Building and Strengthening Oral Health Program Infrastructure: The Road to Sustainability

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National Center for Chronic Disease Prevention and Health Promotion
Division of Oral Health

Presentation Objectives

- To present the evaluation of the CDC cooperative agreement on state oral health program infrastructure development.
- Describe the core activities for building and sustaining state oral health program infrastructure and capacity.
- Identify the programmatic outcomes of infrastructure development.
- Discuss recommendations for future infrastructure efforts.

Presentation Overview

- Section 1: Background and Methodology
- Section 2: Evaluation Findings and Conclusions
- Section 3: Recommendations and Next Steps

Section 1:
Background and Methodology

Need for Infrastructure

- National attention on infrastructure development across public health
- Building Infrastructure and Capacity in State and Territorial Oral Health Programs (ASTDD, 2000)
- “the public health infrastructure for oral health is insufficient to address the needs of disadvantaged groups.” (HHS,2000)

Defining Infrastructure

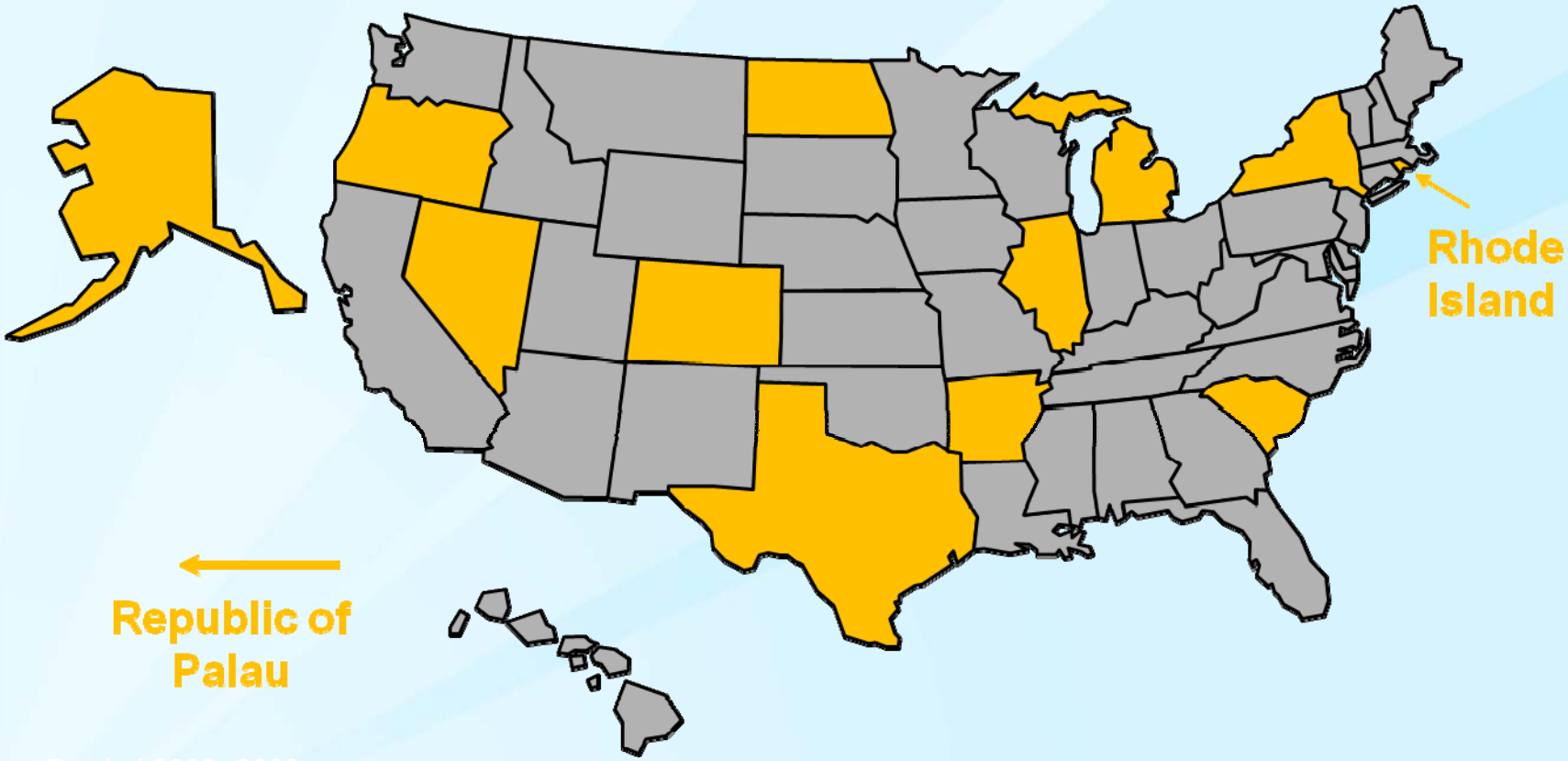
- **Common themes**:
  - Infrastructure provides the base, or foundation, to conduct public health activities.
  - The development and use of resources is the heart of infrastructure.
  - Infrastructure is necessary at the National, State and local level.

