



The Office of the National Coordinator for  
Health Information Technology

## Using Data to Drive Change

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ONC In-Person Site Visit  
New Castle, Delaware  
Wednesday, October 18, 2017



# Using Data to Drive Change

## Vermont Blueprint for Health



All-Insurer Payment Reforms

Transformation Network

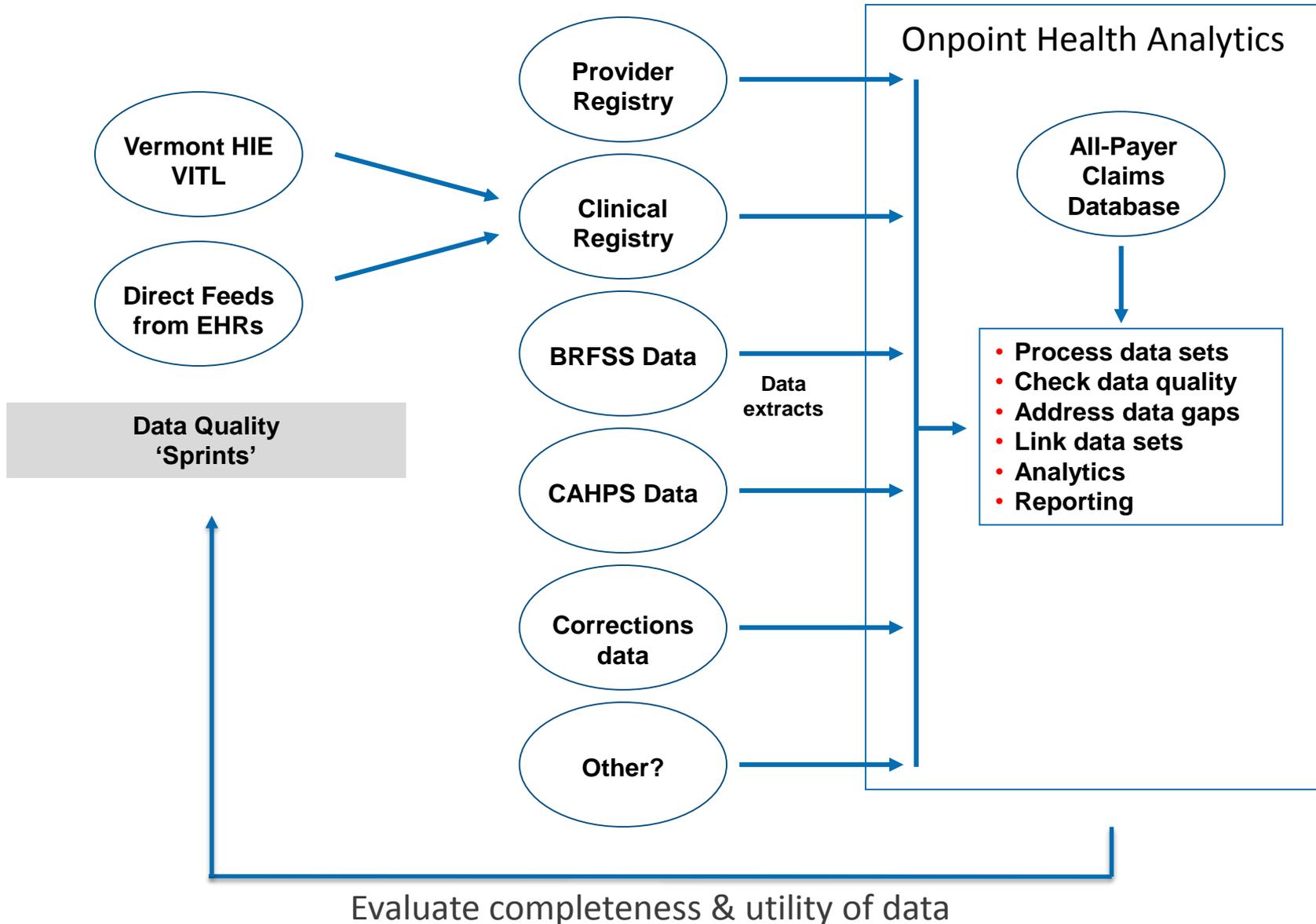
Service Area & Statewide Collaboratives

Data Infrastructure

Evaluation & Comparative Reporting

# Using Data to Drive Change

## Data Aggregation & Quality



# Using Data to Drive Change Products

## Measurement

- Quality
- Utilization
- Expenditures & Unit Costs
- Patient Experience
- Social, Economic, Behavioral
- Variation & Associations

