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Trends and regional variations in provision of contraception methods in a commercially insured population in the United States based on nationally proposed measures☆,☆☆

A. Law[a,*], J.S. Yu[b], W. Wang[a], J. Lin[c], R. Lynen[a]

[a]Bayer HealthCare Pharmaceuticals, Whippany, NJ, USA
[b]Formerly an employee of Bayer HealthCare Pharmaceuticals, Whippany, NJ, USA
[c]Novosys Health, Green Brook, NJ, USA

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Abstract

Objectives: Three measures to assess the provision of effective contraception methods among reproductive-aged women have recently been endorsed for national public reporting. Based on these measures, this study examined real-world trends and regional variations of contraceptive provision in a commercially insured population in the United States.
Study design: Women 15–44 years old with continuous enrollment in each year from 2005 to 2014 were identified from a commercial claims database. In accordance with the proposed measures, percentages of women (a) provided most effective or moderately effective (MEME) methods of contraception and (b) provided a long-acting reversible contraceptive (LARC) method were calculated in two populations: women at risk for unintended pregnancy and women who had a live birth within 3 and 60 days of delivery.
Results: During the 10-year period, the percentages of women at risk for unintended pregnancy provided MEME contraceptive methods increased among 15–20-year-olds (24.5%–35.9%) and 21–44-year-olds (26.2%–31.5%), and those provided a LARC method also increased among 15–20-year-olds (0.1%–2.4%) and 21–44-year-olds (0.8%–3.9%). Provision of LARC methods increased most in the North Central and West among both age groups of women. Provision of MEME contraceptives and LARC methods to women who had a live birth within 60 days postpartum also increased across age groups and regions.
Conclusions: This assessment indicates an overall trend of increasing provision of MEME contraceptive methods in the commercial sector, albeit with age group and regional variations. If implemented, these proposed measures may have impacts on health plan contraceptive access policy.
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Keywords: Contraceptive provision; Developmental measures; Effective contraception methods; Long-acting reversible contraception methods

1. Introduction

In 2011, 45% (2.8 million) of pregnancies in the United States were unintended, a 6-percentage-point decline from 51% of pregnancies in 2008 [1]. Unintended pregnancies have a negative influence on birth and maternal outcomes and represent a substantial societal and economic burden [2–5]. According to a nationally conducted study in the United States in 2010, 51% of all births in the United States were paid for by public insurance, and the cost from unintended pregnancies totaled $21 billion [5].

In November 2016, the National Quality Forum (NQF) endorsed three measures that the Office of Population Affairs (OPA) and Centers for Disease Control and Prevention (CDC) proposed for assessing the provision of contraception methods among women aged 15–44 [6,7]. These measures are currently being tested by the Centers for Medicare and Medicaid Services (CMS) in collaboration with the Center for Medicaid and Children's Health Insurance Program Services (CMCS) under the Maternal and Infant Health Initiative [8]. NQF Measure #2903: Contraceptive Care

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* Corresponding author. Tel.: +1 862 404 5855.
E-mail address: amy.law@bayer.com (A. Law).

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involves assessing the percentage of women (15–44) at risk of unintended pregnancy, defined as women "who are fecund, are not pregnant or seeking pregnancy, and have ever had sex", provided the most effective or moderately effective (MEME) Food and Drug Administration (FDA)-approved methods of contraception [6,7]. This measure is considered an intermediate outcome measure; it contributes to but is not an ultimate outcome (i.e., pregnancy prevention) [6,7]. NQF Measure #2904 involves assessing the percentage of aforementioned women provided a long-acting reversible method of contraception (LARC) [6,7]. This is considered an access measure as it focuses on the proportion of women who are provided LARCs; OPA has defined less than 1%–2% as a very low rate of LARC provision, which may signal barriers to LARC provision that should be addressed through training, changes in reimbursement practices, quality improvement processes or other steps [7,9]. NQF Measure #2902: Contraceptive Care-Postpartum involves assessing the percentage of women (15–44) who had a live birth provided the MEME FDA-approved methods of contraception within 3 and 60 days of delivery [6,7]. Additionally, NQF Measure #2902 involves assessing the percentage of women provided a LARC within 3 and 60 days of delivery [6,7].

Although the measures have not been officially implemented by CMS, their adoption by CMS in the future may promote adoption by commercial payers intent on maximizing the quality of care delivered to their covered populations. The primary objectives of this study were to examine trends in contraceptive provision based on the proposed measures in a commercially insured population and to evaluate potential regional variations in contraceptive provision.

2. Materials and methods

2.1. Study population

This study was a retrospective cohort study of women (15–44) continuously enrolled from the beginning to the end of each studied calendar year (January to December, 2005–2014; annual sample size ranged from 5.4 to 11.4 million women) identified from the Truven Health MarketScan® Commercial Claims and Encounters (CCAE) Database. All inclusion and exclusion criteria were based on International Classification of Diseases, Ninth Revision, Clinical Modification, or Current Procedural Terminology codes within the claims data as defined by CMS/CMCS [10,11].

2.2. Measurements

This study mimics the methodology proposed by CMS/CMCS [10,11].

2.2.1. NQF Measure #2903: MEME contraception methods

The denominator for NQF Measure #2903 was defined as all women at risk of unintended pregnancy in the CCAE Database. Women were excluded from a particular calendar year if they were permanently infecund due to noncontraceptive reasons (e.g. hysterectomy, natural menopause) and were also excluded in all subsequent years. Women who were pregnant at any point in the measurement year were identified and included if the pregnancy ended in a known miscarriage, ectopic pregnancy, stillbirth, or induced abortion or if they had a pregnancy that ended in a live birth in the first 10 months of the measurement year [10].

Table 1
NQF Measures #2903 and #2904: percentages of women 15–20 years and 21–44 years of age provided MEME contraception methods and LARCs stratified by contraception method types in years 2005–2014

Age group	15–20 Years									
Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
N	551,639	459,034	667,869	878,741	1,021,456	1,122,055	1,286,300	1,327,490	1,137,365	1,149,436
% Women provided MEME contraception method	24.5%	26.2%	26.9%	30.0%	31.5%	31.6%	32.1%	32.5%	34.4%	35.9%
% Women provided a LARC	0.1%	0.2%	0.4%	0.6%	0.8%	0.9%	1.2%	1.6%	1.9%	2.4%
Contraception method types										
Oral contraceptive pills	21.7%	23.9%	24.7%	27.7%	29.0%	28.9%	29.1%	29.3%	29.6%	30.8%
IUD	0.1%	0.2%	0.3%	0.5%	0.6%	0.6%	0.8%	1.0%	1.1%	1.2%
Female sterilization	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Age group	**21–44 Years**									
Year	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
N	2,163,349	1,646,002	2,395,280	3,247,059	3,795,350	4,050,330	4,582,097	4,667,382	3,981,675	4,120,771
% Women provided MEME contraception method	26.2%	27.9%	27.1%	29.3%	30.0%	29.0%	29.5%	29.7%	30.8%	31.5%
% Women provided a LARC	0.8%	1.1%	1.5%	2.1%	2.6%	2.6%	2.7%	3.0%	3.5%	3.9%
Contraception method types										
Oral contraceptive pills	22.2%	23.9%	22.9%	24.5%	24.8%	23.6%	24.1%	24.1%	24.1%	24.6%
IUD	0.8%	1.1%	1.5%	2.1%	2.5%	2.6%	2.6%	2.9%	3.4%	3.6%
Female sterilization	1.0%	1.1%	1.1%	1.0%	1.0%	1.0%	1.0%	0.9%	0.9%	0.9%

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