Overview of the
State Oral Health Program
Infrastructure and Capacity Development Program

Infrastructure Program Purpose

- To establish, strengthen and expand the capacity of states, territories, and tribes to plan, implement, and evaluate population-based oral disease prevention and health promotion programs, targeting populations and oral disease burden

Program Participants: 2003 - 2008



Program Resources

- **Funding:**
  - Provided $250k – 450k per fiscal year per program
  - Supplemental funding, as available, upon request
- **Technical Assistance:** Project officers, support for evaluation, fluoridation, surveillance, communication, etc.
- **Training:** Workshops, trainings, webinars, etc.
- **Partners:** National-level partners, CDC partners, consultants

Infrastructure Program Activities

1	Develop leadership capacity
2	Develop burden document
3	Develop/update state oral health plan
4	Establish and sustain a state-wide coalition
5	Develop/enhance surveillance system
6	Identify opportunities for policy change

Infrastructure Program Activities

7	Develop/coordinate partnerships
8	Coordinate/implement community water fluoridation program management
9	Evaluate, document and share program accomplishments
10	a. Develop/implement a community water fluoridation program b. Develop, coordinate, implement limited school-based or school-linked dental sealant program

Program Performance Measures

- Developed with program participants
- Provided more structure to the activities
- Serve as a standard for successfully completing the activity
- Performance measures used to guide the technical review process

Evaluation of the Infrastructure Program

Evaluation Purpose and Use

- **Purpose:** Understand and document the impact of infrastructure development on oral health programs

- **Use:** Generate knowledge about and facilitate improvements to the Infrastructure Program

CDC Evaluation Framework

Evaluation Step	Description
Engage Stakeholders	National evaluation workgroup
Describe Program	Utilized existing logic model
Focus the Evaluation Design	Developed key evaluation questions
Gather Credible Evidence	Non-experimental/Mixed method
Justify Conclusions	Triangulated data within questions and across questions
Ensure Use and Share Lessons Learned	Developed recommendations with workgroup

Engaging Stakeholders

- **Original Evaluation Working Group formed in 2006**

- **Consisted of internal and external stakeholders**
  - Internal group members: Evaluation unit, project officers, epidemiologists, senior management and guest evaluators
  - External group members: Funded/non-funded states, ASTDD

- **Primary responsibilities of workgroup:**
  - Determined the focus and scope of the evaluation
  - Considered the feasibility and utility of the evaluation
  - Crafted evaluation questions and design
  - Provided input on the interpretation and meaning of key findings

PERFORMANCE BASED ORAL HEALTH INFRASTRUCTURE DEVELOPMENT LOGIC MODEL

INPUTS

State Health Department and Partners

CDC technical assistance and funding

Other resources

ACTIVITIES

ASSESS
- Describe oral disease burden
- Develop or enhance oral disease surveillance system including community level indicators

DEVELOP POLICY
- Develop oral health program leadership capacity
- Develop state oral health plan
- Establish and sustain a diverse Statewide oral health coalition
- Identify opportunities for systemic, socio-political and/or policy change to improve oral health (with a focus on prevention)

ASSURE
- Identify prevention opportunities for systemic, socio-political and/or policy change to improve oral health
- Develop and coordinate partnership with a focus on prevention interventions
- Coordinate and implement water fluoridation and school-based/linked dental sealant programs
- Evaluation capacity building

ASSESS

- 2 Develop burden document
- 5 Develop surveillance

DEVELOP POLICY

- 3 Compose state oral health plan
- 4 Develop statewide coalition
- 1 Develop leadership
- 6 Systems & policy change
- 7 Develop partnerships w/ prevention focus

ASSURE

- 8 & 10b Promote water fluoridation and program management
- 10a Promote sealant programs
- 9 Institutionalize strong evaluation