## Products

- Practice Profiles
- HSA Profiles
- Learning System Activities
- Performance Payments
- Outcomes & Impact
- Predictive Modeling

POPULATION HEALTH MANAGEMENT  
Volume 0, Number 0, 2015  
Mary Ann Liebert, Inc.  
DOI: 10.1089/pop.2015.0065

Original Article

Vermont's Community-Oriented All-Payer  
Medical Home Model Reduces Expenditures  
and Utilization While Delivering High-Quality Care

Craig Jones, MD<sup>1</sup>, Karl Finison, MA<sup>2</sup>, Katharine McGraves-Lloyd, MS<sup>2</sup>, Timothy Tremblay, MS<sup>1</sup>,  
Mary Kate Mohlman, PhD<sup>1</sup>, Beth Tanzman, MSW<sup>1</sup>, Miki Hazard, MA<sup>1</sup>,  
Steven Maier, MSL<sup>1</sup>, and Jenney Samuelson, MS<sup>1</sup>

Finison et al. *BMC Health Services Research* (2017) 17:58  
DOI 10.1186/s12913-017-2010-0

BMC Health Services Research

RESEARCH ARTICLE Open Access

Risk-adjustment methods for all-payer  
comparative performance reporting in  
Vermont

Karl Finison<sup>1</sup> , MaryKate Mohlman<sup>2</sup>, Craig Jones<sup>3</sup>, Melanie Pinette<sup>1</sup>, David Jorgenson<sup>1</sup>, Amy Kinner<sup>1</sup>,  
Tim Tremblay<sup>2</sup> and Daniel Gottlieb<sup>4</sup>

Impact of Medication-Assisted Treatment for Opioid Addiction on  
Medicaid Expenditures and Health Services Utilization Rates in Vermont

Mary Kate Mohlman, Ph.D. <sup>a\*</sup>, Beth Tanzman, M.S.W. <sup>a</sup>, Karl Finison, M.A. <sup>b</sup>,  
Melanie Pinette, M.E.M. <sup>b</sup>, Craig Jones, M.D. <sup>a</sup>

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<sup>b</sup> OpPoint Health Data, 254 Commercial Street, Suite 257, Portland, ME 04101, USA

Statewide Data Infrastructure Supports Population  
Health Management: Diabetes Case Study

Craig Jones, MD<sup>1</sup> Mary Kate Mohlman, PhD<sup>1</sup> David Jorgenson, MS<sup>2</sup>  
Karl Finison, MA<sup>2</sup> Katie McGee, MS<sup>3</sup> Hans Kastensmith<sup>3</sup>



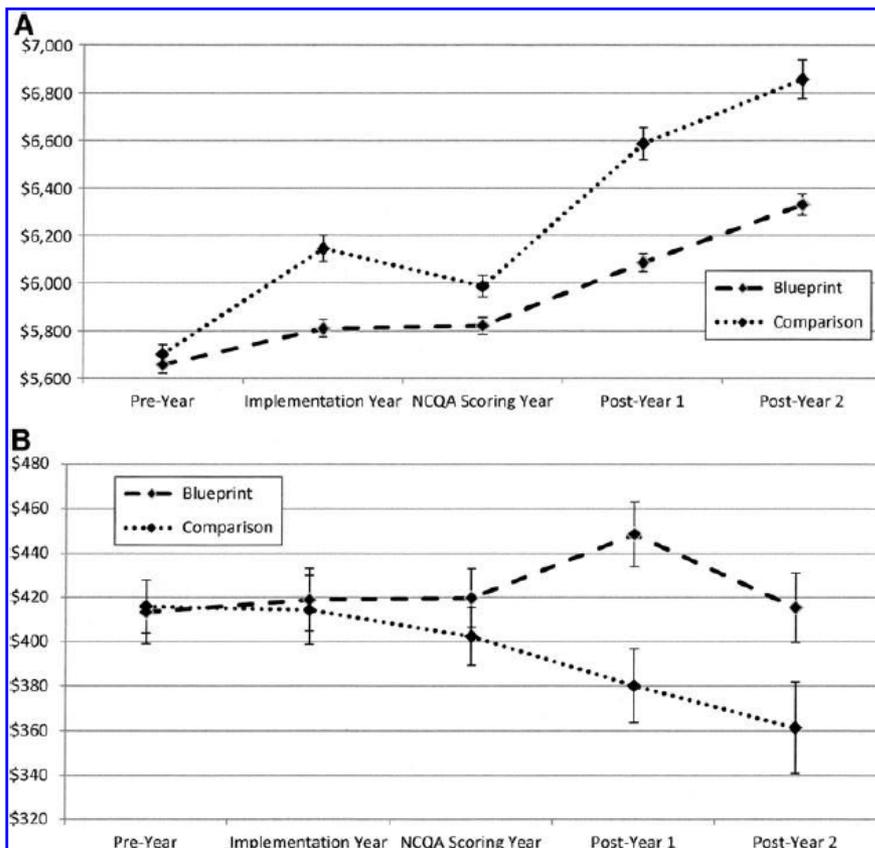
## Vermont's Community-Oriented All-Payer Medical Home Model Reduces Expenditures and Utilization While Delivering High-Quality Care

