

# NIDCR Workshop Summary

## Developing an Implementation Science Agenda to Advance Dental, Oral and Craniofacial Health

April 22, 2015

National Institute of Dental and Craniofacial Research (NIDCR)  
Democracy 1, 6<sup>th</sup> Floor, Conference Room 602

**Executive Summary:** The NIDCR convened an expert panel workshop to discuss the state of implementation science across health fields, and specifically as applied to oral health. The workshop was organized into five sessions, beginning with a context-setting presentation, and followed by four facilitated discussions. Key recommendations from the group were focused in three areas:

- Make implementation science resources more accessible to the existing oral health research community
- Build interest in implementation science research among key stakeholders
- Encourage “pre-implementation” efforts, including measuring the baseline and identifying changes in the evidence base

The summary below is meant to reflect the main points of each discussion. Not all topics or points mentioned achieved full consensus with the group. The list of invited participants can be found at the end of this document. The statements presented do not necessarily represent the views of the NIDCR, NIH, or DHHS.

### **Session 1: Overview of implementation science: How is implementation science defined and how does it differ from the natural flow of information and uptake?**

**Presenter: Enola Proctor, Washington University St. Louis**

#### **I. The importance of implementation science**

The traditional approach of publishing scientific results in refereed journals and waiting for these findings to work themselves into dental practice can be improved upon. The core of implementation science is to understand and improve the pipeline of knowledge starting from the establishment of the scientific base through widespread acceptance, uptake and adoption by clinicians. Implementation science is grounded in the question, “What are the evidence-based ways to bring evidence-based practices into healthcare?” How do we really get a return on our investment from developing novel interventions?

#### **II. The tools of implementation science**

Implementation science uses a set of research tools and intervention strategies, with the goal of closing the quality gap in service delivery. This addresses issues such as persistent safety problems, disparity in care, and use of interventions without an evidence base. Implementation science is not just about intervening with providers, nor should providers

be viewed as the sole reason for lack of implementation. Other important aspects could include finance/reimbursement strategies, system restructuring, and policy/legislation.

### **III. Implementation science (aka, knowledge translation) is distinct from other types of science**

- Dissemination = sharing facts/information  
Publishing is not an effective dissemination or implementation strategy. However, this is at odds with how academics are incentivized and how grant productivity is measured. Additionally many training strategies also tend to be ineffective. Before declaring that a new intervention “doesn’t work” in the real world, we need to see whether it was implemented properly.
- Basic & efficacy research = specifies what to target  
Efficacy research focuses on changing patient symptomatology. Implementation outcomes focus on the feasibility, acceptability, utility, cost, etc. of the new practice to be delivered and the strategy for installing it. Successful implementation should yield improvements in service delivery (quality, timeliness, appropriateness, etc.), which should in turn drive patient outcomes (including eventually population health and elimination of disparities). References were made to the Proctor et al 2009 article<sup>1</sup>. Intervention development frequently occurs in a lab or other non-generalizable setting without attention to real-world practice and policy influences with dissemination of findings as an afterthought. A more practical method would be to inform the intervention by the structure of routine practice environment (including policy) and to design for dissemination at the outset of treatment development.
- Effectiveness research & comparative effectiveness = specifies what to deliver
- Implementation = specifies how to deliver interventions and how to create practice and system changes

### **IV. Steps to address before moving to implementation science**

- Define the quality gaps. Be clear on who the denominator represents (e.g. percent of people getting evidence-based care among all people who are getting care versus percent of people receiving evidence-based care among all people needing services).
- Identify the evidence-based practices available to fill those gaps.
- Develop and test strategies to fill those gaps with the evidence-based practices.
- Situate research in the context of existing frameworks/theories. When possible, identify commonalities in questions across different healthcare fields.
- Form partnerships for research. Input is needed from clinical intervention developers, implementation researchers, and practitioners.
- Tools – selection of study designs and measures.
- Develop criteria for determining what is “ready” for dissemination and implementation. Additionally there should be a balance between treatment discovery and treatment rollout. Traditionally there has been a much stronger focus on discovery versus implementation.

---

<sup>1</sup> Proctor EK, Landsverk J, Aarons G, Chambers D, Glisson C, and Mittman B (2009). Implementation Research in Mental Health Services: an Emerging Science with Conceptual, Methodological, and Training challenges, *Administration and Policy in Mental Health*. 36:24-34

## V. **Implementation science and dentistry**

- **The challenge of procedure codes vs. diagnostic codes**

Within dentistry, there is a wealth of data on procedure codes but very little on diagnostic codes, which makes it difficult to quantify by diagnosis. This is a potentially important area to focus on as a basic component of health services/implementation research in dentistry. This also highlights the need to measure baseline service delivery to determine benchmark gains. In other words, is this research moving the dial?

