

QUALITY INDICATORS IN EPILEPSY CARE

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Quality of Care...The Case of Epilepsy

- Why is it important...
- How might it be defined...
- How were Quality Indicators in Epilepsy Treatment (QUIET indicators) developed...
- How were they adapted for use in the VA...
- What processes of care are included...
- How can they be used to improve the epilepsy care we provide to Veterans...

Why Quality

- Quality of Care is an important consideration
 - Legal
 - Payment
 - Quality Improvement

History of Quality Measurement

- RAND Appropriateness Method (RAM)
 - Mid 1980s
- Goal: Identify overuse and underuse of medical and surgical procedures
- Approach: Expert Consensus Process
- Result: Quality Indicator

Early Results

- 30 Quality Indicators
 - Chronic Disease, Acute Conditions, Preventive Care
 - 54% of patients received recommended treatments
 - Epilepsy Not Included
- CDC funded project to develop Epilepsy Quality Indicators for patients in primary care settings.

Quality In Epilepsy Treatment (QUIET) Indicators

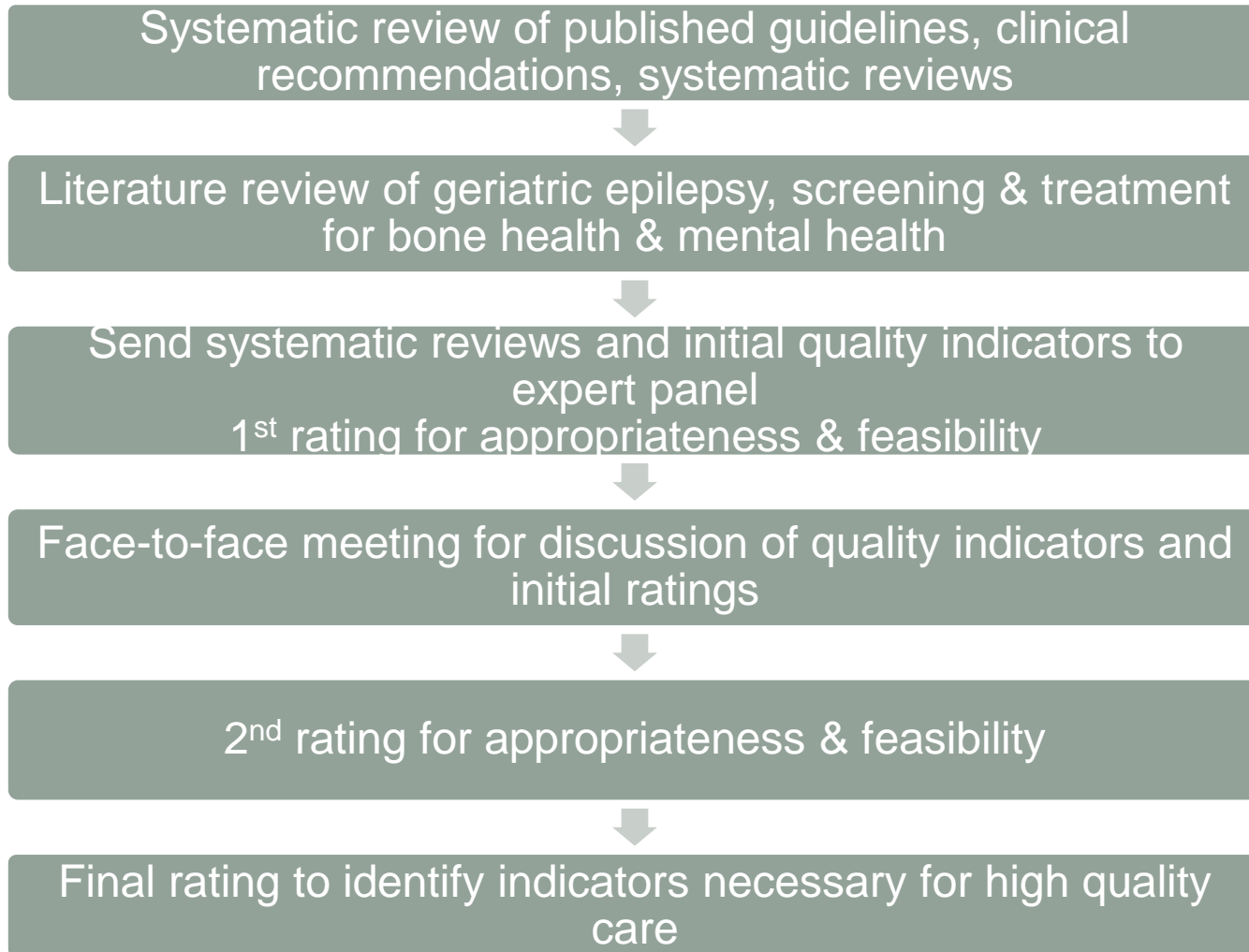
- Pugh MJ, Berlowitz DR, Montouris G, et al. What constitutes high quality of care for adults with epilepsy? *Neurology*. 2007 2007;69(21):2020-2027.
- What constitutes quality of care for people with epilepsy (PWE) in primary and general neurology clinics?

