



# HEDIS 2014 Update

February 17, 2015

Presented by: Keith Bachman MD

SEOW Attachment 5  
February 17, 2015

# Agenda

Performance Summary

Measures to Improve

Summary

Questions

# Our key principles of population care quality

- Quality is everybody's business
- Quality saves lives and prevents disease
- Opportunities happen in every encounter inside and outside the office setting
- Quality is imbedded in our healthcare delivery culture and operations
- Our quality scores are truly a reflection of our "high quality" members, employer-customers, and lots of hard work and dedication

# Performance Summary

# OEBB Performance Summary – Comparison to other Health Plans

## >90<sup>th</sup> Percentile

Breast Cancer Screening  
Colorectal Cancer Screening  
Adult BMI Assessment  
Imaging for Low Back Pain  
Chlamydia Screening

Cardiovascular LDL Screening  
Diabetes HbA1c Testing  
Diabetes Nephropathy  
Diabetes LDL Screening  
Diabetes LDL Control < 100  
Diabetes HbA1c Poor Control  
Antidepressant Mgmt – 180 day  
Med Continuation

Rx of Children with URI  
Child/Adol BMI Assessment  
Child/Adol Counseling for Nutrition  
Child/Adol Counseling for Activity

## >75<sup>th</sup> Percentile

(In addition to the > 90<sup>th</sup> Percentile)

Asthma 19 – 50 years  
Mental Health Post-Inpatient Visits  
Within 7 Days  
Mental Health Post-Inpatient Visits  
Within 30 Days  
Cardiovascular LDL Control < 100  
Timeliness of Prenatal Care  
Avoiding Antibiotics

Well Child Visits Ages Adolescent  
Follow-up Care for Children  
Prescribed ADHD Meds  
(Initiation)  
Adolescent Immunizations  
Childhood Immunization combo 2

## <75<sup>th</sup> Percentile

Tobacco Cessation Assistance (3  
measures – Advise, Medication  
Discussion, Strategies)  
Asthma Appropriate Meds Total Age  
5 - 64

Childhood Immunization combo 2

# Performance Summary – Comparison to prior year

- Compared to 2013, we see an increase in performance on 23 of the 32 measures.
- Performance improved in asthma care, 5 of 6 diabetes measures, cholesterol management in CAD, imaging in low back pain, cervical cancer screening, childhood immunization combo 10, adolescent well visits, and treatment of children with respiratory infections.
- Performance dropped in childhood immunization combo 2, timeliness of prenatal care, avoiding antibiotics in adult bronchitis.

# Care Delivery Improvement Strategy for Measures < 75<sup>th</sup> Percentile

- Tobacco Cessation Assistance (3 measures – Advise, Medication Discussion, Strategies)
- Asthma Appropriate Meds Age Total 5 - 64
- Childhood Immunization combo 2

# Tobacco Use

- Tobacco prevalence is a KPNW high priority quality measure
- OEGB members less likely to report use of tobacco products
  - 11.9% of KP members (age > 18) vs 8.7% of OEGB members use tobacco
  - OEGB: Dec. 2013 to Dec. 2014 reduction from 9.3 to 8.7% (6.5% reduction, 115 fewer tobacco users)
- Survey measures of process (not OEGB specific) show weak performance: HEDIS measures < 75<sup>th</sup> percentile
- Tactics:
  - System improvements include simplification of nicotine and pharmacotherapy prescription process
  - No copays for behavioral treatment or tobacco pharmacotherapy
  - Warm transfer from automated birthday call to health coach

# Asthma Appropriate Meds Total Age 5 - 64

OEBC current	OEBC prior	KPNW Commercial	HEDIS 75 <sup>th</sup> percentile
94.0%	90.7%	94.0%	94.2%

- Comments:
  - Improvements over prior period noted
- Tactics:
  - In reach with electronic alerts at PCP visits
  - Pharmacy out reach for adherence
  - Asthma case management following ED or Hospital stay

# Childhood Immunization combo 2

OEBB current	OEBB prior	KPNW Commercial	HEDIS 75 <sup>th</sup> percentile
87.1%	87.5%	87.1%	87.5%

- Comments:
  - This is a challenge (getting people in, # of vaccines required, patient preference)
- Tactics:
  - In reach at well and urgent visits
  - Centralized out reach

# Summary

- Most HEDIS measures performing higher than the 75<sup>th</sup> percentile
- Increased HEDIS performance noted in 2014 compared to 2013
- High priority measures going forward
  - For adults--Diabetes management, tobacco prevalence, asthma care, breast and colorectal cancer prevention
  - For children and adolescents– immunizations and well child visits
- Excellent quality scores reflect a true partnership between our coordinated system efforts and prevention-focused OEBC members

# Quality Ranking: NCQA HEDIS 2014



## NCQA top-ranked plans in Oregon and Washington

- #1 in Quality and Performance among HMO and PPO Health plans in Oregon and Washington
- #3 Medicare plan in the US
- #5 Commercial plan in the US (and #1 west of Boston)!

Medicare.gov



## Rated 5 out of 5 Stars in Oregon and Washington

- KPNW has earned a '5 Stars' rating for four years in a row

# HEDIS 2014 Update

February 17, 2015

Presented by Nathan Trenholme and Dr. Neal Mills



# HEDIS Results



# OEBB Performance Summary

## Comparison to Other Health Plans

### > 90<sup>th</sup> Percentile

- Comprehensive Diabetes Care (Eye Exam)
- Use of Imaging Studies for Low Back Pain
- Breast Cancer Screening
- Plan All-Cause Readmissions

### > 75<sup>th</sup> Percentile

(In addition to the >90<sup>th</sup> percentile)

- Comprehensive Diabetes Care (Eye Exam)
- Use of Imaging Studies for Low Back Pain
- Breast Cancer Screening
- Plan All-Cause Readmissions
- Use of Appropriate Medications for People with Asthma
- Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis

### < 75<sup>th</sup> Percentile

- Comprehensive Diabetes Care (HbA1c Testing, HbA1c Poor Control, LDL-C Screening, LDL-C Control, Medical Attention for Nephropathy)
- Cholesterol Management for Patients with Cardiovascular Conditions
- Antidepressant Medication Management: Effective Continuation Phase Treatment
- Follow-Up Care for Children Prescribed ADHD Medication
- Follow-Up After Hospitalization for Mental Illness
- Outpatient Visits (Ambulatory Care)
- ED Visits (Ambulatory Care)
- Adult BMI Assessment
- Weight Assessment and Counseling for Nutrition and Physical Activity in Children/Adolescents
- Colorectal Cancer Screening
- Chlamydia Screening
- Childhood Immunization Status
- Adolescent Immunizations
- Timeliness of Prenatal Care
- Adolescent Well-Care Visits
- Appropriate Treatment of Children with Upper Respiratory Infection

# OEBB Performance Summary (continued)

## Increased in Rate

- Cholesterol Management for Patients with Cardiovascular Conditions
- Follow-Up Care for Children Prescribed ADHD Medication
- Use of Imaging Studies for Low Back Pain
- Breast Cancer Screening
- Colorectal Cancer Screening
- Chlamydia Screening
- Childhood Immunization Status
- Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis
- Plan All-Cause Readmissions
- Comprehensive Diabetes Care (LDL-C Control)

## Rate Remained Stable

- Use of Appropriate Medications for People with Asthma
- Follow-Up After Hospitalization for Mental Illness
- Ambulatory Care Outpatient Visits
- Ambulatory Care Emergency Department Visits
- Adult BMI Assessment
- Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents
- Cervical Cancer Screening
- Adolescent Immunizations
- Timeliness of Prenatal Care
- Adolescent Well-Care Visits
- Appropriate Treatment of Children with Upper Respiratory Infection
- Comprehensive Diabetes Care (HbA1C Test, LDL-C Test, Eye Exam, Attention for Medical Nephropathy)

## Decreased in Rate

- Antidepressant Medication Management: Effective Continuation Phase Treatment

# OEGB Performance Summary (continued)

- Medical Assistance with Smoking and Tobacco Use Cessation lacked enough data to report – too few smokers

# Moda — Be more, be better.

Striving for excellence and continuous improvement



# Current Interventions

- Focus on improving member experience, outcomes, and clinical guidelines
- Focus interventions in 4 major categories:
  1. Preventive service gaps in care
  2. Lifestyles/healthy behaviors
  3. Chronic disease management and control
  4. Medication adherence and appropriate use
- Interventions are highly data driven!  
Focus on specific deficiencies and barriers

# 1. Preventive Services

Gap in Care reminders to members AND providers

- Cancer screening
  - > Colorectal, breast, cervical cancer screening reminders
  
- Infectious disease prevention
  - > Chlamydia screening reminders
  - > Childhood and adolescent immunization schedules

## 2. Lifestyles/Healthy Behaviors

- Health coaching
  - › Weight Care (addresses *Adult BMI Assessment*)
  - › Maternity Wellness (addresses *Timeliness of Prenatal Care*)
  - › Tobacco Cessation (addresses *Medical Assistance with Smoking and Tobacco Use Cessation*)
  - › C3 Program (identifies high utilizers of emergency departments and recommends appropriate services; addresses *Ambulatory Care - Emergency Department Visits*)
  
- Reminders for adolescent well-care visits
  
- Flu-shot reminders
  
- Benefit design
  - › Added an additional wellness visit for OEBB members

# Flu Shot Campaign

## “Surround Sound” Approach

- Members received reminders and educational materials from several sources
- Member mailing stuffers in EOBs and all member outreach
- IVR phone outreach to over 36,000 OEBC households
- Social media campaign including Facebook, My Apple a Day Blog, and myModa web messaging
- Member and provider notices and materials in newsletters
- Reminders in HRAs for members who indicate they have not yet had a flu shot

# 3. Chronic Disease Management

Support programs for members with chronic disease include:

- Health coaching
  - › Diabetes Care (addresses *Comprehensive Diabetes Care*)
  - › Heart Health (addresses *LDL-C Control and Screening*)
  - › Respiratory Health (addresses *Use of Appropriate Medications for People with Asthma*)
  
- Gap in care reminders for chronic disease management:
  - › HbA1c screenings
  - › Eye exams
  - › Nephropathy screenings
  - › LDL-C screenings
  - › Spirometry testing for COPD

## 4. Medication adherence

- Reducing medication non-adherence
  - › Member outreach to those with poor adherence to depression and cardiac medication (addresses *Antidepressant Medication Management*)
- Reducing inappropriate medication use
  - › Currently developing member outreach to those with asthma (addresses *Use of Appropriate Medications for People with Asthma*)
  - › Non-compliant providers contacted regarding *Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis* and *Appropriate Treatment for Children with Upper Respiratory Infection*
- Improving recommended medication use
  - › Beta Blockers following heart attacks
- Improving follow-up and oversight of medication use:
  - › Prescribing physicians (as well as parents of children) are contacted to encourage follow-up visits for children taking ADHD medication
  - › External providers contracted to follow-up with those hospitalized for mental illness

# Interventions

Interventions for HEDIS Measures decreasing  
or in the 75th percentile or below (Moda Commercial PPO Rate):

Measure	Intervention
Breast Cancer Screening	Routine birthday screening reminders
Use of Appropriate Medications for People with Asthma	Currently developing member outreach, Respiratory Health Coaching Program
Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis	Letters to non-complaint providers, as well as chart reviews of these providers
Appropriate Treatment for Children with Upper Respiratory Infection	Letters to non-complaint providers, as well as chart reviews of these providers
Follow-Up After Hospitalization for Mental Illness	External providers contracted to follow-up
Colorectal Cancer Screening	Routine birthday screening reminders
Comprehensive Diabetes Care	Diabetes Health Coaching program, routine diabetes screening reminders
Chlamydia Screening in Women (ages 18 to 24)	Routine birthday screening reminders
Adolescent Immunizations	Member Outreach

# Interventions (continued)

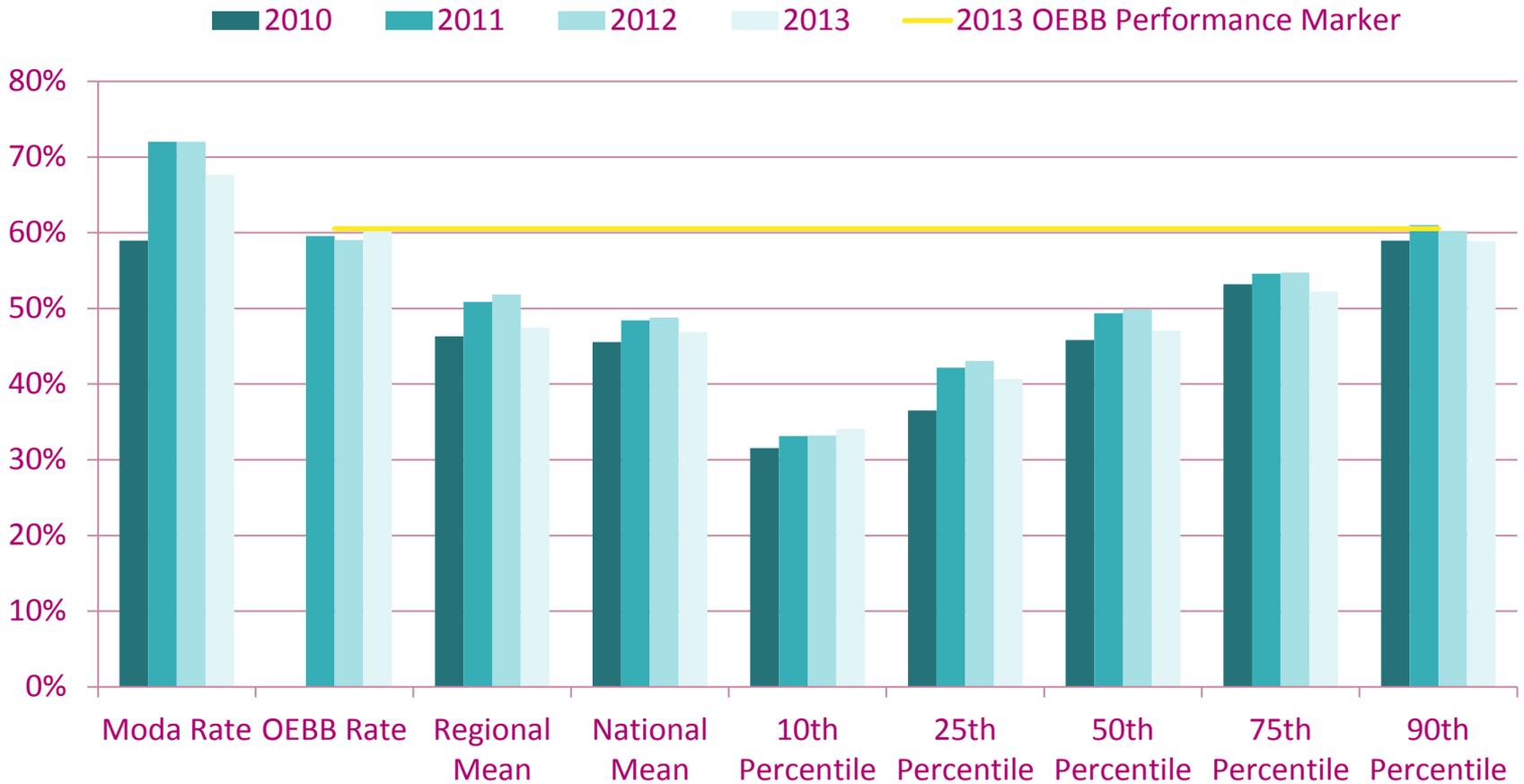
Measure	Intervention
Adolescent Well-Care Visits	Routine reminders to members needing visits
Antidepressant Medication Management	Member outreach to those non-compliant, Depression Health Coaching Program
Follow-Up Care for Children Prescribed ADHD Medication	Prescribing physicians and parents of children taking ADHD medication are contacted to encourage follow-up visits
Adult BMI Assessment	Switch to hybrid measure (due to better data quality, regarding identifying members in the numerator), Weight Care Health Coaching Program
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents	Switch to hybrid measure (due to better data quality, regarding identifying members in the numerator)
Childhood Immunizations	Routine Immunization Reminders
Cholesterol Management for Patients with Cardiovascular Conditions	Cardiac Health Coaching Program
Timeliness of Prenatal Care	Maternity Care Health Coaching Program
Ambulatory Care - Outpatient Visits	Benefit design, an additional wellness visit added for OEGB members
Ambulatory Care – Emergency Department Visits	C3 Health Coaching Program - Identifying high utilizers of emergency departments and recommending appropriate services, such as seeing a primary care physician

# Appendix A - Charts



# Comprehensive Diabetes Care- Eye Exam

## Eye Exam Rates from 2010 to 2013

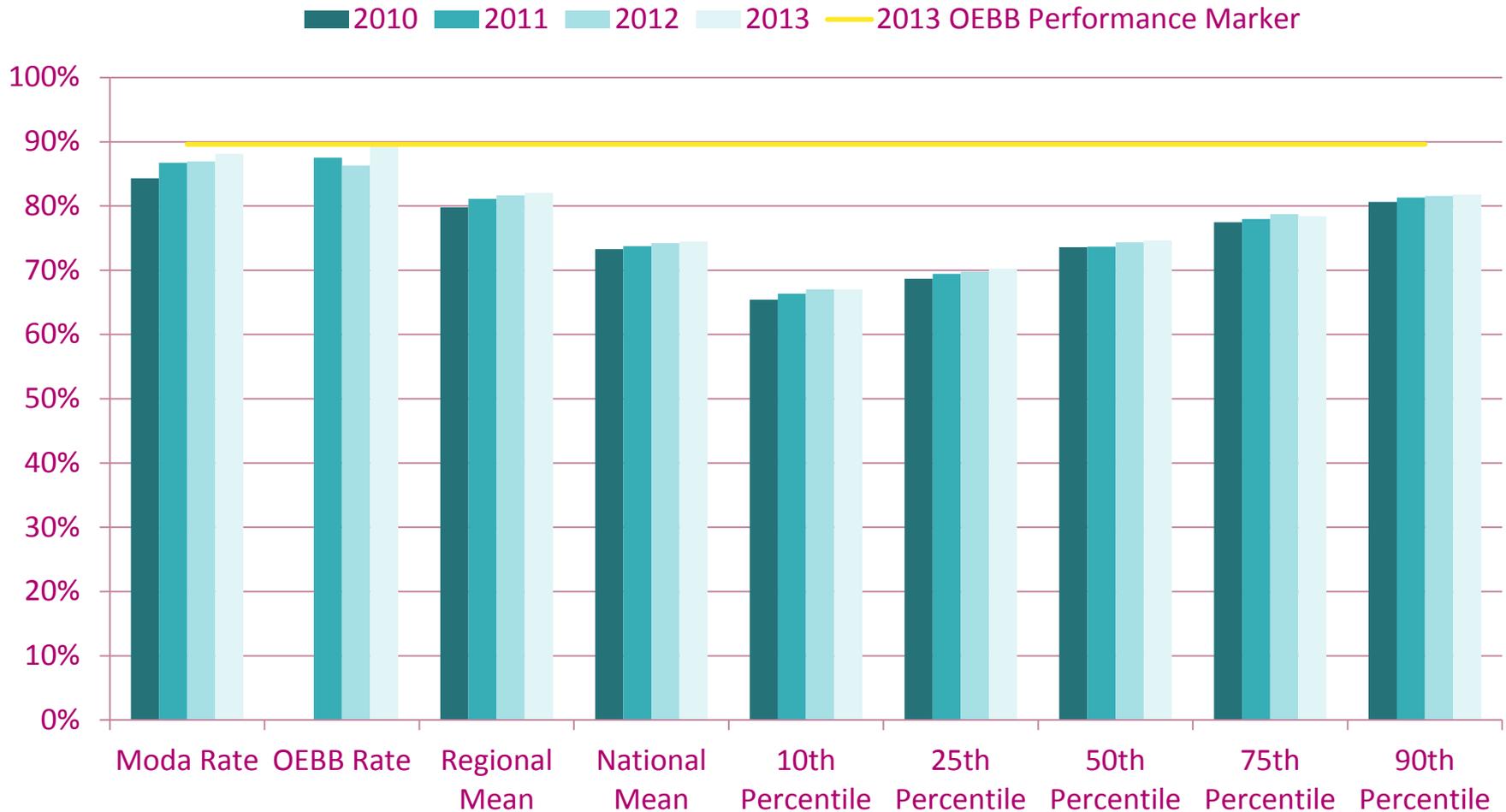


Moda Commercial PPO and OEGB scored in the 90<sup>th</sup> percentile nationally.

