

# Progress in Dental Quality Measurement

Krishna Aravamudhan  
American Dental Association



The screenshot shows the top of the Wall Street Journal website. At the top, there are social media icons for Facebook, Twitter, Live, and others. Below that is the site's masthead: "THE WALL STREET JOURNAL." followed by a menu icon and the word "OPINION". A banner for the "SOCHI 2014" Winter Olympics is visible, featuring flags and medal counts for Norway (13), Netherlands (12), USA (12), Russia (11), and Germany (10). Below the banner is a "TOP STORIES IN OPINION" section with three article thumbnails: "Noonan: Reliving History—and Learning F...", "Scott Hodge: Here's What 'Income Equali...", and a third partially visible one. The main article is titled "Why 'Metrics' Overload Is Bad Medicine" by Victoria Mcevoy, dated Feb. 12, 2014. The sub-headline reads "Doctors must focus on lists and box-checking rather than patients." The first paragraph of the article is visible, discussing the overuse of metrics in health care.

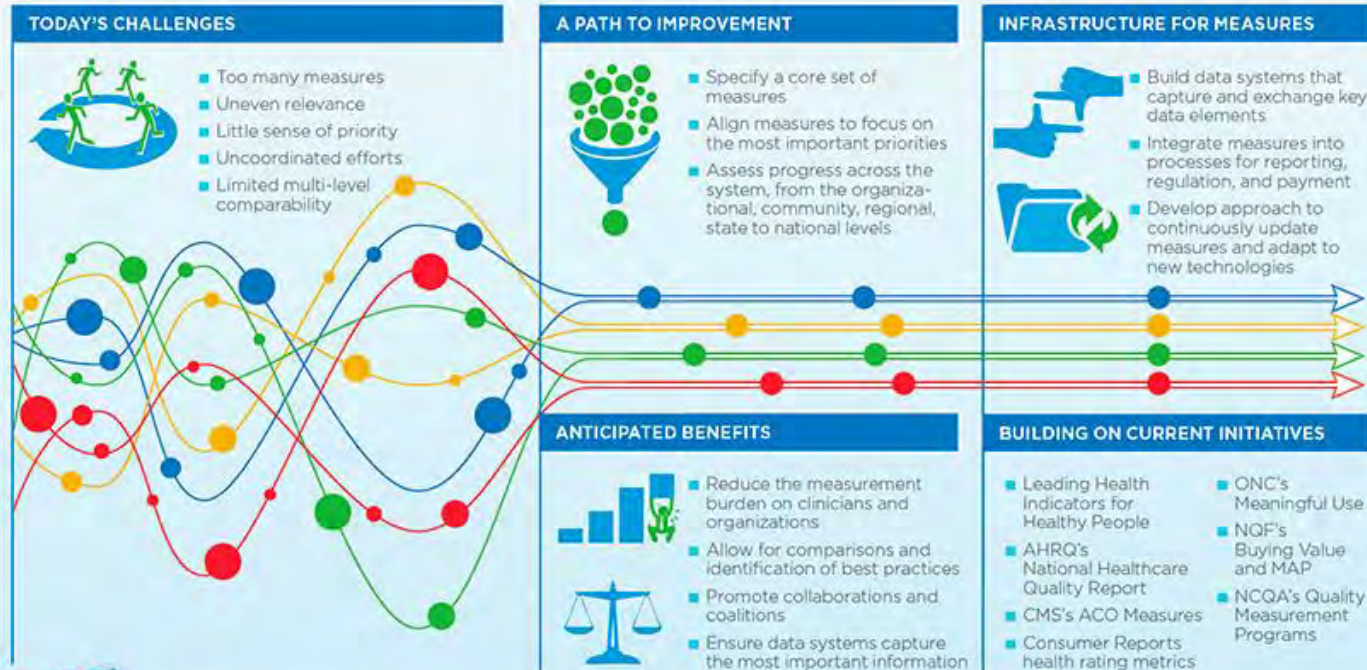
[http://online.wsj.com/news/articles/SB10001424052702303293604579253971350304330?mod=wsj\\_share\\_email](http://online.wsj.com/news/articles/SB10001424052702303293604579253971350304330?mod=wsj_share_email)



# Counting What Counts

## MEASURING PROGRESS TOWARD BETTER HEALTH AT LOWER COST

What matters most for improving the health of Americans and the affordability of our health care? Because what gets measured gets done, progress in health and health care depends on the measures used to guide our efforts, and our focus can be blurred without a sense of what's most important among the thousands of measures in use across the nation. Our challenge is to identify a small, practical set of key indicators of our progress—how we are doing in achieving better health, better care, lower costs, and in involving people more in their own health and care. We need core metrics for continuously learning health and health care in America.



*This graphic summarizes themes that emerged from a workshop. For more information, please visit [www.iom.edu/countingwhatcounts](http://www.iom.edu/countingwhatcounts).*

**NOTES:** ACO = accountable care organization; AHRQ = Agency for Healthcare Research and Quality; CMS = Centers for Medicare & Medicaid Services; MAP = Measure Applications Partnership; NCQA = National Committee for Quality Assurance; NQF = National Quality Forum; ONC = Office of the National Coordinator for Health Information Technology.

## Linked to Care

- Access; Follow up after ED use

## Diagnosed

- Process

## Treated

- Completion needed treatment plans
- Safety of care

## Pt. Engaged/ Retained in care

- Care Continuity, Usual Sources of Services, Patient engagement, coordination of care