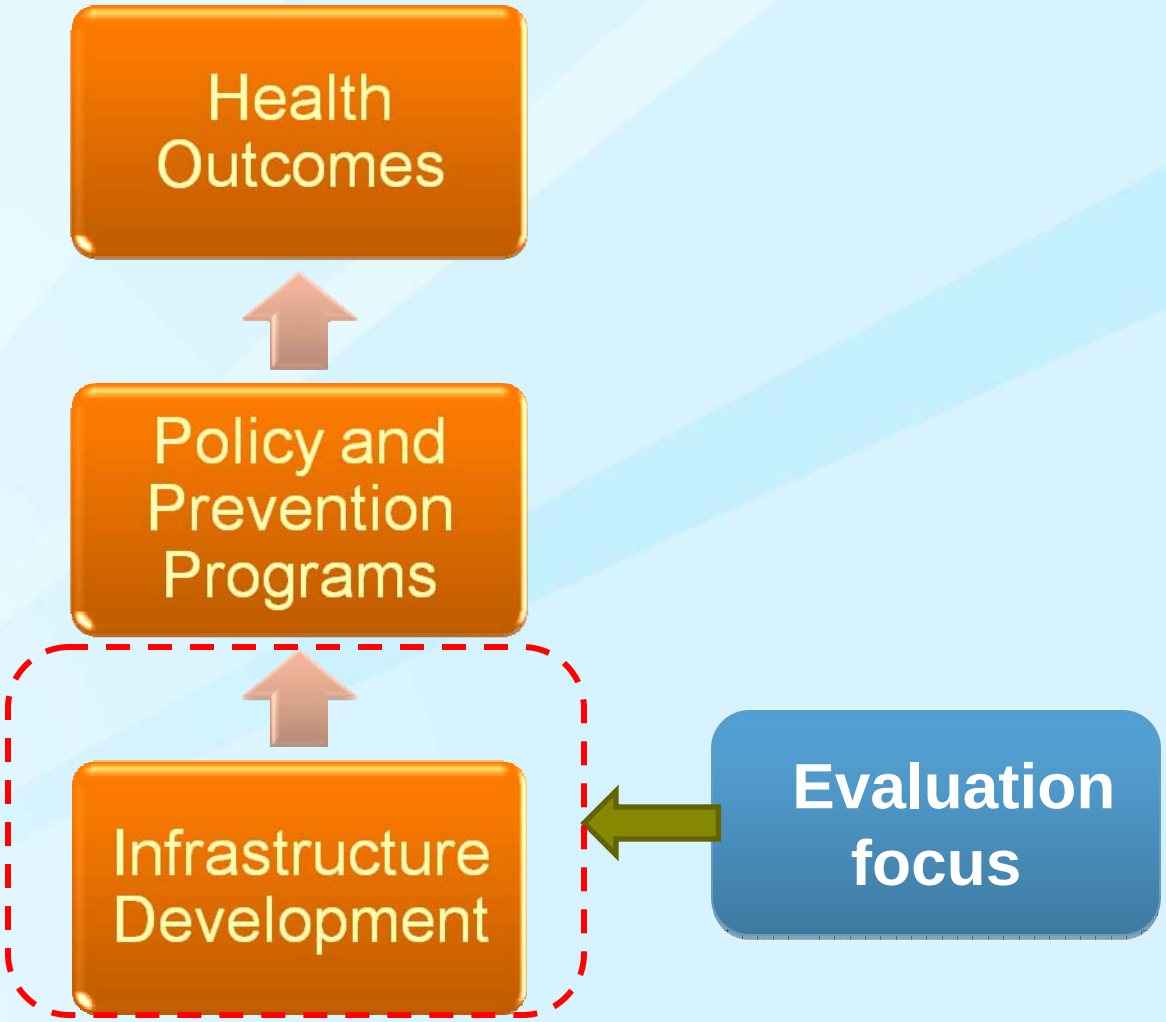
OUTCOMES

?

SURVEILLANCE NUMBERS

DISTAL
- Reduced Prevalence of Caries
- Reduced Prevalence of Oral Cancer
- Reduced Prevalence of Periodontal Disease
- Universal adoption and implementation of infection control methods in dental settings
- Reduced Health Disparities

Focusing the Evaluation



Evaluation Questions

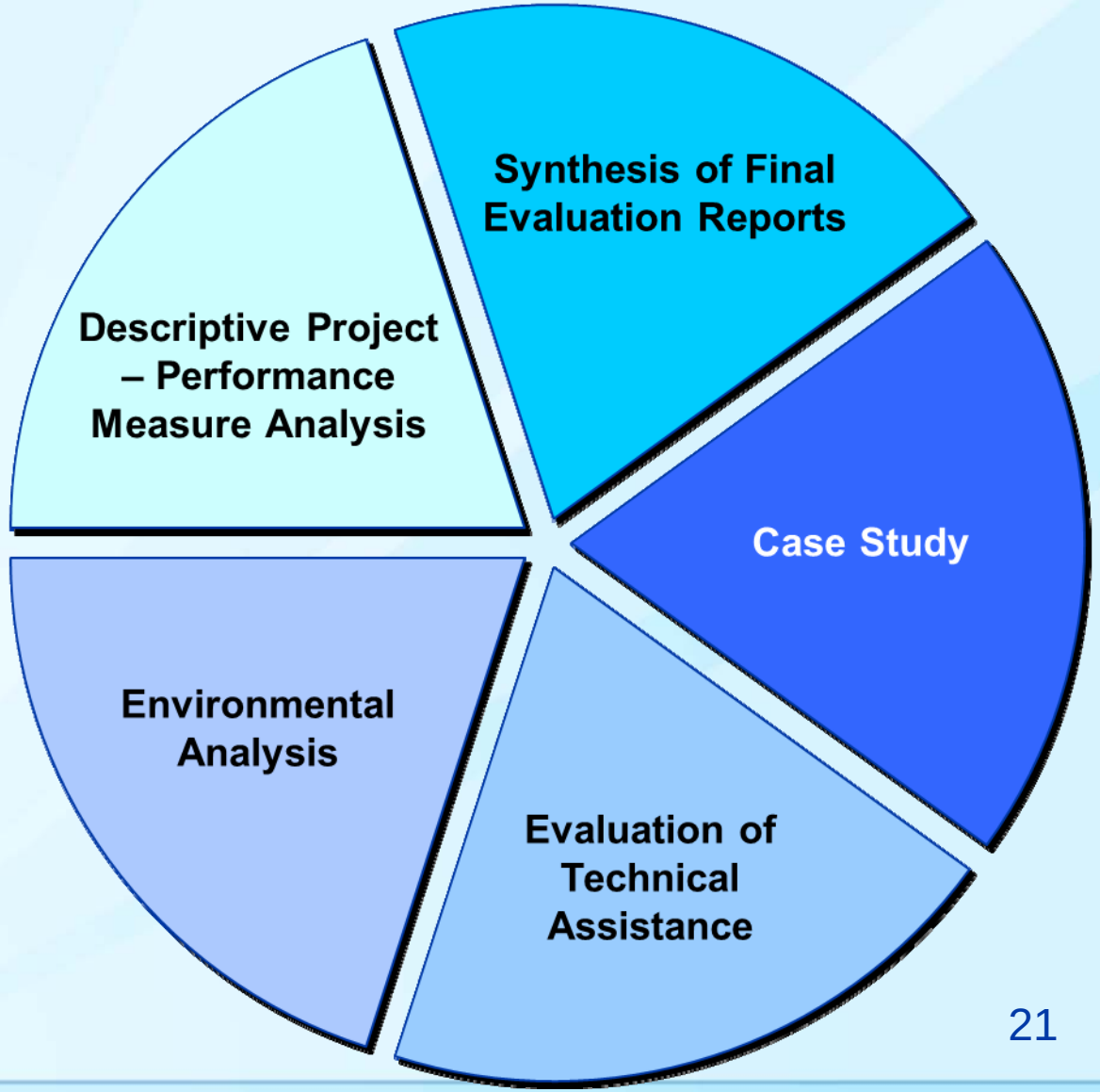
1. Did grantees accomplish the infrastructure and capacity activities?