Craig Jones, MD,<sup>1</sup> Karl Finison, MA,<sup>2</sup> Katharine McGraves-Lloyd, MS,<sup>2</sup> Timothy Tremblay, MS,<sup>1</sup> Mary Kate Mohlman, PhD,<sup>1</sup> Beth Tanzman, MSW,<sup>1</sup> Miki Hazard, MA,<sup>1</sup> Steven Maier, MSL,<sup>1</sup> and Jenney Samuelson, MS<sup>1</sup>

### Impact of Medication-Assisted Treatment for Opioid Addiction on Medicaid Expenditures and Health Services Utilization Rates in Vermont

Mary Kate Mohlman, Ph.D.,<sup>a,\*</sup> Beth Tanzman, M.S.W.,<sup>a</sup> Karl Finison, M.A.,<sup>b</sup> Melanie Pinette, M.E.M.,<sup>b</sup> Craig Jones, M.D.<sup>a</sup>

<sup>a</sup> Vermont Blueprint for Health, NOB 1 South, 280 State Drive, Waterbury, VT 05671, USA  
<sup>b</sup> Orpoint Health Data, 254 Commercial Street, Suite 257, Portland, ME 04101, USA



**Table 2**

Adjusted average annual expenditures and utilization rates<sup>†</sup>.

	MAT group	Non-MAT	Difference <sup>‡</sup>	P-value
<b>Expenditures</b>				
Total expenditures	\$14,468	\$14,880	−\$412	0.07
Total expenditures without treatment	\$ 8794	\$11,203	−\$2409	<0.01
Buprenorphine expenditures	\$2708	−\$47	\$2755	<0.01
Total prescription expenditures	\$4461	\$2166	\$2295	<0.01
Inpatient expenditures	\$2132	\$3757	−\$1625	<0.01
Outpatient expenditures	\$345	\$604	−\$259	<0.01
Professional expenditures	\$674	\$981	−\$307	<0.01
SMS expenditures*	\$2872	\$4160	−\$1288	<0.01
<b>Utilization (rate/person)</b>				
Inpatient days	1.54	3.00	−1.46	<0.01
Inpatient discharges	0.30	0.52	−0.22	<0.01
ED visits	1.44	2.48	−1.04	<0.01
Primary care physician visits	15.27	9.81	5.46	<0.01
Advanced imaging	0.29	0.54	−0.25	<0.01
Standard imaging	0.76	1.43	−0.67	<0.01
Colonoscopy	0.01	0.02	−0.01	<0.01
Echography	0.46	0.53	−0.07	0.002
Medical specialist visits	0.49	0.82	−0.33	<0.01
Surgical specialist visits	3.04	1.89	1.15	<0.01

\* SMS refers to special Medicaid services and include transportation, home and community-based services, case management, dental, residential treatment, day treatment, mental health facilities, and school-based services.

<sup>†</sup> Multivariable regression analysis, adjusted for gender, age, calendar year, clinical risk groups, Medicaid in the prior year, hepatitis C virus (HCV) status, and pre- and perinatal care.

<sup>‡</sup> Difference = MAT – non-MAT.

# Using Data to Drive Change Performance Profiles



## Practice Profile: ABC P

Period: 01/2013 - 12/2013 Practice HSA: ABC Profile Type: Adults (18+ Years)

### Demographics & Health Status

	Practice	H.S.A.
Average Members	4,081	84,070
Average Age	50.6	50.1
% Female	55.6	55.5
% Medicaid	14.5	13.0
% Medicare	23.7	22.2
% Maternity	2.1	2.1
% with Selected Chronic Conditions	50.1	38.8
<b>Health Status (CRG)</b>		
% Healthy	39.0	43.9
% Acute or Minor Chronic	18.8	20.5
% Moderate Chronic	27.9	24.5
% Significant Chronic	15.4	12.3
% Cancer or Catastrophic	1.4	1.3

Table 1: This table provides comparative information on the demographics of your practice, all Blueprint practices in your Health Service Area (HSA) as a whole. Included measures reflect the types of information used to adjust rates: age, gender, maternity status, and health status.

