdrawal Condom Diaphragm/Cap Sponge Spermicides Oral Contraceptives Implants/Injectables	0.2 1.4 0.9 0.6 0.6 0.8 1.6 0.8	0.3 1.3 1.7 1.2 1.1 1.5 1.9 1.3	0.2 0.7 0.9 0.6 0.6 0.8 1.4 1.1	0.1 1.0 1.3 0.9 0.9 1.1 1.9 1.8	0.3 1.0 0.8 0.5 1.6 2.2 1.5 1.0	0.6 1.9 1.5 1.0 3.1 4.1 2.7 1.9 0.6	
Tubal Sterilization Vasectomy	1.3 0.1	1.2 0.1	1.1 0.1	1.1 0.1	1.2 0.1	1.3 0.2	

Harlap S. et al., Preventing Pregnancy, protecting health: a new look at birth control choices in the US. The Alan Guttmacher Institute 1991: 1-129

PRECAUTIONS
PATIENTS SHOULD BE COUNSELED THAT THIS PRODUCT DOES NOT PROTECT
AGAINST HIV INFECTION (AIDS) AND OTHER SEXUALLY TRANSMITTED DISEASES.

AGAINST HIV INFECTION (AIDS) AND 01 HEN SEXUALLT I PREVIOUS INFECTION (AIDS) AND 01 HEN SEXUALLT I PREVIOUS INFECTION.

Prior to insertion, give the patient the Patient Information Booklet. She should be given the opportunity to read the information and discuss fully any questions she may have concerning Mirena as well as other methods of contraception. Also, advise the patient that the prescribing information is available to her upon request.

Careful and objective counseling of the patient prior to insertion regarding the expected bleeding pattern, the possible inter-individual variation in changes in bleeding, including amenorrhea, and the etiology of the changes may have an effect on the frequency of patient-requested removal.

inimum, and the enology of the changes may have an effect on the frequency of attent-requested removal. 
The patient should be informed that some bleeding such as irregular or prolonged leeding and sporting, and/or carrangs may occur during the first few weeks after sertion. If her symptoms continue or are severe she should report them to her healthcare rouder. She should also be given instructions on what other symptoms require her to all her healthcare provider. She should also be given instructions on what other symptoms require her to all her healthcare provider. She should be instructed on how to check after her menstrual eriod to make certain that the threads still protrude from the cervix and cautioned not up ull on the threads and displace Mirena. She should be informed that there is no ontraceptive protection if Mirena is displaced or expelled.

Patient Evaluation and Clinical Considerations
A complete medical and social history, including that of the partner, should be obtained to determine conditions that might influence the selection of an IUD for contraception (see CONTRAINDICATIONS).

NOTE: Special attention must be given to ascertaining whether the woman is of MOTE: Special attention must be given to ascertaining whether the woman is of

obtained to determine conditions that might influence the selection of an IUD for contraception (see CONTRAINIDICATIONS).

NOTE: Special attention must be given to ascertaining whether the woman is at increased risk of infection (for example, leukema, acquired immune deficiency syndrome (AIDS), I.V. drug abuse), or has a history of PID unless there has been a subsequent intrauterine pregnancy. Mirena is contraindicated in these women. A physical examination should include a pelvic examination, a Pap smear, examination of the breasts, and appropriate tests for any other forms of genital or other sexually transmitted diseases, such as gonorther and chlamydia laboratory evaluations, if indicated. Use of Mirena in patients with vaginitis or cervicitis should be postponed until proper treatment has eradicated the infection and until it has been shown that the cervicitis is not due to gonorrhea or chlamydia (see CONTRAINIDICATIONS).

Irregular bleeding may mask symptoms and signs of endometrial polyps or cancer. Because irregular bleedings profuling is common during the first months of Mirena use, exclude endometrial pathology prior to the insertion of Mirena in women with persistent or uncharacteristic bleeding. If unexplained bleeding irregularities develop during the prolonged use of Mirena, appropriate diagnostic measures should be taken. (See WARMINOS, Irregular Bleeding and Amenorrhea.)

The healthcare provider should determine that the patient is not pregnant. The possibility of Mirena can be inserted immediately after first trimsser abordion.

Mirena should be of Mirena and propriate development of an emerstrual period. Mirena can be inserted immediately after first trimsser abordion.

Mirena can be inserted immediately after first trimester abortion.

Mirena should not be inserted immediately after first trimester abortion.

Mirena should not be inserted until 6 weeks postpartum or until involution of
the uterus is complete in order to reduce the incidence of perforation and
expulsion. If involution is substantially delayed, consider waiting until 12 weeks
postpartum (see WARNINGS, Perforation).

Patients with certain types of valvular or congenital heart disease and surjectify
constructed systemic-pulmonary shurts are at increased risk of infective endocarditis.

Use of Mirena in these patients may represent a potential source of septic emboil.

Patients with known congenital heart disease who may be at increased risk should be
treated with appropriate antibiotics at the time of insertion and removal.

Patients requiring chronic corticosteroid therapy or insulin for diabetes should be
monitored with special care for infection.

Mirena should be used with caution in patients who have:

ena should be used with caution in patients who have:

Mirena should be used with caution in patients who have:

coagulopathy or are receiving anticoagulants

migraine, focal migraine with asymmetrical visual loss or other symptoms
indicating transient cerebral ischemia

exceptionally severe headache
marked increase of blood pressure
severe arterial disease such as stroke or myocardial infarction

Insertion Precautions

Observe strict assepsis during insertion. The presence of organisms capable of
establishing PID cannot be determined by appearance, and IUD insertion may be
associated with introduction of vaginal bacteria into the uterus. Administration of
antibiotics may be considered, but the utility of this treatment is unknown.