2. Does completing the infrastructure and capacity activities lead to support of program implementation?

3. Did the infrastructure and capacity activities promote policy change and prevention interventions?

4. Did CDC technical assistance and funding impact state infrastructure and capacity?

Evaluation Data Sources



Data Sources

- **Descriptive Project – Performance Measure Analysis**:
  - Purpose: Documented completion of recipient activities and performance measures
  - Sources: semi-annual progress reports and supporting documents
  - Validation process with states
  - N: 12 states
  - Limitations: Retrospective review of secondary data
  - Analysis: Content analysis; SPSS (frequencies and sequencing)

- **Synthesis of Final Evaluation Reports**:
  - Purpose: Understand the contextual background of completing recipient activities; illustrate impact of cooperative agreement
  - Sources: CA 3022 Final Evaluation Reports
  - N: 11 states
  - Limitations: Secondary data, point of view of state (potential bias)
  - Analysis: Content Analysis, theme/trends (across and within states)

Data Sources

- **Case Study**:
  - Purpose: Understand whether and how infrastructure of state oral health programs impact progress towards oral health outcomes
  - Source: Focus group discussions and in-depth interviews
  - N: 4 states (CO, NV, NY, SC)
  - Limitations: study of subset of states
  - Analysis: Yin's case-study methodology

- **Evaluation of Technical Assistance**:
  - Purpose: Identify the strengths and weaknesses and perceived effectiveness of the CDC technical assistance
  - Source: Post-TA survey and in-depth interviews
  - N: 10 (surveys); 3 (interviews)
  - Limitations: interview with subset of states
  - Analysis: Descriptive frequencies, thematic content analysis

Data Sources

- **Environmental Assessment Analysis**:
  - Purpose: Determine change in environmental impact on state oral health program
  - Source: Environmental assessment tools (2003/2008)
  - N: 8 states
  - Limitations: different iterations of tool
  - Analysis: Comparative analysis of means (2003 & 2008)

Analysis and Synthesis Process

- Analyzed and interpreted data across data sources to identify common themes and unique findings within questions
- Presented findings to the evaluation workgroup; received feedback on the worth and use of the findings
- Incorporated feedback; further synthesized data to identify key findings across questions
- Generated evaluation report; reviewed by evaluation workgroup
- Finalized evaluation report

Section 2:
Evaluation Findings and Conclusions

Evaluation Question #1

Did grantees accomplish the infrastructure and capacity activities?

Evaluation Question 1: Key Findings

- Programs made significant progress in establishing the core infrastructure components – leadership, surveillance/burden document, state oral health plan, coalition, policy planning
- Completion of activities tended to occur in a sequential manner
- Leadership (staff development) serves as the foundation for all activities

Key Finding 2: Sequence of Activities

Key Finding 2: Sequence of Activities

Key Finding 2: Leadership

- Strong leadership equals competent, capable staff
- Bottleneck Positions

Data Snapshot: Leadership

- *"Difficulties resulted with completing the recipient activities due to "under filling" the position who did not have the required skills needed as the state oral health director."*
- *"The [Dental Director's] knowledge of the inner-workings of the state health department allowed for the OHP to, 'bypass some of the bureaucratic channels with some SOHP activities including approval for grant applications.'"*
- *"The dental director's position was filled by three people during the course of the cooperative agreement."*
- *"The completion of the burden document was delayed by difficulty in maintaining a contract epidemiologist."*

Evaluation Question #2

Does completing the infrastructure and capacity activities lead to support of program implementation?