## Prevented

- Fluoride; Sealants, periodontal maintenance

## Healthy

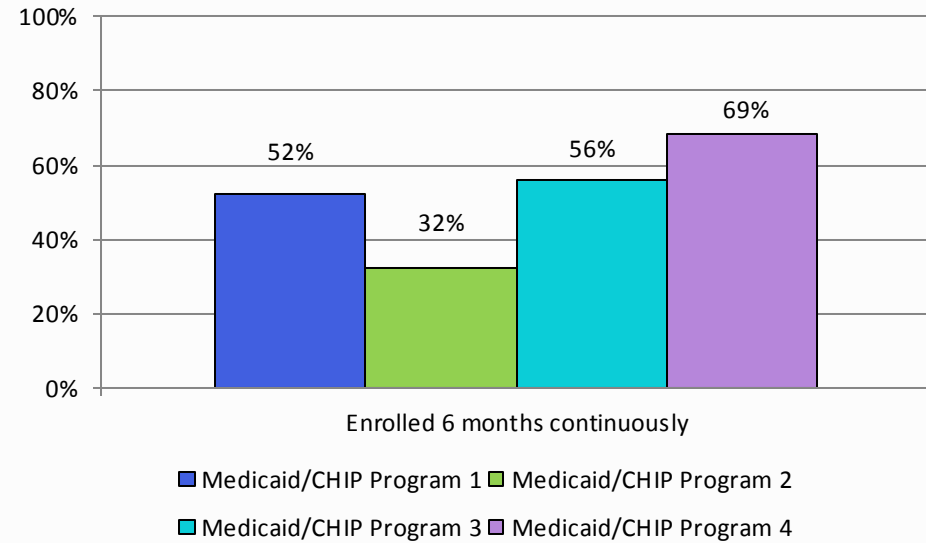
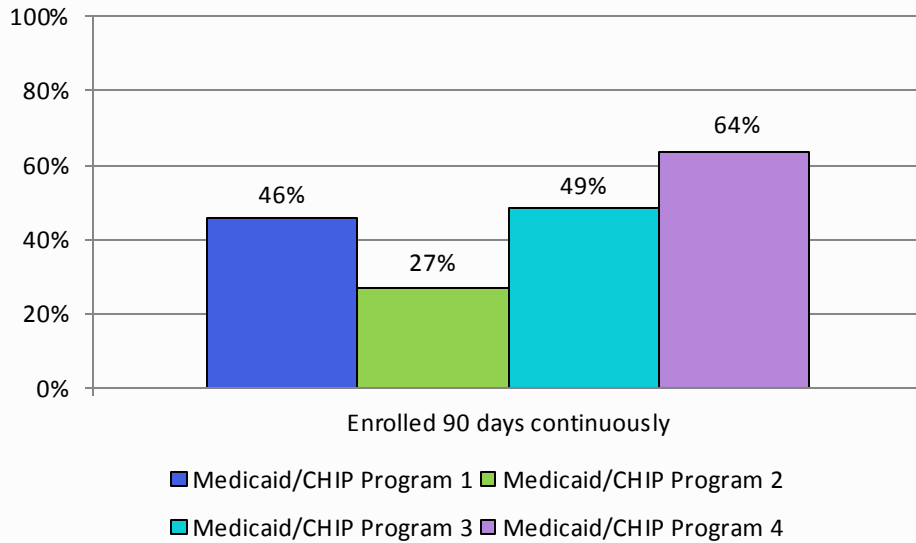
- Disease Status: Tooth loss, New Caries, ED Use, GA Use;
- Risk Status: Treatments, Behaviors;
- Functional Status: tooth loss, patient reported outcomes

# Overview

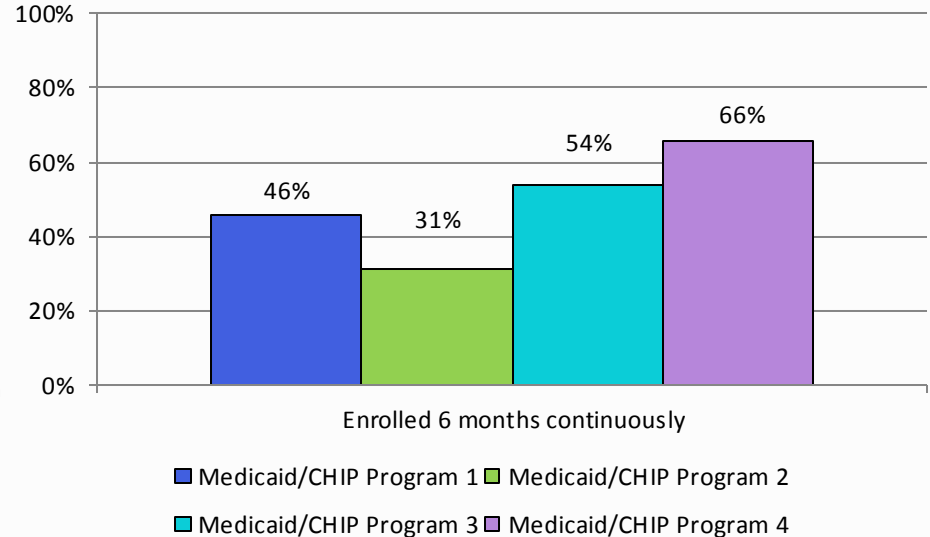
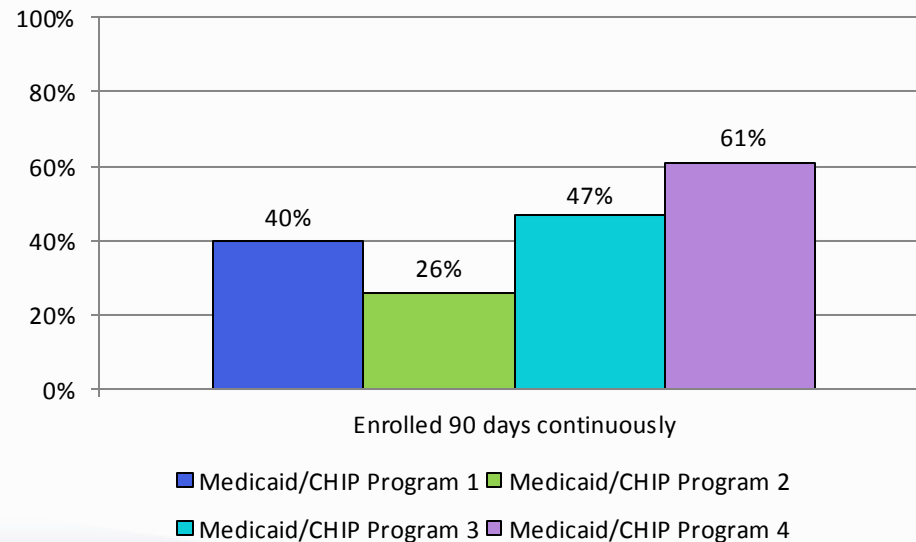
<http://www.ada.org/8472.aspx>

