Using Data to Improve Virginia's Health Care Value

Beth A. Bortz, President and CEO, Virginia Center for Health Innovation

Kyle Russell, Director of Strategy and Analytics, Virginia Health Information

VIRGINIA HEALTH VALUE DASHBOARD

- The purpose is to prompt action for improving healthcare value.
- Our measurement approach is to identify and report on the delivery of low value and high value clinical services across Virginia and its regions.
- Our action aims are to engage key stakeholders in systematically reducing low value services, increasing high value services, and improving the infrastructure for value-based care.

The Virginia Health Value Dashboard

Aim I: Reducing Low Value Care

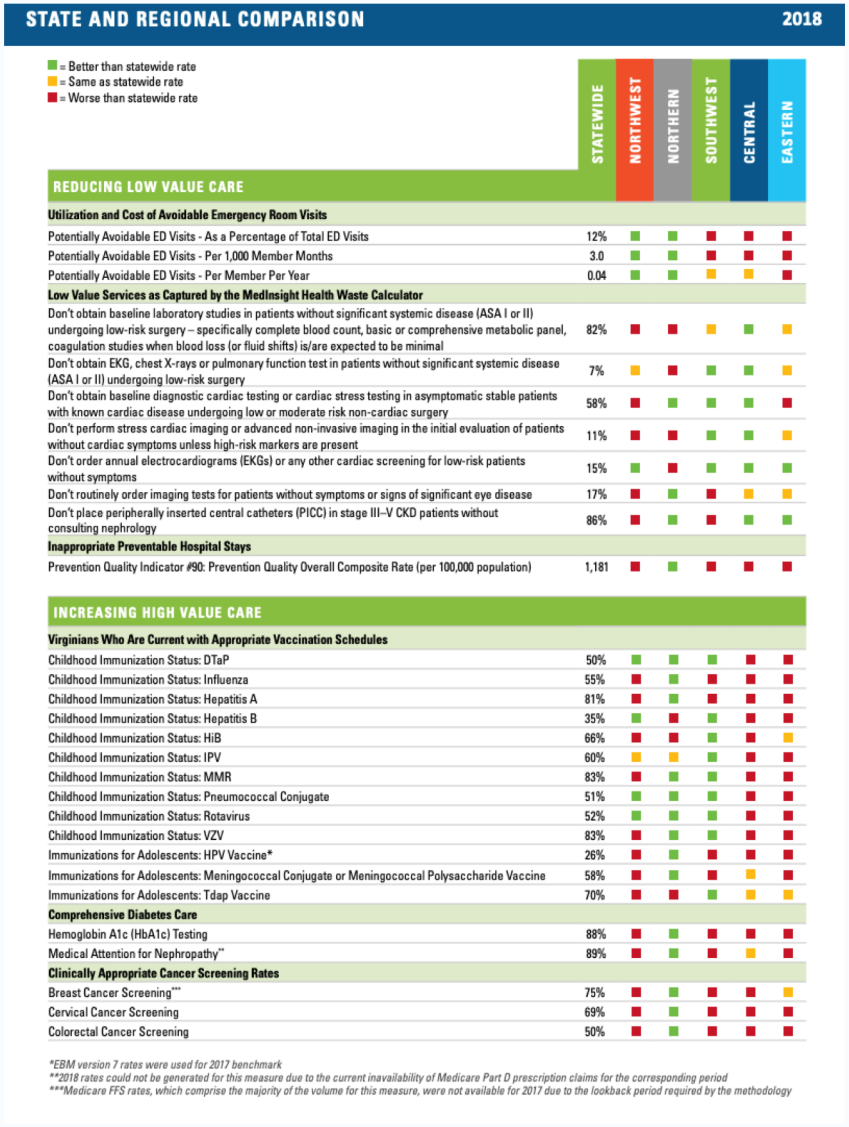
- A. Utilization and cost of potentially avoidable emergency room visits (3 measures)
- B. Low value services as captured by the MedInsight Health Waste Calculator (5 measures)
- C. Inappropriate preventable hospital stays (1 measure)

Aim II: Increasing High Value Care

- A. Virginians who are current with appropriate vaccination schedules (1 measure with multiple elements)
- B. Comprehensive diabetes care (2 measures)
- C. Clinically appropriate cancer screening rates (3 measures)

Aim III: Improving the Infrastructure for Value-Based Care

- A. Commercial in-network payments that are value-based (1 measure)
- B. Claims in Virginia's All-Payer Claims Database (2 measures)
- C. Value-oriented payments that place doctor and hospitals at financial risk for their performance (1 measure)



STATE AND REGIONAL COMPARISON 2018

■ = Better than statewide rate
■ = Same as statewide rate
■ = Worse than statewide rate

REDUCING LOW VALUE CARE	STATEWIDE	NORTHWEST	NORTHERN	SOUTHWEST	CENTRAL	EASTERN
Utilization and Cost of Avoidable Emergency Room Visits						
Potentially Avoidable ED Visits - As a Percentage of Total ED Visits	12%	■	■	■	■	■
Potentially Avoidable ED Visits - Per 1,000 Member Months	3.0	■	■	■	■	■
Potentially Avoidable ED Visits - Per Member Per Year	0.04	■	■	■	■	■
Low Value Services as Captured by the MedInsight Health Waste Calculator						
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery – specifically complete blood count, basic or comprehensive metabolic panel, coagulation studies when blood loss (or fluid shifts) is/are expected to be minimal	82%	■	■	■	■	■
Don't obtain EKG, chest X-rays or pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	7%	■	■	■	■	■
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery	58%	■	■	■	■	■
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present	11%	■	■	■	■	■
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms	15%	■	■	■	■	■
Don't routinely order imaging tests for patients without symptoms or signs of significant eye disease	17%	■	■	■	■	■
Don't place peripherally inserted central catheters (PICC) in stage III–V CKD patients without consulting nephrology	86%	■	■	■	■	■
Inappropriate Preventable Hospital Stays						
Prevention Quality Indicator #90: Prevention Quality Overall Composite Rate (per 100,000 population)	1,181	■	■	■	■	■