Evaluation Question 2: Key Findings

- The development and use of the infrastructure activities increased the growth and stability of the program
- Programs increased their leverage capacity through the use of the infrastructure activities
- Programs increased their visibility and environmental support

Key Finding 1: Development and Use

Activity	Effect
State Plan	• Prioritized oral health issues and strategies • Documented intended outcomes • Used as a recruitment and communication tool
Surveillance	• Used to identify priority issues for oral health within the state, which shaped the objectives for policy development for the coalitions and partners
Burden Document	• Used information collected in the burden documents to inform the planning of oral health programs and services • Coalitions and partners used data from burden documents to strengthen grant proposals in order to secure additional funding

Data Snapshot: Surveillance and Burden Document

- *"The…administration, local public health agencies, the Coalition, and other stakeholders now had evidence based on a credible surveillance system of the effects of oral disease…The social and economic cost of oral disease and the rampant decay…was becoming more apparent to policy-makers and the…administration."*

- *"…coalition members and stakeholders who used the Burden Document indicated it was useful for program planning and writing grant proposals for community oral health services and programs."*

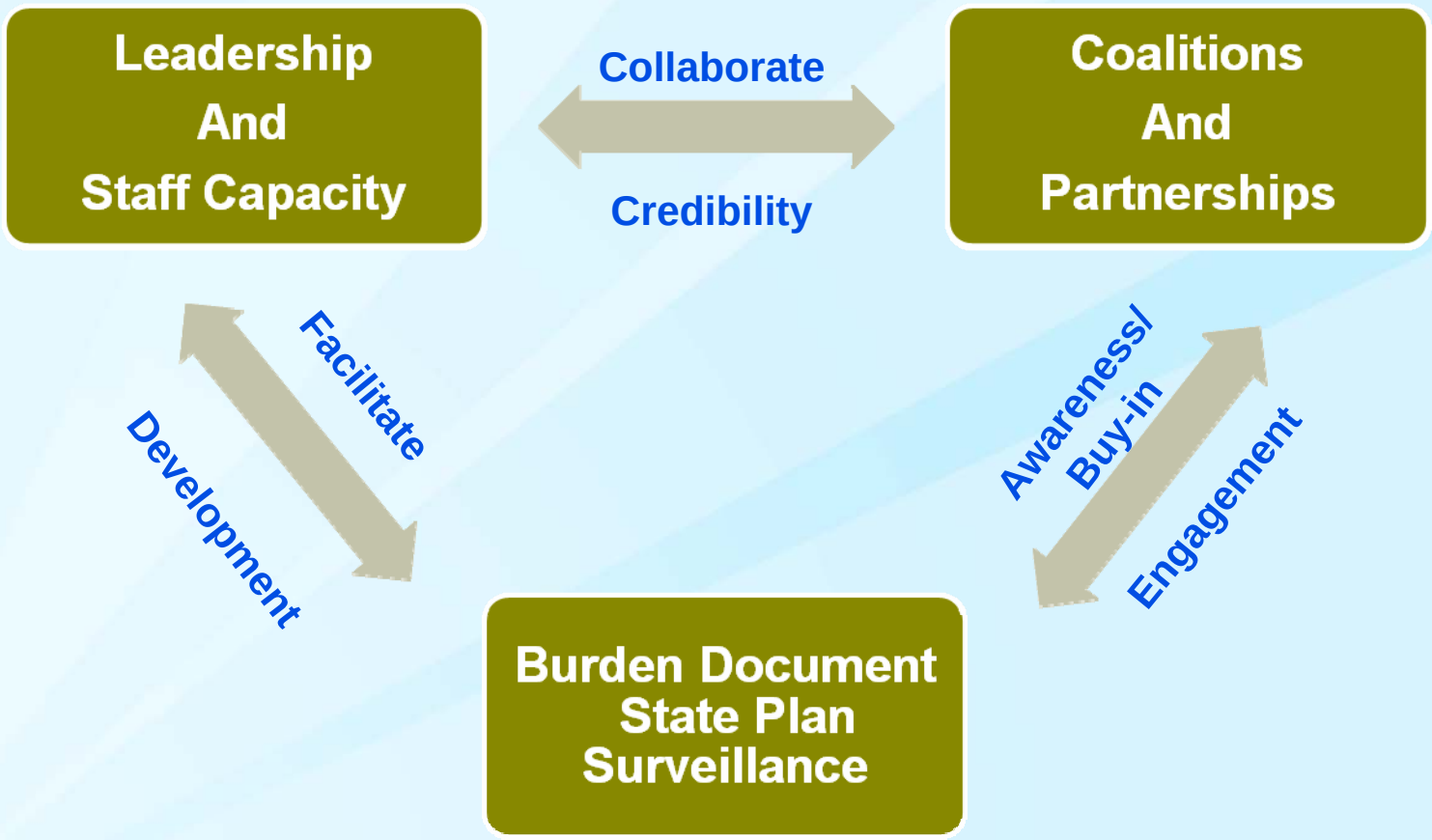
Key Finding 1: Development and Use

Activity	Effect
Leadership	• Influenced the growth and scope of the state oral health program • Effective leadership (skilled and competent staff) improved program activities
Partnerships	• Expanded reach of state oral health program (i.e. to community level) • Better enabled programs to achieve outcomes • Provided expertise to state oral health program
Coalitions	• Increased the manpower and resources available to state oral health programs • Improved policy development efforts by educating on oral health • Expanded the reach of programs • Worked independently of oral health program to achieve state priorities