- **De-implementation of practices with limited evidence or growing evidence of potential harm**

Implementation science also includes identifying targets for de-implementation. These may be practices in common use by practitioners with limited evidence, or growing evidence of potential harm. Dissemination is important for getting current/correct information out to stop improper use, which makes it a potential de-implementation strategy. Meeting participants were asked for some examples of practices ready for de-implementation that are specific to dentistry. Responses included:

- Third molar extractions
- 6-month recall visits
- Fluoride supplements for pregnant women
- Surgery for TMJ disorders

## VI. **Conceptual model/theories/frameworks in implementation science**

Conceptual models, theories, and frameworks are essential to successful NIH research proposals. This is also true for implementation science applications. Grant applications reviewed by the DIRH (Dissemination and Implementation Research in Health) study section are not scored well if the applicants do not include a theory or framework. Implementation research is not just about solving a specific problem, but more about the broader implementation processes and strategies being addressed. The Consolidated Framework for Implementation Research (CFIR) taken from the Damschroder et al 2009 article<sup>2</sup> was suggested as a strong example.

## VII. **“Push” vs. “Pull” strategies for implementation science**

Most of the attention in implementation science is on “Push” strategies. In other words, pushing evidence-based practices out into the field. Less attention is paid to “Pull” strategies such as increasing patient demand for quality care, and including patient advocacy groups that may be advocating for better care. Studying pull strategies is wide open for research.

## VIII. **Suggested priority areas for implementation science at the NIDCR**

- NIDCR should determine how the current model of implementing quality care in dentistry is working, then decide if implementation science is an area worth pursuing and making a commitment to.
- Implementation strategies should be incorporated earlier in the intervention development pipeline. If implementation is continually relegated to the end of the

---

<sup>2</sup> Damschroder LJ, Aron DC, Keith RE, Kirsch SR, Alexander JA, and Lowrey (2009). Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science, *Implementation Science*. 4(1):50

pipeline, it is likely to add time between research findings and uptake in practices. References were made to the Curran et al (2012) article on hybrid designs<sup>3</sup>. Specifically about incorporating implementation science questions early on in effectiveness research.

- Build the evidence around implementation strategies and carefully study outcomes. NIDCR research may benefit from data on incremental costs, scale up and spread, and sustainability. It would be beneficial to explain return on investment in order to get practitioners to be willing to undertake a re-engineering process.
- It would be helpful to differentiate between patient-centered outcomes versus research outcomes. Identify key stakeholders in the process and be able to explain how much this will cost and how much disruption they might experience in adopting the new practice(s).
- Implementation science efforts at the NIDCR should capture the complexity of implementation. Contexts keep changing, and evidence can also change. How many evidence-based practices can one setting deliver well, and sustainably? Staff turnover and organizations in continuous flux.

### **Session 1 Discussion:**

Q: There are lots of components of the CFIR – how do you balance incremental and comprehensive projects? How is review likely to view these proposals?

A: Be clear for review committees what portion of the whole you're working on, and be clear about what you're not addressing. NIDCR needs to be clear in a "blueprint" what the focus needs to be; applicants need to be clear in applications that they either understand the implications of the context or will measure it.

Q: Where is the patient in implementation research? How do you balance patient outcomes and implementation outcomes? Can patient demand or patient ratings of practitioners be used as an implementation strategy?

A: Currently there is little support in the literature on the role of consumer ratings in changing provider behavior in medical settings. This is an area that could be examined for dentistry.

Q: How do Pharma and (medical) device manufacturing fit into implementation science?

A: This is unclear but an important question. There is a growing body of literature on this topic in the medical field.

### **Session 2: Defining the evidence base: What is acceptable evidence to allow proceeding to implementation?**

**Facilitators: Scott Tomar, University of Florida & Julie Frantsve-Hawley, AAPHD**

Where is the bar? Quality/quantity/consistency of evidence. Evidence pyramid:

---

<sup>3</sup> Curran GM, Bauer M, Mittman B, Pyne JM, and Stetler C (2012). Effectiveness-implementation Hybrid Designs: Combining Elements of Clinical Effectiveness and Implementation Research to Enhance Public Health Impact, *Medical Care*. 50(3):217-226

- Evidence-based guidelines from professional organizations (Examples: American Dental Association, U.S. Preventive Services Task Force, American Academy of Pediatric Dentistry); in oral health there are not a lot of guidelines
- Systematic reviews (Cochrane reviews) and published meta-analyses
- Randomized Controlled Trials
  - Replicated trials vs. single randomized controlled trial (RCT) results
- Other clinical study designs (case-control, cohort)

Dentistry is roughly 20 years behind medicine in developing evidence-based guidelines and it is “humbling” to look at the level of evidence for what we currently practice in dentistry. In dental schools and dental hygiene schools, students want to know what works. However some students are getting conflicting instruction on what are recommended practices versus what are evidence-based. Part of the problem is that many everyday clinical decisions don’t have clear decision support. In dentistry there are few comparative clinical studies, fewer community-based studies, few patient-oriented outcomes, and limited resources to develop guidelines.