Average Members serves as this table's denominator and adjusts for partial enrollment during the year. In addition, special attention has been given to Medicaid and Medicare. This includes adjustment for each member's unique Medicaid or Medicare, the member's practice's percentage of membership in Medicaid or Medicare, Medicare disability or end-stage renal disease status, and the member required special Medicaid services that are not found in common populations (e.g. day treatment, residential treatment, case management, services, and transportation).

The Selected Chronic Conditions measure indicates the proportion of members through the claims data as having one or more of seven selected chronic conditions: asthma, chronic obstructive pulmonary disease, congestive heart failure, cancer, diabetes, hypertension, and depression.

The Health Status measure aggregates 3M™ Clinical Risk Group (CRG) for the year for the purpose of generating adjusted rates. Aggregated risk class includes: Healthy, Acute (e.g., end-stage renal disease), or Minor Chronic (chronic joint pain), Moderate Chronic (e.g., diabetes), Significant Chronic (e.g., CHF), and Cancer (e.g., breast cancer, colorectal cancer) or Catastrophic (e.g., asymptotic optic disease).

Welcome to the 2014 Blueprint Practice Profile from the Blueprint for Health, a state-led initiative transforming the way that health care and overall health services are delivered in Vermont. The Blueprint is leading a transition to an environment where all Vermonters have access to a continuum of seamless, effective, and preventive health services. Blueprint practice profiles are based on data from Vermont's all-payer claims database, the Vermont Healthcare Claims Uniform Reporting and Evaluation System (VHCURES). Data include all covered commercial, Full Medicaid, and Medicare members, attributed to Blueprint practices starting by December 31, 2013. Practice Profiles for the adult population cover members ages 18 years and older; pediatric profiles cover members between the ages of 1 and 17 years. Utilization and expenditure rates presented in these profiles have been risk-adjusted for demographic and health status differences among the reported populations. This reporting includes only members with a visit to a primary care physician, as identified in VHCURES claims data, during the current reporting year or the prior year.



## Practice Profile: ABC Primary Care

Period: 01/2013 - 12/2013 Practice HSA: ABC Profile Type: Adults (18+ Years)

### Total Expenditures per Capita

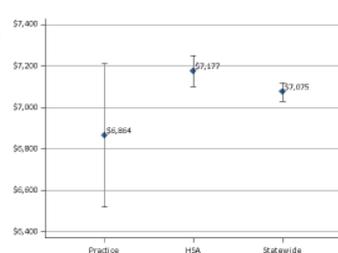


Figure 1: Presents annual risk-adjusted rates and 95% confidence intervals with expenditures capped statewide for outlier patients. Expenditures include both plan and member out-of-pocket payments (i.e., copay, coinsurance, and deductibles).

### Total Expenditures by Major Category

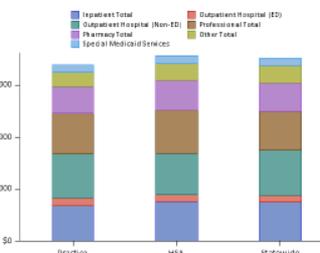


Figure 2: Presents annual risk-adjusted rates for the major components of cost (as shown in Figure 1) with expenditures capped statewide for outlier patients. Some services provided by Medicaid (e.g., case management, transportation) are reported separately as Special Medicaid Services.

### Total Expenditures Excluding SMS

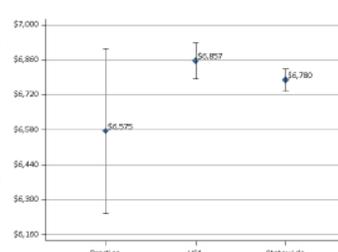


Figure 3: Presents annual risk-adjusted rates and 95% confidence intervals with expenditures excluding Special Medicaid Services capped statewide for outlier patients. Expenditures include both plan and member out-of-pocket payments (i.e., copay, coinsurance, and deductibles).

### Total Resource Use Index (RUI) Excluding SMS

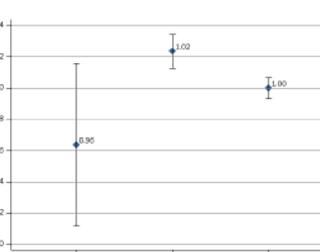


Figure 4: Presents annual risk-adjusted rates and 95% confidence intervals. Since price per service varies across Vermont, a measure of expenditures based on resource use — Total Resource Use Index (RUI) — is included. RUI reflects an aggregated cost based on utilization and intensity of services across major components of care (e.g., inpatient) and excludes Special Medicaid Services. The practice and HSA are indexed to the statewide average (1.00).