Data Snapshot: Coalitions and Partners

- *"…the strength and independence of the [coalition] helps to ensure sustainability of oral health initiatives in the state. Though the [state oral health program] is a central member of the coalition and supports the coalition's many activities in many ways, those activities are sustainable beyond CDC funding."*

Key Finding 1: Development and Use



Key Finding 2: Leverage Capacity

Activity	Leverage Point
Surveillance	• Compelling data influenced policy-makers and funders to make decisions that supported oral health
Partnerships	• Partners increased monetary and in-kind support for the state oral health program
Coalition	• Coalitions worked as an extension of the oral health program. Efforts focused on moving the oral health agenda forward

Key Finding 3: Visibility and Environment

- Leadership, surveillance, partnerships, coalition and evaluation increased visibility and credibility
- Many programs reported having a more supportive environment
  - Seven of the 8 programs that completed the environmental assessment in 2003 and 2008 had a positive shift in general support for oral health

Data Snapshot: Leveraging and Visibility

- *"The Oral Health Program conducted a Basic Screening Survey in 2007 assessing the oral health of 1st, 2nd and 3rd grade children.... created a significant response from stake holders, legislators and the public. The 2007 Legislature, partially due to the [survey], enacted …legislation to help insure improved oral health for [the state's] children."*

- *"For the first time, oral health was not targeted for a budget or staff reduction in the last legislative cycle because oral health had developed an infrastructure. Oral health had documentation, evaluation, leadership, visibility and partnership to demonstrate its viability and need within the state."*

- *"Now that the [CDC funding] is lost, the partners are willing to mount a campaign to get it back in order to maintain the program to which they have become accustomed."*

Evaluation Question #3

Did the Infrastructure and Capacity Activities Promote Policy Change and Prevention Interventions?

Evaluation Question 3: Key Findings

- Infrastructure activities (partnerships, leadership and coalitions) were used to influence policy change and prevention programs

Key Finding 1:
Influence on Policy and Programs

- Partners: implemented programs in the community
- Coalition: provided educational support for policy change
- Leadership: staff provided guidance and coordination of program activities

Key Finding 1: Influence on Policy and Programs

❑ Policy

- Support for dental sealant programs
- Workforce capacity
- Barriers to policy include lack of political prioritization and effective educational strategies

❑ Community Water Fluoridation

- Advances in number of states that reached the HP 2010 goal
- Responding to fluoridation opponents is constant
- Maintaining water fluoridation management is challenging due to external factors such as turnover and decreased budgets

Key Finding 1:
Influence on Policy and Programs

- **Dental Sealant Programs**
  - States were at varying levels of implementing dental sealant programs
  - Successes include increased number of programs state-wide and increased number of children sealed
  - Barriers include missed opportunities for collaboration/coordination and geographic challenges

Evaluation Question #4

Did CDC's Technical Assistance and Funding Impact State Infrastructure and Capacity?

Evaluation Question 4: Key Findings

- Project officer greatly supported the development of infrastructure activities
- CDC funding for the states was vital for infrastructure development

Synthesis and Conclusion

Key Finding: Infrastructure Building Blocks

Conclusion

- CDC infrastructure program did promote the development of infrastructure and contributed to the growth of the state oral health program
- The program includes an appropriate mix of activities, now with a new understanding of their interaction and use
- CDC should continue investing in infrastructure

Section 3:
Recommendations and Next Steps

Recommendations for Programs

- Develop a strategy or plan to maximize the benefits of infrastructure development
- Invest in training and development to build staff competencies
- Continue to collaborate, network and coordinate with partners to support program efforts
- Continue to strengthen evaluation capacity and utilize evaluation data
- Continue to strive for a self-governing and sustained state oral health coalition
- Utilize infrastructure development activities to secure diverse funding

Recommendations for CDC

- Continue to invest in the development of the state oral health program infrastructure
- Define the ultimate goal and outcomes of the infrastructure program
- Coordinate and collaborate with national partners to leverage resources for the infrastructure program
- Create a tiered approach to infrastructure development

Next Steps

- **Established program outcomes; completed revision to program logic model**
- **Develop a program monitoring and evaluation system**
  - Develop program indicators
  - Create data collection and analysis process
  - Determine focus for next program evaluation
- **Dissemination efforts**

State Oral Health Infrastructure and Capacity: Reflecting on Progress and Charting the Future

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National Oral Health Conference
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astdd
Where oral health lives

Funded by CDC Cooperative Agreement 5U58DP001695

Presentation Overview

- Background and Purpose of Infrastructure and Capacity Enhancement Project
- Research Methods
- Study Findings and Lessons Learned
- Recommendations and Possible “Next Steps”

Background and Purpose

- Recognition that improved OH infrastructure is needed at national, federal, state & community levels to assure oral health for US

- ASTDD 2000 report, *Building Infrastructure & Capacity in State and Territorial Oral Health Programs* - 10 top infrastructure and capacity elements to address 10 Essential PH Services

- Recognized need to review current status of SOHP Infrastructure and Capacity

Definitions

- Infrastructure is the basic physical and organizational structure and support needed for the operation of a society, corporation or collection of people with common interests.