Purpose	Measure	AHRQ Domain
<b>Evaluating Utilization</b>	Use of Services	Use of Services
	Preventive Services	Use of Services
	Treatment Services	Use of Services
<b>Evaluating Quality of Care (Evidence-Based with link to outcomes)</b>	Oral Evaluation	Access/ Process
	Topical Fluoride Intensity	Access/ Process
	Sealant use in 6 – 9 years	Access/ Process
	Sealant use in 10 -14 years	Access/ Process
	Care Continuity	Access/ Process
	Usual Source of Services	Access/ Process
<b>Evaluating Cost</b>	Per-Member Per-Month Cost	Cost

# Overall Use: Utilization of Services

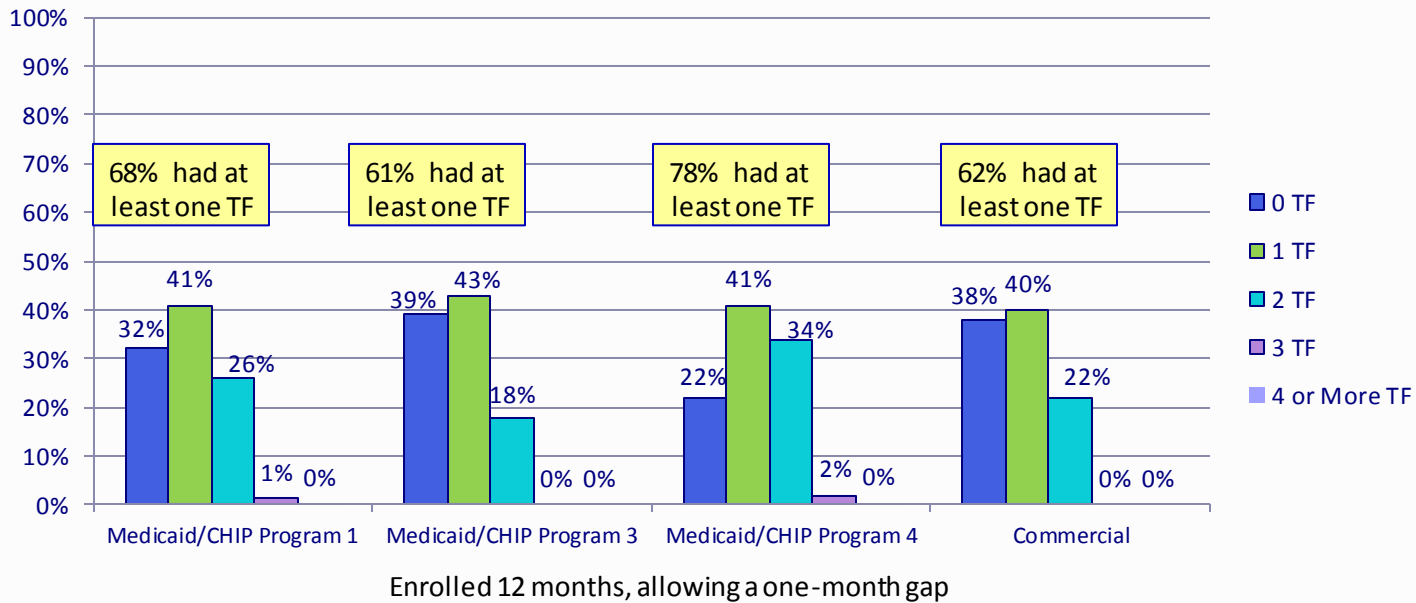


# Access: Oral Evaluation



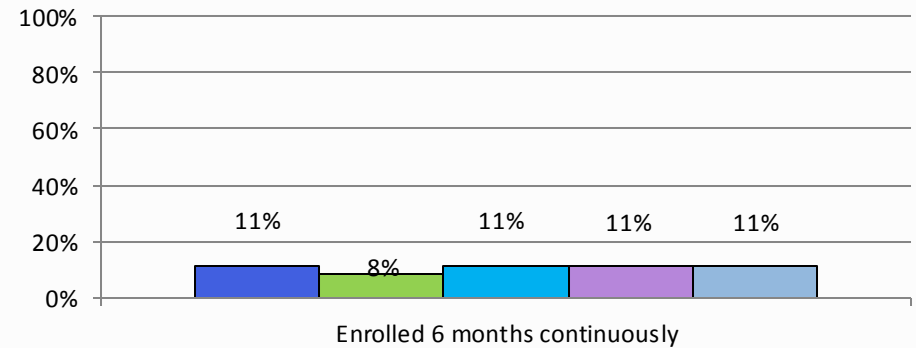
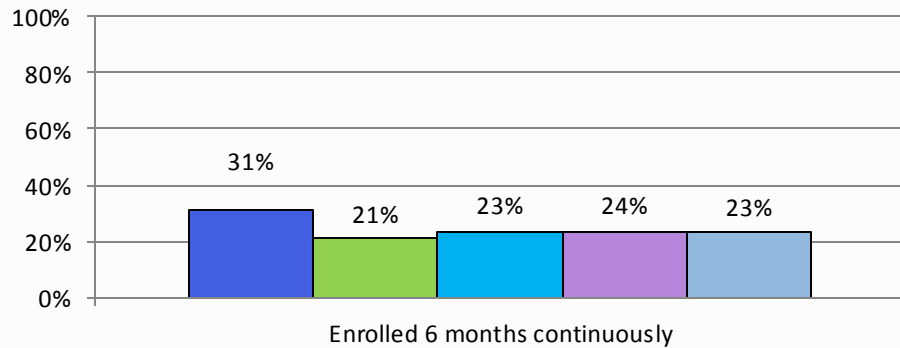


# Topical Fluoride, Elevated Risk, Dental



## Sealants for 6-9 Years Elevated Risk, Dental

## Sealants for 10-14 Years Elevated Risk, Dental



- Medicaid/CHIP Program 1
- Medicaid/CHIP Program 2
- Medicaid/CHIP Program 3
- Medicaid/CHIP Program 4
- Commercial

- Medicaid/CHIP Program 1
- Medicaid/CHIP Program 2
- Medicaid/CHIP Program 3
- Medicaid/CHIP Program 4
- Commercial



- Home
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Visit the HHS Measure Inventory

NQMC is a public resource for evidence-based quality measures and measure sets. NQMC also hosts the HHS Measure Inventory.