OEGB's rate consists of only administrative data.

# Use of Advanced Imaging for Low Back Pain

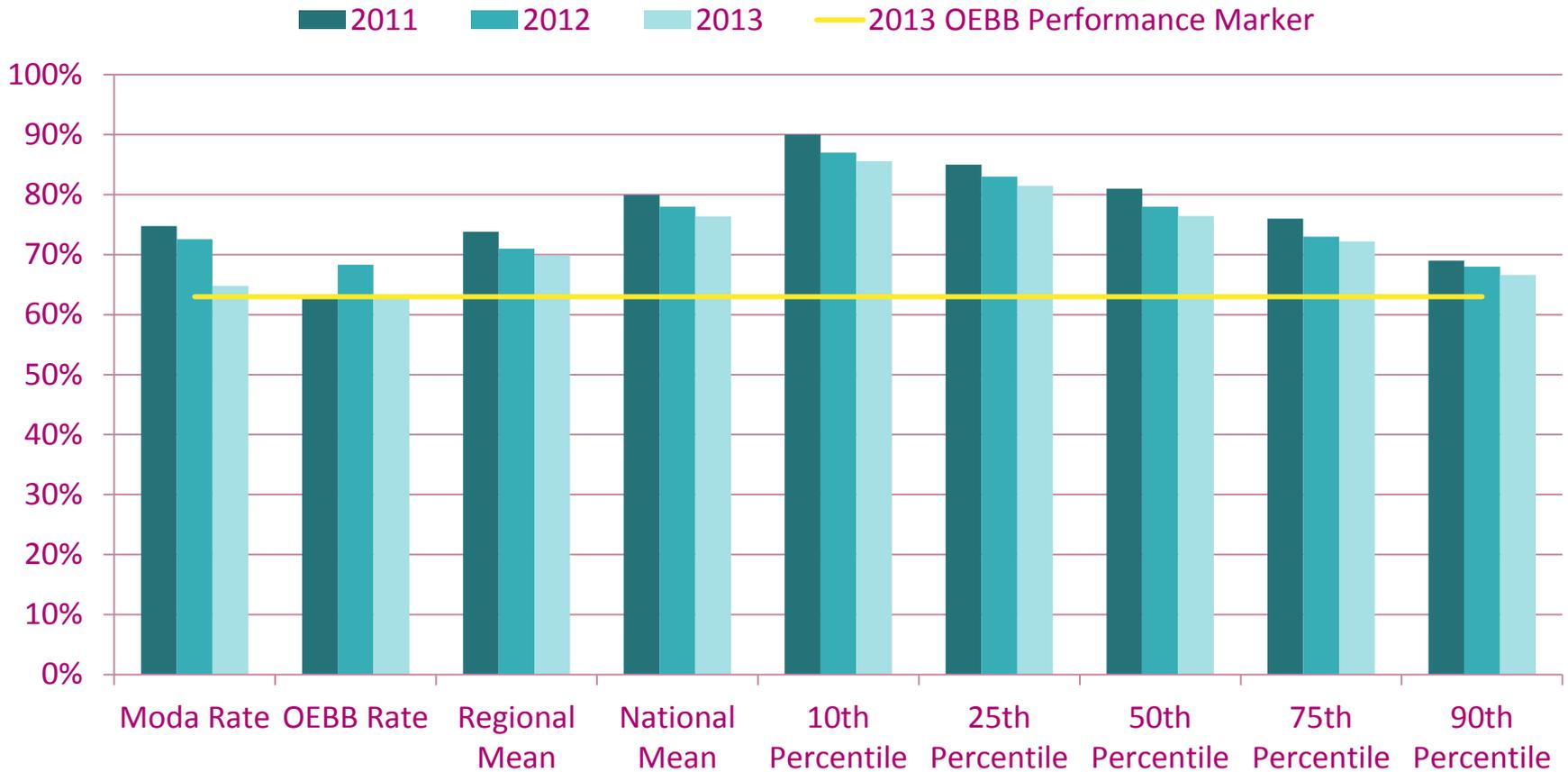
## LBP Rates from 2010 to 2013



Moda Commercial PPO and OEBC scored in the 90<sup>th</sup> percentile nationally.

# Plan All-Cause Readmissions

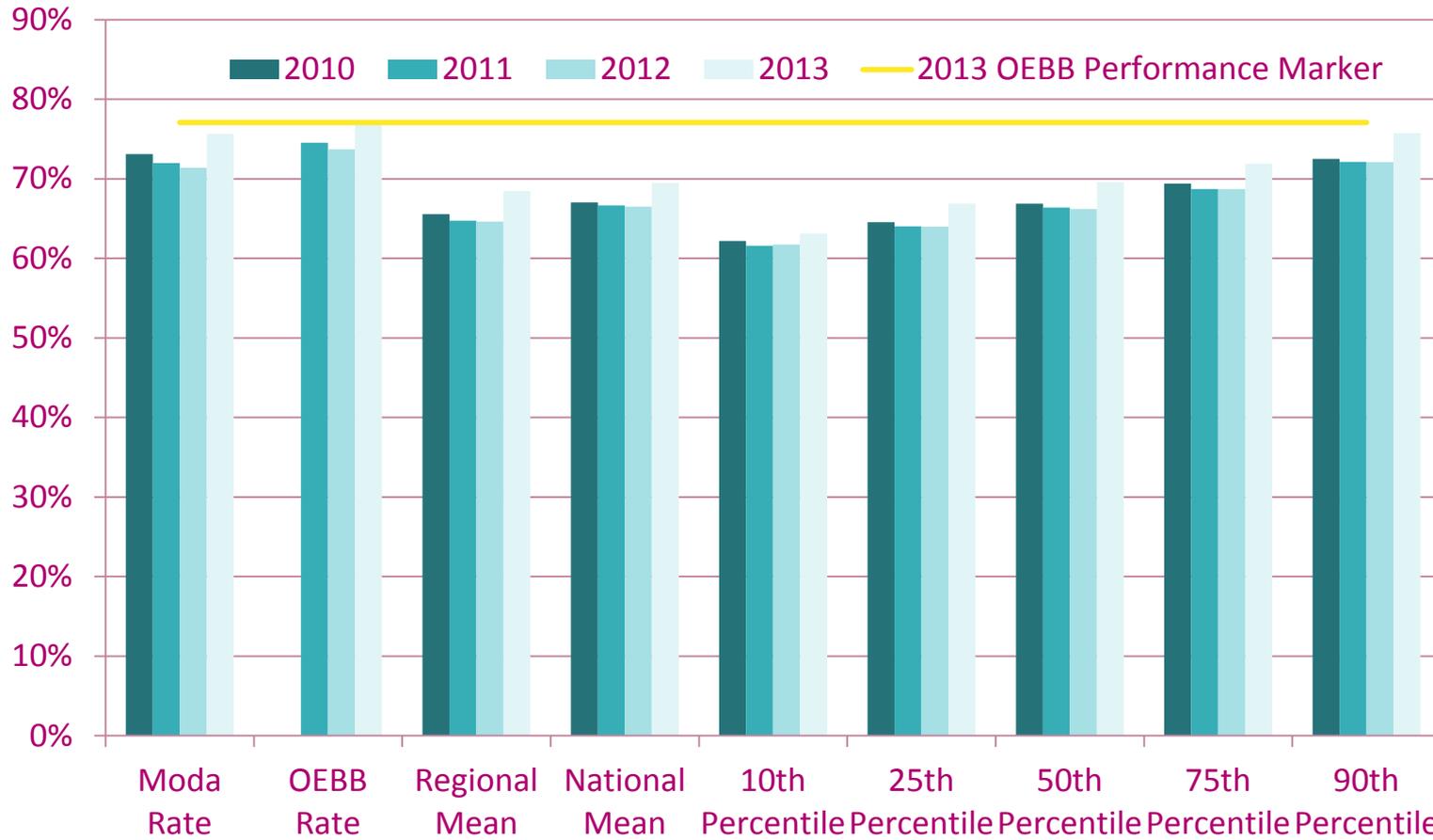
## PCR Rates from 2011 to 2013



Both the Moda Commercial PPO and OEBB readmission rates are at the 90<sup>th</sup> percentile nationally.

# HEDIS Details - Breast Cancer Screening (BCS)

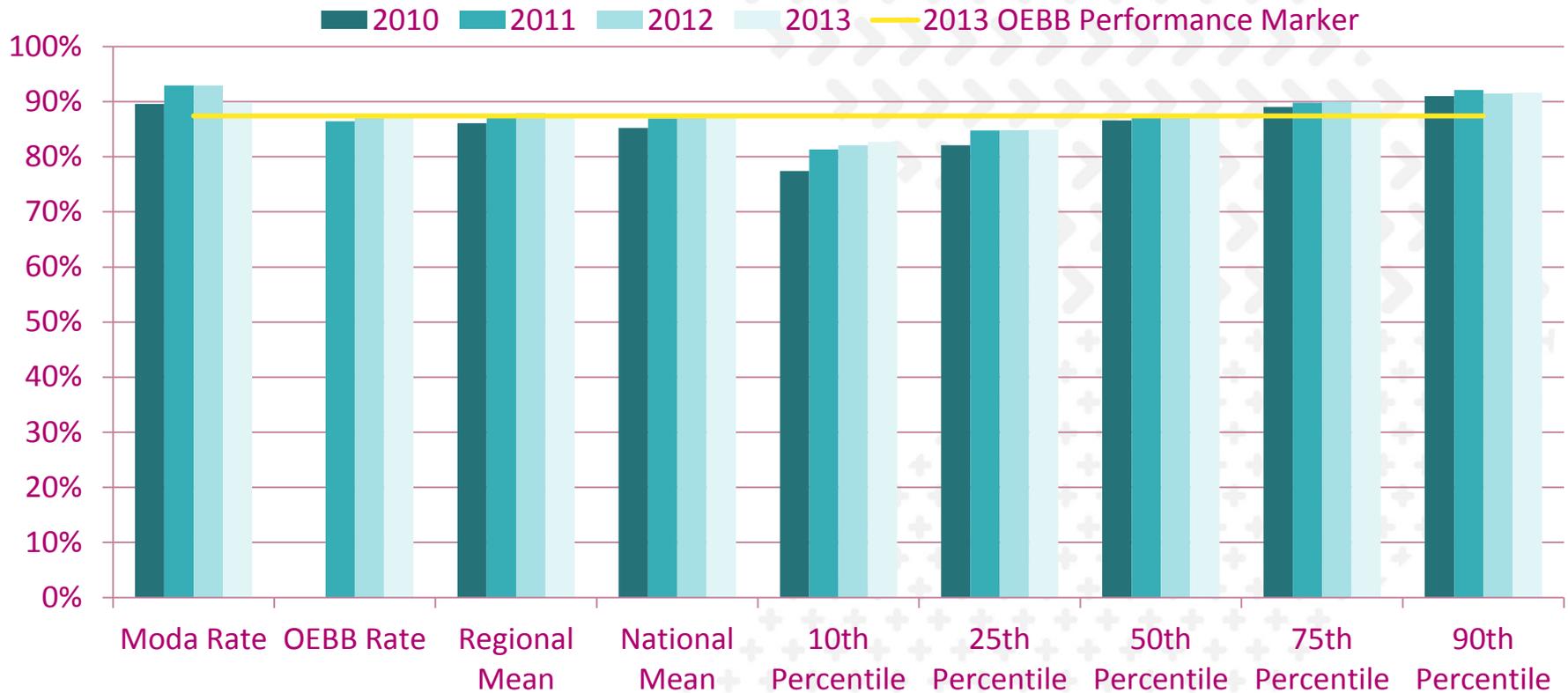
## BCS Rates from 2010 to 2013



Moda Commercial PPO scored in the 75<sup>th</sup> percentile and OEBB scored in the 90<sup>th</sup> percentile nationally

# Comprehensive Diabetes Care – HbA1c Screening

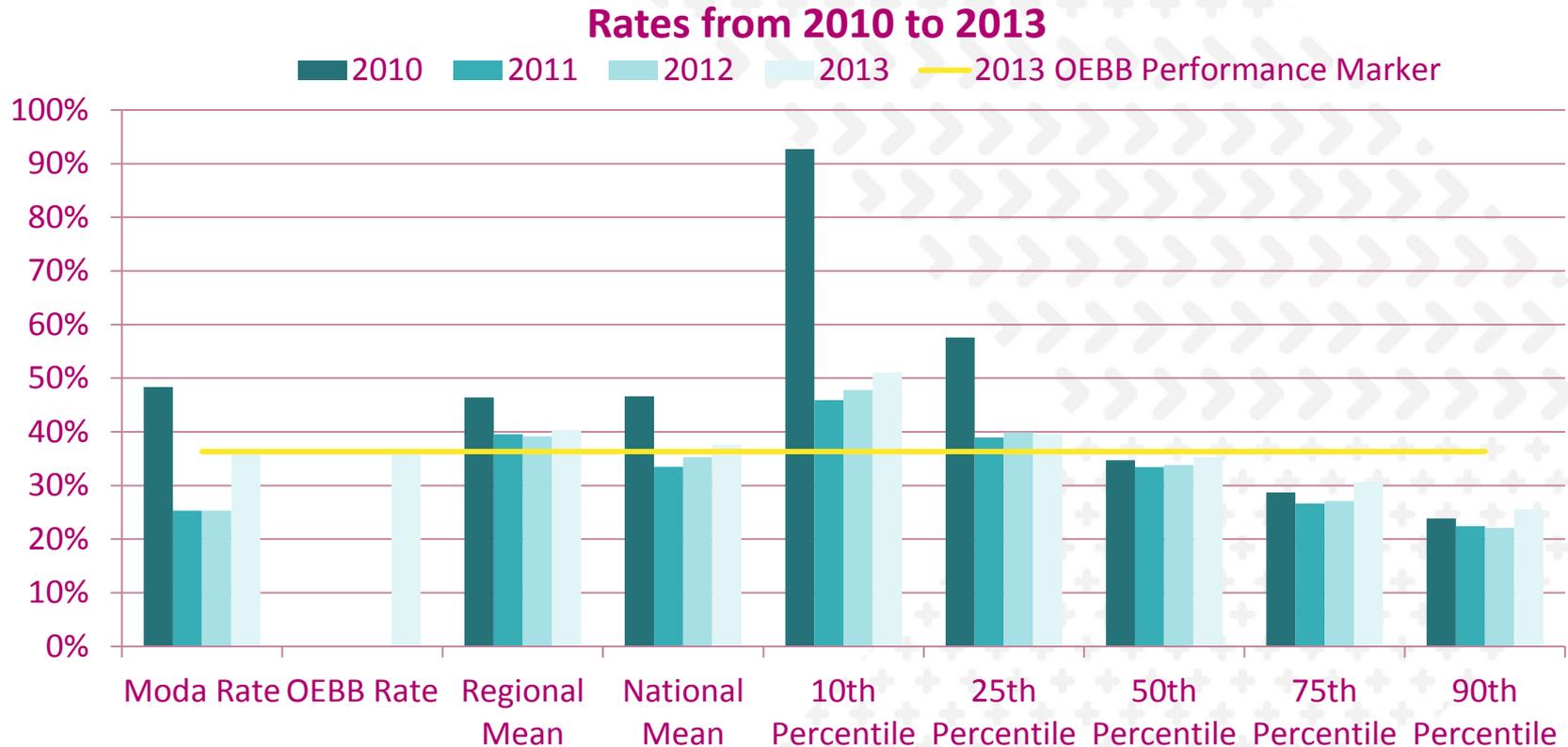
## HbA1c Rates from 2010 to 2013



Moda Commercial PPO scored in the 50<sup>th</sup> percentile, while OEBC was just under the 50<sup>th</sup> percentile.

OEBC's rate consists of only administrative data.