Carefully sound the uterus prior to Mirena insertion to determine the degree of patency of the endocervical canal and the internal os, and the direction and depth of the uterine cavity. In occasional cases, severe cervical stenosis may be encountered. Do not use excessive force to overcome this resistance. Fundal positioning of Mirena is important to prevent expulsion and maximize efficacy. Fundal positioning of Mirena is important to prevent expulsion and maximize efficacy. Fundal positioning of Mirena is important to prevent expulsion and maximize the series of the insertion carefully. If the patient develops decreased pulse, perspiration, or pallor, have her remain supline until these signs resolve. Insertion may be associated with some pain and/or bleeding. Synocype, bradycardia, or other neurovascular episodes may occur during insertion of Mirena, especially in patients with a predisposition to these conditions or cervical stenosis.

these conditions or cervical stenosis.

1. Continuation and Removal
1. Receamine and reducate patients 4 to 12 weeks after insertion and once a year
thereafter, or more frequently if clinically indicated.

b. If the threads are not visible, they may have retracted into the uterus or broken, or
Mirean may have broken, perforated the uterus, or been expelled (see WARNIMGS.
Perforation and Expulsion). If the length of the threads has changed from the
length at time of insertion, the system may have become displaced. Prepanary
must be excluded and the location of Mirena verified, for example, by sonography,
X-ray, or by gentle exploration of the uterine cavity with a probe. If Mirena is
displaced, remove it. A new Mirena may be inserted at that time or during the next
menses if it is certain that conception has not occurred. If Mirena is in place with no
evidence of perforation, no intervention is indicated.

Promorniby avanimie users with complaints of pain, odorous discharge, unexplained

Promptly examine users with complaints of pain, odorous discharge, unexplained bleeding (see WARNINGS, Irregular Bleeding and Amenormea), fever, genital lesions or sores.

Consider the possibility of ectopic pregnancy in the case of lower abdominal pain especially in association with missed periods or if an amenormeic woman starts bleeding (see WARNINGS, Ectopic Pregnancy).

In the event a pregnancy is confirmed during Mirena user.

Determine whether pregnancy is ectopic and if so, take appropriate measures.

Inform patient of the risks of leaving Mirena in place or removing it during pregnancy and of the take of data on long-term effects on the offspring of women who have had Mirena in place during conception or gestation (see WARNINGS, Klontauterine Pregnancy).

If possible, Mirena should be removed after the patient has been warned of the risks of removal. If removal is difficult, the patient should be conseled and offered pregnancy termination.

If Mirena is let in place, the patient's course should be followed dosely.

Should the patient's relationship cases to be mutually monogamous, or should he partner become filty ossible, or acquire a sexually transmitted diseases, she should be instructed to report this change to her clinician immediately. The use of a barrier method as a partial protection against acquiring secually transmitted diseases should be strongly recommended. Permoval of Mirena should be considered. Mirena should be removed for the following medical reasons:

menormagia and/or metrorrhagia producing anemia acquired immune deficiency syndrome (AIDS)

sexually transmitted disease

selve interaction genital actinomycosis intractable pelvic pain severe dyspareunia pregnancy, under the considered of the pelvic pain severe dyspareunia pregnancy, under the considered of the pelvic pain severe dyspareunia pregnancy, under the considered of the pelvic pain severe dyspareunia pregnancy, and the permonent of the system should also be considered if any of the following conditions arise to the first tim

uterine or cervical perforation moval of the system should also be considered if any of the following conditions se for the first time: migraine, focal migraine with asymmetrical visual loss or other symptoms indicating transient cerebral ischemia

Removal may be associated with pain and/or bleeding or neurovascular episodes

Glucose Tolerance evonorgestrel may affect glucose tolerance, and the blood glucose concentration should be monitored in diabetic users of Mirena.

6. Drug Interactions
The influence of drugs on the contraceptive efficacy of Mirena has not been studied.
The metabolism of progestogens may be increased by concomitant use of substances known to induce drug-metabolizing liver enzymes, specifically cytochrome P450 enzymes.

7. Carcinogenesis Long-term studies in animals to assess the carcinogenic potential of levonorgestrel releasing intrauterine system have not been performed (see WARNINGS).

8. Pregnancy Pregnancy Category X (see WARNINGS).

9. Nursing Mothers effects have been found on breastfeeding performance or on the health, growth, or development of the infant. However, isolated post-marketing cases of decreased milk production have been reported. Small amounts of progestins pass into the breast milk of nursing mothers, resulting in detectable steroid levels in infant plasma. Also, see WARNINGS, Perforation.

To. Pediatric Use
Safety and efficacy of Mirena have been established in women of reproductive age. Use
of this product before menarche is not indicated. of this product such as the second such as the seco

12. Return to Fertility
About 80% of women wishing to become pregnant conceived within 12 months after

The most serious adverse reactions associated with the use of Mirena are discussed above in the WARNINGS and PRECAUTIONS sections. Very common adverse reactions (5/170 users) include uterine/aquinal bleeding including sporting, irregular bleeding, heavy bleeding, oligomenorrhea and amenorrhea) and ovarian cysts. Other adverse events are listed below using MedDRA (9.0) terms. Adverse reactions reported by 5% or Notional trial subjects include:

Abdominat/pelvic pain
Vaginal discharge
Nausea
Nervousness
Vultovagninits

Acne
Decreased libido

Depresseu mood Cervicitis/Papanicolaou smear normal, class II Hypertension Other relevant reported adverse reactions occur

abudininal distansions, a lieted modul, inisulishi, quenta.

The following adverse reactions have been identified during post approval use of Mirena: device breakage and angioedema. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a cusal relationship to drug exposure.

Manufactured for:



Bayer HealthCare

Pharmaceuticals

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