Search the site:

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The **HHS Measure Inventory**, a repository of measures separate from the NQMC, captures measures currently being used by the agencies of the U.S. Department of Health and Human Services for quality measurement, improvement, and reporting. Only some of the measures in the HHS Measure Inventory meet criteria for inclusion in the NQMC.

Visit the HHS Measure Inventory

**New This Week**

April 28, 2014

**Measure Summaries**

- **New Dental Quality Alliance (DQA) Dental Caries in Children: Prevention & Disease Management Measures**
- **Updated Institute for Clinical Systems Improvement (ICSI) Preventive Services for Children and Adolescent Measures**
- **New Spanish Society of Intensive and Critical Care and Units Coronary (SEMICYUC) Quality Indicators in Critically Ill Patients**

[View All](#)

**Announcements**

**Coming Soon**

- **Updated Institute for Clinical Systems Improvement Preventive Services for Adults Measures**
- **More new Spanish Society of Intensive and Critical Care and Units Coronary (SEMICYUC) Quality Indicators in Critically Ill Patients**

Look for these measures in NQMC in the near future!

[More...](#)

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- **Physician-to-population ratio: total number of general practitioners and family physicians per 100,000 population.**

**New This Week**  
April 28, 2014

**Measure Summaries**

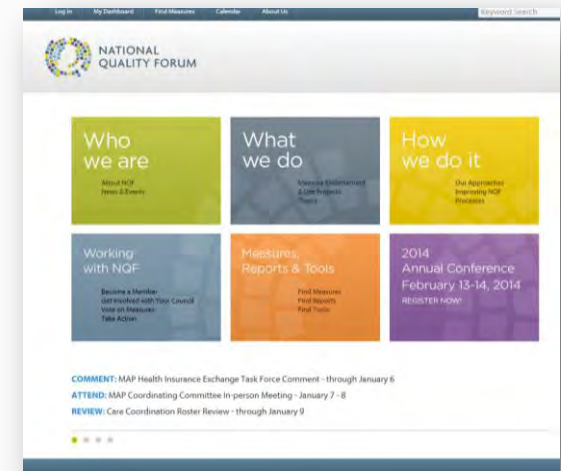
- **New Dental Quality Alliance (DQA) Dental Caries in Children: Prevention & Disease Management Measures**





# Federal Legislation

There is federal legislation that calls for a "Consensus Based Entity" to endorse measures and to propose measures for use in federal programs. NQF currently has the designation as this consensus based entity.



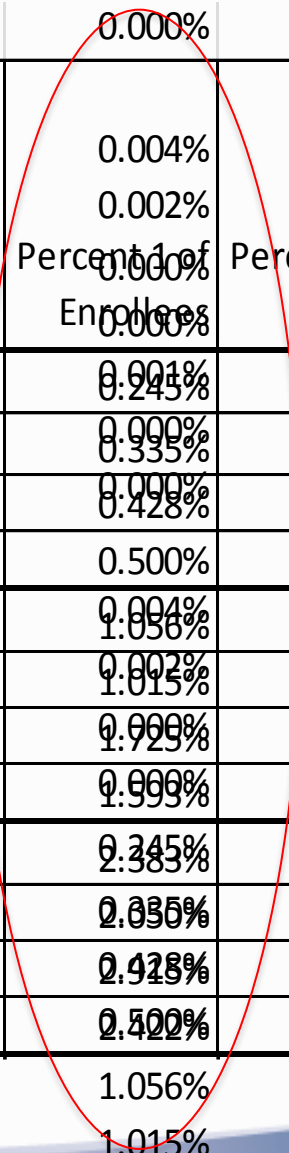
# Additional Pediatric Measures

- Early extraction or pulp therapy
- Treatment in a sealed tooth

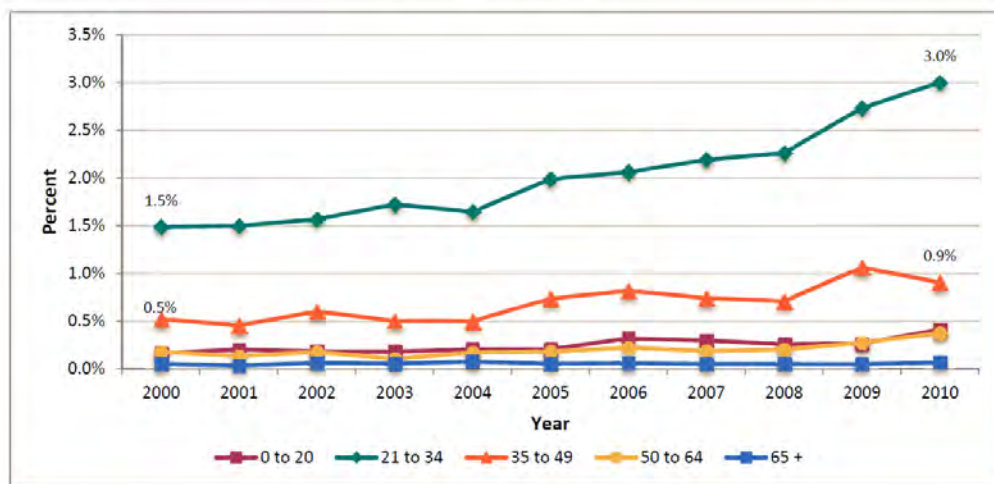
*Interim report for comment in  
late spring*