Demographics & Health Status Cost of Care Utilization Effective & Preventive Care

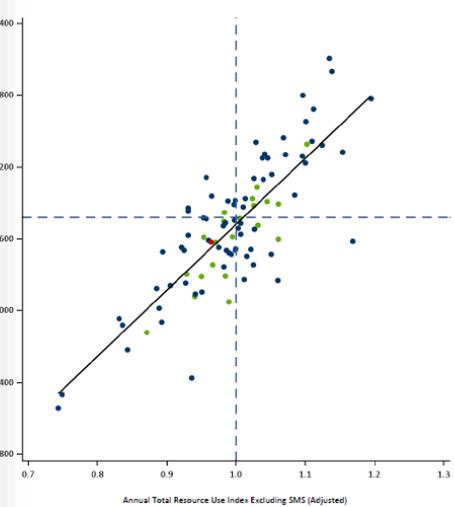
Demographics & Health Status Cost of Care Utilization Effective & Preventive Care Data Detail



## Practice Profile: ABC Primary Care

Period: 01/2013 - 12/2013 Practice HSA: ABC Profile Type: Adults (18+ Years)

### Annual Total Expenditures per Capita Excluding SMS vs. Resource Use Index (RUI)

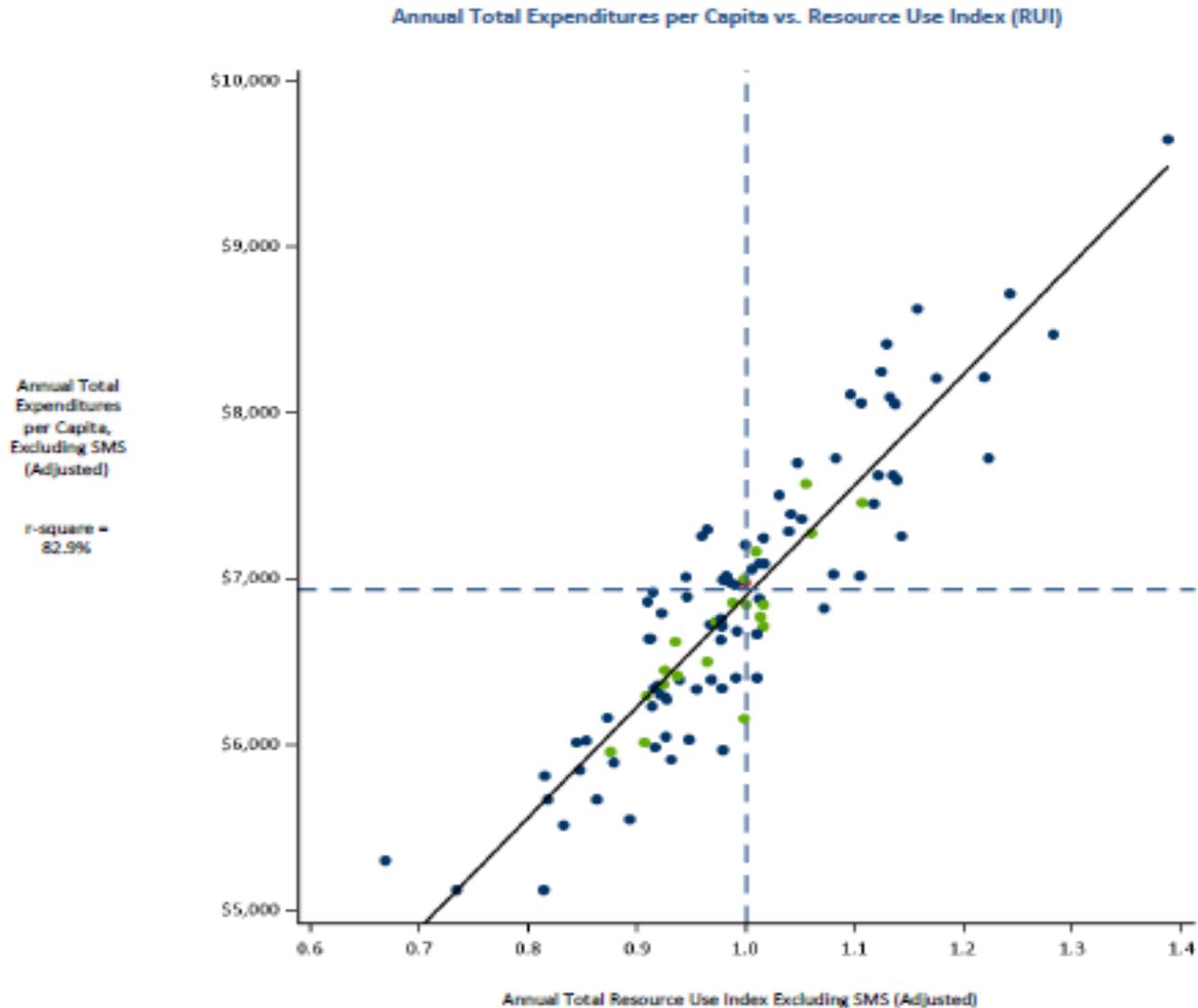


This demonstrates the relationship between risk-adjusted expenditures excluding SMS and RUI for Blueprint practices. This graphic illustrates your practice's risk-adjusted rates (i.e., the red dot) of all practices in your Health Service Area (i.e., the green dots) and all other Blueprint (i.e., the blue dots). The dotted lines show the average expenditures per capita and average statewide (i.e., 1.00). Practices with higher expenditures and utilization are in the upper right-hand corner with lower expenditures and utilization are in the lower left-hand quadrant. An RUI value indicates higher than average utilization; conversely, a value lower than 1.00 indicates lower than average utilization. A trend line has been included in the graphic, which demonstrates that, in general, practices with utilization had higher risk-adjusted expenditures.