# Comprehensive Diabetes Care- HbA1c Poor Control (> 9%)



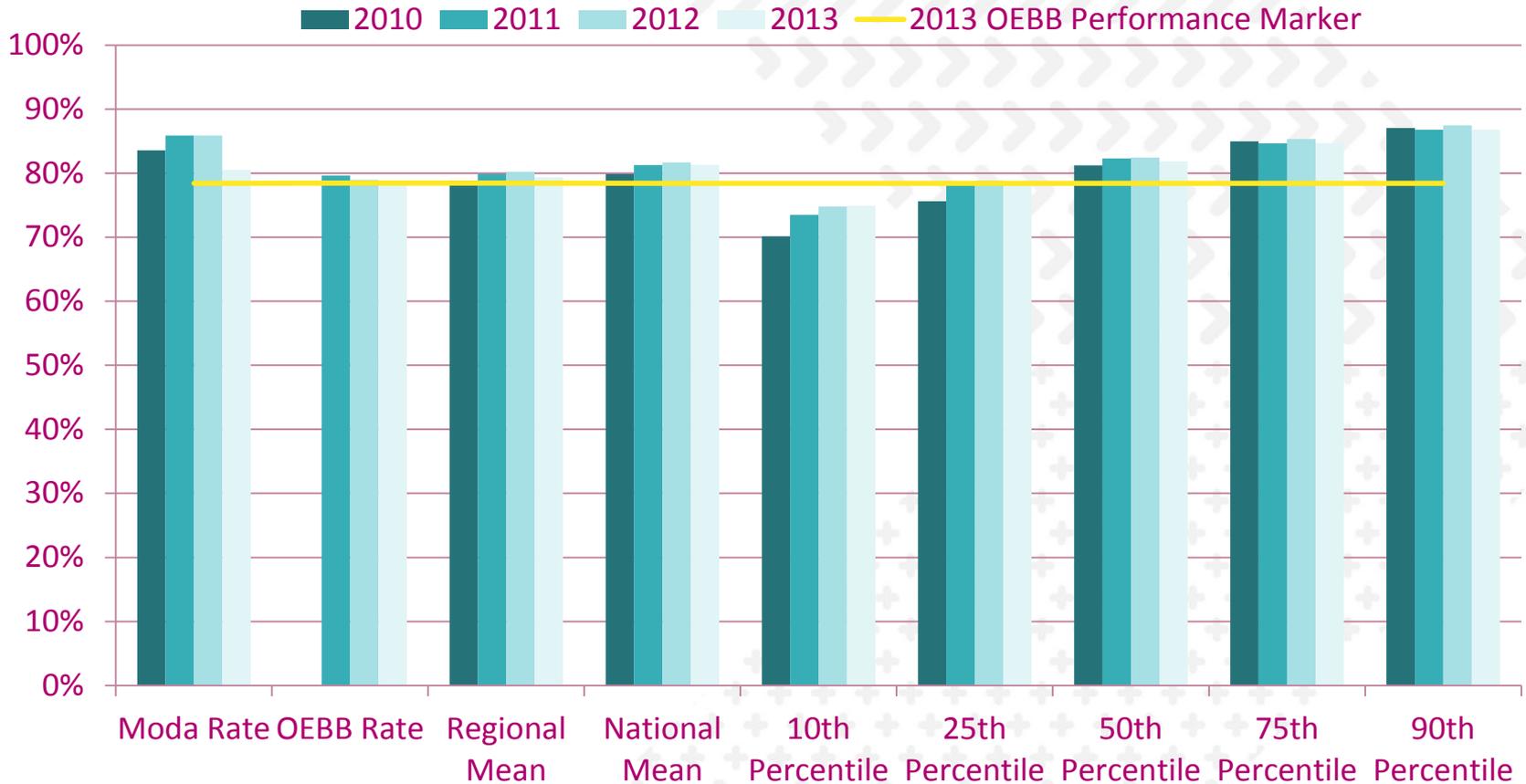
A higher rate indicates worse performance.

Both Moda Commercial PPO and OEBB scored in the 25<sup>th</sup> percentile.

OEBB's rate consists of only administrative data.

# Comprehensive Diabetes Care- LDL-C Screening Rates

Rates from 2010 to 2013

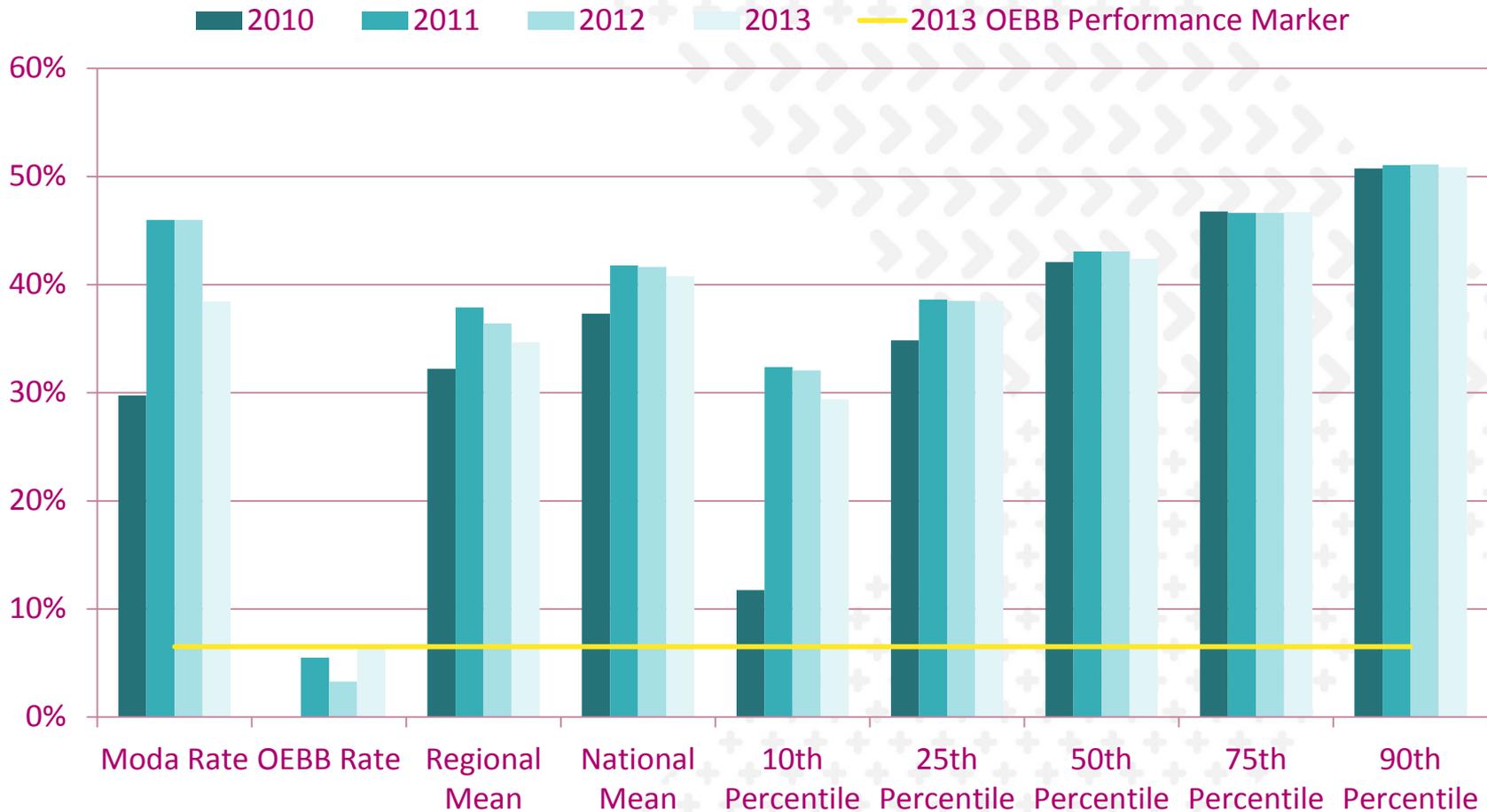


Both Moda Commercial PPO and OEBC scored in the 25<sup>th</sup> percentile.

OEBC's rate consists of only administrative data.

# Comprehensive Diabetes Care- LDL-C Control

Rates from 2010 to 2013



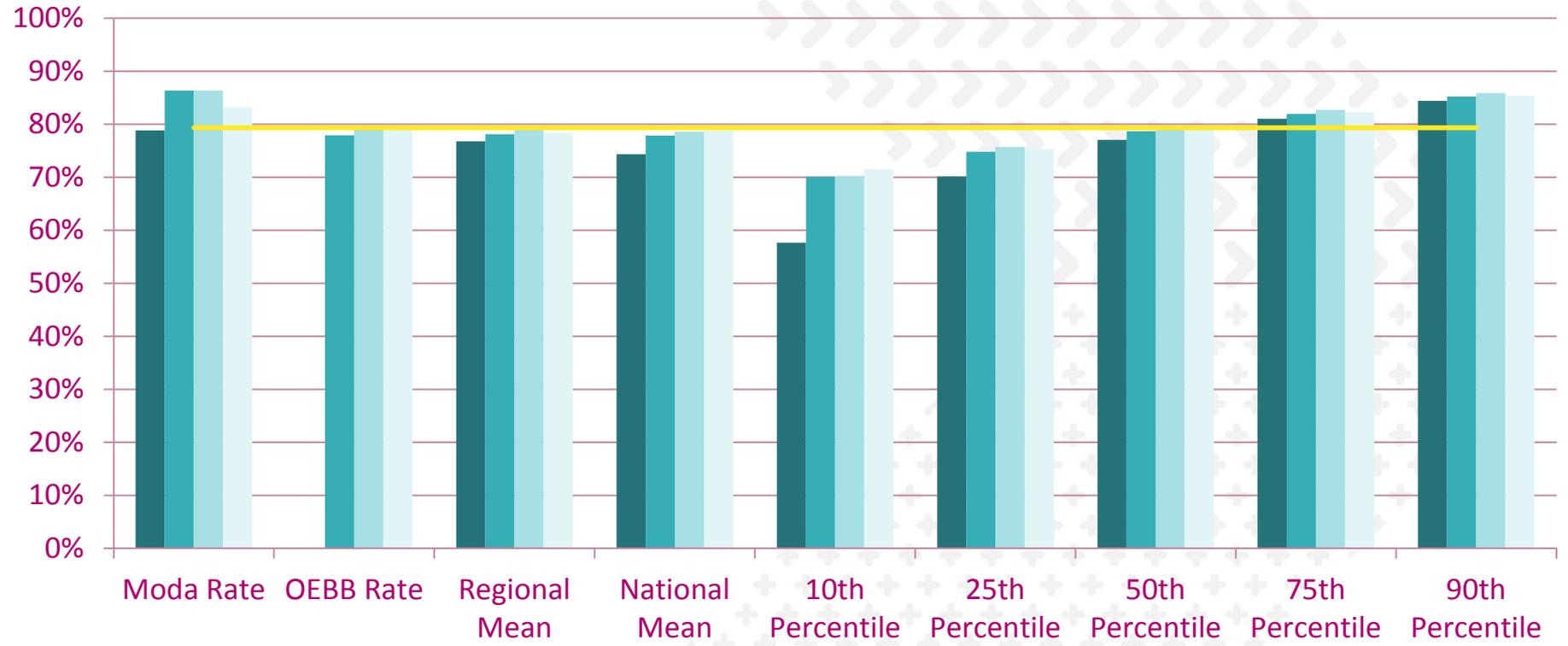
OEGB's rate only consists of administrative data.

Moda Commercial PPO scored in the 10<sup>th</sup> percentile.

# Comprehensive Diabetes Care- Medical Attention for Nephropathy

## Rates from 2010 to 2013

2010 2011 2012 2013 2013 OEGB Performance Marker

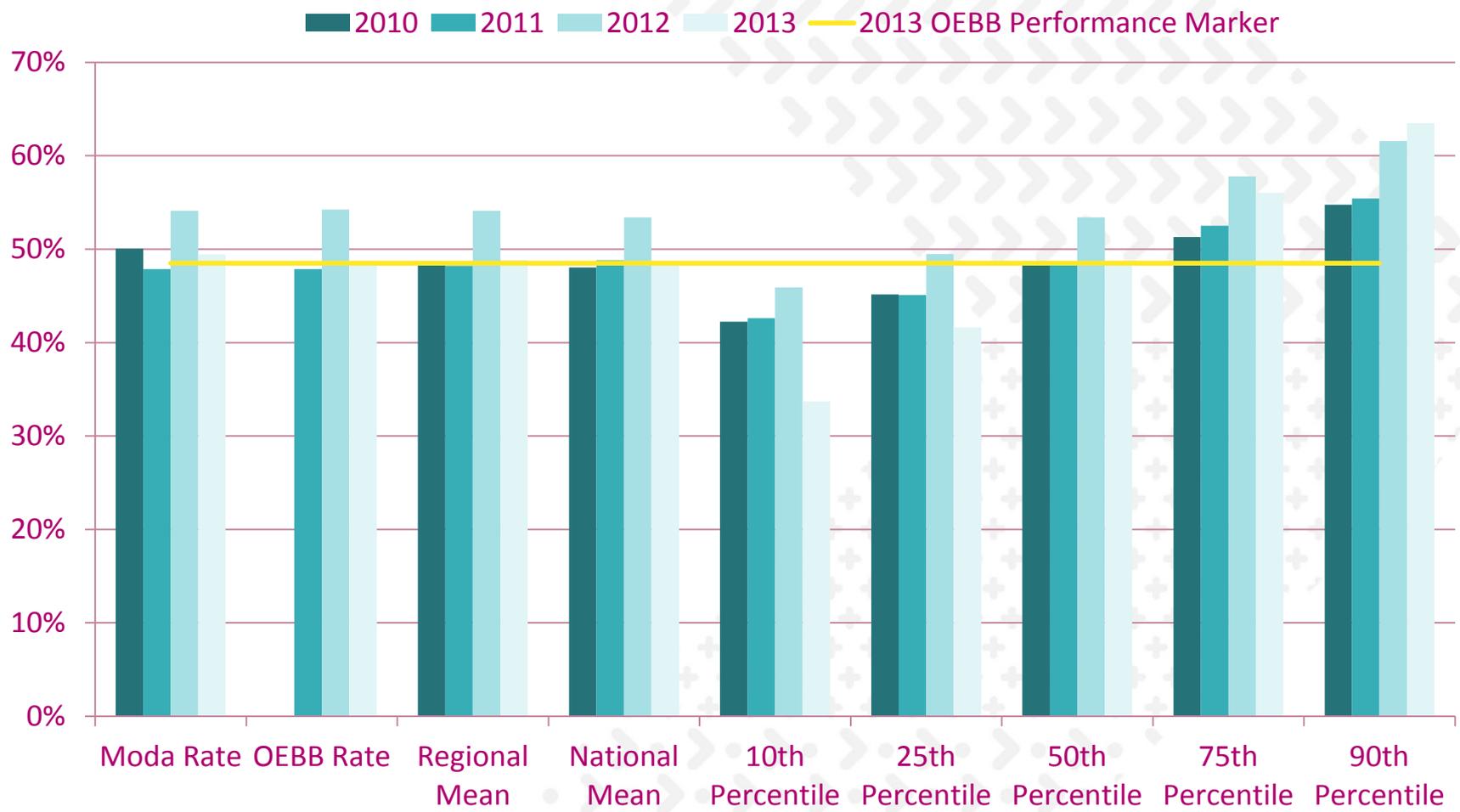


Moda Commercial PPO scored in the 75<sup>th</sup> percentile, and OEGB scored in the 50<sup>th</sup> percentile.

OEGB's rate consists of only administrative data.

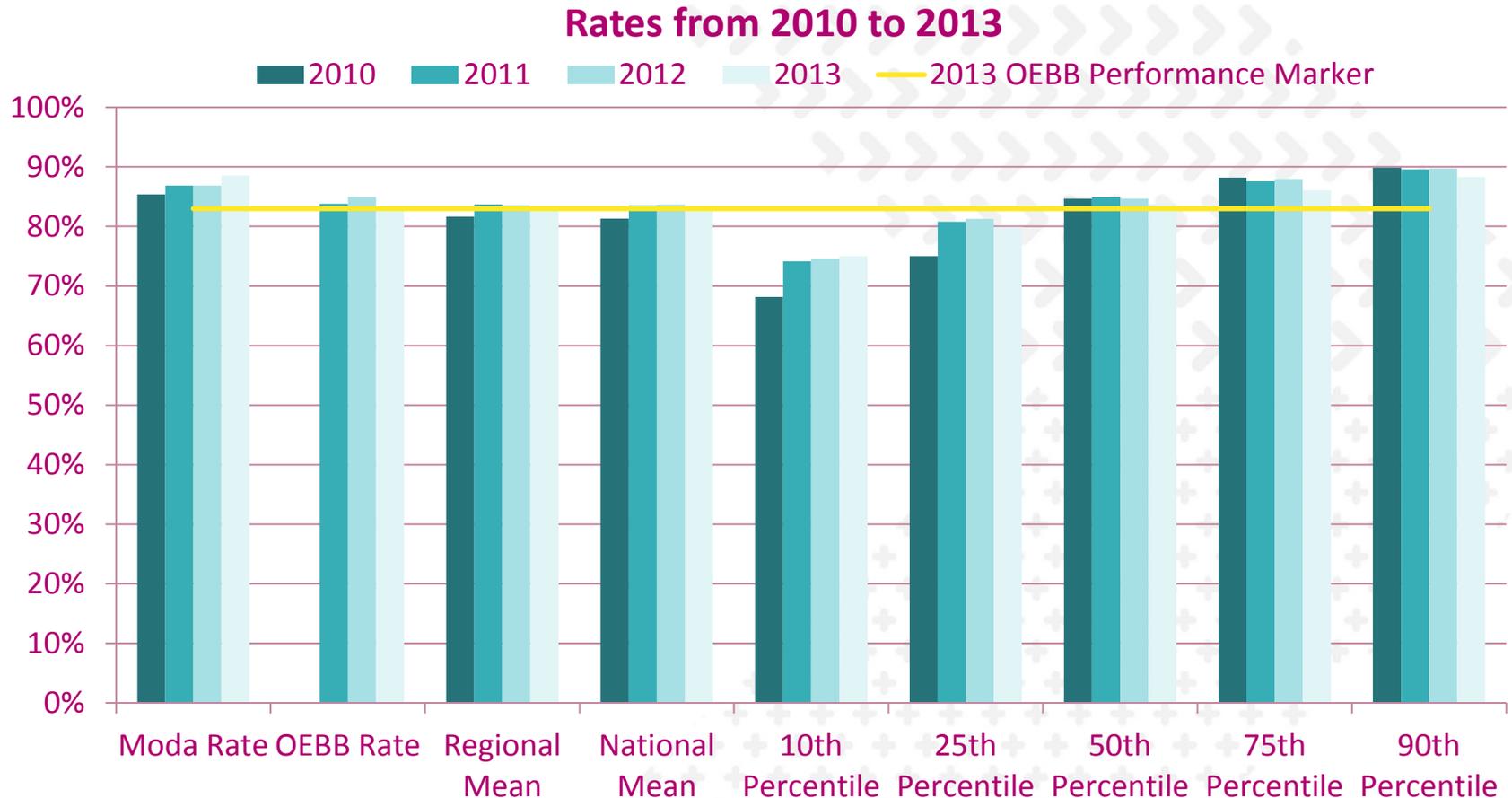
# Antidepressant Medication Management – Effective Continuation Phase Treatment

Rates from 2010 to 2013



Both Moda Commercial PPO and OEGB scored in the 50<sup>th</sup> percentile.