Age Range	Health Plan Name	Members (DEN1)	Members (DEN2)	Services (NUM)	Enrollees	Patients
0-2	Medicaid 1	82,704	25,229	1	0.001%	0.004%
	Medicaid 2	260,134	176,018	1	0.000%	0.001%
	Medicaid 3	16,593	1,703	-	0.000%	0.000%
3-5	CHIP	1	-	-	-	-
	Medicaid 1	98,095	76,626	4	0.004%	0.005%
	Medicaid 2	285,892	216,091	Count of	0.002%	0.002%
	Medicaid 3	16,593	8,241	Enrollees with	0.000%	0.000%
6-10	Medicaid 1	182,704	135,234	373	0.243%	0.208%
	Medicaid 2	386,134	333,018	1,294	0.335%	0.389%
	Medicaid 3	16,593	1,703	106	0.428%	0.621%
	CHIP	41,982	29,108	210	0.500%	0.721%
11-14	Medicaid 1	109,704	99,152	1,159	1.056%	1.169%
	Medicaid 2	243,745	203,202	2,474	1.015%	1.218%
	Medicaid 3	16,593	10,408	280	1.725%	2.690%
	CHIP	38,349	27,488	609	1.999%	2.000%
15-20	Medicaid 1	150,807	120,024	3,336	2.345%	2.768%
	Medicaid 2	386,908	363,927	4,894	2.635%	2.389%
	Medicaid 3	16,236	10,408	406	2.428%	2.629%
	CHIP	41,982	29,898	1,020	2.400%	2.435%
11-14	Medicaid 1	109,704	99,152	1,159	1.056%	1.169%
	Medicaid 2	243,745	203,202	2,474	1.015%	1.218%
	Medicaid 3	16,236	10,408	280	1.725%	2.690%

Preliminary Data



**Figure 3:** Dental Emergency Department Visits as a Percent of Total Dental Visits by Age in the United States, 2000 to 2010



Sources: National Hospital Ambulatory Medical Care Survey, NCHS; Medical Expenditure Panel Survey, AHRQ.



## COVER STORY

# Hospital-based emergency department visits involving dental conditions

Profile and predictors of poor outcomes and resource utilization

Veerasathpurush Allareddy, BDS, MBA, MHA, PhD, MMSc; Sankeerth Rampa, MBA, MPH; Min Kyeong Lee, DMD; Veerajalandhar Allareddy, MD, MBA; Romesh P. Nalliah, BDS

## ABSTRACT

**Background.** Untreated dental conditions may progress to lesions that are severe enough to necessitate emergency visits to hospitals. The authors conducted a study to investigate nationally representative trends in U.S. hospital-based emergency department (ED) visits involving dental conditions and to examine patient-related characteristics associated with ED charges.

**Methods.** The authors used the Nationwide Emergency Department Sample of the Healthcare Cost and Utilization Project, sponsored by the Agency for Healthcare Research and Quality, for the years 2008 through 2010. They selected all ED visits involving patients with a diagnosis of either dental caries, pulpal or periapical lesions, gingival or periodontal conditions, or mouth cellulitis or abscess. Outcomes examined included post-ED disposition status and hospital ED charges.

**Results.** During the study period, 4,049,361 ED visits involved diagnosis of a dental condition, which is about 1 percent of all ED visits occurring in the entire United States. Uninsured patients made about 40.5 percent of all dental condition–related ED visits. One hundred one patients in the study died in EDs. The mean hospital ED charge per visit was approximately \$760 (adjusted to 2010 dollars), and the total ED charges across the entire United States during the three-year study period was \$2.7 billion.

**Conclusions.** Patients without insurance are a cohort at high risk of seeking dental care in hospital-based ED settings. A substantial amount of hospital resources are used to treat dental conditions in ED settings. Patients with mouth cellulitis, periodontal conditions and numerous comorbidities are likely to incur higher ED charges.

**Practical Implications.** Dental conditions can be treated more effectively in a dental office setting than in hospital-based settings.

**Key Words.** Dental emergencies; access to care; hospital costs.

JADA 2014;145(4):331-337.

doi:10.14219/jada.2014.7

Dental conditions such as dental caries, pulpal lesions and gingival or periodontal conditions are treated routinely in dental office settings. When neglected, these minor localized infections can progress to form cellulitis or systemic infection and even could result in mortality.<sup>1-4</sup> Most of these dental conditions could be avoided altogether or minimized by periodic receipt of preventive oral health care, maintenance of good oral hygiene and adoption of optimal dietary habits.<sup>5-8</sup> Limitations in or lack of financial resources, geographical barriers to accessing dental clinics, and limitations in or lack of oral health care literacy could preclude people from seeking periodic dental care and lead to worsening oral health status.<sup>9-12</sup> Results of existing research have shown that about 4.3 percent of all hospital emergency department (ED) visits annually were of dental origin.<sup>13</sup> Research results suggest that 90 percent of dental-care-related ED visits do not result in performance of dental procedures, and most patients are treated with prescription medication.<sup>15</sup> Additionally, evidence shows that care provided in hospital settings is less effective in managing oral health complaints and therefore could represent a highly inefficient use of limited hospital resources.<sup>14,15</sup> People without health insurance and