INCREASING HIGH VALUE CARE						
Virginians Who Are Current with Appropriate Vaccination Schedules						
Childhood Immunization Status: DTaP	50%	■	■	■	■	■
Childhood Immunization Status: Influenza	55%	■	■	■	■	■
Childhood Immunization Status: Hepatitis A	81%	■	■	■	■	■
Childhood Immunization Status: Hepatitis B	35%	■	■	■	■	■
Childhood Immunization Status: HiB	66%	■	■	■	■	■
Childhood Immunization Status: IPV	60%	■	■	■	■	■
Childhood Immunization Status: MMR	83%	■	■	■	■	■
Childhood Immunization Status: Pneumococcal Conjugate	51%	■	■	■	■	■
Childhood Immunization Status: Rotavirus	52%	■	■	■	■	■
Childhood Immunization Status: VZV	83%	■	■	■	■	■
Immunizations for Adolescents: HPV Vaccine*	26%	■	■	■	■	■
Immunizations for Adolescents: Meningococcal Conjugate or Meningococcal Polysaccharide Vaccine	58%	■	■	■	■	■
Immunizations for Adolescents: Tdap Vaccine	70%	■	■	■	■	■
Comprehensive Diabetes Care						
Hemoglobin A1c (HbA1c) Testing	88%	■	■	■	■	■
Medical Attention for Nephropathy**	89%	■	■	■	■	■
Clinically Appropriate Cancer Screening Rates						
Breast Cancer Screening***	75%	■	■	■	■	■
Cervical Cancer Screening	69%	■	■	■	■	■
Colorectal Cancer Screening	50%	■	■	■	■	■

*EBM version 7 rates were used for 2017 benchmark
**2018 rates could not be generated for this measure due to the current inavailability of Medicare Part D prescription claims for the corresponding period
***Medicare FFS rates, which comprise the majority of the volume for this measure, were not available for 2017 due to the lookback period required by the methodology

Dashboard Results

- Released 2020
- 2018 Data

Dashboard Not Meant to be Static

Future Measures Task Force annually considers value indicators and associated measures that may be added to the dashboard.

New for 2021:

Aim 1: Reducing Low Value Care

Recommended: One or two additional measures on antibiotic stewardship incorporating upper respiratory infection and ear infection in children and adults.

Aim 2: Increasing High Value Care

Recommended: Medication adherence for chronic illness (1 measure)
Recommended: Clinically appropriate behavioral health services (1 measure)
Recommended: Appropriate end-of-life care (2 measures)

New Measure Details

	Aim	Indicator	Measure
Recommended Measures			
R1	Aim II	**G. Medication Adherence for Chronic Illness (new indicator if a candidate measure is adopted)**	*The percentage of patients 18 years and older who met the proportion of days covered (PDC) threshold of 80% during the measurement year (NQF 0541)*
R2	Aim II	**H. Appropriate End-of-Life Care (new indicator if a candidate measure is adopted)**	*Proportion of patients who died from cancer not admitted to hospice (increase high value care to reduce this measure) (NQF 0215)*
R3	Aim II		*Percentage of patients aged 65 years and older who have an advance care plan or surrogate decisionmaker documented in the medical record or documentation in the medical record that an advance care plan was discussed but patient declined or did not have a surrogate (NQF 0326)*
R4	Aim I	**B. Low Value Services as Captured by the Medinsight Health Waste Calculator**	*Don't routinely prescribe antibiotics for otitis media in children aged 2-12 years with non-severe symptoms where the observation option is reasonable (Choosing Wisely)*
R5	Aim II	**D. Clinically Appropriate Behavioral Health Services (new indicator if a candidate measure is adopted)**	*Follow-up after hospitalization for mental illness among population age 6+ (NQF 0576)*

Taking Action to Advance the Dashboard Aims

AIM 1: Reducing Low Value Care

Smarter Care
VIRGINIA

Advancing Aim 1: Reducing Low Value Care

Important Definitions

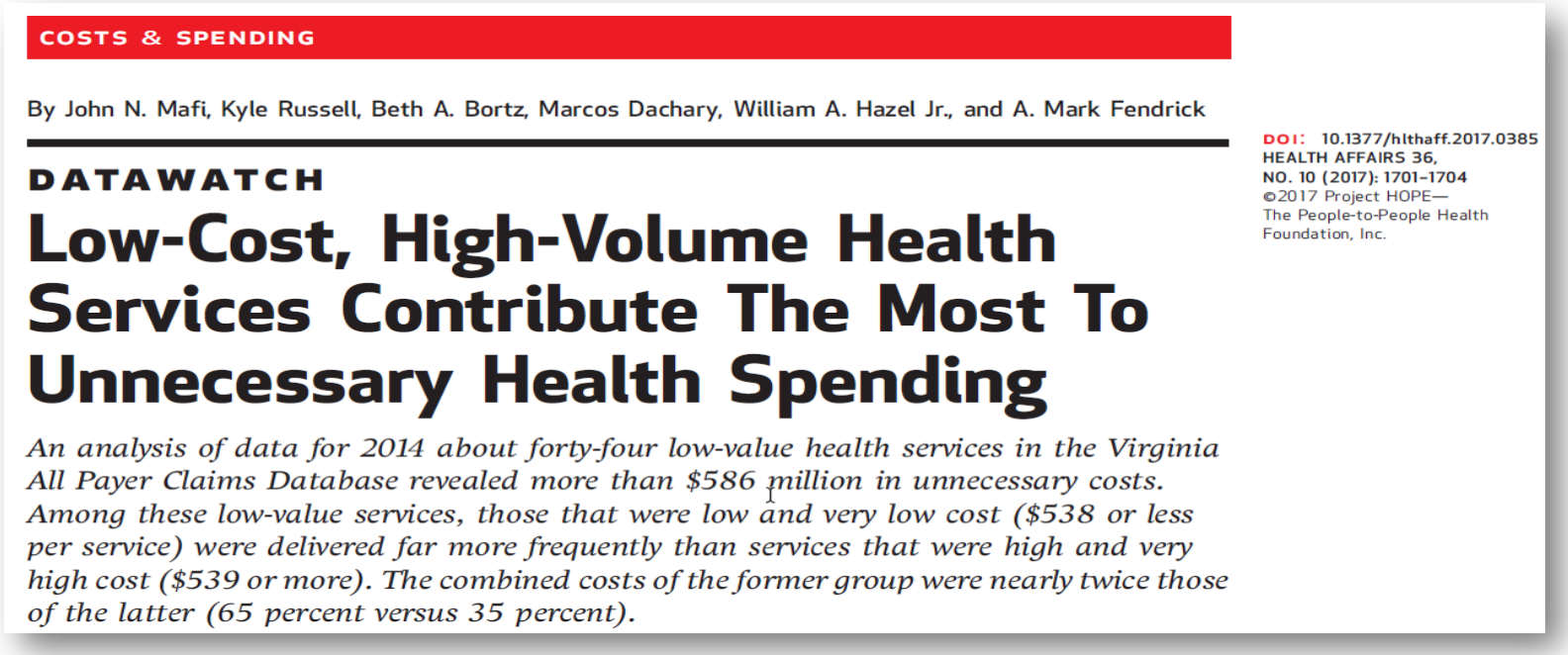
Choosing Wisely® – designed by the American Board of Internal Medicine and the National Physicians Alliance to help physicians, patients and other health care stakeholders think and talk about overuse of health care resources. Each medical specialty was asked to identify 5 medical tests and/or procedures that they know to be unnecessary and/or harmful.