QUIET Indicators Framework

- **DEFINING QUALITY**
 - Quality maximizes patients' welfare
 - Improves (or maintains) quality or duration of life
 - Leads to desired health outcomes
 - IOM defines as the degree to which health services increase the likelihood of desired health outcomes of individuals and populations and which are consistent with current professional knowledge.
- **DIMENSIONS OF QUALITY**
 - Technical quality: right decisions for patients, technical skill to perform care
 - Interpersonal quality: quality of communication, ability to gain patient trust, ability to interact with empathy, honesty, sensitivity to patients' concerns
 - Amenities of care

Methods—Modified Delphi Process

used to develop quality indicators for care of adult PWE (overview)



American Academy of Neurology Quality Indicators

- Based on the QUIET Indicators
- Went through a second more stringent process (Physicians Consortium for Performance Improvement)
- 8 were approved as AAN Quality Indicators (indicated with *)
- 4 approved for use as Pay for Performance measures

VA Adaptation

- Used a similar process (RAM)
- Allowed more specific recommendations for referral
- Included more recent evidence on teratogenicity of SM
- Items added to create QUIET VA are indicated in font

Evaluation of Initial Seizure

- In the initial clinical evaluation of a first seizure,
 - *1. all patients should have the results of at least one EEG reviewed or requested.
 - Or, if EEG was not performed previously, then an EEG should be performed
 - *2. all patients should have results of at least one MRI or CT scan reviewed or requested.
 - Or, if a MRI or CT scan was not obtained previously, then a MRI or CT scan should be ordered (MRI preferred).
- 3. all patients should receive information on driving restrictions, safety, and injury prevention.



Initial Diagnosis & Treatment

- *4. IF a patient is thought to have a diagnosis of epilepsy THEN the diagnosis should include a best estimation of seizure types.
- 5. IF the patient meets the criteria for epilepsy diagnosis (generally two unprovoked seizures) THEN seizure medication (SM) treatment should be discussed with and offered to the patient and caregivers.
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- 6. IF the patient is diagnosed with a seizure disorder/epilepsy and started on therapy THEN monotherapy is preferred.

Initial Diagnosis & Treatment (cont.)

- 7. IF the patient is a woman of childbearing potential (12-44 years old) THEN referral to a neurologist or an epilepsy specialist is indicated.
- 8. IF a woman with epilepsy is of childbearing potential (12-44 years old) she should receive information about the teratogenicity associated with treatment with valproate or topiramate and accept those risks prior to treatment.

Initial Diagnosis & Treatment (cont.)

- 9. During the visit at which a patient is diagnosed with a seizure disorder/epilepsy, the patient should receive information on:
 - driving restrictions, safety and injury prevention, diagnosis and treatment options including the importance of taking SMs as directed,
 - triggers and other lifestyle factors that may affect seizure control (e.g. sleep deprivation, alcohol/drug use), and contraception and family planning.
- 10. If a person with epilepsy is prescribed an SM that interacts with warfarin, the INR should be monitored within a week of any change in SM therapy, especially during polytherapy. Once the INR is stable, it should be monitored every four weeks.

Chronic Epilepsy Care

- *11. WHEN a patient with epilepsy receives follow-up care, THEN an estimate of the number and types of seizures since the last visit and an assessment of drug side-effects should be documented.
- *12. WHEN a patient with epilepsy receives follow-up care, THEN drug side-effects should be assessed and documented.
- 13. IF the patient continues to have seizures after initiating treatment, THEN interventions should be performed.
 - Options include: compliance assessment/enhancement, monitor SM blood levels, increased SM dose, change SM dose, patient education regarding lifestyle modification, referral to higher level of epilepsy care.

Chronic Epilepsy Care (cont.)

- 14. IF a patient with epilepsy continues to have seizures after three months of care by a primary care provider, further assessment by a neurologist should be conducted.
- 15. IF a patient continues to have seizures after 12 months of appropriate care by a general neurologist, THEN the patient should receive a referral to an epilepsy specialist.



Chronic Epilepsy Care (cont.)

- 16. Patients with epilepsy should receive an annual review of information including topics such as:
 - chronic effects of epilepsy and its treatment including
 - drug side-effects, drug-drug interactions, and their effect on bone health,
 - *contraception, family planning, and how pregnancy or menopause may affect seizures,
 - screening for mood disorders,
 - triggers and lifestyle issues that may affect seizures,
 - impact of epilepsy on other chronic and acute diseases,
 - *safety issues (injury prevention, burns, driving restrictions, etc.)
 - other patient self-management issues

Chronic Epilepsy Care (cont.)