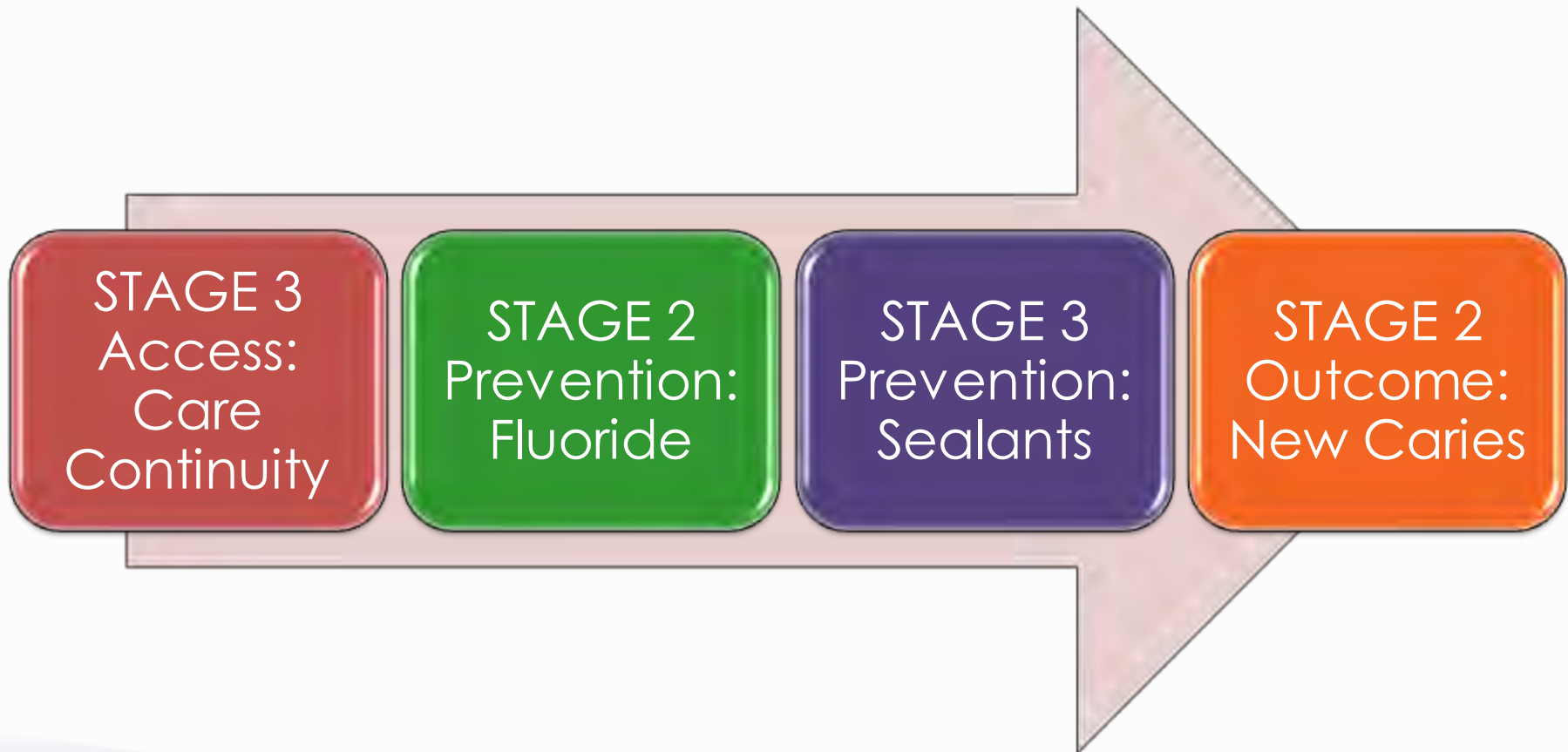
# Additional Pediatric Measures

- Emergency department use
- Follow- up after emergency room use
- General Anesthesia use in children


*Interim report for comment in  
early summer*



# Measurement Dashboard for EHR enabled oral health clinical quality measures: **Population Health**



## Primary Caries Prevention Intervention as Offered by Primary Care Providers, including Dentists (Measure)

Definition:	Percentage of children, age 0-20 years, who received a fluoride varnish application during the measurement period.
Improvement Notation:	A higher score indicates better quality 
Measurement Period:	January 1, 20xx through December 31, 20xx
Transmission Format:	TBD
Scoring:	Proportion
Type:	Process
ID:	74
Version:	3
NQF:	Not Applicable
GUID:	0b81b6ba-3b30-41bf-a2f3-95bdc9f558f2
Measure Set:	Not Applicable
Eligibility:	Eligible Professionals
Domain:	Clinical Processes/Effectiveness

This is a measure developed by CMS through contract with Booz Allen Hamilton for the Meaningful Use program.

## Children Who Have Dental Decay or Cavities (Measure)

Definition:	Percentage of children, age 0-20 years, who have had tooth decay or cavities during the measurement period.
Improvement Notation:	A lower score indicates better quality ←
Measurement Period:	January 1, 20xx through December 31, 20xx
Transmission Format:	TBD
Scoring:	Proportion
Type:	Outcome
ID:	75
Version:	2
NQF:	Not Applicable
GUID:	61947125-4376-4a7b-ab7a-ac2be9bd9138
Measure Set:	Not applicable
Eligibility:	Eligible Professionals
Domain:	Clinical Processes/Effectiveness

This is a measure developed by CMS through contract with Booz Allen Hamilton for the Meaningful Use program.

# Under development

- Care Continuity

Children with a periodic or comprehensive exam in the measurement year

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Children with a limited, problem-focused, periodic or comprehensive exam or oral assessment in year prior to measurement year

**Interim report for comment by May 20:** <http://www.ada.org/7503.aspx>

# Under development

- Sealants in first permanent molar in children aged 6 – 9 years who are at elevated risk

Children 6 – 9 years with sealant in at least one permanent first molar

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Children 6 – 9 years with a visit in measurement period who are at elevated risk

**Interim report for comment by May 20:** <http://www.ada.org/7503.aspx>





# DEVELOPMENT OF PEDIATRIC PATIENT REPORTED OUTCOME MEASURES OF ORAL HEALTH

**Financial Support:** This work is funded by a Pediatric Quality Measures Program grant U18HS20408 from the Agency for Healthcare Research and Quality.