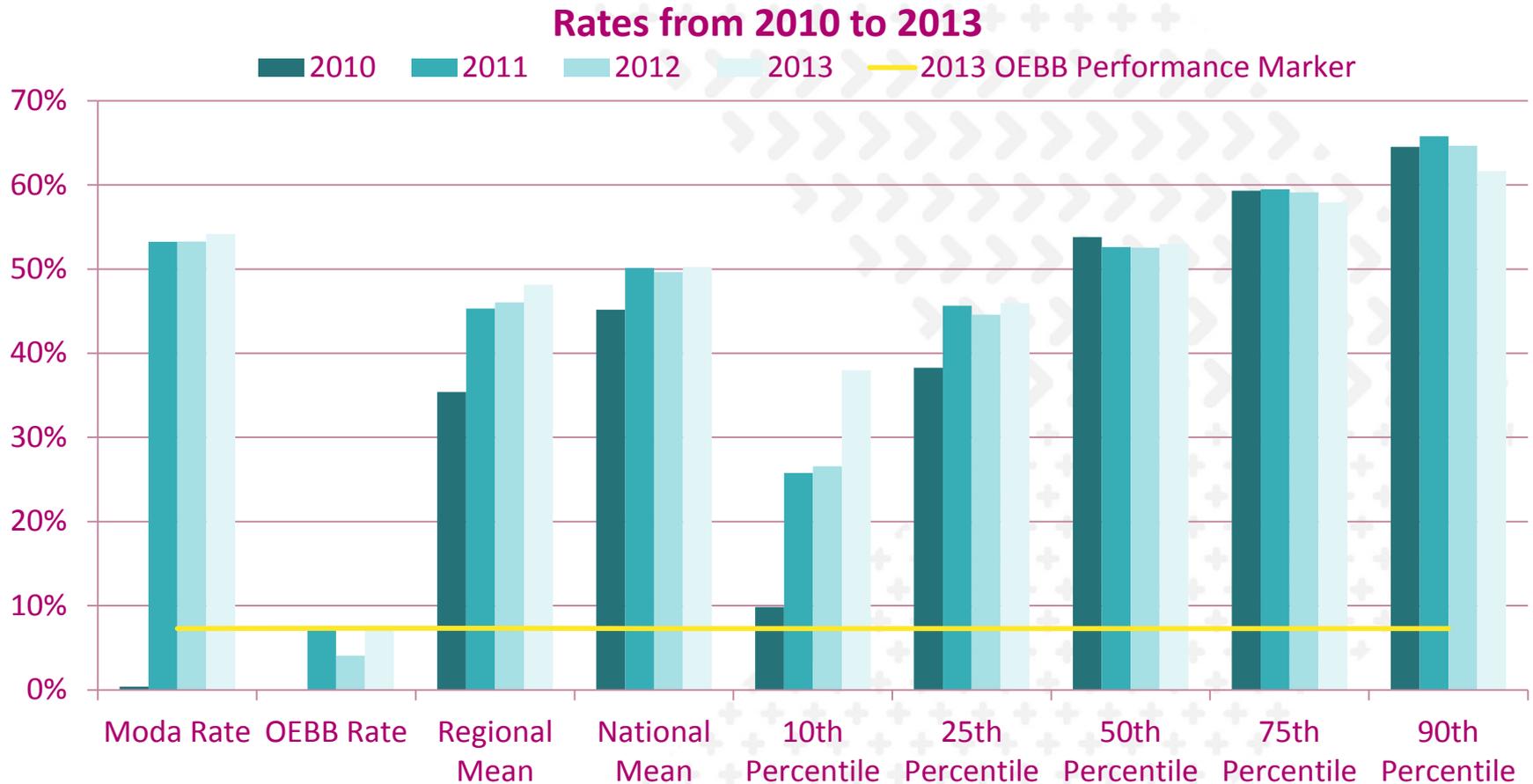
# Cholesterol Management for Patients with Cardiovascular Conditions- LDL-C Screening



OEGB scored just under the 50<sup>th</sup> percentile, and Moda Commercial PPO scored in the 90<sup>th</sup> percentile.

OEGB's rate consists of only administrative data.

# Cholesterol Management for Patients with Cardiovascular Conditions- LDL-C Control

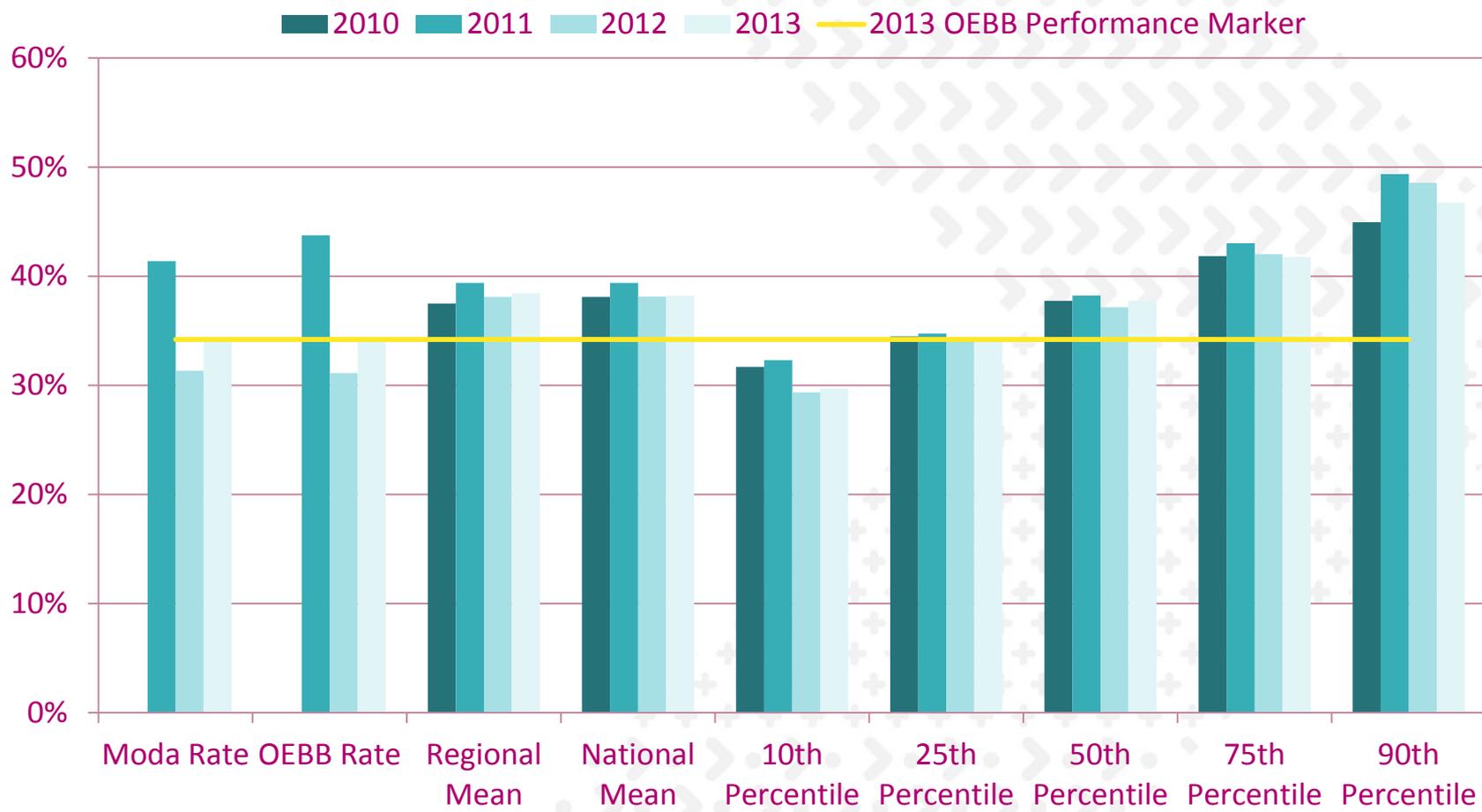


OEGB's rate consists of only administrative data.

Moda Commercial PPO scored in the 50<sup>th</sup> percentile.

# Follow-Up Care for Children Prescribed ADHD Medication- Initiation Phase

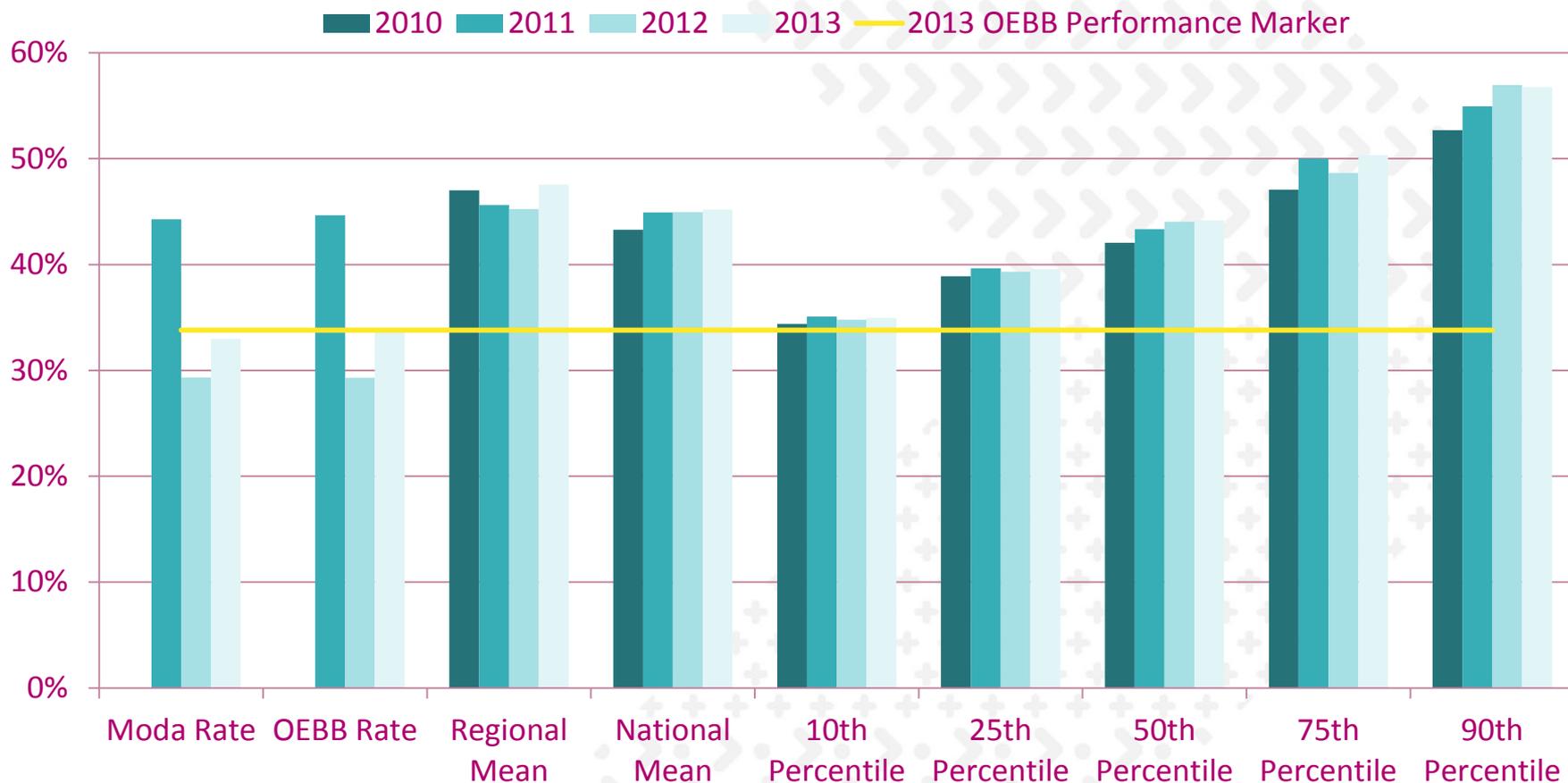
Rates from 2010 to 2013



Moda Commercial PPO scored in the 25<sup>th</sup> percentile, and OEGB scored just under the 25<sup>th</sup> percentile.

# Follow-Up Care for Children Prescribed ADHD Medication- Continuation and Maintenance Phase

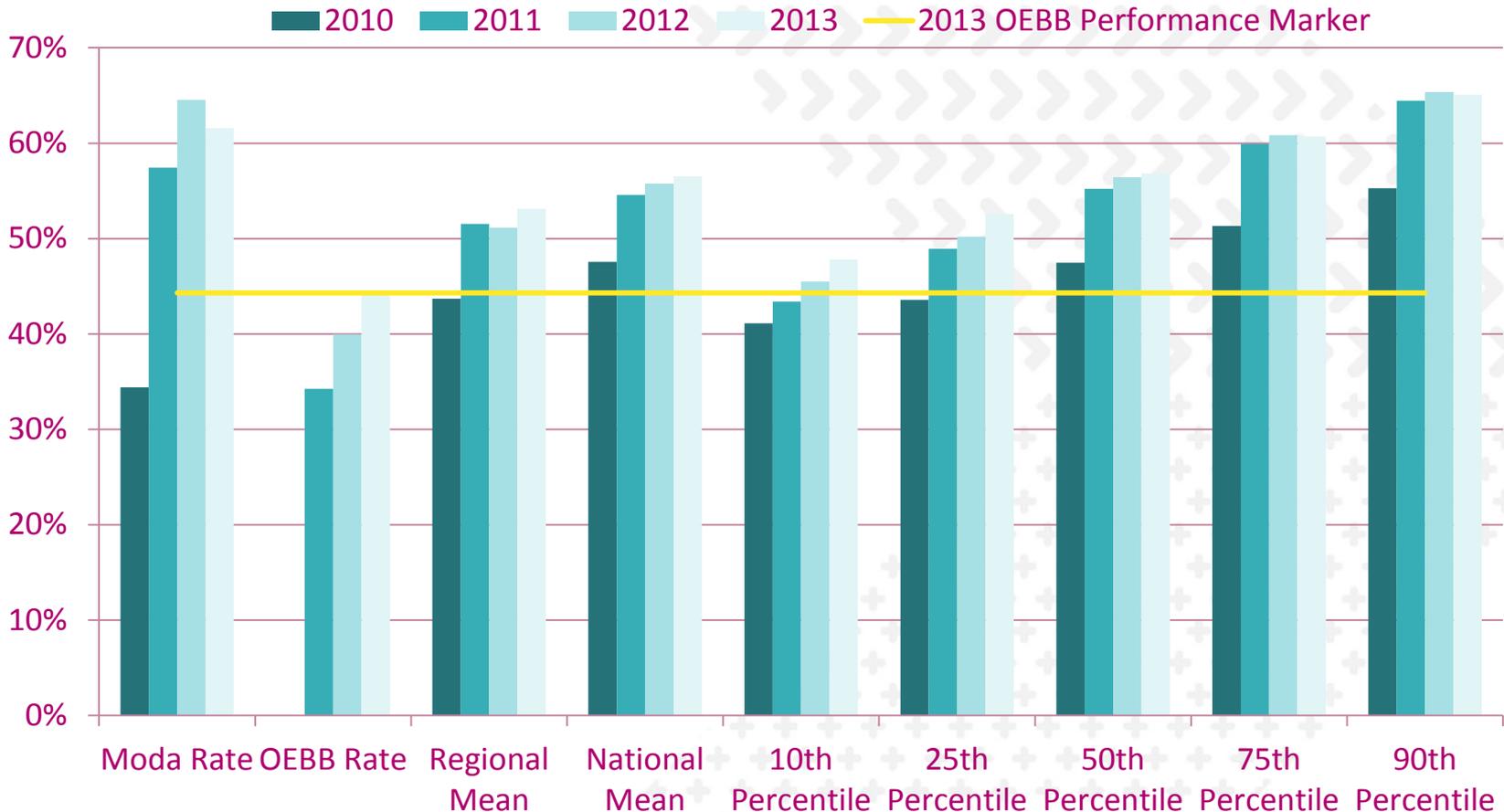
Rates from 2010 to 2013



Both Moda Commercial PPO and OEBB were just under the 10<sup>th</sup> percentile.

# Colorectal Cancer Screening

Rates from 2010 to 2013

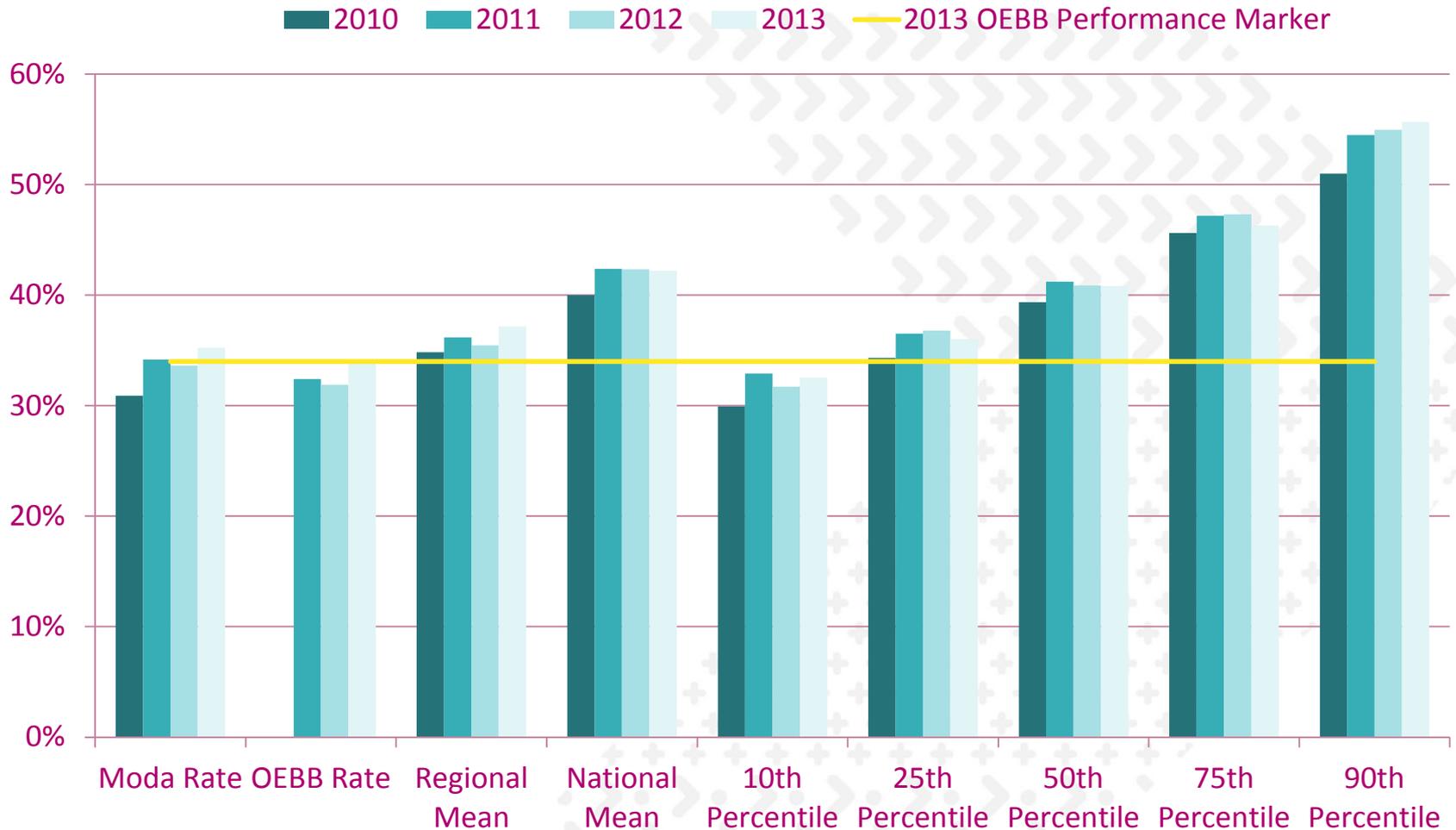


OEBB's rate only consists of administrative data.

Moda Commercial PPO was in the 75<sup>th</sup> percentile.