The American Dental Association (ADA), the American Academy of Pediatric Dentistry (AAPD), and the American Academy of Periodontology (AAP) have published guidelines<sup>456</sup>. Overall in dentistry there may not be enough people involved in guideline development. We can also look to organizations outside of the U.S. that have developed guidelines.

If we set the evidence bar too high, what do we miss? Examples include oral cancer screening, caries risk assessment, and HPV vaccination. If the level of evidence is low should we consider stopping these practices? Most practitioners would agree that trying to promote earlier detection of oral cancer when it is more easily treated and improves outcomes is a good practice. However, the evidence supporting it is pretty weak. Additionally this type of research question is probably not feasible for an RCT. RCT’s are considered by many to be the gold standard for determining causal relationships. When RCT’s are not feasible the evidence from rigorous case-control studies can be sufficient for development or revision of guidelines. So what should practitioners do when faced with lack of ‘strong’ evidence? Caries risk assessment is another example. The AAPD and ADA recommend caries risk assessment, but there is weak/sparse evidence for the tools currently available.

In dentistry, who says “this is enough evidence?” It is typically dental schools, professional organizations (ADA, AAPD, etc.), journal editors, and other stakeholders. For grant applications it is the peer review process. What happens when the evidence is interpreted differently between the various experts?

Every field has to decide what the evidence base is for itself. What is considered state of the art evidence in dentistry? It would be beneficial to have some operational understanding about what level of evidence we’re willing to accept, and steps to advance that agenda. If the field uses multiple RCT’s as the bar, what do we miss? Is this a realistic bar to set?

In addition to moving evidence-based practices into use there is also the issue of de-implementation. Some widely used interventions in dentistry are no longer supported by the evidence. This includes over-treatment and in some cases interventions that may be causing more harm than benefit.

---

<sup>4</sup> American Dental Association Center for Evidence-Based Dentistry website: <http://ebd.ada.org/en/evidence/guidelines> Retrieved on 06/03/2015

<sup>5</sup> American Academy of Pediatric Dentistry Policy & Guidelines website: <http://www.aapd.org/policies/> Retrieved on 06/03/2015

<sup>6</sup> American Academy of Periodontology Parameters of Care website: <http://www.perio.org/resources-products/clinical-scientific-papers.html> Retrieved on 06/03/2015

Examples of possible over-treatment in dentistry:

- Third molar extraction in asymptomatic teeth
- Prophylactic antibiotics in routine dental treatment
- Use of radiographs is not usually based on risk
  - Financial incentives counter to evidence as third party payers will reimburse for full mouth series every 5 years
- Preventive caries treatments for those who are at low risk
  - Who should be targeted for these services?
- Systemic fluoride supplements during pregnancy

Examples of treatments that may cause harm:

- Use of cone-beam CT for placement of orthodontics
- Poor compliance with rubber dam usage
- Restorative (drill) vs preventive (sealant) treatment of early caries

The field of dentistry also must work with the public and outside groups. The evidence bar that is set for dentistry will not always be used by those with special interests. Information for consumers also appears to be changing rapidly which can undermine trust. How should dentistry deal with advocacy/consumer groups that raise concerns over evidence-based practices? The availability of information on the internet – which is not always subject to scientific rigor--can influence patient perceptions. One idea is to make the science behind the evidence more accessible to the public. Accessibility in this case means easy to find and easy to understand. There are also going to be times when consumers are right and practice is wrong. Incorporating patient-centered concerns as an outcome measure and assuring the patients their concerns are being heard by practitioners is important.

Within dentistry there are instances when the level of interest in a new intervention outpaces the evidence base. The level of interest is sometimes opposite of the level of evidence. Some examples include:

- Silver diamine fluoride for caries prevention (recently approved by FDA for sensitivity)
- Xylitol
- Risk-based assessments/treatment planning

In some cases decision making is based more on where the dentist or hygienist trained than the on the current evidence base. One example of a routine procedure is deciding when to place a crown. The decision on timing is frequently based on what the dentist was taught in school, and not necessarily on where the current evidence is on specific guidelines.