- Capacity is the actual or potential ability to perform activities or withstand threats.

10 Essential PH Services for OH*

- ***Assessment***
  - Assess oral health status and implement an oral health surveillance system
  - Analyze determinants of oral health and respond to health hazards in the community
  - Assess public perceptions about oral health issues and educate/empower them to achieve and maintain optimal oral health**
- ***Policy Development***
  - Mobilize community partners to leverage resources and advocate for/act on oral health issues
  - Develop and implement policies and systematic plans that support state and community oral health efforts

*10 Essential PH Services to Promote Oral Health in the US

10 Essential PH Services for OH*

- ***Assurance***
  - Review, educate about and enforce laws and regulations that promote oral health and ensure safe oral health practices
  - Reduce barriers to care and assure utilization of personal and population-based oral health services
  - Assure an adequate and competent public and private oral health workforce
  - Evaluate effectiveness, accessibility and quality of personal and population-based oral health promotion activities and oral health services
  - Conduct and review research for new insights and innovative solutions to oral health problems

*10 Essential PH Services to Promote Oral Health in the US

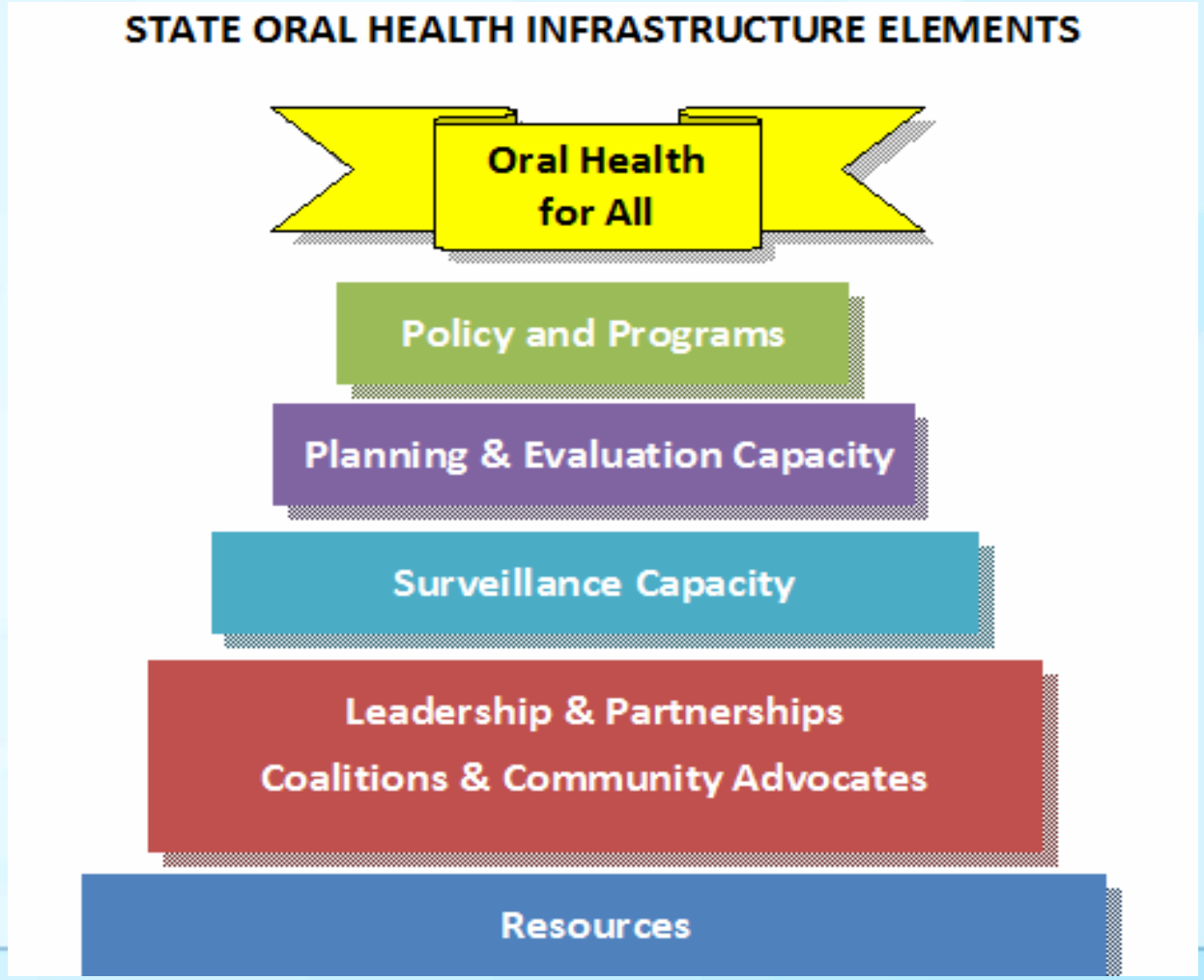
Methodology

- Reviewed and analyzed: State Synopsis and other data from 2000-2010
- CDC DOH Evaluation Reports
- CDC, HRSA and ASTDD Investments in State Oral Health Programs (SOHP)
- Conducted Interviews of Collaborations between State MCH-Title V and SOH Programs (20 states)
- Conducted Interviews of SOHPs and other stakeholders (ten states)

Format and Content of IEP Report

- Identified Key Infrastructure/Capacity Elements for SOHPs
- IEP Study Findings:
  - Current status and trends for SOHP structure/org placement/staffing, funding
  - SOHP ability to perform Core Public Health Functions and 10 Essential Public Health Services
- Lessons Learned
- Recommendations
- Next Steps

State Oral Health Program Infrastructure Elements



IEP Findings

- From 2000-10, considerable investments from Federal/state governments & others
- Tools, resources and funding opportunities
- Enhanced/broadened OH surveillance and epidemiology infrastructure, capacity, expertise

IEP Findings

- > States with state oral health plans
- Increased SOHP budgets and staffing
- No “ideal” staffing model
- > Evidence-based primary prevention policies and programs

Lessons Learned - Resources

- Diversified Funding is advantageous
- Support for more than just the SOHP is key, e.g., support for local programs
- Single funding source can jeopardize a SOHP
- Organizational Placement of SOHP can be influential

Lessons Learned – Leadership, Staffing & Partnerships

- Successful SOHP needs a continuous, strong, credible leader to create partnerships and leverage available assets
- Key to address 10 Essential PH Services & *SOHP Competencies*
- Need not be BIG – need to be strong and forward thinking/visionary
- Advocates/Coalition/Partners with financial or political clout
- Take advantage of leadership/professional development opportunities

Lessons Learned – Surveillance Capacity

- Data drives decision-making
- Need surveillance with sound analysis and dissemination
