

TexMed 2017 Quality Research Abstract

Please complete all of the following sections and include supporting charts and graphs in this document. Submit a total of two documents - this document and the Biographical Data and Disclosure Form to posters@texmed.org by midnight March 17, 2017.

Description and Selection Criteria

- Applicants should demonstrate an understanding of systematic investigation through research development, testing and evaluation designed to develop or contribute to generalizable knowledge. Judges will use the scoring described in this matrix to identify projects to be presented at the conference, as well as, projects to be considered for the awards.
- The focus for Quality Research abstracts is any project that is conducted with an intent to answer a research question or test a hypothesis related to quality improvement (QI). It is also intended to develop or contribute to generalizable knowledge. Projects in Quality Research need to have approval from an Institutional Review Board or have a formal letter of exemption. Traditional QI activities, on the other hand, cover the gamut of projects that are:
 - aimed at improving local systems of care, or improving the performance of institutional practice;
 - designed to bring about immediate improvements in health care delivery; or
 - intended to compare a program/process/system to an established set of standards such as standard of care, recommended practice guidelines, or other benchmarks.

If you have a question about whether your project is Quality Research or a QI project, please contact us.

- These submissions should provide general information related to the one of the following categories: patient safety, patient centered care, equity, timeliness, efficiency, or effectiveness.
- Maximum points delineated with a brief explanation of the content that should be included under each section. Applicants may describe the problem and results in narrative or graphic format.

PROJECT NAME: Tracking Osteoporosis Screening and Vitamin D supplementation in Post-Menopausal women in an outpatient Internal Medicine clinic

Institution or Practice Name: University of Texas Rio Grande Valley, Su Clinica Familiar, Harlingen, Texas

Setting of Care: Office visits to the Internal Medicine Residency Service outpatient clinic.

Primary Author: Leopoldo M. Cobos, MD PGY-3

Secondary Author: Jean Luis Cabrera, MD PGY-1

Other Members of Project Team: Laura Garcia, MD, Garry Souffrant, MD and James Hanley, MD

Is the Primary Author, Secondary Author or Member of Project Team a TMA member (required)?

Yes No

Please provide name(s): Laura Garcia, MD; TMA ID# 1142350

Project Category: *(Choose all categories)*

- Patient Safety Patient Centered Care Timeliness Enhanced Perioperative Recovery
 Efficiency Effectiveness Equity Disaster Medicine & Emergency Preparedness

For this poster session, TMA is looking for research projects that demonstrate the six aspects of Quality Care as defined by the Institute of Medicine.

- Safe - avoids injuries to patients from care that is intended to help them
- Timely - reduces waits and delays for both those who receive care and those who give care
- Effective - based on scientific knowledge, extended to all likely to benefit, while avoiding underuse and overuse
- Equitable - provides consistent quality, without regard to personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status
- Efficient - avoids waste, including waste of equipment, supplies, ideas, and energy
- Patient centered - respects and responds to individual patient preferences, needs, and values, ensuring that patient values guide all clinical decisions

Introduction (15 points max): *Describe 1) where the work was completed; 2) what faculty/staff/patient groups were involved, and 3) sufficient background information provided to establish the significance of the problem.*

This was a retrospective analysis performed at Su Clinica Familiar outpatient clinic in Harlingen, Texas. The project was completed by Dr. Leopoldo M. Cobos and Dr. Jean Luis Cabrera and supervised by Dr. Laura Garcia, Dr. Garry Souffrant and Dr. James Hanley.

Osteoporosis is a disorder of the bone in which there is decreased bone strength secondary to an imbalance between bone resorption and bone formation, which increases risk of bone fractures even with minimal trauma. It is usually seen in post-menopausal women and has increased prevalence in pre-menopausal patients with risk factors such as smoking, certain medications, low body weight, alcoholism, Vitamin D deficiency and family history of hip fracture. The USPSTF recommends screening for osteoporosis in women aged 65 years and older and in younger women whose fracture risk is equal to or greater than that of a 65 year old white woman who has no additional risk factors. In addition, the risk of falls is increased as patients grow older, and there is proven evidence that supports the use of adequate dosing of Vitamin D supplementation of at least 800 units per day for the preventions of falls. The aim of this study is to evaluate our internal medicine residency program outpatient clinic in regards to screening for osteoporosis in post-menopausal females in addition to screening if Vitamin D supplementation is given for fall prevention.