# Chlamydia Screening in Women

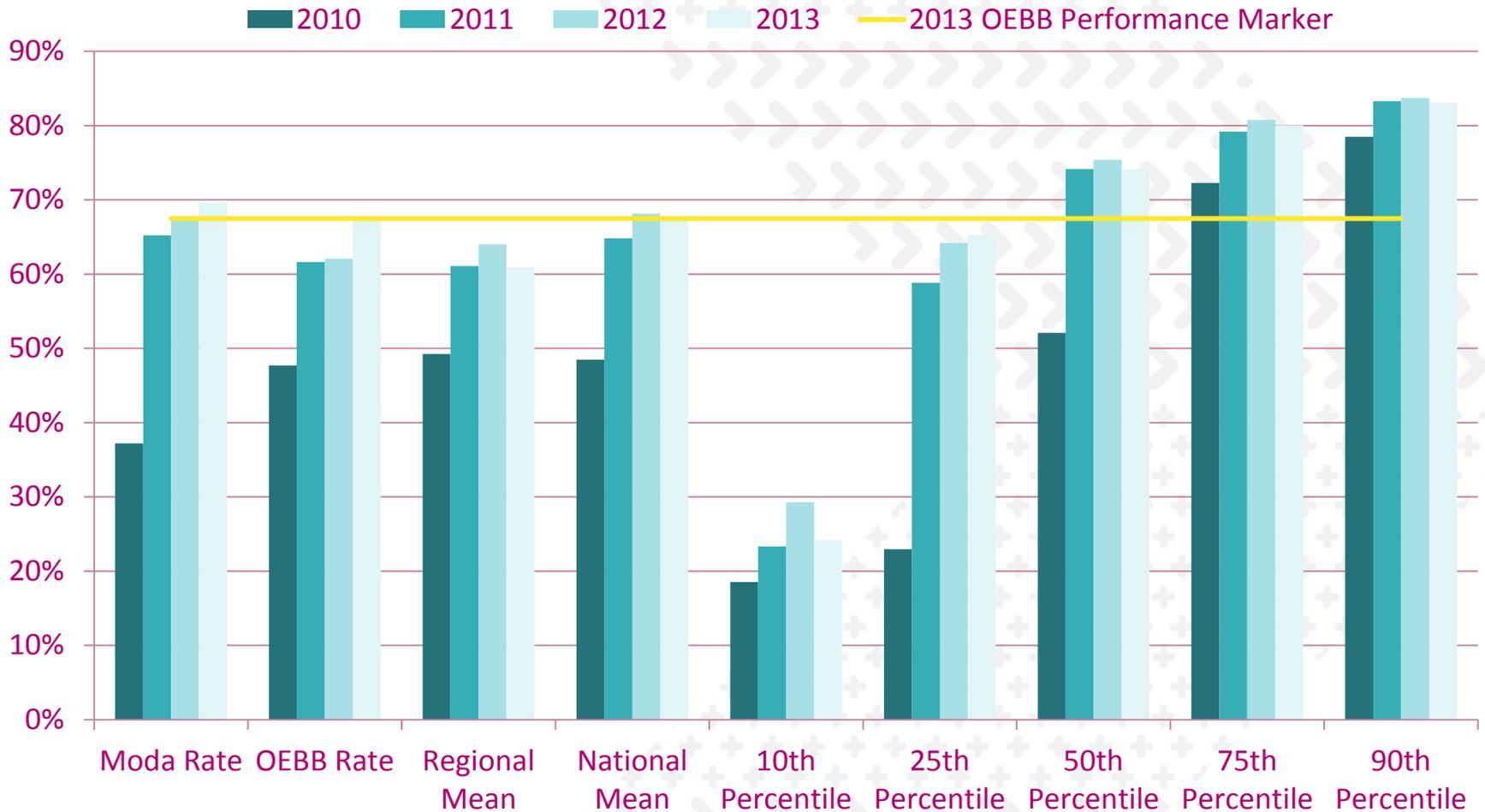
Rates from 2010 to 2013



Moda Commercial PPO and OEBC scored in the 10<sup>th</sup> percentile.

# Childhood Immunizations Combination 2

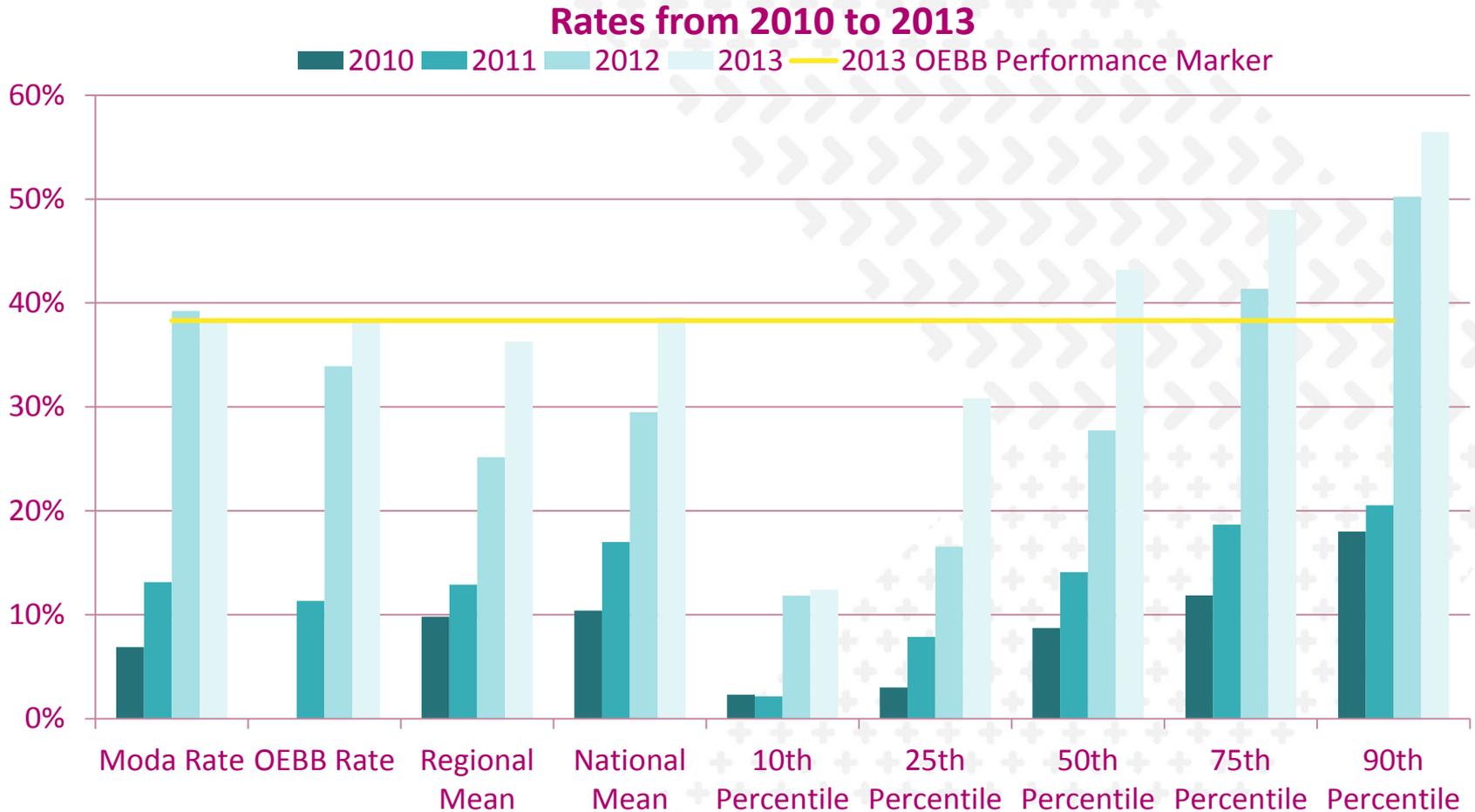
Rates from 2010 to 2013



Administrative data only for OEBB.

Both Moda Commercial PPO and OEBB were in the 25<sup>th</sup> percentile.

# Childhood Immunizations Combination 10

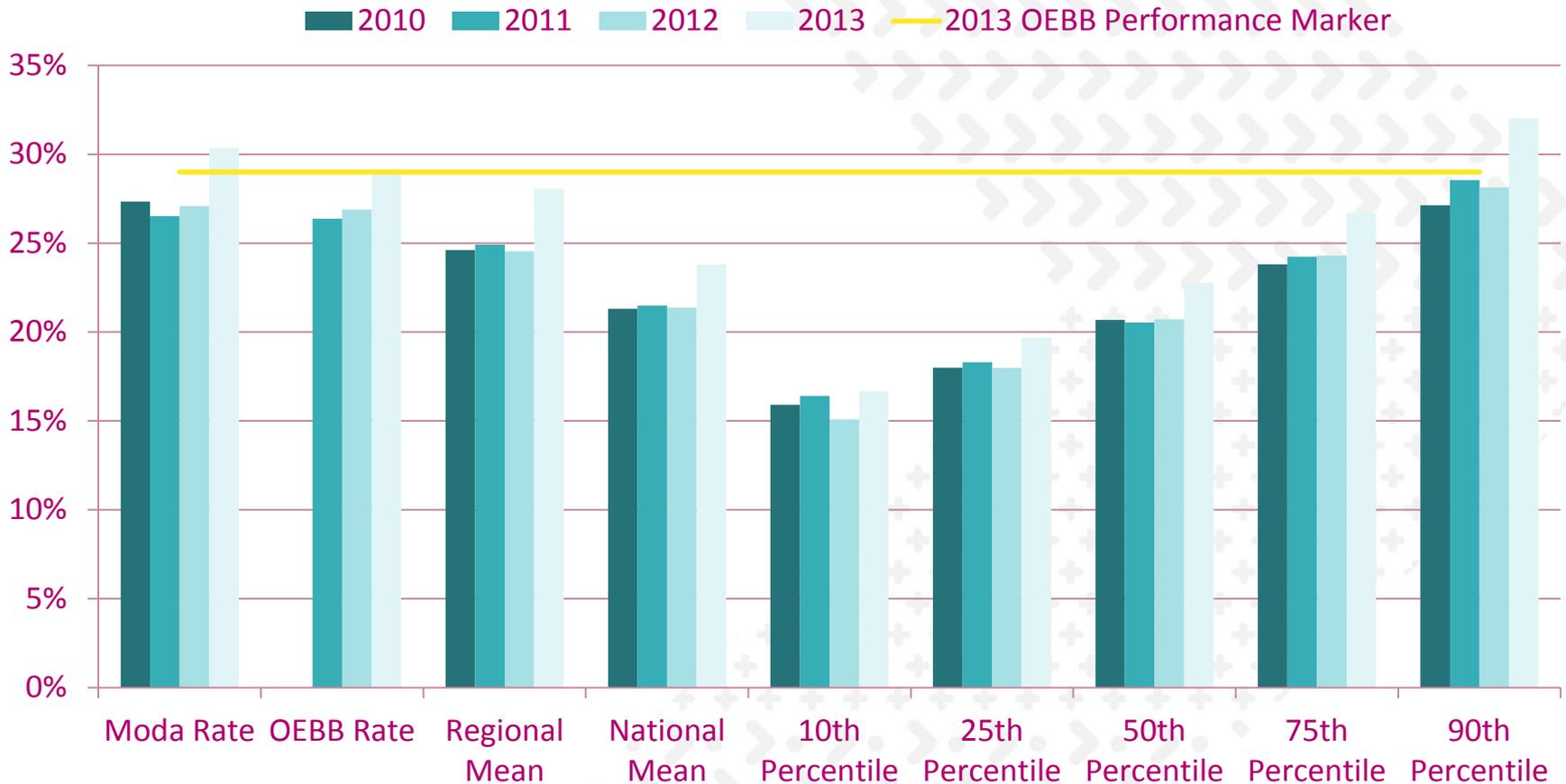


Only administrative data for OEBB.

Both Moda Commercial PPO and OEBB scored in the 25<sup>th</sup> percentile.

# Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis

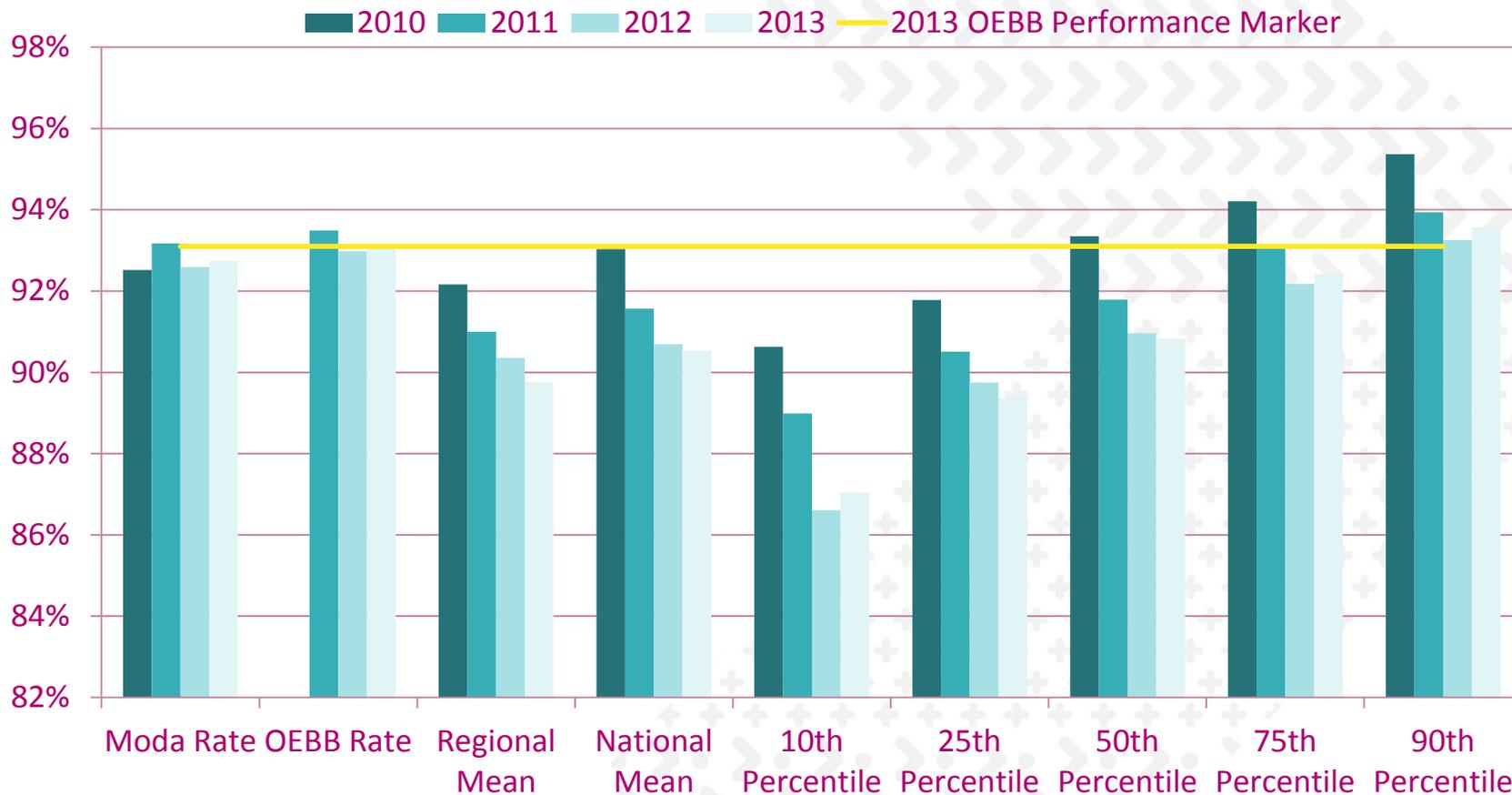
Rates from 2010 to 2013



Both Moda Commercial PPO and OEBB scored in the 75<sup>th</sup> percentile.

# Use of Appropriate Medications for People with Asthma

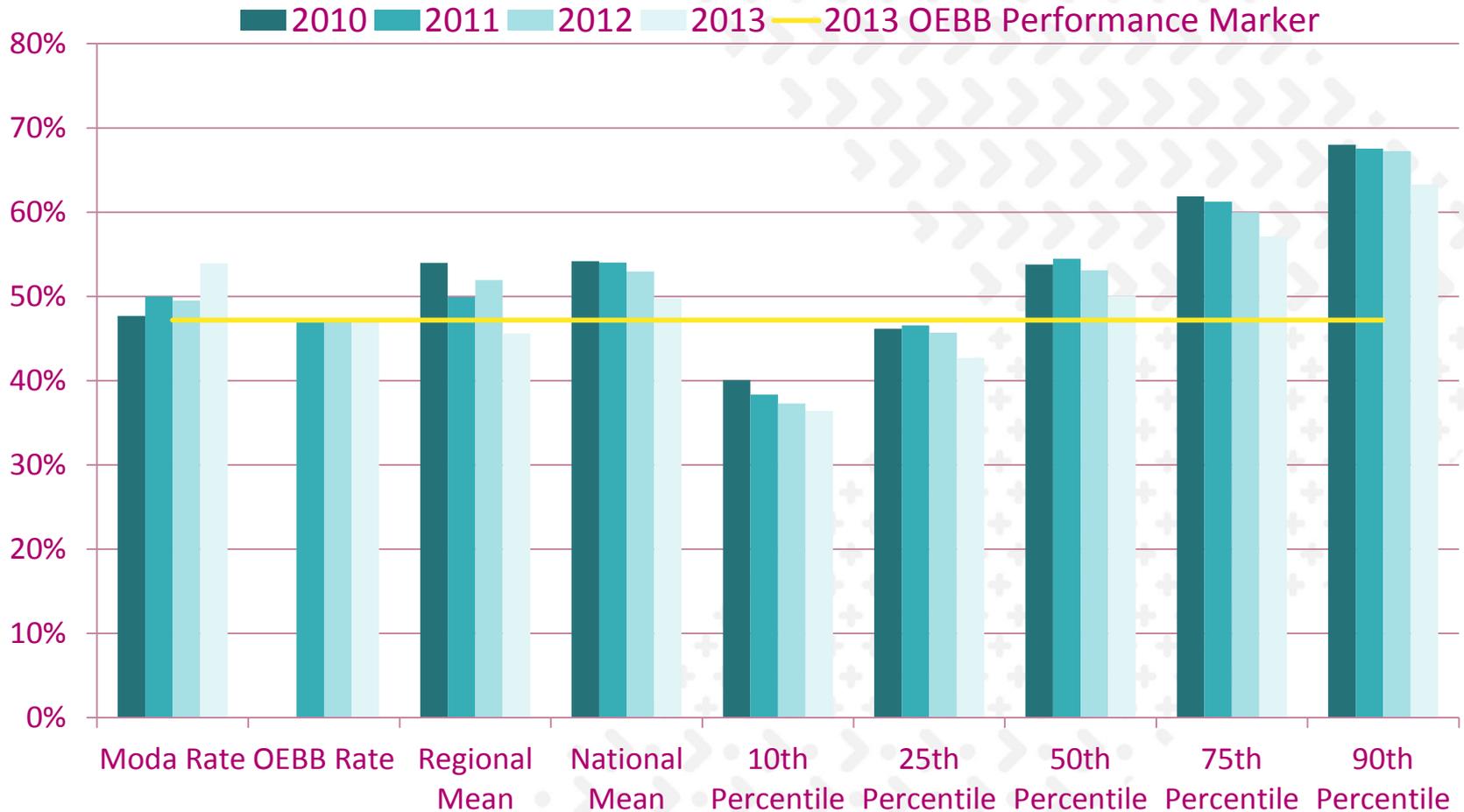
Rates from 2010 to 2013



Both Moda Commercial PPO and OEBC were in the 75<sup>th</sup> percentile.