- 17. IF the patient is on SM for 2 or more years THEN providers should assess bone health.
- 18. Individuals receiving seizure medications should be screened for depression/suicide related behaviors (e.g., PHQ-9) initially, then 4-6 weeks (or the next clinic visit) after SM initiation and then at least yearly.
- 19. If a person with epilepsy is found to have evidence of a mood disorder (e.g., depression, anxiety), THEN s/he should receive treatment or a referral for mental health care.

Chronic Epilepsy Care for Women

- 20. IF a woman with epilepsy is of childbearing potential (12-44 years old) THEN she should receive daily supplemental folate at a dose of at least 400 mcg.
- 21. IF a woman with epilepsy is of childbearing potential (12-44 years old) and receives oral contraceptives in conjunction with an enzyme inducing SM, THEN decreased effectiveness of oral contraception should be addressed. (higher doses of oral contraceptives, alternative birth control methods, or change SM).
- 22. Prenatal care for a woman with epilepsy should be co-managed by a neurologist and an obstetrician with experience in high risk pregnancy to assure that issues related to the impact of epilepsy and its treatment on the pregnancy are addressed.

Patient Generated Quality Indicator Statements

- P1. Providers should refer patients to local support groups or other resources to obtain psychosocial support.
- P2. Providers should encourage patients to become educated about epilepsy and to advocate for themselves in the health care system and with providers.
 - For example, provide patients with written material about epilepsy, references to epilepsy foundation or epilepsy web sites.
- P3. Providers should communicate with patients about potential medication side effects, including cognitive, emotional, physical and sexual side effects.

Patient Generated Quality Indicator Statements

- P4. Providers should give referrals to social services to assist with employment, negotiating through the SSDI, insurance and alternative transportation for patients who cannot drive.
- P5. Providers should discuss the complexity of epilepsy treatment and explain that each patient responds to medications differently and that they may need to try several different medications before they find out what works best for that individual.

Conclusion

- QUIET Indicators are appropriate for patients in primary care or general neurology settings.
- QUIET Indicators based on published evidence, expert opinion, patient perceptions.
- QUIET Indicators provide a foundation for quality improvement in the care of adults with epilepsy.
 - Allows for identification of gaps between recommendations and clinical practice
 - Encourages development of interventions targeted at improving specific aspects of care identified by baseline assessment.

Research on QUIET Measures

- Pugh MJ, Berlowitz DR, Rao JK, et al. The quality of care for adults with epilepsy: an initial glimpse using the QUIET measure. *BMC Health Serv Res.* 2011;11:1.
- QUIET allows for the investigation into the kind of care people with epilepsy (PWE) receive.
 - What kinds of quality of care are patients receiving?
 - How does the care vary among patients?
 - How does care vary in different settings of care (i.e., neurology, primary, and shared care)?
 - Given that patients with other chronic conditions tend to receive better quality care from medical sub-specialists or within shared care context, we hypothesized that PWE were more likely to receive high quality care when they receive neurological care or shared care.

Methods

SAMPLE: Tertiary Hospital in the Northeastern US

Adults over 18	≥ 2 primary care or neurology care
ICD-9 code 345x or 780.39, “epilepsy”, “seizure”	<u>or</u> 1 primary/neurology care + 1 hospitalization

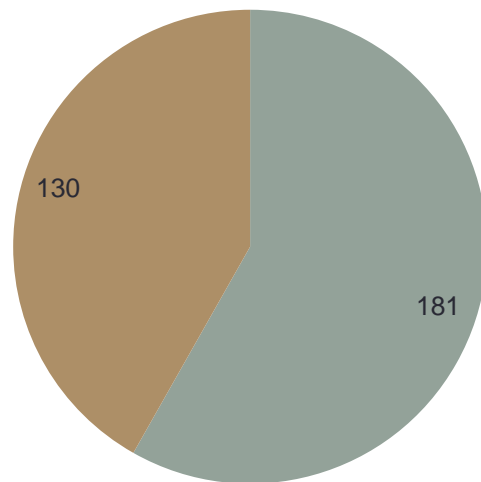
DATA: Medical Chart Abstraction of Electronic Medical Record

Demographics	Pharmacy
Diagnosis codes	Laboratory
Patient problem list	Inpatient/outpatient components

Operational Definitions of Quality Indicators

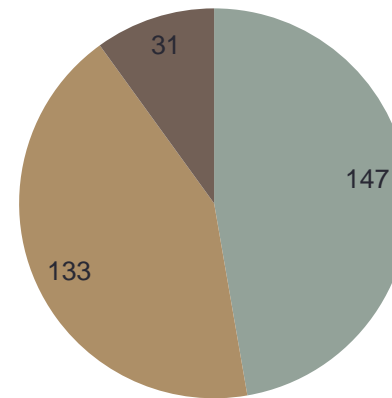
IF (specific conditions present)/THEN (process of care)