Low Value - Services that research has proven to add no value in particular clinical circumstances and in fact can lead to subsequent unnecessary patient harm and higher total cost of care.

All Payer Claims Database –includes paid claims from commercial health insurance companies and the Department of Medical Assistance Services. This voluntary program facilitates data-driven, evidence-based improvements in the access, quality, and cost of healthcare. For the purposes of this work, VHI and VCHI were also able to secure Medicare fee for service data to add to the Medicaid and commercial data.

MedInsight Health Waste Calculator – an analytical software tool that provides actionable insight on the degree of necessity of healthcare services and determines optimal efficiency benchmarks.

Statewide Data Starts to Create a National Stir



COSTS & SPENDING

By John N. Mafi, Kyle Russell, Beth A. Bortz, Marcos Dachary, William A. Hazel Jr., and A. Mark Fendrick

DOI: 10.1377/hlthaff.2017.0385
HEALTH AFFAIRS 36,
NO. 10 (2017): 1701–1704

DATAWATCH

Low-Cost, High-Volume Health Services Contribute The Most To Unnecessary Health Spending

An analysis of data for 2014 about forty-four low-value health services in the Virginia All Payer Claims Database revealed more than $586 million in unnecessary costs. Among these low-value services, those that were low and very low cost ($538 or less per service) were delivered far more frequently than services that were high and very high cost ($539 or more). The combined costs of the former group were nearly twice those of the latter (65 percent versus 35 percent).

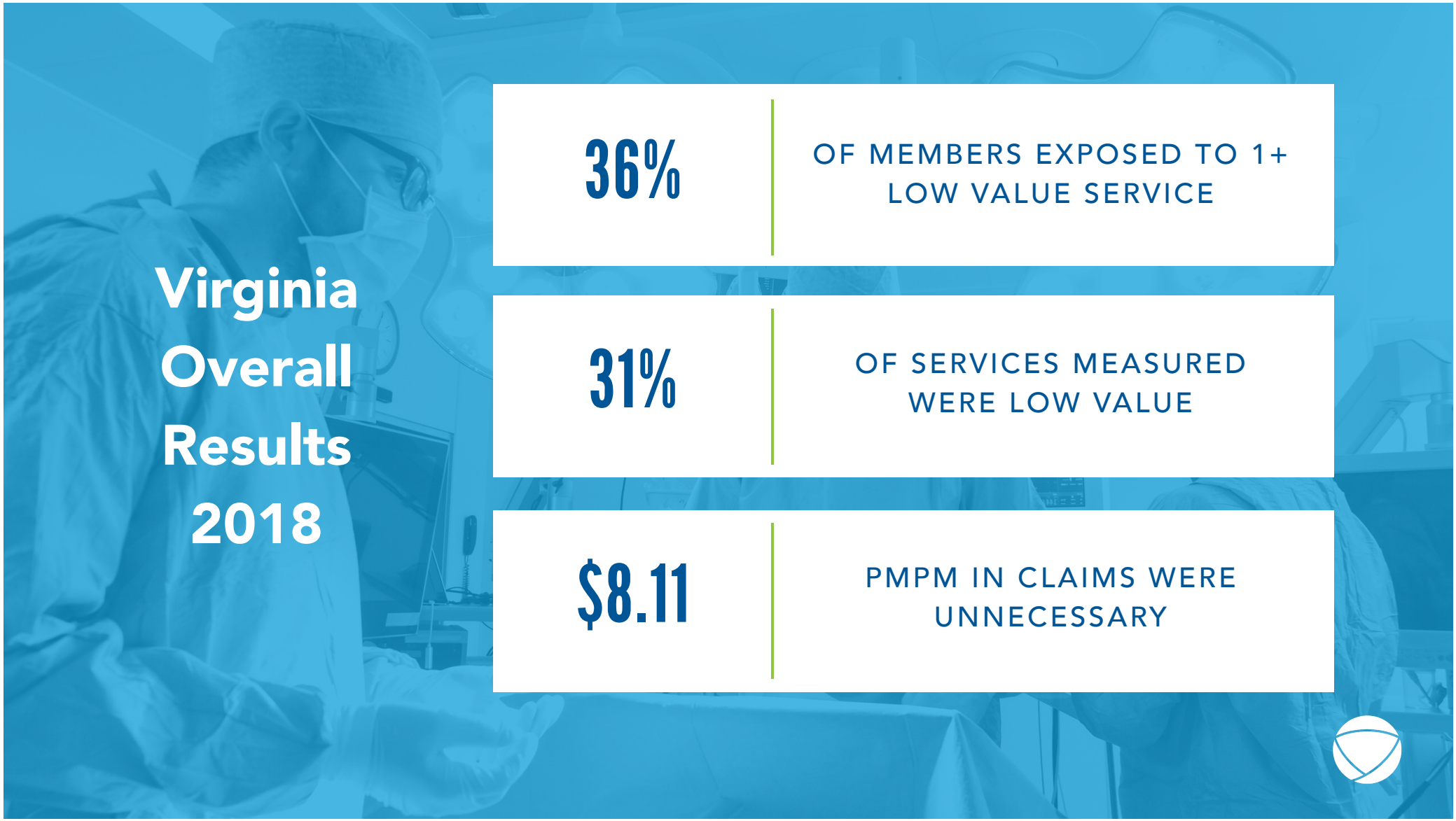
Health Affairs article, ***"Low-Cost, High Volume Services Contribute The Most To Unnecessary Health Spending"***, was the 3rd most read *Health Affairs* Article in 2017.