# Follow-Up After Hospitalization for Mental Illness- 7 Days

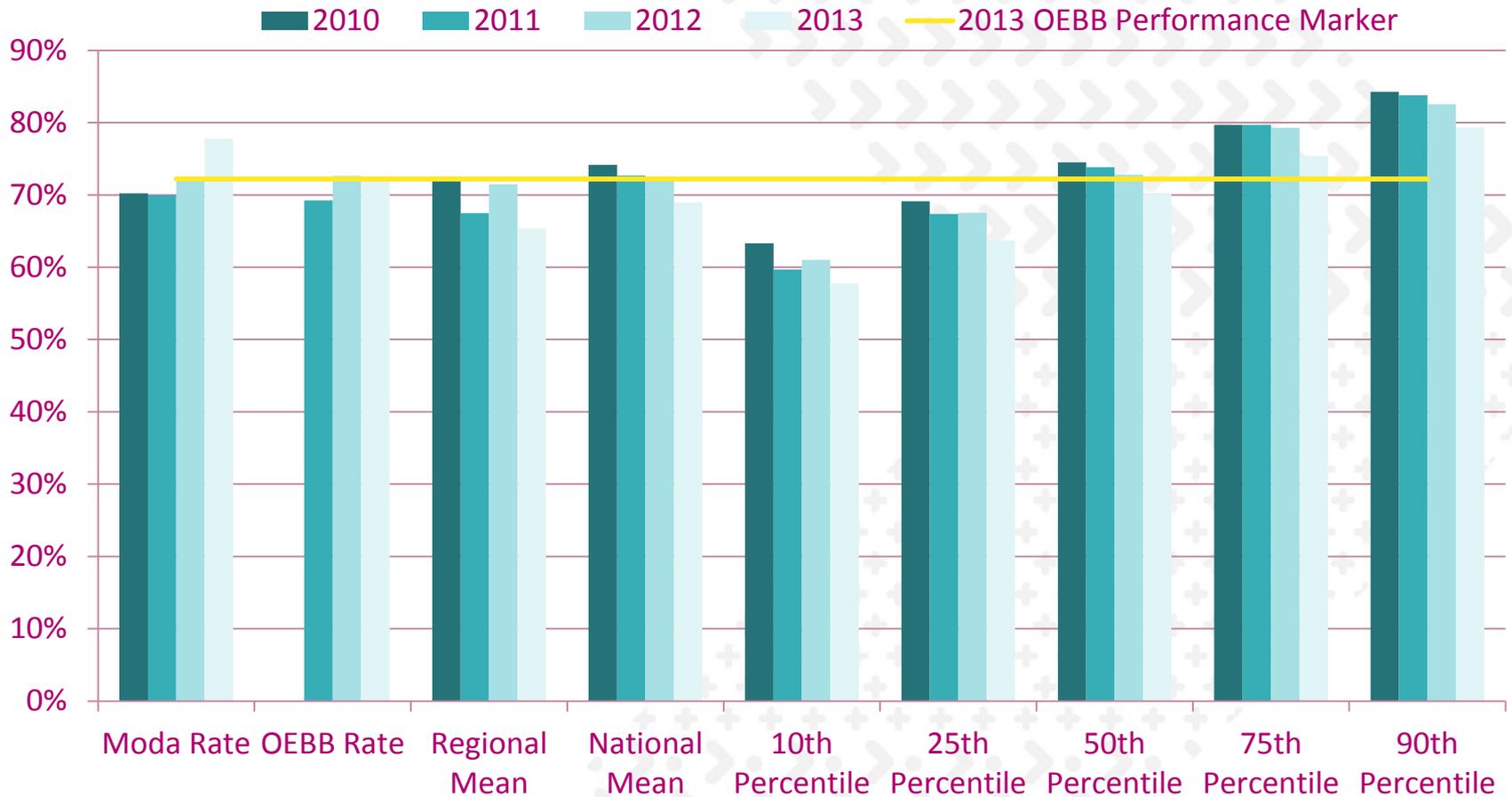
Rates from 2010 to 2013



Moda Commercial PPO was in the 50<sup>th</sup> percentile, and OEBB was in the 25<sup>th</sup> percentile.

# Follow-Up After Hospitalization for Mental Illness- 30 Days

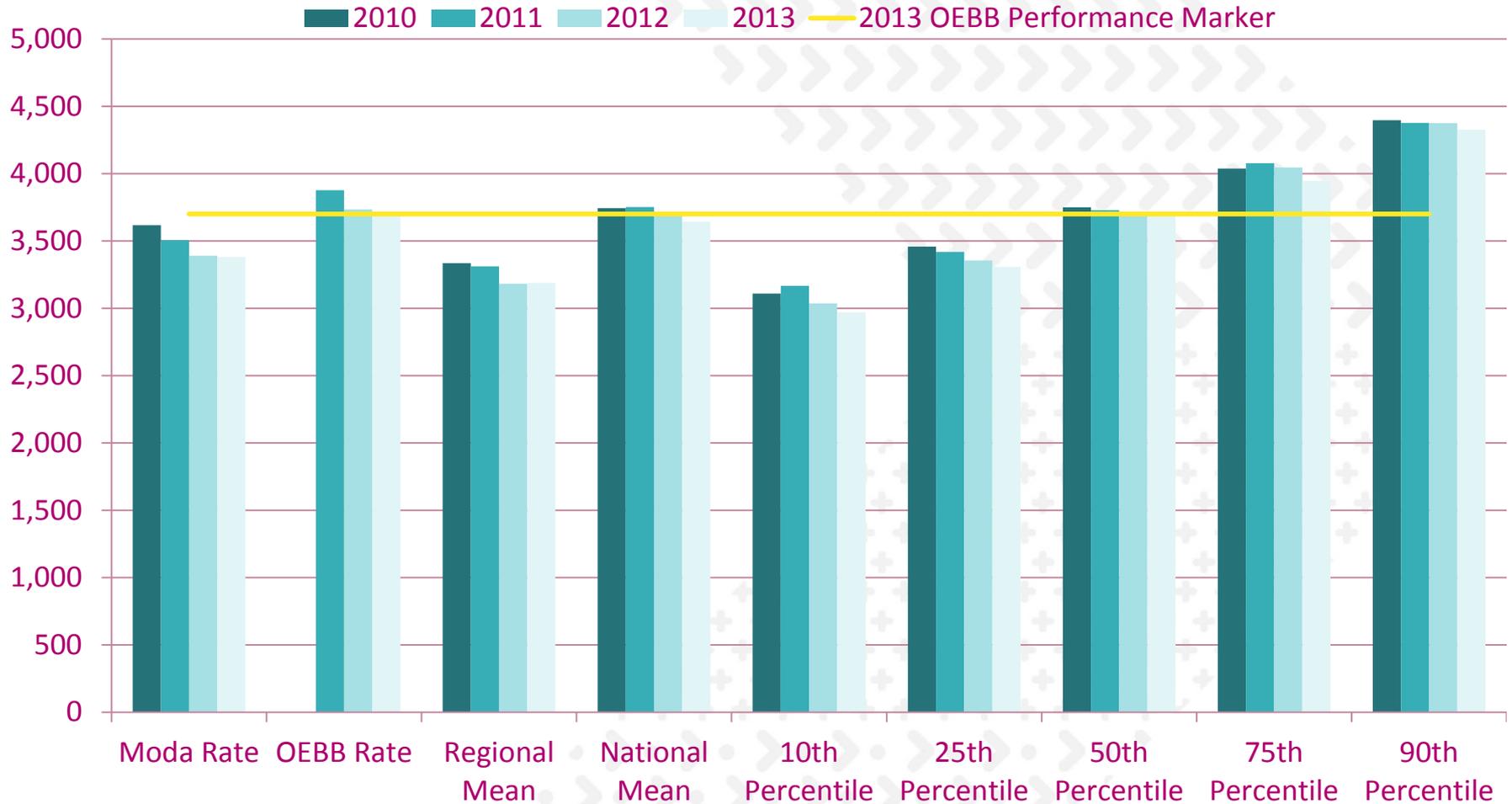
Rates from 2010 to 2013



Moda Commercial PPO scored in the 75<sup>th</sup> percentile, while OEBB scored in the 50<sup>th</sup> percentile.

# Ambulatory Care – Outpatient Visits

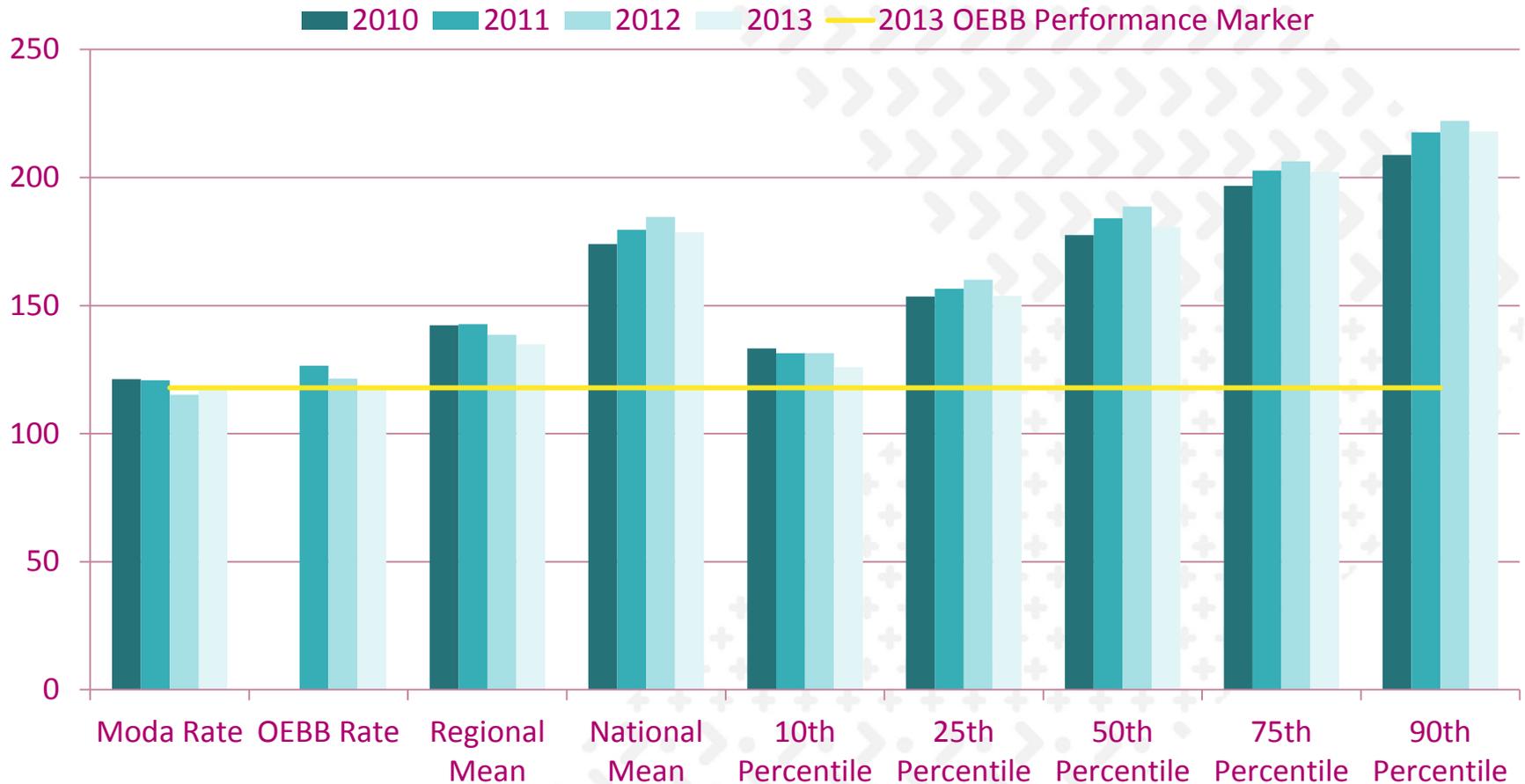
Rates from 2010 to 2013



Moda Commercial PPO was in the 25<sup>th</sup> percentile, and OEGB was in the 50<sup>th</sup> percentile.

# Ambulatory Care – Emergency Department Visits

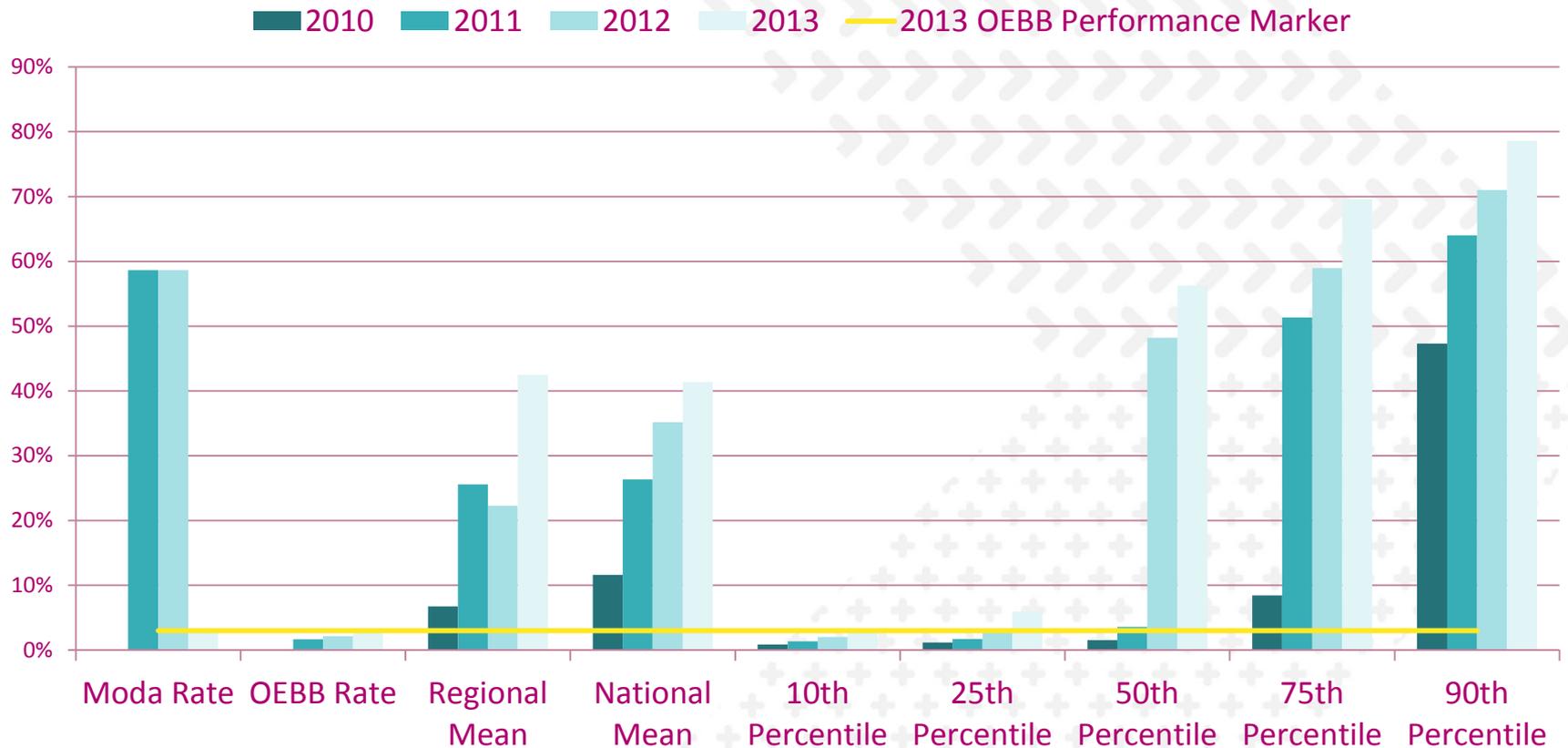
Rates from 2010 to 2013



Both Moda Commercial PPO and OEBC were under the 10<sup>th</sup> percentile.

# Adult BMI Assessment

## Rates from 2010 to 2013

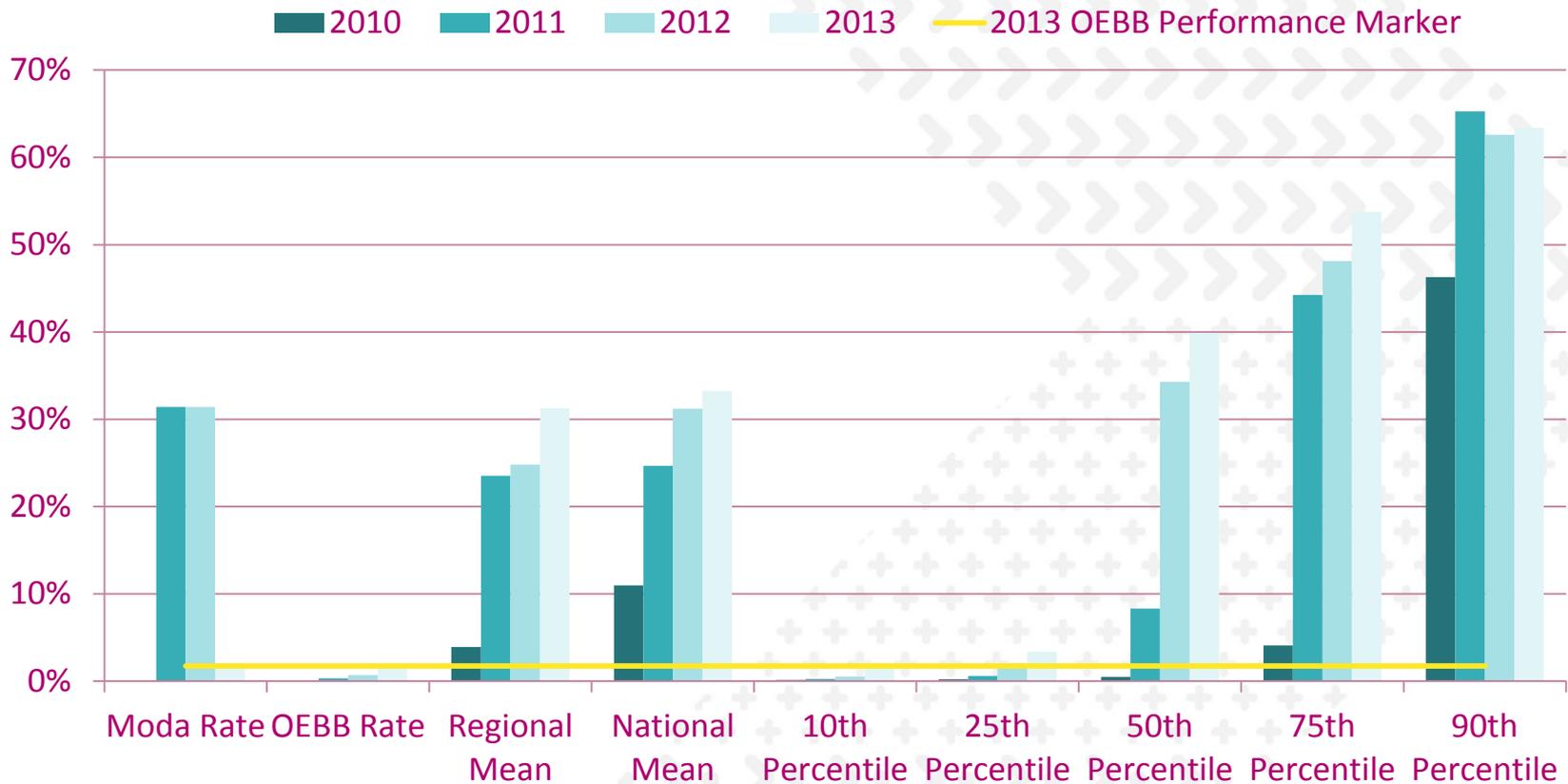


The rate of OEGB consists of only administrative data.

