Breast Density Legislation: Discussion of Patient Utilization and Subsequent Direct Financial Ramifications for Insurance Providers

EC: Editor's Choice

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Abstract

Now that New Jersey has become the 14th state in the United States to enact legislation regarding dense breast screening, its patients are eligible to receive screening breast sonography coverage from their insurance carriers. This law is intended to improve breast cancer detection in patients with dense breasts and create awareness of unique issues that come with dense breast tissue, while reinforcing already present efforts to reduce the incidence of and morbidity related to the diagnosis of breast cancer. The aim of this study was to examine data from months preceding the effective date of this legislation in a community hospital setting and compare these data with data from months immediately after, and 6 months after, its enactment to present patient participation data and estimate the legislation's direct financial ramifications. Detractors of this type of legislation worry about overburdening the health care system with an influx of patients. Although there is a lack of present studies confirming this suspicion in other states with dense breast legislation, this study confirms a large increase in patient utilization after enactment, showing a minimum relative increase of 176.90% and a maximum relative increase of 335.56% in patient utilization of screening breast sonography. The investigators further include an estimation of an increased direct cost for insurers of $4,910,899.18 to $9,848,897.96 for a given month.

J Am Coll Radiol 2015;12:1011-1015.

INTRODUCTION

On January 17, 2014, the governor of the State of New Jersey signed NJ S-792/A-2022, a bill requiring insurers to cover breast evaluations (including breast ultrasound) under certain circumstances, namely, the setting of dense breasts as seen during mammographic testing [1]. The law, effective May 1, 2014, also requires certain mammographic reports to contain information on breast density.

Dense breast tissue has been shown to mask possibly threatening lesions in mammographic images, leading to the possibility of missed diagnoses and delaying early intervention [2]. Screening breast ultrasound has shown the advantage of improving diagnosis in some situations and, as such, has been suggested as a follow-up in patients with dense breast tissue. Most notably, ACRIN® conducted a study concluding that adding screening ultrasound to mammography will identify an additional 4.3 cancers per 1,000 women screened [2].

Concordantly, patient awareness of risks associated with the diagnosis in the setting of dense breasts and options available to minimize said risks have been deemed imperative by the State of New Jersey. However, the ACR has also noted issues with test reproducibility, high false-positive rates, operator dependency, and a low positive predictive value for biopsy recommendations [2]. This creates a logical uncertainty for other states' possible forthcoming legislation. The utility of including this screening must always be considered at the level of the patient, but legislation of this nature leads to similar consideration at the level of the state as a whole.

Our facility is within a 111-bed regional medical center, which provides mammography, breast sonography, and breast MRI to patients from a variety of areas in and around New Jersey. We have fully implemented the necessary measures in compliance with NJ S-792/A-2022 as of May 1, 2014, including a process of disclosure and follow-up imaging. Patients with dense breasts are informed of the legislation and provided with the option to undergo additional studies the same day or on a future date or to decline any further screening.

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The authors have no conflicts of interest related to the material discussed in this article.

1546-1440/15/$36.00 ■ http://dx.doi.org/10.1016/j.jacr.2015.04.015

As mentioned, although further screening may lead to better diagnostics, it also opens the door to false positives and additional, unnecessary, testing. As other states begin to contemplate similar legislation, it is important to understand the possible financial repercussions. To assist in this understanding, we looked at a sample of patients seen for mammography and subsequent breast ultrasound at our facility within the 3 months before and after the enactment of the law. We then followed up approximately 6 months after enactment to rule out the possibility of misestimating participation. The difference in breast ultrasound volume is then combined with the average reimbursements of these examinations to provide an aggregate reimbursement amount of these measures and thus a direct financial impact.

METHODS

Patients who visited our facility for mammography during the months of May, June, July, November, and December 2014 were used as a sample, with the number of those opting for follow-up breast ultrasound within the months included in the study period representing an "affirmative response." This sample did not include patients who presented for diagnostic recall mammography, who, for example, had previously presented for palpable abnormalities. Comparison was then made between the mean number seen monthly in January through March, which preceded the enactment of NJ S-792/A-2002, and a mean of the months after enactment (separated as May to July 2014 and November to December 2014). A confidence interval (CI) of 95% was then calculated for the percentage of affirmative responses in both groups. These CIs would serve as an assumed range to be used in the second part of this study.

Using state and local census numbers and data from State of New Jersey Department of Health state health assessment data regarding the percentage of women undergoing breast mammography [3], estimation was made of the total number of women who would undergo mammography in an average year and month. Then, percentage data acquired from the first part of this study were multiplied by this estimation to present an estimated number of women who would agree to undergo follow-up ultrasound statewide before and after the enactment of NJ S-792/A-2002.

Finally, pricing information for breast sonography global reimbursement rates for the State of New Jersey was obtained from Medicare to be used to estimate the representative reimbursement amount. These amounts were multiplied by the study's estimated number of ultrasound patients, and a comparison was made between the months preceding the enactment of NJ S-792/A-2002 and 2 separate sets of months after enactment.

RESULTS

There are approximately 2,323,218 women older than 40 years in New Jersey [4]. Of these, 68.7%, or 1,596,051, will undergo mammography in a given year, or 133,004 in a given month [3].

At our facility, the months of January to March 2014 showed a mean of 415 mammographic examinations performed, with a mean of 73 supplemental follow-up ultrasound studies performed (17.59%; 95% CI, 13.92%–21.26%; Table 1). The months of May to July 2014 had a mean of 452 mammographic examinations,

Table 1. Follow-up breast sonography before and after the enactment of dense breast notification legislation

	January	February	March	Average, January to March	95% CI (±3.67%)
Mammography	419	382	444	415.0	
Follow-up ultrasound	57	74	88	73.0	
% follow-up	13.60%	19.37%	19.82%	17.60%	13.92%–21.26%
	May	**June**	**July**	**Average, May to July**	**95% CI (±4.55%)**
Mammography	459	435	461	451.7	
Follow-up ultrasound	215	187	169	190.3	
% follow-up	46.84%	42.99%	36.66%	42.16%	37.61%–46.71%
	November	**December**		**Average, November and December**	**95% CI (±4.71%)**
Mammography	395	429		412.0	
Follow-up ultrasound	160	182		171.0	
% follow-up	40.51%	42.42%		41.47%	36.71%–41.47%