# Partners in developing **QUALITY METRICS IN ORAL HEALTH**

## Stakeholders

Dental Plans

Purchasers

Program  
Administrators

Clinicians

Academics/  
Researchers

State Leaders

Children &  
Families

### Pediatric Oral Health Working Group

Children's Hospital  
of Philadelphia

Penn Dental

UCLA

Dental Quality Alliance

### GOALS

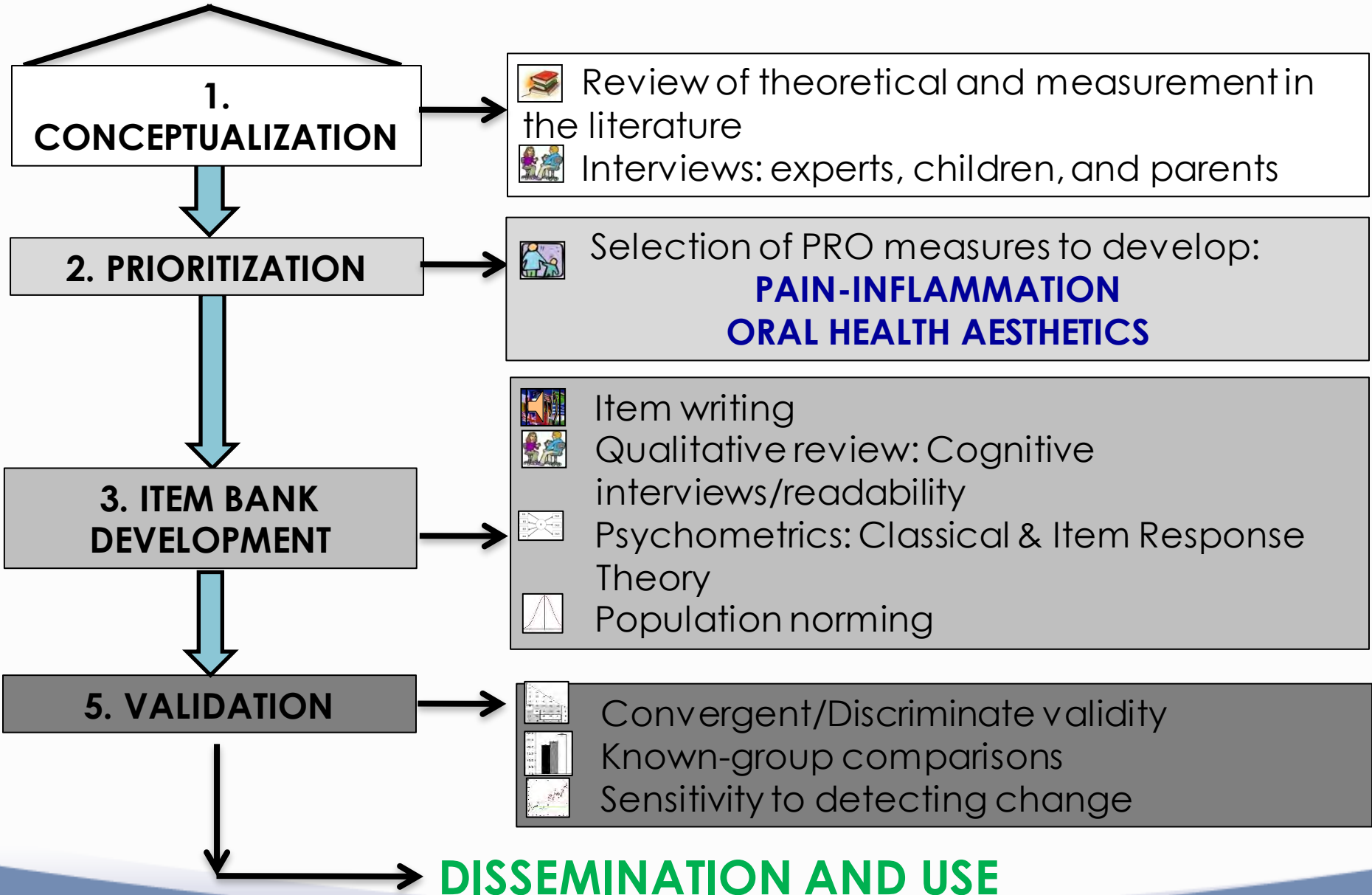
- To develop a **conceptual framework of oral health outcomes**
- To produce a patient/clinician informed set of items for **patient-reported oral health outcome measures**
- To advance **oral health performance measurement**



**Improve healthcare  
quality and outcomes  
in oral health**



# Overview of Instrument Development Methods



# Adult Measures

- Smokers – Oral Evaluation
- Diabetics – Oral Evaluation
- History of treated periodontitis – Oral evaluation and periodontal maintenance

**Request for Proposals by July 1:** <http://www.ada.org/7503.aspx>

# Nursing Home Population

**Challenge: Lack of a data source**

Table 1: MDS 3.0 National Totals: Fourth Quarter 2012 Data

		No	Yes
<a href="#">L0200A</a>	Oral/Dental Status - Dental - Broken or Loosely Fitting Dentures	98.60%	1.40%
<a href="#">L0200B</a>	Oral/Dental Status - Dental - No Natural Teeth or Tooth Fragments	82.69%	17.31%
<a href="#">L0200C</a>	Oral/Dental Status - Dental - Abnormal Mouth Tissue	99.75%	0.25%
<a href="#">L0200D</a>	Oral/Dental Status - Dental - Cavity or Broken Natural Teeth	91.64%	8.36%
<a href="#">L0200E</a>	Oral/Dental Status - Dental - Inflamed or Bleeding Gums or Loose Natural Teeth	99.39%	0.61%
<a href="#">L0200F</a>	Oral/Dental Status - Dental - Discomfort or Difficulty Chewing	98.66%	1.34%
<a href="#">L0200G</a>	Oral/Dental Status - Dental - Unable to Examine	98.38%	1.62%
<a href="#">L0200Z</a>	Oral/Dental Status - Dental - None of the Above	29.19%	70.81%