Health Status Cost of Care Utilization Effective & Preventive Care Data Detail

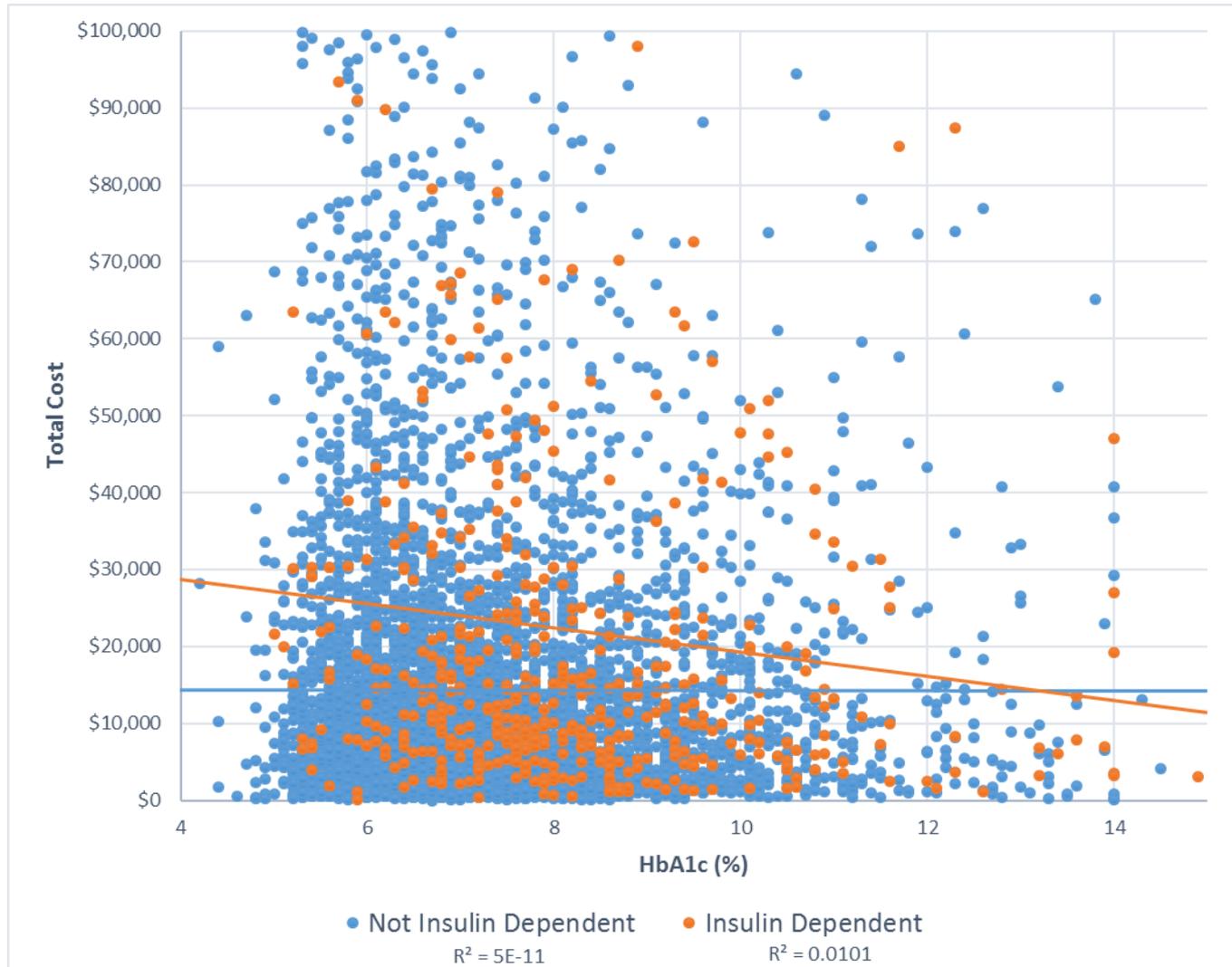
# Using Data to Drive Change

## Insights and displays: variation in TCOC & RUI



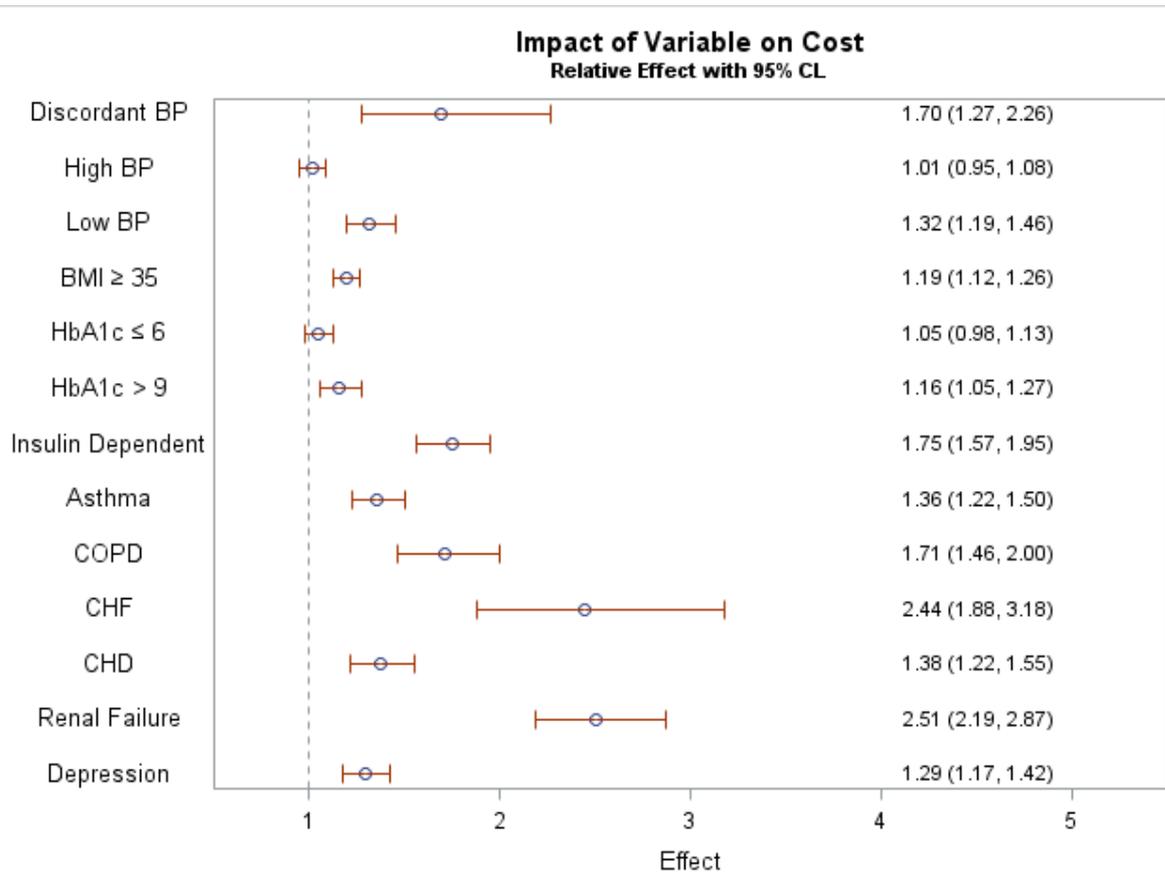
# Using Data to Drive Change

## Meeting VBP model goals: Quality, Health & TCOC



# Using Data to Drive Change

## Meeting VBP model goals: Quality, Health & TCOC



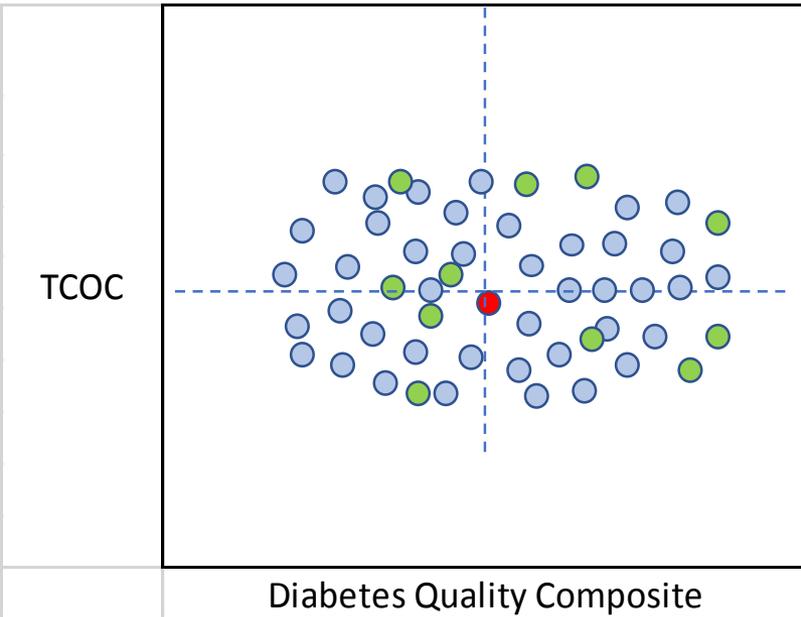
## Outreach Criteria

- Diabetes + BP  $\geq$  140/90 mm/Hg
- Diabetes + BP  $\leq$  90/60 mm/Hg
- Diabetes + BMI > 35
- Diabetes + HbA1c  $\leq$  6%
- Diabetes + HbA1c > 9%
- Diabetes + Insulin
- Diabetes + Asthma
- Diabetes + COPD
- Diabetes + CHF
- Diabetes + CHD
- Diabetes + Renal Failure
- Diabetes + Depression

# Using Data to Drive Change

## Performance guided services

### Display Associations & Performance



Click on  
practice