Summary of Results

Produced: January 2020

Health Waste Calculator Version 7.1

REPORTING PERIOD	2018
NUMBER OF MEASURES	48
CMS DATA INCLUDED?	YES
DOLLARS SPENT ON UNNECESSARY SERVICES	$539M /YEAR
UNNECESSARY SERVICES IDENTIFIED	1.72M / YEAR


Virginia Overall Results 2018
36%
OF MEMBERS EXPOSED TO 1+ LOW VALUE SERVICE
31%
OF SERVICES MEASURED WERE LOW VALUE
$8.11
PMPM IN CLAIMS WERE UNNECESSARY

Top 4 Measures by Percent of Low Value Dollars for Virginia - 2018

Measure	Risk of Harm	% Low-Value Dollars	Avg. Proxy Cost/Service	Low Value Index
Don't obtain baseline laboratory studies in patients without significant systemic disease undergoing low-risk surgery.	L	23%	$439	82%
Don't place peripherally inserted central catheters (PICC) in stage III-V CKD patients without consulting nephrology	H	15%	$13,992	86%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	M	13%	$280	15%
Don't routinely order imaging tests for patients without symptoms or signs of significant eye disease	L	13%	$622	17%

Exciting New Partnership

- VCHI was awarded a **$2.2 M grant** from Arnold Ventures to launch a statewide pilot to reduce the provision of low-value health services.
- The initiative will span **3 years**, with an additional 6 months for evaluation.
- It will employ a two-part strategy to reduce 7 sources of provider-driven low value services and prioritize a next set of consumer-driven measures for phase two.

Core Components

CLINICAL LEARNING COMMUNITY

Health system and physician practice partners working together to reduce seven provider-driven measures.

EMPLOYER TASK FORCE

15-25 Virginia employers working together to increase their knowledge of low-value care and identify consumer-driven measures to drive change through benefit design and employee education.

PLAN TO IMPROVE HEALTH VALUE

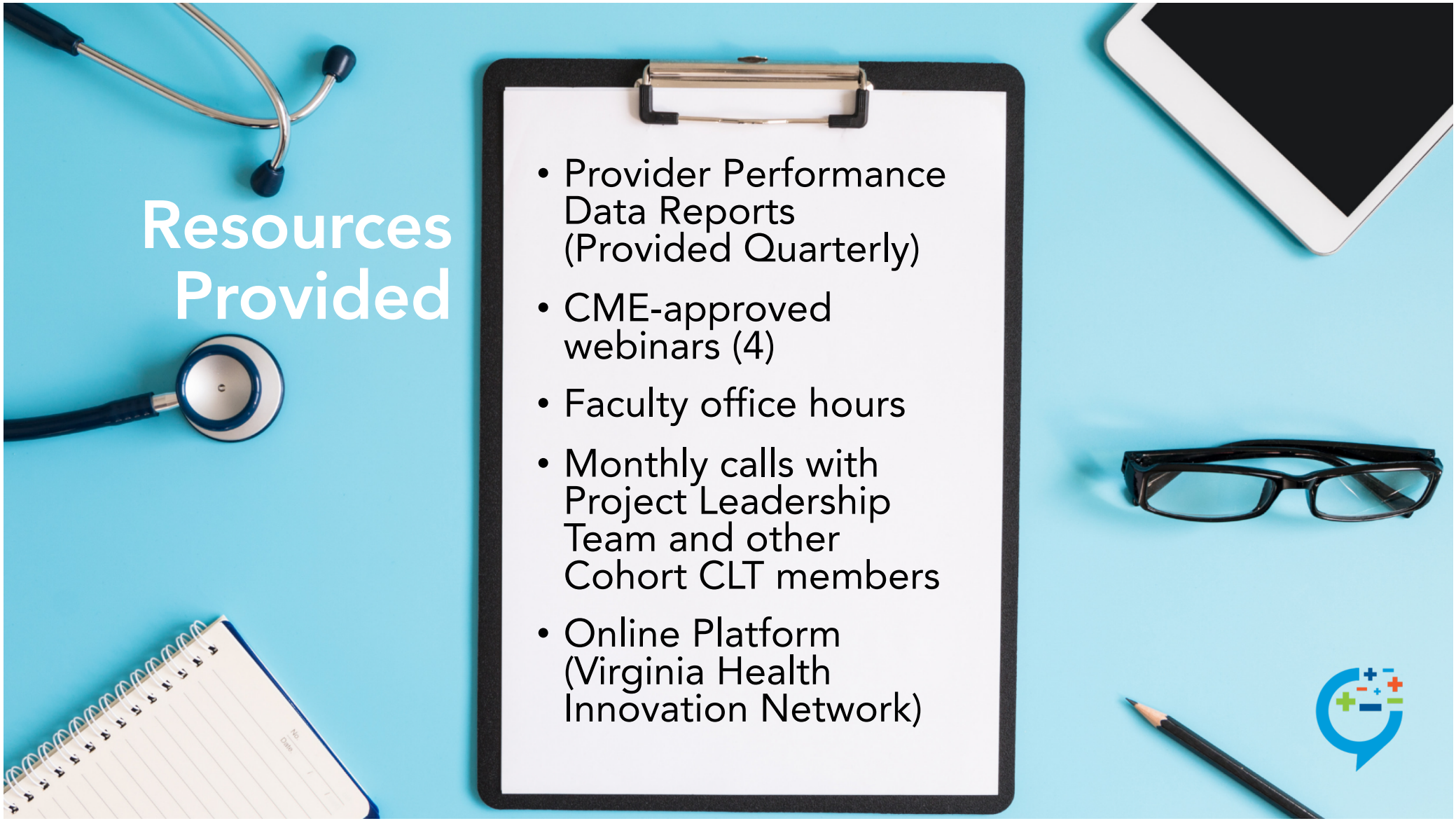
Developed at a joint conference of the clinical learning community and employer task force members.