- Strategic and effective sharing of data reports promote understanding of OH and disease prevention programs and the need for and value of funding these evidence-based programs

Lessons Learned – State Planning & Evaluation Capacity

- Need current/comprehensive SOH Plan with a practical evaluation component. Allows SOHP to assess and communicate its relevance, progress, efficiency, effectiveness and impact

- Evaluation must engage stakeholders

- Evaluation can help build infrastructure and enhance sustainability when results are used to improve programs, increase program visibility and demonstrate program achievements

Lessons Learned – Evidence-Based Prevention & Promotion Programs & Policies

- States with documented improvements in OH status of residents have strong EB local programs with quality guidance/support from the SOHP
- Local programs without guidance/support were not always successful
- States with local programming limited to OH education have not seen improvements in OH status of the children they serve

Lessons Learned - Resiliency

- Resiliency of an organization relates to the ability to bounce back following some environmental, financial, political, public relations or other challenge, misfortune or disaster

- Important to have the ability to scale programs up and down in response to the environment, and the ability to identify and sustain core elements can help to sustain programs in challenging times

Recommendations

RECOMMENDATIONS *(in order of the infrastructure elements as shown in Figure 3, but not prioritized)*	STAKEHOLDERS						
	Federal Government	ASTDD, National Organizations & Partners	State Public Health Agency	State Oral Health Program	Other State Organizations & Partners	Local Public Oral Health Program	Other Local Organizations & Partners
LEADERSHIP, STAFFING, PARTNERSHIPS							
7. Develop and adopt a common vision and goals for oral health among federal, state and local agencies and national partners while acknowledging there are different strategies and structures for achieving the goals.	•	•	•	•	•	•	•
9. Staff federal, state and local oral health programs with qualified public health and oral health professionals whose skills match the job functions.	•		•	•		•	
10. Strengthen State oral health leadership, consistent with the ASTDD Competencies.	•	•	•	•	•		
11. Promote and support partnerships between the public and private sectors to improve oral health at the State and local levels.	•	•	•	•		•	
12. Promote and support partnerships between maternal and child health, chronic disease, and other public health programs and payors to address social determinants and other factors that impact public health.	•		•	•		•	

Next Steps for ASTDD and Partners

- Resources
- Leadership, Staffing and Partnerships
- Surveillance Capacity
- State Planning, Evaluation Capacity
- Evidence-Based Prevention & Promotion Programs & Policies

References

- Infrastructure Enhancement Project Report: http://www.astdd.org/docs/Infrastructure_Enhancement_Project_Feb_2012.pdf
- ASTDD Guidelines for SOHPs: http://www.astdd.org/state-guidelines/
- ASTDD Competencies for SOHP and Tools for Competency Assessment: http://www.astdd.org/docs/CompetenciesandLevelsforStateOralHealthProgramsfinal.pdf

Thank you!

Questions and Answers

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