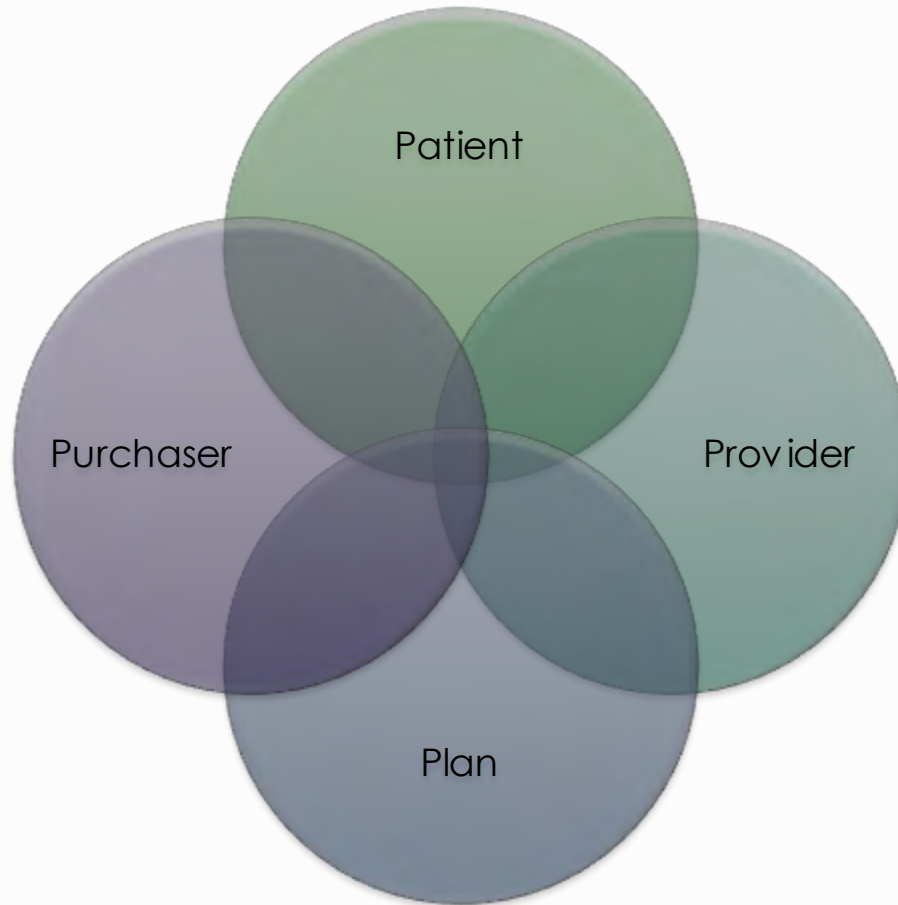


# Healthcare System

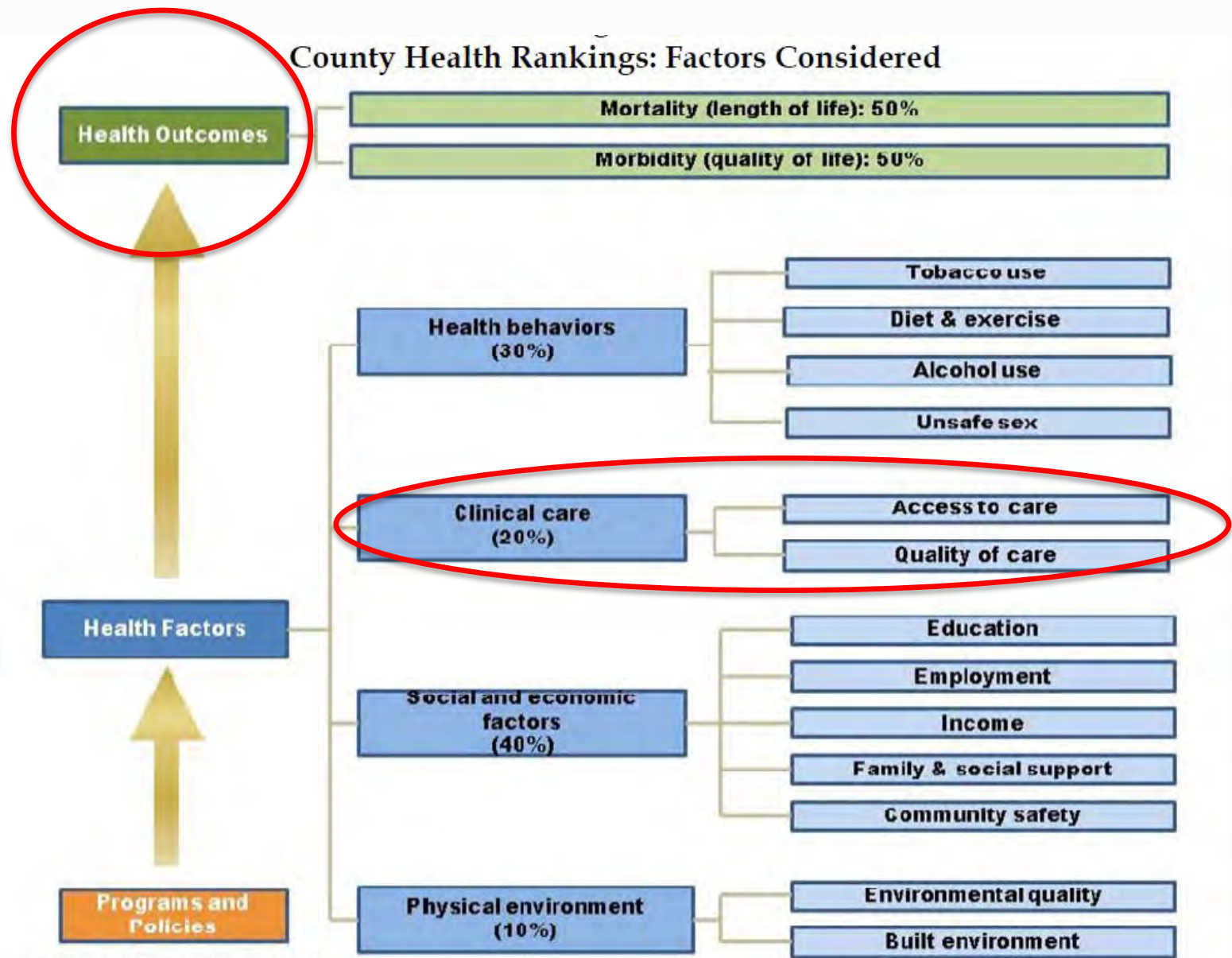
Shared-  
performance

Shared  
responsibility

Shared  
accountability



# County Health Rankings: Factors Considered



# Measure Implementation

- ❑ What are your program's overall goals for oral health?
- ❑ Are there existing measures with specifications?
  - Whom are you measuring: Attribution is important
  - If specifications be modified how can you ensure reliability?
  - Seek clarification if unsure about how to implement measures.  
**We are here to help!**
- ❑ Do you have the data to calculate the measures now?
- ❑ Can you get the additional data you need?
  - Assess the steps, relevant stakeholder involvement, and resources required to capture missing data for future measurement

# We need your feedback!

Email – [aravamudhank@ada.org](mailto:aravamudhank@ada.org)

Questions, concerns, ideas and thoughts – all  
welcome!

THANK YOU!