OEGB falls in the 10<sup>th</sup> percentile, while Moda Commercial PPO falls under the 10<sup>th</sup> percentile.

# Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents- BMI

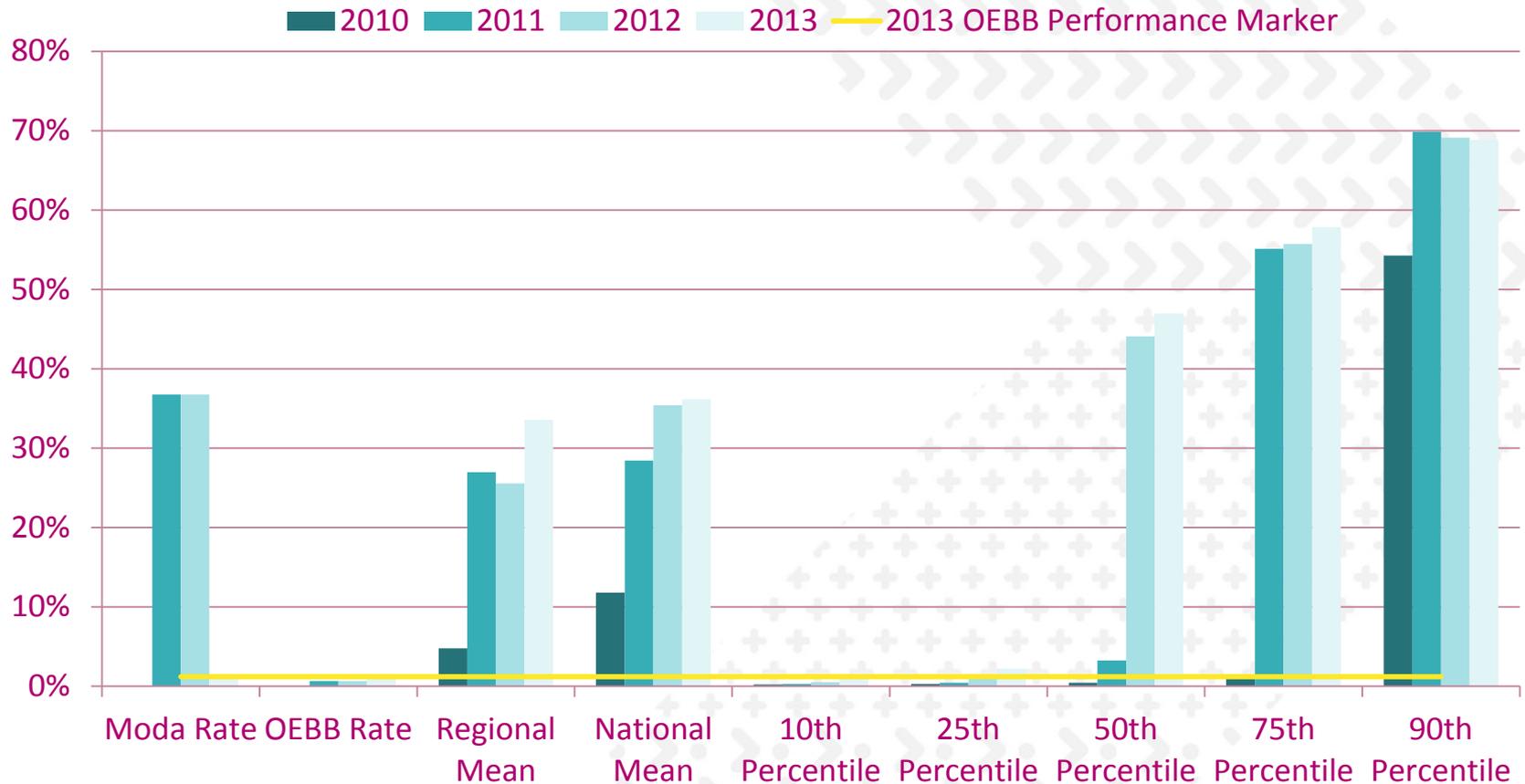
Rates from 2010 to 2013



Both Moda Commercial PPO and OEBC are in the 10<sup>th</sup> percentile.

# Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents- Counseling for Nutrition

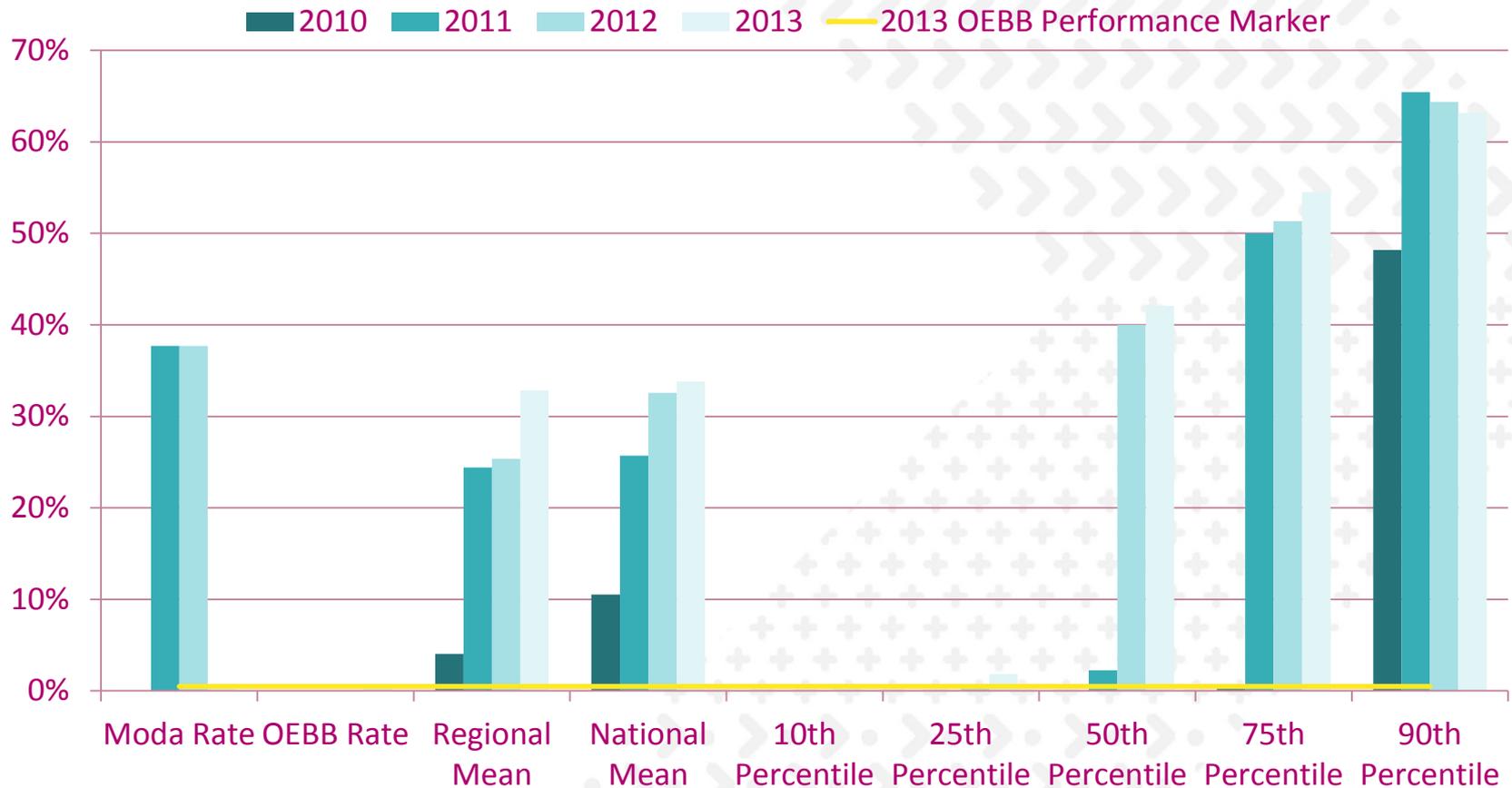
Rates from 2010 to 2013



Both Moda Commercial PPO and OEBB fall in the 10<sup>th</sup> percentile.

# Weight Assessment and Counseling for Nutrition and Physical Activity for Children Adolescents – Counseling for Physical Activity

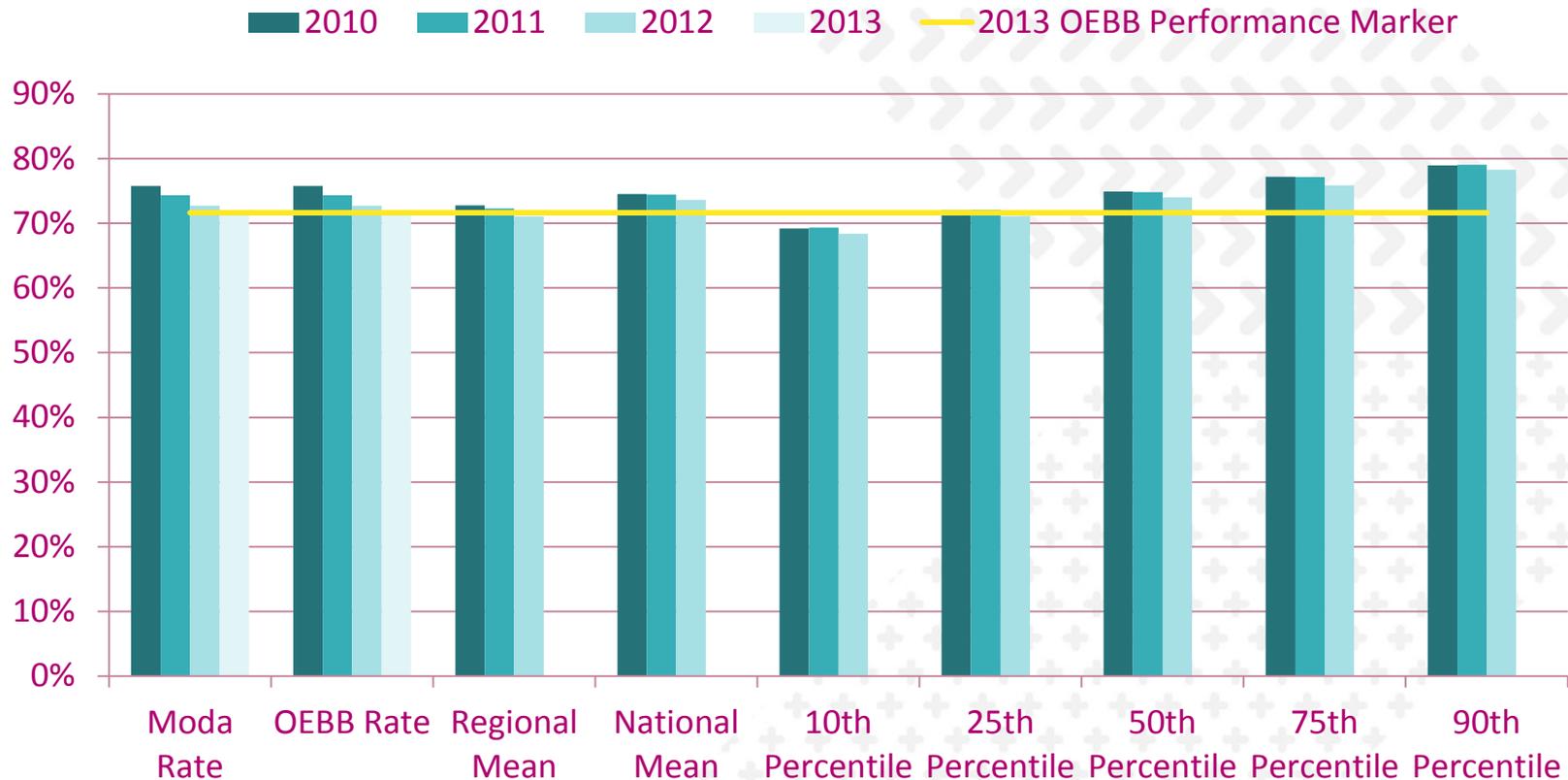
Rates from 2010 to 2013



Both Moda Commercial PPO and OEBC fall in the 10<sup>th</sup> percentile.

# Cervical Cancer Screening

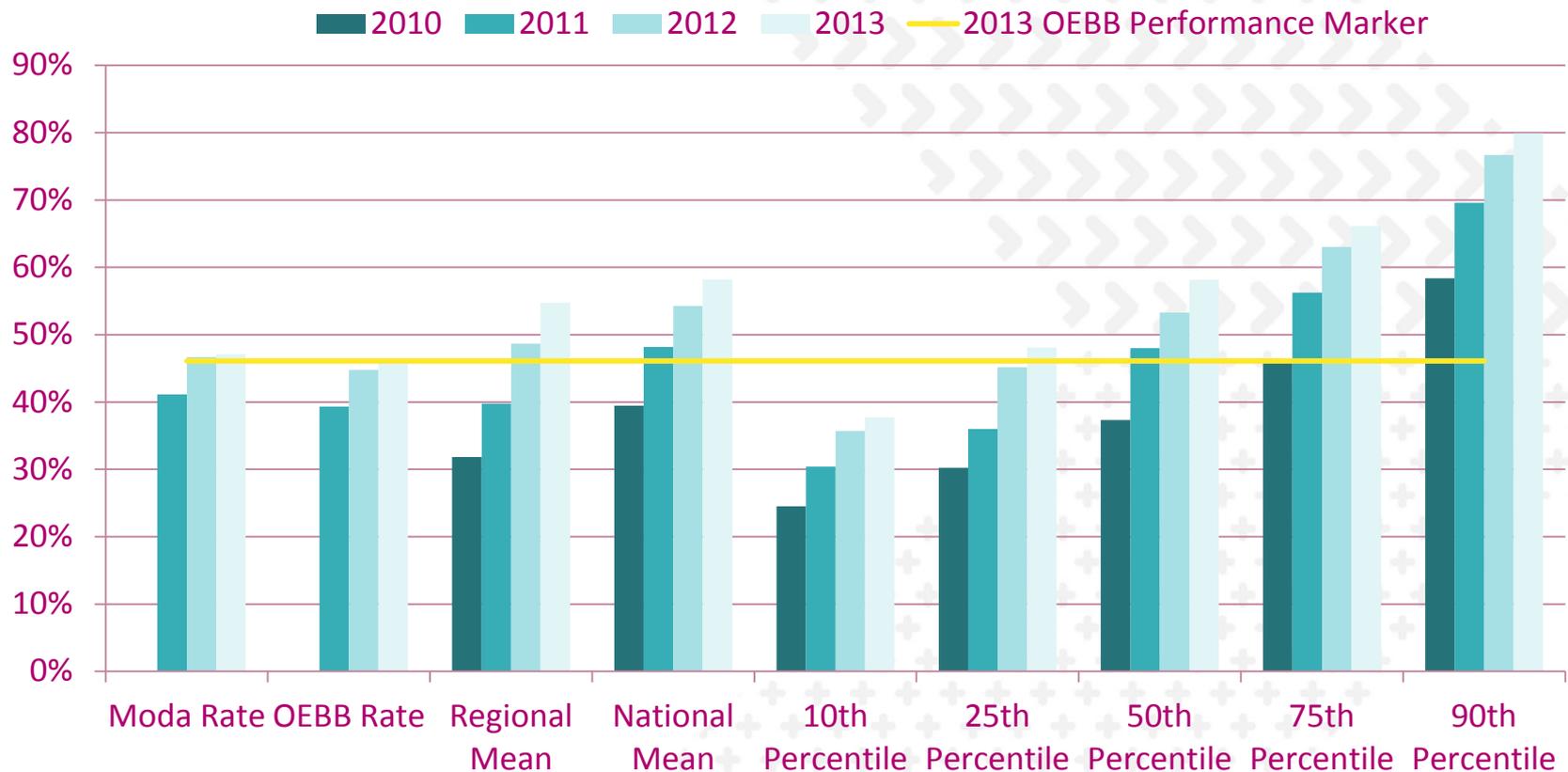
## Rates from 2010 to 2013



Benchmarks are unavailable for 2013, due to significant specification changes. The NCQA did not publicly report this measure.