Funded by a 3 year, $2.2. M grant from Arnold Ventures


Clinical Learning Community
BalladHealth
CarilionClinic
INOVA
HCA
Hospital Corporation of America
SENTARA
HEALTHCARE
VCUHealth
Sentara Quality Care
NETWORK
SIGNATURE
PARTNERS
VIRGINIACARE
PARTNERS
An HCA affiliate
Physician-led Evolution in Patient Care

Clinical Learning Community

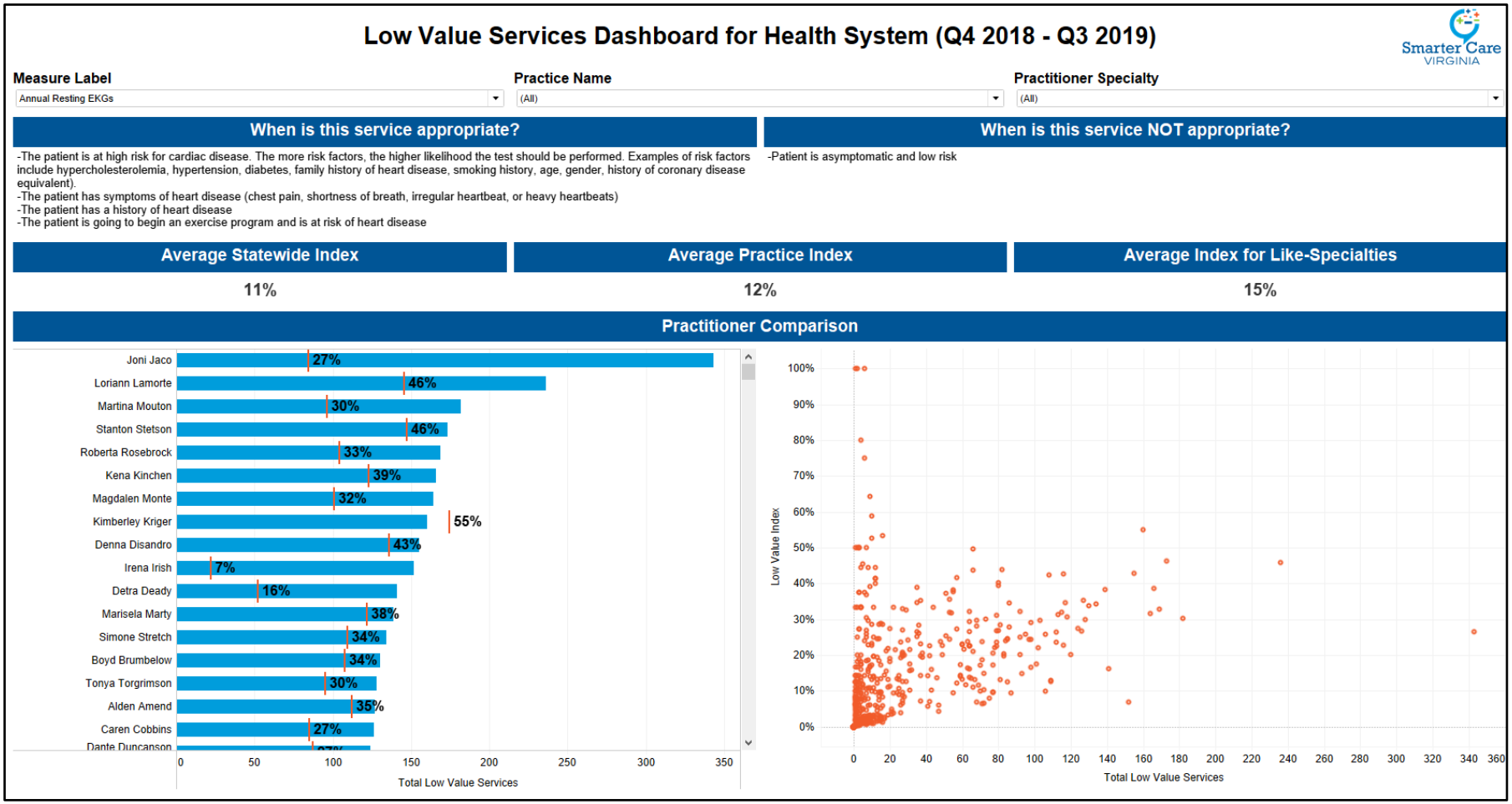
- 1000+ practice sites, nearly 7,000 clinicians, serving all 5 Virginia health planning regions. Active intervention period is 18 months.
- Original study design: step-wedge implementation, with 2 systems in 3 cohorts, starting 4 months apart. First 2 systems were to finish project planning and "go live" with sharing physician performance reports in March 2020.
- COVID's impact on health care utilization necessitated a change in plans.
- All six systems will now merge into one cohort, with a tentative "go live" date of September 2020.
- Virginia health systems not participating in Smarter Care will serve as the control group.
- All six systems remain eager to participate and are working to execute their plans.