Results—Participant Characteristics



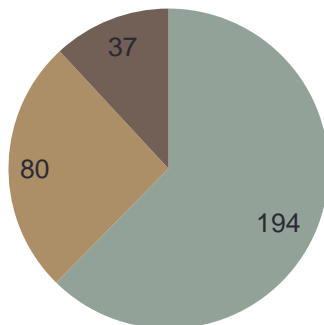
Participants
N=311

■ Female
■ Male



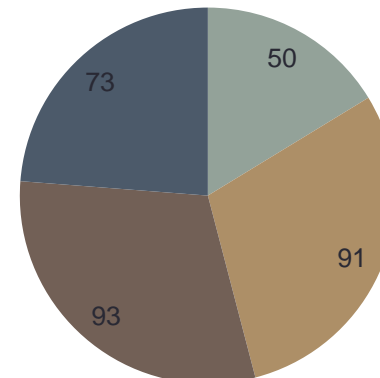
Race/Ethnicity

■ White
■ African American
■ Other



Age

■ 18-49
■ 50-64
■ 65+

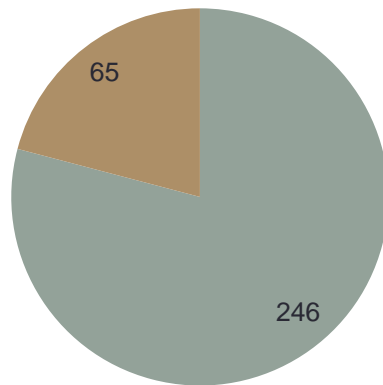


Education

■ <High School
■ High School
■ Some College
■ College Grad

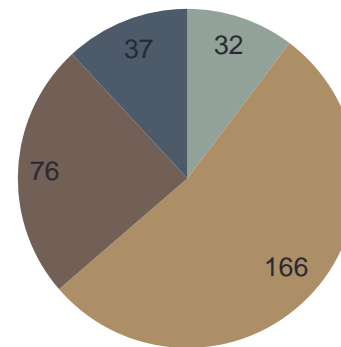
Results—Participant Characteristics

(cont.)