### Display Practice Results for Contributing Measures

Diabetes Care Quality Measures	Practice Average	Organization Average	Region Average	Statewide Region
Diabetes Care, Eye Exam (age 18-75)				
Diabetes Care, HbA1C Test (age 18-75)	Click on result			
Diabetes Care, Kidney Disease Test (age 18-75)				
Statin Therapy for Patients with Diabetes				



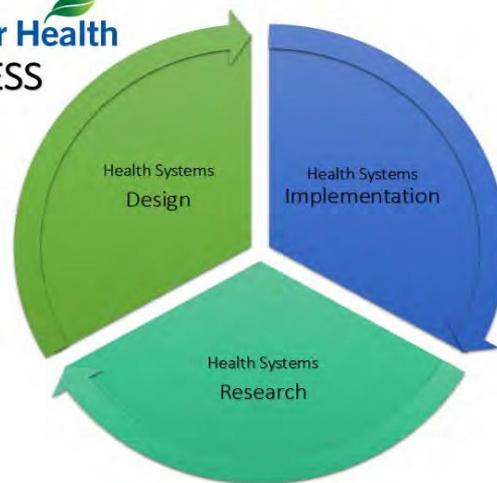
# Using Data to Drive Change

## Learning & Transformation Network



- 31 Community Health Team Leaders
- 19 Blueprint Practice Facilitators
- 14 Blueprint Project Managers
- 4 ACO Clinical Quality Leaders
- 6 ACO Clinical Consultants

VERMONT  
**Blueprint for Health**  
PROCESS



# Using Data to Drive Change

## Building a 'Data Use Culture'

### Key Ingredients

- Meaningful stakeholder group that informs reporting & displays
- Provide information that directly supports care management (individuals)
- Provide information that directly supports outreach & prevention (populations)
- Display performance results that are linked with incentives
- Display comparative performance, highlight variation & drivers
- Support practices use of information to drive operations
- Evaluate and report program impact, culture of transparency

# Value Based Health System

## Systems Based Approach

### Key Ingredients

- Advanced primary care freed up by the right incentive model
- Multi-disciplinary team based services working closely with primary care
- Coordination with community providers (medical, non-medical) to organize a more complete approach to population health
- Use of health IT and data (medical, non-medical) to support care management, prevention, and measure comparative performance
- Support for providers and practices to assist with transformation and data guided continuous improvement .... 'Data use culture'
- Learning network to share best practices and improve variable performance

## **Questions & Discussion**