Resources Provided
• Provider Performance Data Reports (Provided Quarterly)
• CME-approved webinars (4)
• Faculty office hours
• Monthly calls with Project Leadership Team and other Cohort CLT members
• Online Platform (Virginia Health Innovation Network)

Provider Performance Data Reports

- Data from Virginia All Payer Claims Database
- Systems provide NPI rosters
- Each system can customize their reports or choose to completely take over the process in house

Sample Reports



Sample Reports

Low Value Services Individual Report (Q4 2018 - Q3 2019)

Pre Op Testing | Cardiac Screening | PICC Line Consult

Provider Name

Adaline Abee

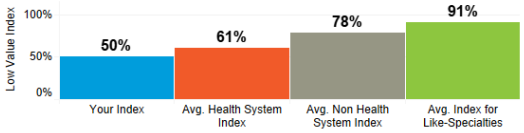
Pre Op Cardiac Echocardiography or Stress Testing

Total Services Measured: **None**

When is this service appropriate?	When is this service NOT appropriate?
-The patient is extremely high-risk, example – significant left main disease for which preoperative revascularization would be beneficial regardless of the impending procedure -Testing would change management prior to surgery -Testing could change decision of the patient to undergo surgery -Testing could change the type of procedure the surgeon will perform	-The patient is asymptomatic, low-risk, and stable -The procedure is low or moderate risk

Pre Op Baseline Lab Studies

Total Services Measured: **4**



When is this service appropriate?	When is this service NOT appropriate?
-A targeted history and physical exam determine that the pre-procedure laboratory should be obtained -Labs results may change the preoperative, intraoperative or postoperative management of the patient -The patient is higher risk (ASA III to ASA V) -The patient is undergoing a urologic procedure and requires a urinalysis per guidelines	-The patient does not have significant systemic disease and is otherwise healthy (patient is ASA I or ASA II) and is undergoing a low risk procedure (for example, arthroscopy and orthopedic procedures that only require local anesthesia; cataract surgery, corneal replacement and other ophthalmologic procedures; cystoscopy and other minor urologic procedures; dental restorations and extractions; endoscopy; hernia repair; minor laparoscopic procedures; superficial plastic surgery) -Blood loss or fluid shifts is/are expected to be minimal

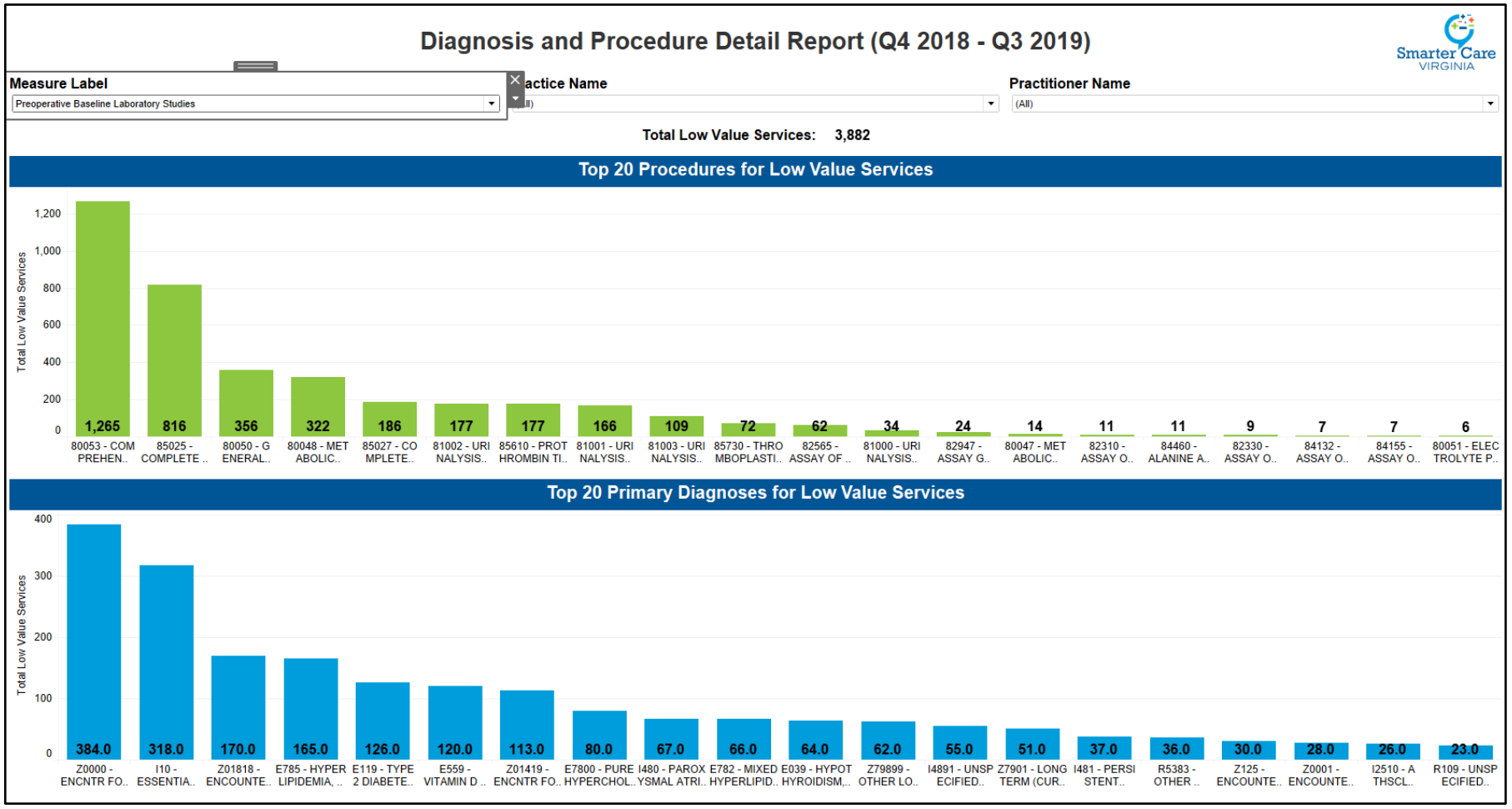
Pre Op EKG, Chest X-Ray, and PFT

Total Services Measured: **None**

When is this service appropriate?	When is this service NOT appropriate?
-Cardiovascular risk factors are present -Signs or symptoms of cardiovascular disease are present -Signs or symptoms suggest new or unstable cardiopulmonary disease -Existing risk and level of invasiveness of the surgery indicate that the test should be performed -The patient has severe systemic disease or is not expected to survive without surgery (ASA III-V)	-The patient is asymptomatic -The patient does not have significant systemic disease (ASA I or II)