# Adolescent Immunizations- Combination 1

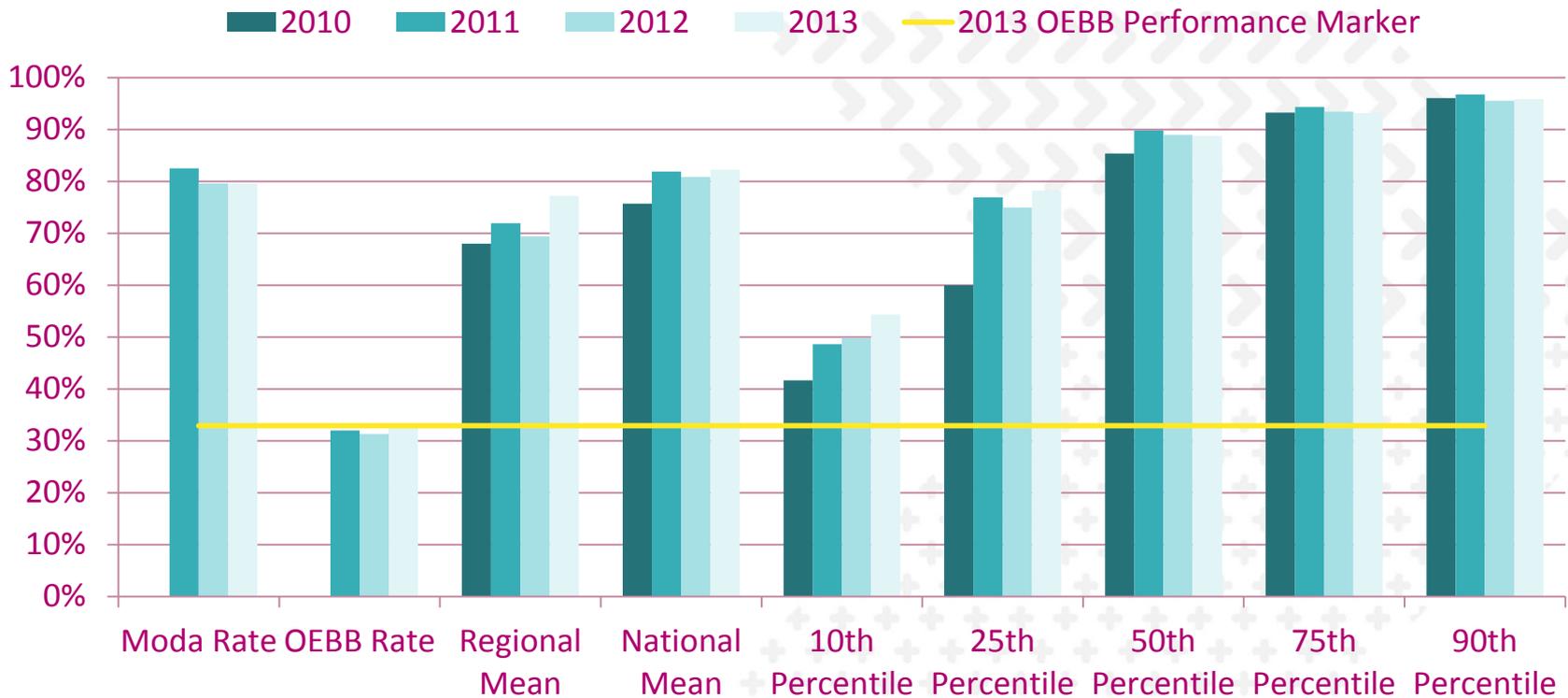
## Rates from 2010 to 2013



Both Moda Commercial PPO and OEBC fall in the 10<sup>th</sup> percentile.

# Timeliness of Prenatal Care

## Rates from 2010 to 2013

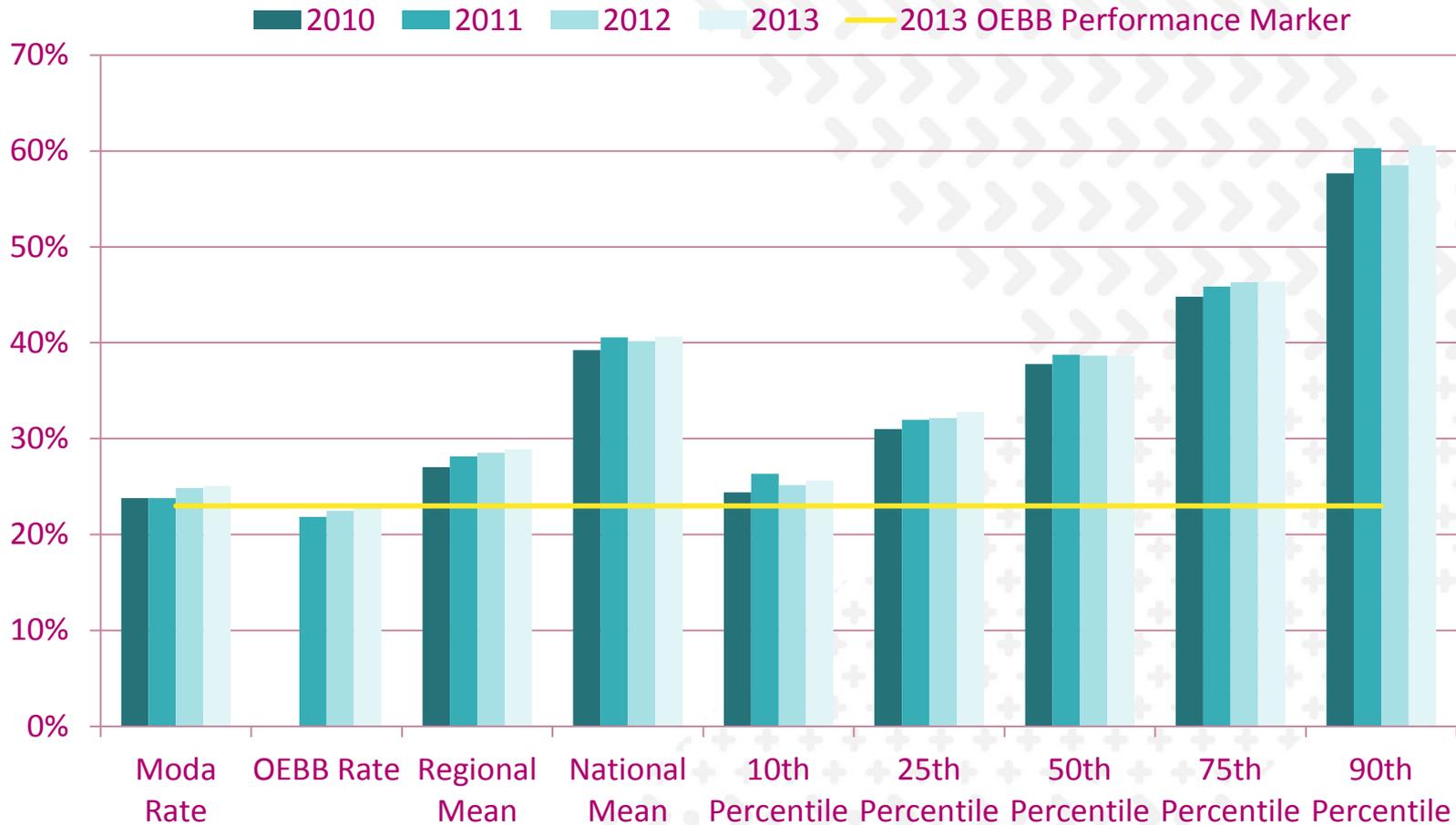


OEGB's rate consists of only administrative data.

Moda Commercial PPO falls in the 25<sup>th</sup> percentile.

# Adolescent Well-Care Visits

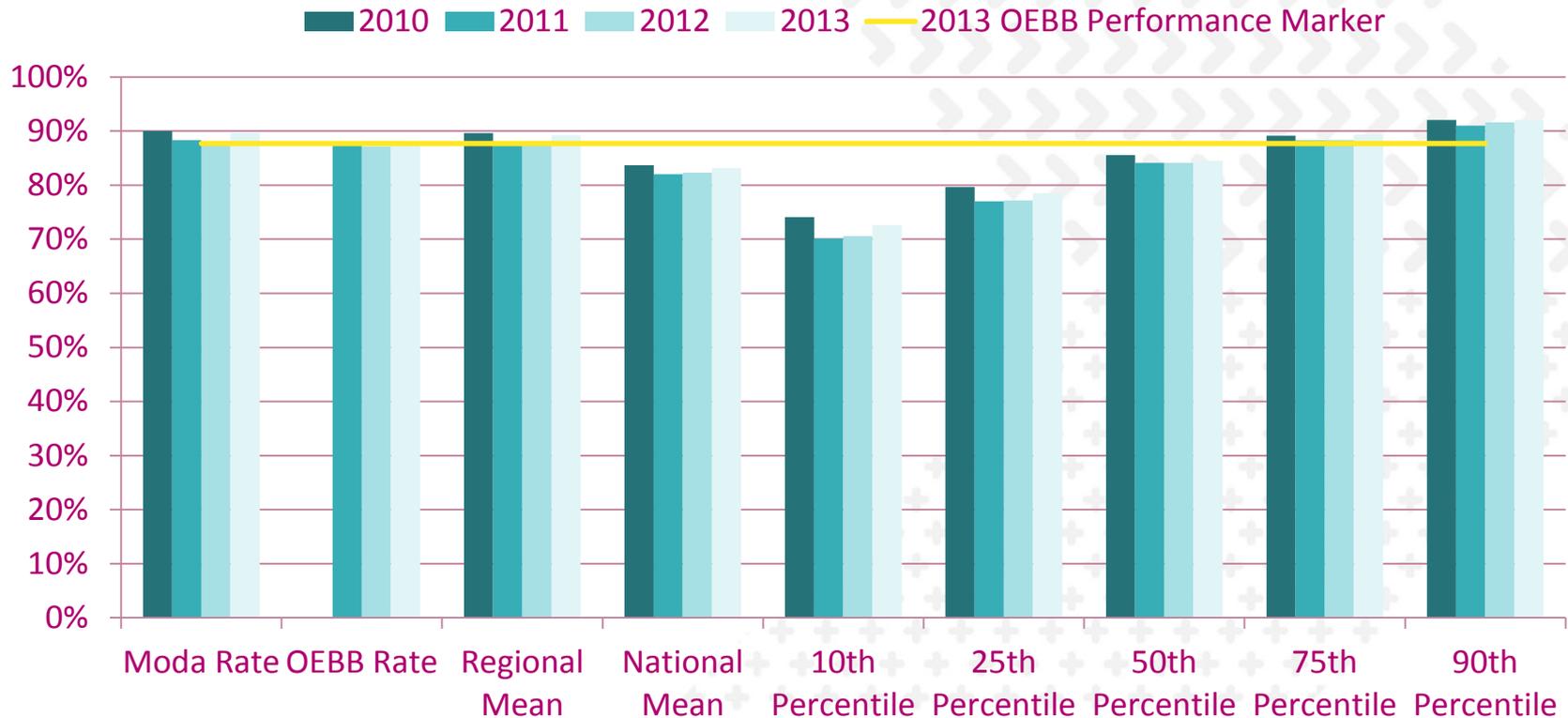
## Rates from 2010 to 2013



Both Moda Commercial PPO and OEBC fall under the 10<sup>th</sup> percentile.

# Appropriate Treatment for Children with Upper Respiratory Infection

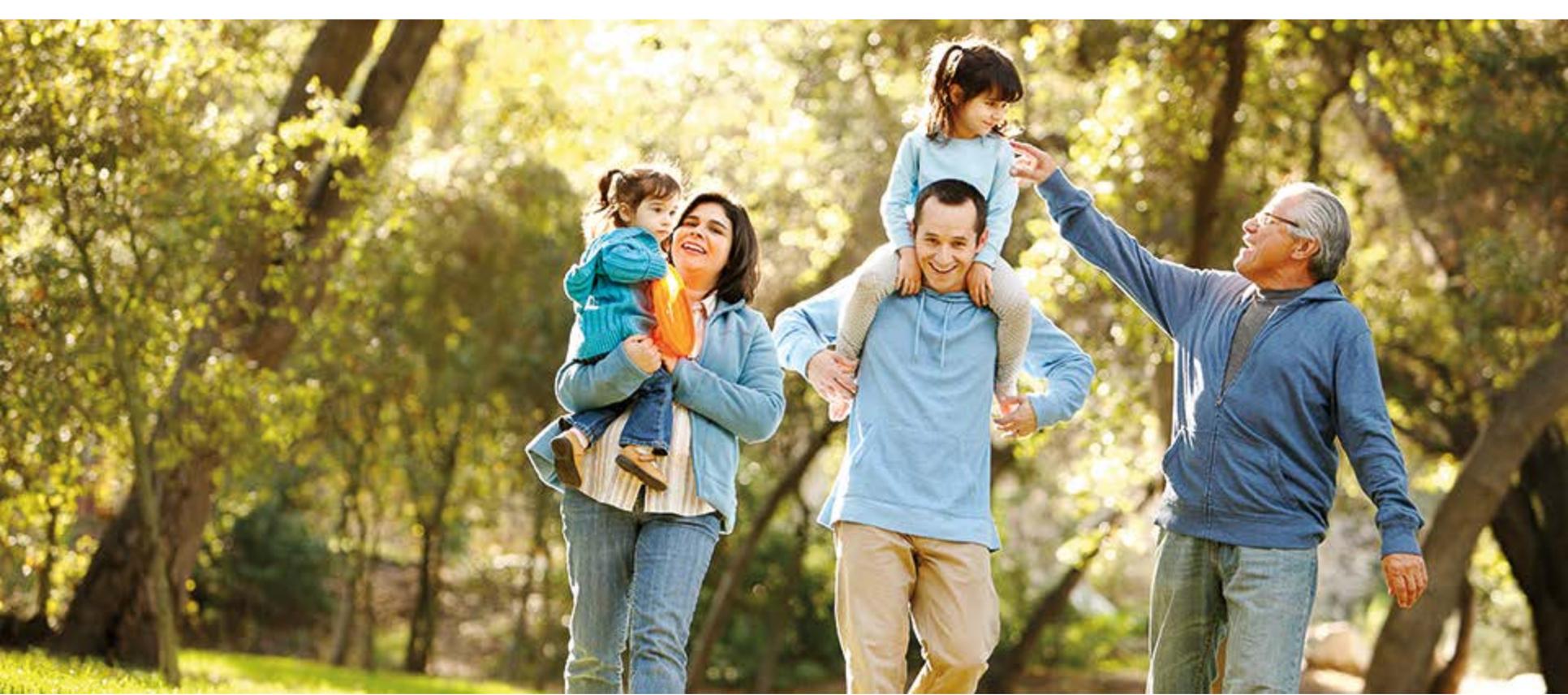
Rates from 2010 to 2013



Moda Commercial PPO was in the 75<sup>th</sup> percentile, and OEGB was in the 50<sup>th</sup> percentile.



[modahealth.com](http://modahealth.com)



# Chronic Condition Management and Cost Savings

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SEOW Attachment 7  
February 17, 2015

# What are our questions?

Do individuals with well controlled chronic conditions cost less than individuals with poorly controlled chronic conditions?

Are disease management programs cost savings or cost effective?



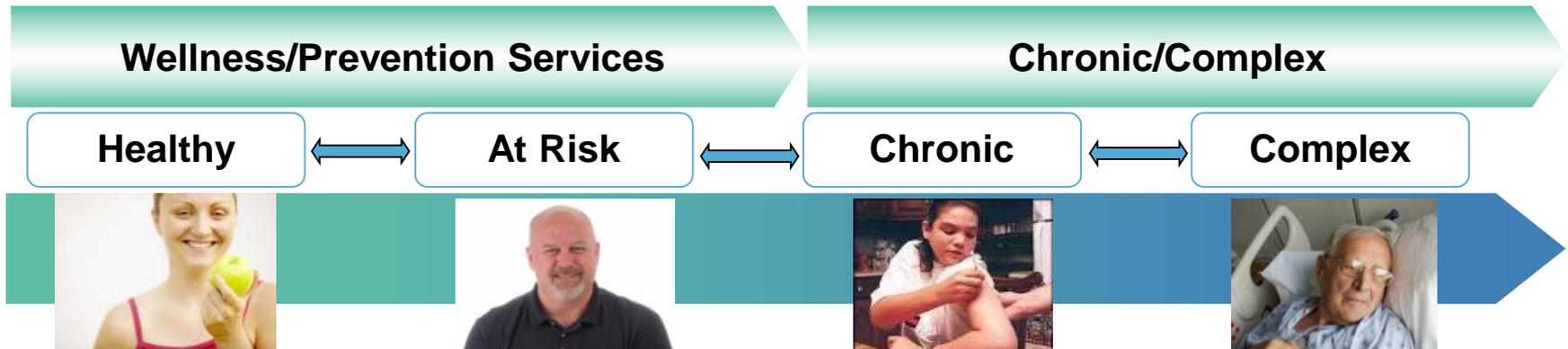
# Definition of Disease Management

- The Disease Management Association of America (DMAA) 2004 defines DM as a multi-disciplinary, coordinated, continuum-based approach to healthcare delivery and communications for populations with, or at risk for, established medical conditions [4]
- Elements include use of:
  - evidence based guidelines;
  - collaborative care between providers;
  - risk stratification to match interventions with need;
  - enhancing self management;
  - process and outcomes measurement;
  - use of information technology

# Big Picture of Health Status

Health Status

Cost of Care



**Zero Trends\*:** Don't get worse; Keep the healthy people healthy

*\*Zero Trends: Health as a Serious Economic Strategy, D.W. Edington. 2009. Health Management Research Center*

# Key Learnings: Literature Review

- Care management programs clearly improve process outcomes: medication adherence and guideline adherence (i.e. lipid checks, A1c checks, quality measures) [ref 1- 6]
- Care management programs are often associated with increased outpatient utilization and increased use of disease specific pharmaceuticals
- It has been difficult to show consistent reductions in inpatient utilization or overall costs. Most studies in moderate disease have not shown cost savings.
- Few studies provide long term outcomes
- Most studies (except the Medicare study [5]) use weak study designs.

# Example: Type 2 Diabetes

- Randomized controlled trials (UKPDS) indicate each 1 point reduction in A1c results in 37% reduction in microvascular complication and 14% reduction in MI rate.
- Li examined 24 evidence based DM interventions recommended by the ADA and assessed their cost savings of effectiveness
  - 6 of these were found to be cost savings (ACE or ARB therapy for kidney protection (3), comprehensive foot care, multicomponent risk factor control (2))
  - Other interventions (including aggressive sugar control) are either cost effective, or not cost effective at all (poor value for resources)
- Much usual and “good” DM care goes to blood sugar control which reduces complications. However, this will not be cost saving.

# OEBB DATA: Q2 2014

- Comparison: 400 members with A1c > 8 (poor control) compared to 834 with A1c < 8 (fair to good control)
- Demographics: the groups were similar by gender and weight status (49% female; ~77% of each group obese and 27% of each group severely obese). Age was 1 year higher in good control group.
- 80% of the poor control group were in the poor control cohort in 2012.
- Comorbidities

	Good Control (%)	Poor Control (%)
Depression	12.6	12.4
CAD	1.6	1.9
CHF	2.3	2.2
Asthma	2.5	1.6

# OEBB Utilization: Q2 2014

	Good or Fair Control	Poor Control
Inpatient Discharge per 1000	94.8	78.1
ED Visits for DM per 1000	191.2	183.2
IP Discharge per 1000 with CAD *	416.7	428.6
Revascularization per 1000 with CAD *	83.3	142.9
IP Discharge per 1000 with CHF *	111	125

\* Low cell size limits comparison

# OEBB Relative Utilization (overall cost of care) : Q2 2014

All OEBB	DM Good or Fair	DM poor control
1 (comparator)	2.1	1.9

# Conclusions

- Utilization, in terms of hospital admissions, ER care for Diabetes, and overall utilization is similar in individuals with good/fair, vs poor DM control.
- Intensive efforts to improve risk factor control and blood pressure control (using ACE or ARB) could potentially be cost savings. These efforts are ongoing in the KP setting.
- Intensive efforts to improve sugar control are not likely to be cost savings. These efforts remain clinically appropriate, and are ongoing, but are not likely to be cost saving.
- Longer term follow-up for a cohort may provide different conclusions.
- Analyses including productivity, work loss, and quality of life may provide different conclusions.
- Care management for other chronic conditions may be more (or less) cost effective or cost saving than care management for diabetes.

# References

1. Fireman, 2004 Health Affairs
2. De Bruin , 2011 Health Policy
3. Li, 2010 Diabetes Care
4. Goetzel 2005, Health Care Financing Review
5. Piekes, 2009 JAMA
6. Ofman AM J Medicine 2004