

# The impact of personal characteristics on contraceptive choice and use over 5 years

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## Abstract

**Background.** Worldwide, there is an unintended pregnancy rate of 40%. That rate is higher in some areas, such as in the United States (U.S.) – where it is nearly 50%. These pregnancies have potentially negative outcomes for the mother and child that include health, economic, social, and psychological aspects. Long-acting reversible contraception (LARCs) are highly reliable methods of contraception. Identifying personal characteristics associated with choices of LARCs is postulated to better address the unintended pregnancy rates. **Methods.** A retrospective chart audit was conducted on 268 randomly-selected records, half of which were each from the years 2009 and 2014. One Midwestern U.S. family planning clinic was the site of the research. The characteristics derived from the chart audits were derived from the literature. **Results.** Key differences between the years 2009 and 2014 included an increase in the number of LARCs prescribed at a statistically significant level. There was a significant relationship between the choice of a LARC in those using one in the past. Personal characteristics influencing LARC birth control choice included minority females, those with a history of a teen pregnancy, and those below the poverty level. **Conclusion.** The findings of an increase choice of a LARC in populations at high risk for unintended pregnancy is important for addressing the cycle of continued poverty and other untoward outcomes that often results from these pregnancies. The results will influence the development of tailored interventions for adolescents and women at high risk for unintended pregnancy.



Dr. Plonczynski presenting study to staff

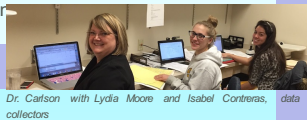
## Background

- A century after the 1916 opening of the first birth control clinic, nearly one-half of all pregnancies in the U.S. are unplanned.
- Birth control has been identified as one of the top 10 achievements in in the 20th century.
- The World Health Organization (WHO) has established a worldwide goal to address improvement in maternal health.
- The United Nations calls for addressing the gap between access to contraception.
- Unintended pregnancies are associated with negative outcomes for the mother and child, including health, economic, social, and psychological aspects.
- Those at high risk for unintended pregnancies have low-income and low educational attainment.
  - In U.S., that risk is also higher in minority racial and Hispanic groups.
- Hispanic females in the U.S. experienced an unintended pregnancy rate increase from 49% to 53% from 1995 to 2008.



## Methods

- The study was a retrospective chart analysis
- A data collection tool, developed from the literature and the Healthy People 2020 family planning goals, provided the variables.
- A random sample of charts from the health department's family planning clinic were evaluated for the years 2009 and 2014.
- Inclusion criterion include that charts were of family planning clients, adolescent – 44 years of age, female, received service during the calendar years 2009 and/or 2014.
- A random sample of 134 clients for each of the two calendar years were obtained.
- Following approval of the Institutional Review Board and ethical reviewers, research began.
- Inter-rater reliability between all four data extractors was assured after 100% agreement on four chart audits following orientation.



Dr. Carlson with Lydia Moore and Isabel Contreras, data collectors

## Purpose

**Purpose.** The purpose of this research project was to evaluate characteristics of adolescents and women at high-risk for unintended pregnancies by 1) comparing the LARC contraceptive choice and use and select personal characteristics for the years 2009 and 2014, and 2) exploring relationships among contraceptive LARC choice with personal characteristics of clients seeking family planning services.

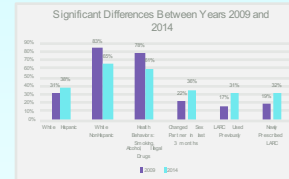
## Results: Question 1.

Table 1: Comparison of categorical variables of 2009 and 2014

Variables	2009 n	2014 n	Chi-square	p-value
Race and Ethnicity				
White-Hispanic	31	38	5.27	0.021
White-Non-Hispanic	83	65		
Black and other race groups	19	21		
Language				
English	110	105	0.77	0.68
Spanish	23	27		
Other	1	2		
Age group				
<19	35	26	5.18	0.16
20-29	73	96		
30-39	23	27		
≥40	3	10		
Below poverty level				
yes	121	113	0.65	0.42
no	60	59	0.02	0.90
Smoking				
yes	37	31	0.71	0.40
no	63	53	1.52	0.12
Using drugs				
yes	8	13	2.45	0.12
no	78	61	4.32	0.04*
Chronic Medical conditions				
yes	98	96	0.08	0.78
no	29	41	2.78	0.10
History of STI				
yes	15	16	0.14	0.71
no	22	36	6.34	0.03*
Had teen pregnancy				
yes	40	43	0.27	0.79
no	84	79	3.9	0.05*
Condom use in history form				
yes	17	31	4.97	0.03*
no	20	31	4.09	0.04*

Note: \* Health Behavior is additive score which includes smoke, alcohol and drug use.

Figure 1. Differences in personal characteristics across 2009 and 2014

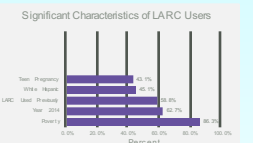


## Results: Question 2

Table 2. Personal characteristics on contraceptive choice

Variables	Total n	LARC yes (%)	LARC no n (%)	Chi-square	p-value
Race and Ethnicity	269				
White-Hispanic	69	23 (33%)	46 (67%)	14.8	<0.001*
White-Non-Hispanic	148	17 (11%)	131 (89%)		
Black and Other Race	50	11 (22%)	39 (78%)		
Language	265				
English	215	32 (15%)	183 (85%)	12.14	0.002*
Spanish	50	18 (36%)	32 (64%)		
Below poverty level	265				
yes	239	50 (21%)	189 (79%)	4.40	0.04*
no	26	1 (4%)	25 (96%)		
Used LARC ever	268				
yes	48	30 (63%)	18 (37%)	71.71	0.001*
no	220	21 (10%)	199 (90%)		
History of teen pregnancy	265				
yes	83	22 (27%)	61 (73%)	4.61	0.03*
no	182	28 (15%)	154 (85%)		
Year	268				
2009	114	19 (17%)	115 (86%)	4.09	0.04*
2014	134	32 (24%)	102 (76%)		

Figure 2. Significant personal characteristics on LARC use across years.



## Conclusions

- There were differences between the years of 2009 and 2014 in that there were **fewer riskier health behaviors** and **more of those with a new sexual partner** in the past 3 months.
- The results also underscore the need to encourage condom use in our population in order to reduce health risks for those not seeking pregnancy due to the early sexual initiation of this population (15 years v 17 year national mean) and the large number of clients seeking service after initiating relations with a new partner.
- There was an **increase in the number of LARCs** prescribed at a statistically significant level.
- A higher rate of LARC use was identified in those **using a LARC in the past**, those **below poverty** and those who had a **teen pregnancy**.
- Higher rates of LARC use were also identified in the **White-Hispanic population** across the years.
- These results will influence the development of tailored interventions for adolescents and women at high risk for unintended pregnancy.



Dr. Carlson presenting study to staff

## Key References

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