Smarter Care VIRGINIA

Sample Reports



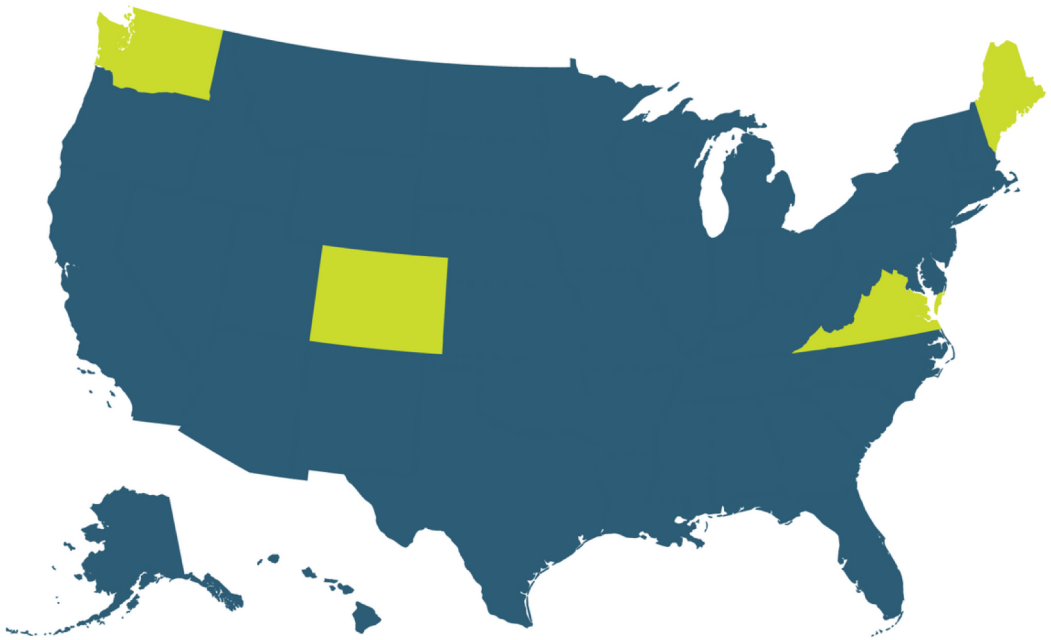
APCD Administrator Reflection on SCV

- Nothing has generated more interest
- Facilitates movement from research to clinical decision making support
- While not perfect, APCDs are the most ideal data source available for this type of project

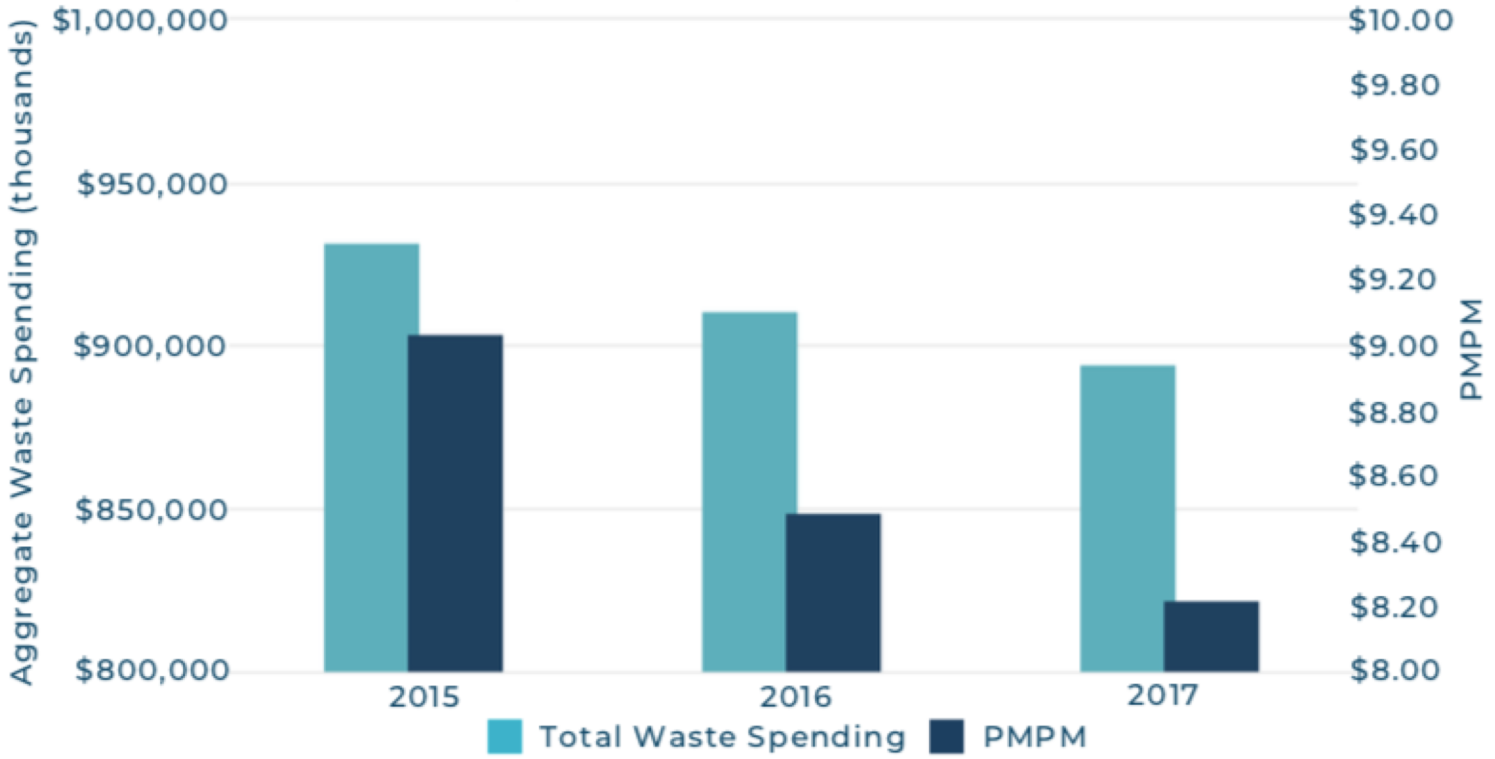
Moving LVC Reduction Efforts Beyond Virginia