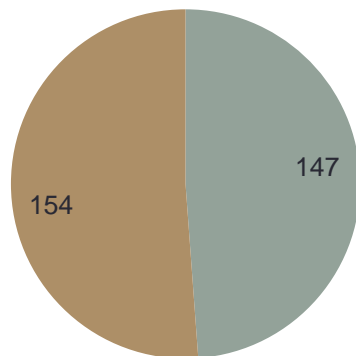
Epilepsy Chronicity

- Chronic
- New-Onset



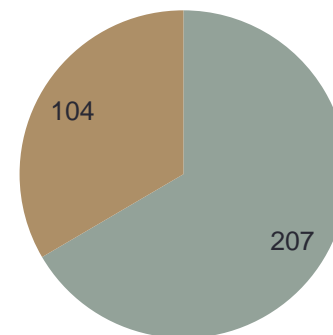
No. of SM

- 0
- 1
- 2
- 3+



Seizure Controlled/Continued

- Continued Seizures
- Controlled Seizures

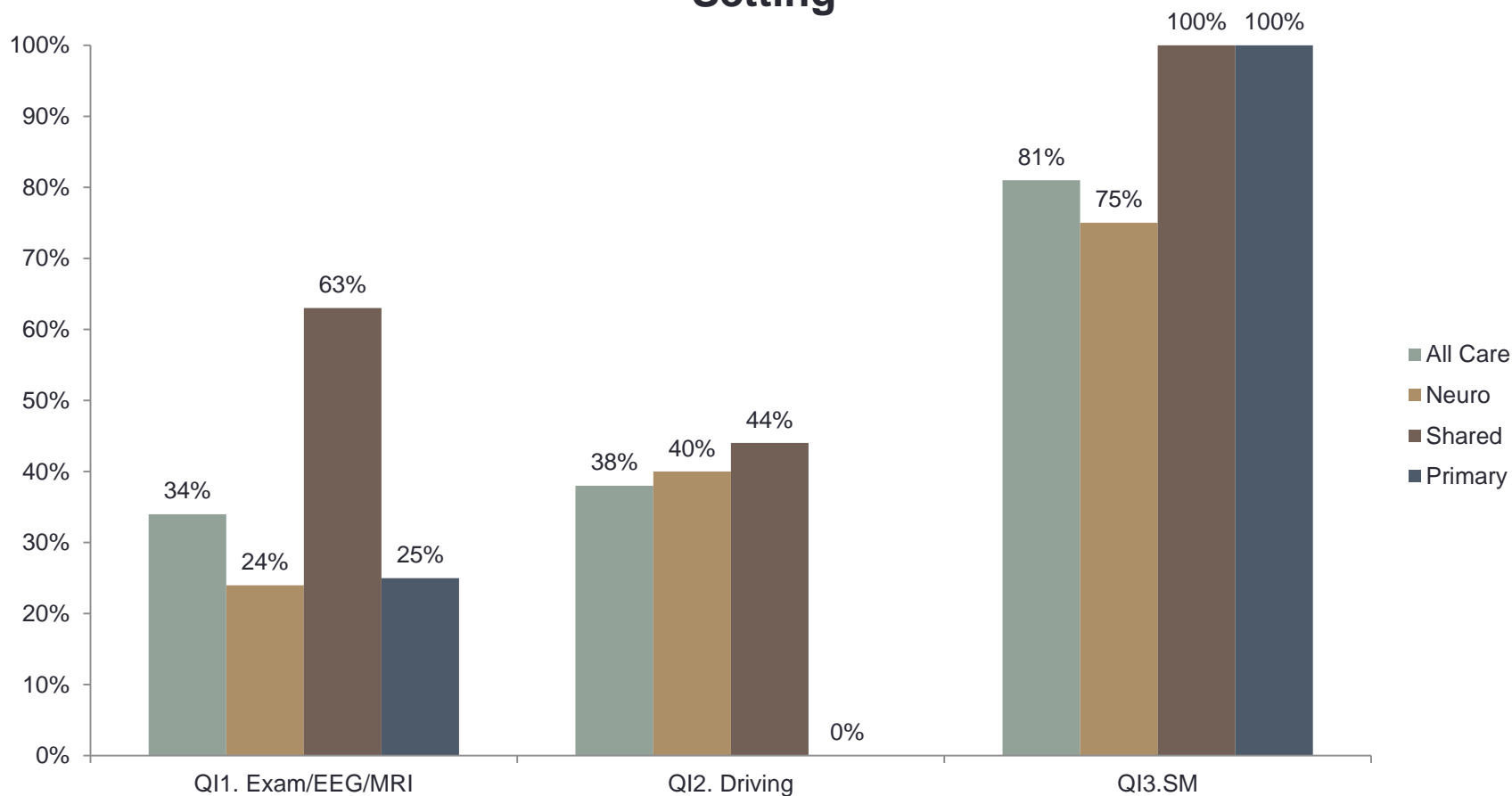


SM Change/No Change

- No Change SM
- Change SM

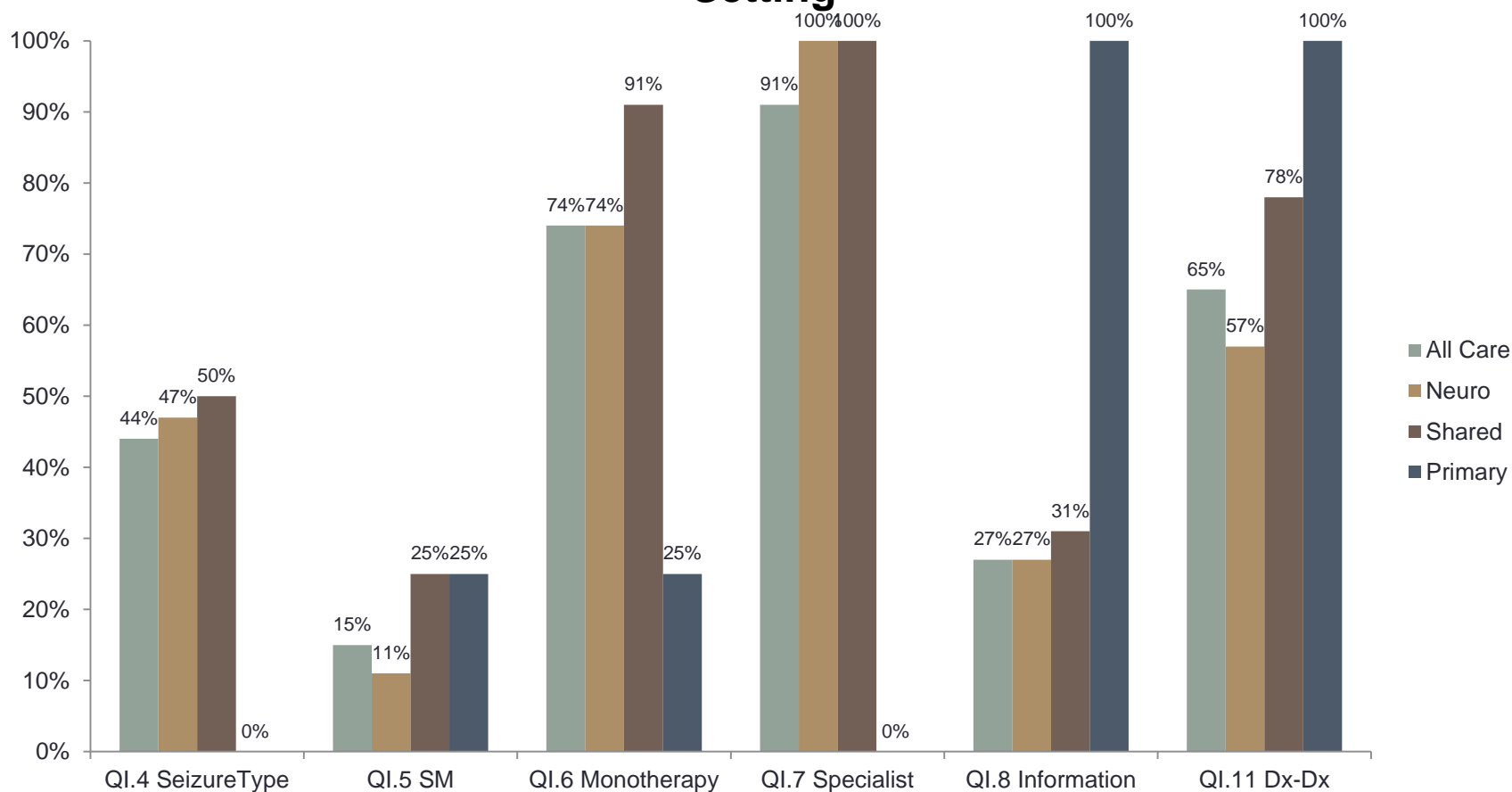
Results QUIET Indicators—Evaluation of First Seizure