Hypothesis (15 points max): *State the pertinent research or change hypothesis. Using if/then format, describe the 1) assumption; 2) condition; and 3) prediction(s).*

The assumption is: If the residents have been introduced to USPTF recommendations to screen post-menopausal women above age 65 for osteoporosis and knowing that adequate Vitamin D supplementation aids bone health and fall prevention,

The condition is: the residents at clinic should properly identify who to screen for osteoporosis by referring to a bone density scans and prescribe appropriate dosing of Vitamin D.

The prediction: we should see appropriate identification for screening and referral for bone density scan in addition to prescribing proper Vitamin D supplementation for bone health and fall prevention.

Methods (25 points max): *Describe the specific methods, resources, procedures, models and/or programs used to study and test the subject of the investigation. Note charts, graphs and tables here and send as addendum with abstract form.*

We retrospectively selected 91 charts of female patients above age 65 which were seen by Internal Medicine residents from January 2014 to December 2016. We reviewed if patients had been referred for a bone density scan; if they were

placed on daily Vitamin D supplements and what dose was prescribed to patients. We also reviewed the number of patients that were Spanish speakers only and if they were covered by insurance.

Results (25 points max): *Specifically explain what was discovered, accomplished, collected and/or produced; supports hypothesis and conclusions with adequate evidence and includes quantitative data. Note charts, graphs and tables here and send as addendum with abstract form.*

Of the 91 patients seen, 52 (57.1%) had a bone density scan performed or ordered. Daily Vitamin D supplementation was prescribed to 64 patients (70.3%), but, only 16 patients out of the 64 which were on Vitamin D supplement had a dose of 800 units or more, (25% of those on Vitamin D, and 17.5% of total patients). In addition, we found that 57 of the 91 patients were Spanish speakers only (62.6%). Forty one patients were un-insured (45%) and out of the un-insured, 34 were Spanish speakers only (82.9%, 37.3% of the total patients).

Conclusions (20 points max): *Provide a succinct interpretation of the results and evaluate what the results mean to the investigation, OR evaluate the relevance or uniqueness of what was accomplished in the immediate context of the project's purpose and describe how the investigation fits within a larger field.*

In our Internal Medicine outpatient clinic, we found that about half of the patients meeting criteria for osteoporosis screening either had a bone density scan done or had one ordered. Vitamin D supplementation was prescribed to the majority of patients, but less than one fifth of the patients had a dose of at least 800 units per day, which is recommended for bone health in post-menopausal women and also for fall prevention in elderly. Also, we found that more than half of our patient population was Spanish speaking only and less than half did were un-insured, but, out of the Spanish speakers, the vast majority was un-insured.

Our approach to screening for osteoporosis is suboptimal and is only done in about half of our patient population meeting criteria. Also, although the majority of our patients are on Vitamin D supplements, we are not prescribing the adequate dosing for bone health and fall prevention. There was a tendency to prescribe Vitamin D once a day at the lowest dose available. Improvement in the area of preventive health and adequate knowledge of the current evidence is warranted to properly screen and treat patients with the proper dosing of Vitamin D. Our goal is to establish an effective way to alert resident physicians on identifying patients which require osteoporosis screening the same way there are alerts in the EMR in addition to providing the adequate dosing of Vitamin D supplementation.

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Supporting Tables

	Total Patients = 91
DEXA ordered	52 (57.1%)
Vitamin D Supplement	64 (70.3%)
Vitamin D >800 U/day	48 (17.5%)

	Total Patients = 91
Spanish Speakers	57 (62.6%)
Non-Insured	41 (45%)
Spanish + No Insurance	34 (37.3%)