- Four State Report
- Selecting Engagement Ready States

State APCD Low-Value Care Report

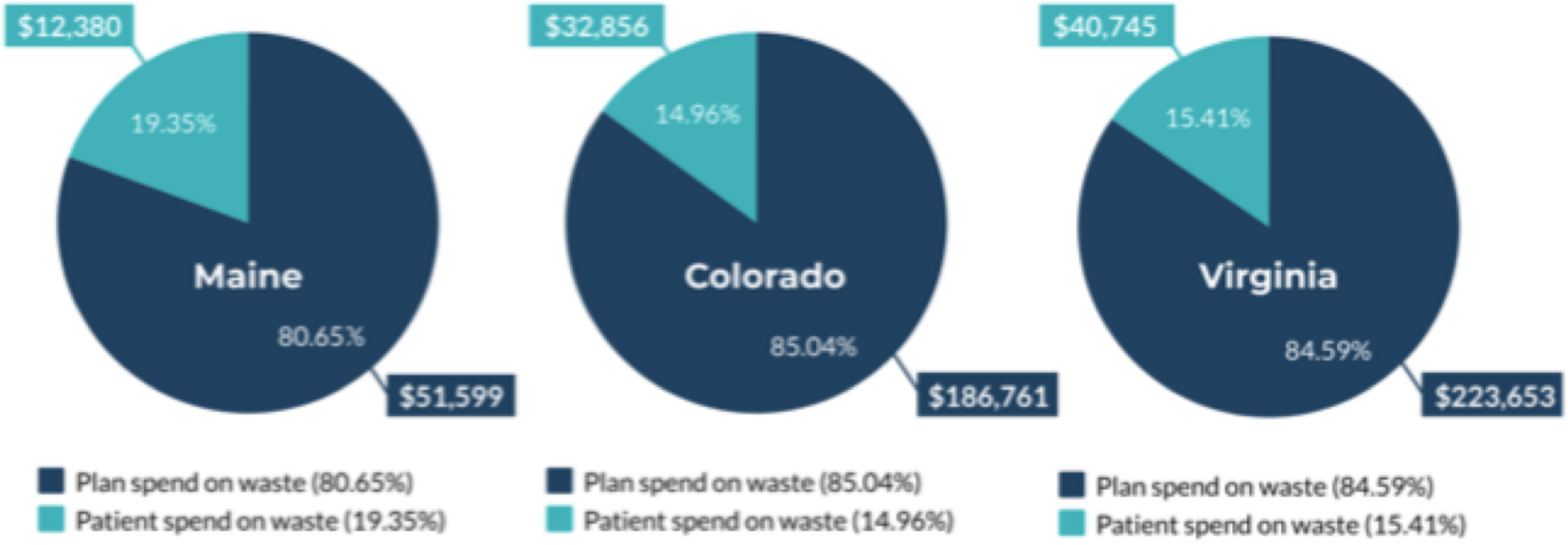


Total Spending on 47 Low-Value Services by Four States in Medicaid and Commercial Plans, 2015-2017



Notes: this figure shows total spending (sum of plan and patient spending) on the 47 low-value services for commercial and Medicaid only, across three years for all four states: Colorado, Maine, Virginia, Washington.

Spending on 47 Low-Value Services in Medicaid and Commercial Plans in 2017 by Patients and Plans



Notes: spending in thousands $. These figures only represent Maine, Colorado, and Virginia. Washington did not separately report patient and plan spending, estimated allowed spending based on standard pricing for Medicaid and commercial plans

Spending on "Top 10" Commercial and Medicaid Low-Value Services by Volume in 2017

2017	Total Spend on "Top 10" LVC Services	PMPM	% Total Medicaid and Commercial Waste Spending
Maine	$49,659	$6.67	78%
Washington*	$278,236	$8.69	80%
Colorado	$160,125	$5.65	73%
Virginia	$179,322	$4.37	68%
Total	$667,343	$6.13	70%

*Notes: total spending in thousands $. PMPM = total spending on the top 10 services divided by total member months (Appendix 3) provided by the states for 2017. These data only include Medicaid and commercial spending. *Washington does not report plan and patient spending separately.*

Total Plan and Patient LVC Spending, including Medicare, 2017

	Total LVC Spending, with Medicare	PMPM, with Medicare	% Total Health Spending, with Medicare
Maine	$146,884	$12.53	1.72%
Colorado	$358,111	$9.67	1.86%
Virginia	$627,768	$10.66	1.92%

Maine and Colorado include Medicare FFS and Medicare Advantage, Virginia Medicarl FFS only

Seven Key Requirements

1. Clear Purpose
2. Authentic Partnerships
3. A Guiding Framework
4. Robust Data & Analytical Resources
5. A Communications Strategy
6. An Action Support Strategy
7. A Phased Development Strategy