Percentage of Patients Receiving QI Concordant Care by Setting

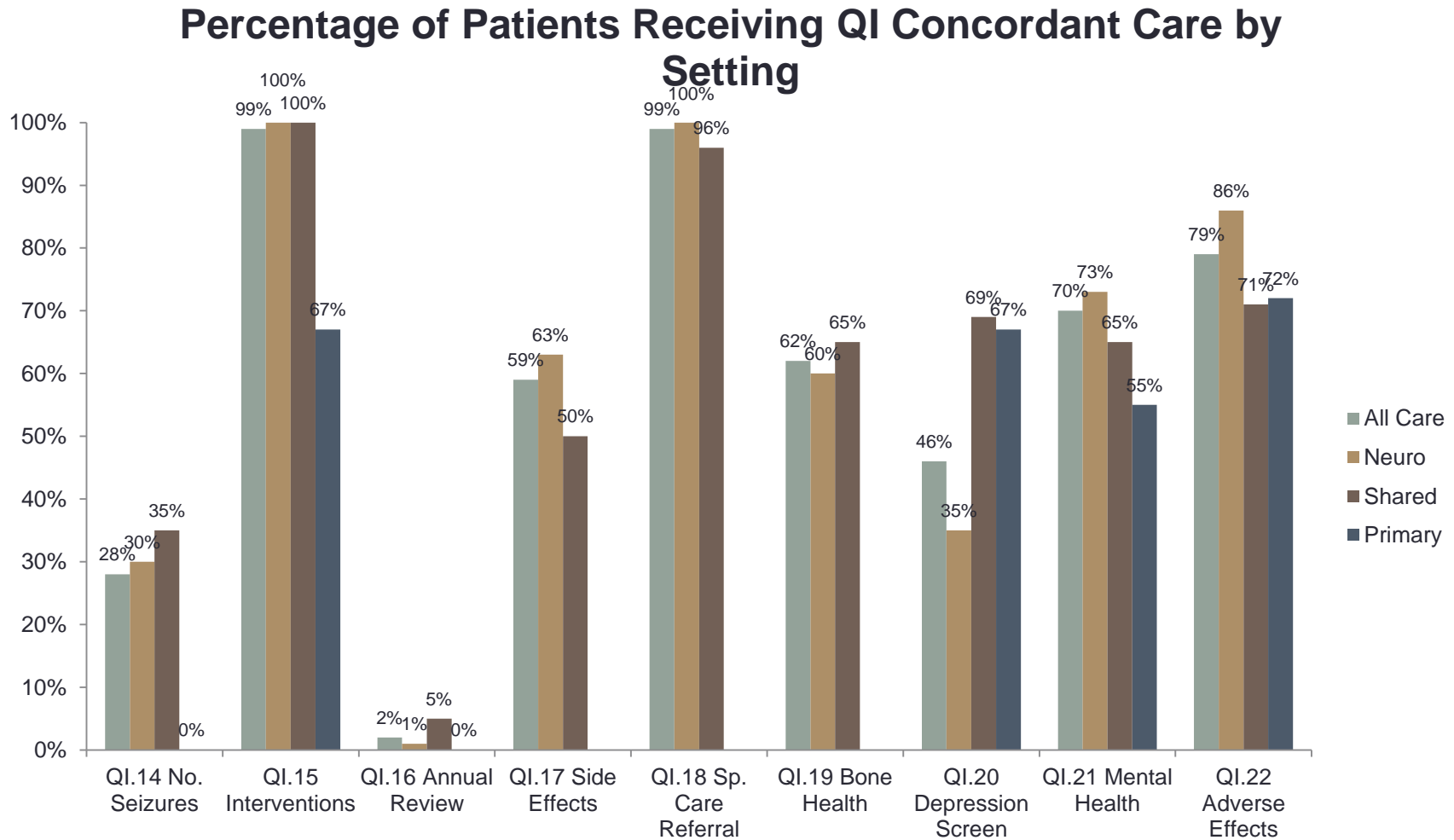


Results: QUIET—Initial Treatment of Epilepsy

Percentage of Patients Receiving QI Concordant Care by Setting

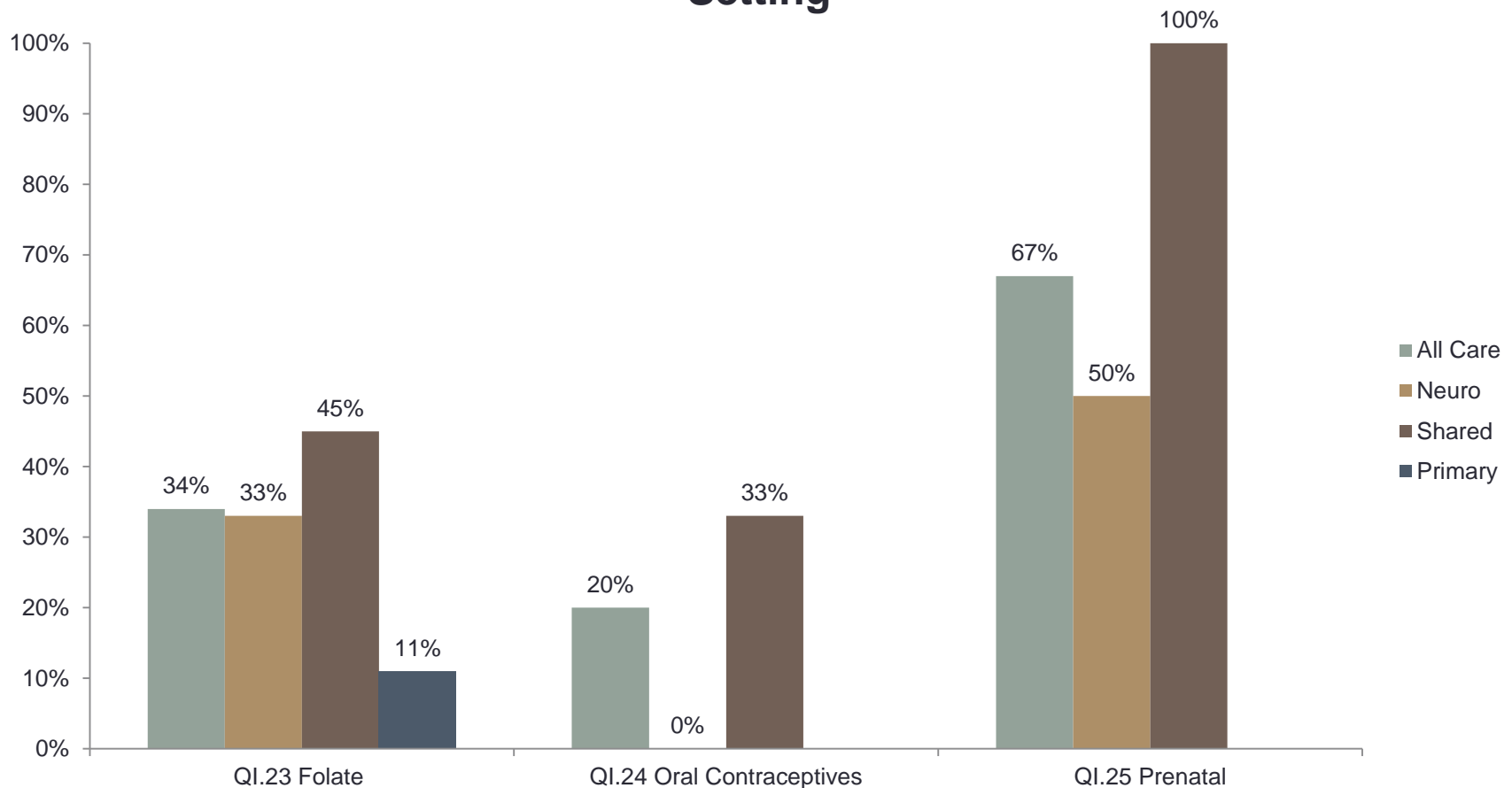


Results QUIET—Follow-up/Chronic Care

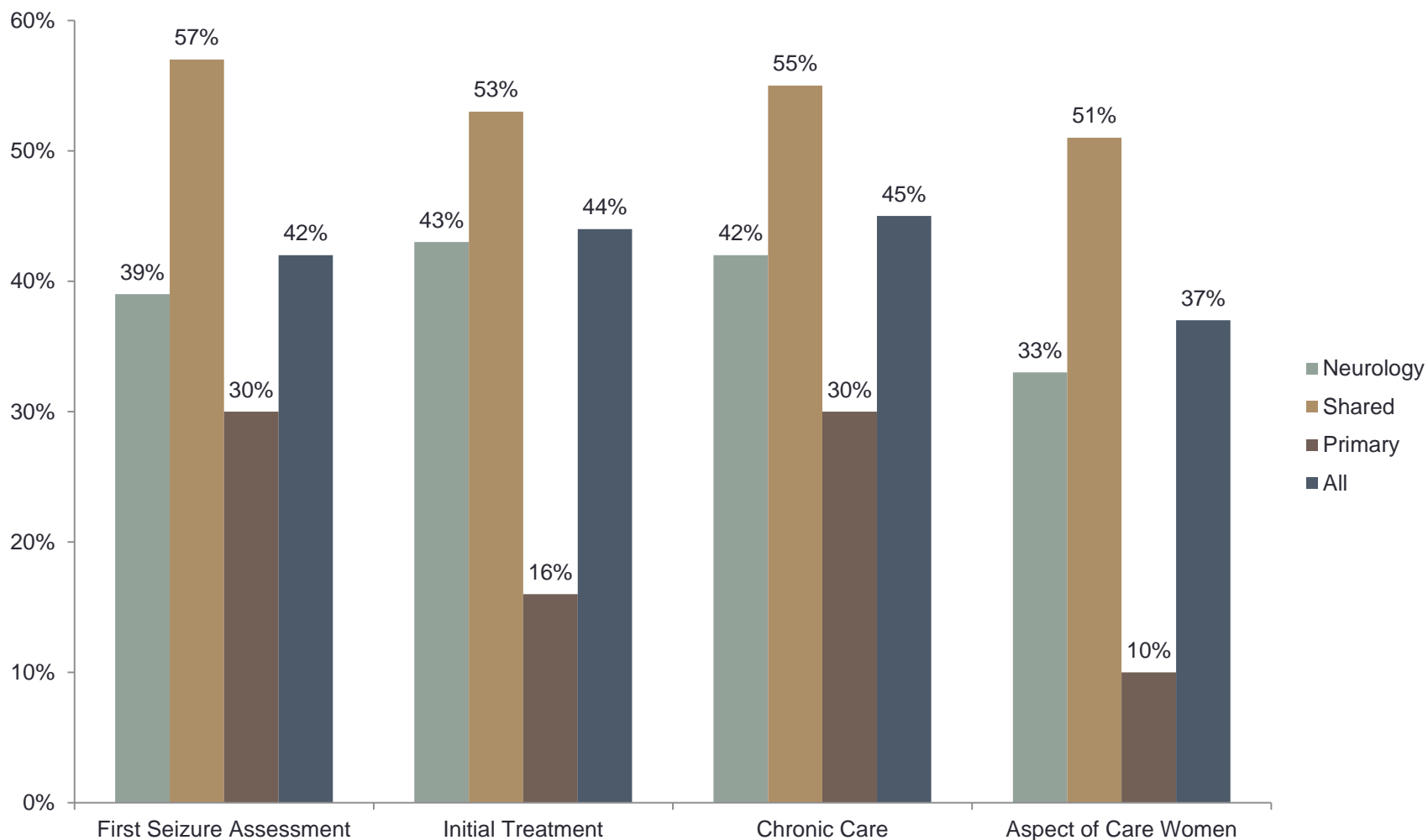


Results QUIET—Aspects of Care Specific to Women

Percentage of Patients Receiving QI Concordant Care by Setting



Results Proportion of All Possible Opportunities Taken for Quality



Discussion

- Overall, less than half of all possible care processes were completed.
- Wide variation in the delivery of recommended care
 - Aspects of Care Unique to Women had lowest concordance.
- Data provide little support for hypothesis that PWE receiving shared care would have better care than primary/neurology care only.
- QI with technical focus had higher rates of concordance (QI 2,7,15,18).
- QI with discussion focus had lower rates of concordance (QI 5,8,16) (documentation is indicator of quality)
- Bone health & mood disorders being addressed for many PWE.

Next Steps

- Examining quality of care in VA using QUIET-VA
- Information can be fed back to clinicians
- Specific areas of focus can be identified
- Quality Improvement strategies can be developed
- Quality of epilepsy care for Veterans can be improved

References

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- Pugh MJ, Berlowitz DR, Montouris G, et al. What constitutes high quality of care for adults with epilepsy? *Neurology*. 2007;69(21):2020-2027.
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