It is nice to be able to say definitively “Treatment A is better than Treatment B.” Moving interventions into the field requires understanding the levels of evidence. This statement can be a matter of someone’s personal opinion all the way up to a rigorous meta-analysis of many peer-reviewed publications and replication studies. It is important to identify the evidence core because modifications may be necessary around the edges to fit the program context. This is similar to the importance of looking at mechanisms of action in intervention research. It is important to improve the dissemination pipeline to communicate changes in the evidence base. It is typically easier to make changes within a dental practice if the culture of that practice expects change.

We need basic science to inform how our interventions work, efficacy studies to determine which interventions work, and implementation studies to move the interventions into widespread use. In

addition to guidelines published by the dental professional organizations there are other sources for evidence. These include Cochrane reviews and meta-analyses around particular practices learned from outside of dentistry. One example is establishment of the medical home translated into the dental home.

It is widely accepted that self-reported behaviors in research have a higher probability of bias as compared to objectively collected data. In implementation studies the accuracy of self-reported behaviors in the dental office can be equally subject to the same bias. Once practitioners know the “EBP” buzzword, social desirability bias can creep into reporting of what they do. This highlights the need for fidelity monitoring.

In addition to deciding what interventions to target it is equally important to decide who you are targeting. For a particular intervention you may be targeting dentists. Another intervention may be specific to hygienists. In some cases the target group may be physicians and nurses in general medical settings. The evidence-based practices being implemented need to be relevant to practitioners. Basic health services research can identify the current standards of care and from that, identify critical gaps and set priorities. An example of this is the Translation Research in a Dental Setting (TRiADS)<sup>7</sup> trial in the UK on how to incentivize placing sealants. This study produced interesting findings about incentives with or without education about the practice.

### **Session 3: Opportunities for implementation – National Dental Practice-Based Research Network and beyond**

**Facilitators: Gregg Gilbert, University of Alabama, Birmingham, & Brad Rindal, HealthPartners**

Dr. Gilbert gave an overview of the National Dental Practice-Based Research Network (NDPBRN). The network is oriented around identifying practices that will work in their real-world settings, and how to scale up – so their research agenda is concerned with both effectiveness and D&I. The NDPBRN provides infrastructure to engage end users and their interests. The network is intentional about collaborating with practitioners and leveraging their clinical expertise, and making research involvement easy for them.

The NDPBRN functions as a clinical research laboratory with a broad range of practices and patient populations. Practitioners are engaged in the research process from idea generation through study execution.

One of the challenges the network has experienced is orienting academic researchers to the NDPBRN. The usual practice for many academic researchers is ‘helicopter’ studies, rather than collaboration. Another challenge has been training and monitoring personnel in the clinical settings who are not professional researchers.

Dr. Rindal provided an overview of the HealthPartners Dental Group. The dental group is a large group practice embedded within a large health care system. The group uses electronic dental records, with diagnostic codes that can be leveraged for research. HealthPartners Dental Group is one of the NDPBRN

---

<sup>7</sup> Translation Research in a Dental Setting (TRiADS) website: <http://dentistry.dundee.ac.uk/translation-research-dental-setting-triads> Retrieved on 06/16/2015.

regional hubs. The group recently published in *Implementation Science* on adherence to evidence-based treatments<sup>8</sup>.

The norm in dentistry has been solo private practice, but this is decreasing and the emerging model is group practice. Implementation studies should consider this when designing proposals and what role this may have in changing behavior/practice. Large group practices are becoming more interested in participating in the NDPBRN. This can help leverage the network for both implementation research and dissemination.

HealthPartners has a history of placing emphasis on electronic dental records (EDR) and diagnostic codes. Using electronic records typically allows for improved data quality and outcome measurement. Challenges for dentistry include getting the EDR into smaller community practices and agreement on a single unified set of diagnostic codes. Solo practitioners have less incentive to use diagnostic codes or electronic records. Larger group practices and healthcare systems need to monitor population health, which incentivizes investment in electronic medical and dental records. In the case of HealthPartners they are also a payer, which further incentivizes the ability to measure what care is delivered and what the outcomes are.

Patient perspectives are also needed to understand what resonates with them, what's valued, where our own points of emphasis miss the mark. Many patients may be unfamiliar with the concept of "evidence-based practice" but value concepts such as "individualized treatment."

There are a number of "pre-implementation" activities that could be done while building the evidence base:

- Build infrastructure to support quality improvement / quality care activities
- Continue basic health services research about access, retention, and disparities
- Use descriptive health services research to characterize the system as it exists and where the critical gaps are
- Develop infrastructure to support measurement of service delivery and outcomes

The NDPBRN has some significant advantages for research. There is a bidirectional philosophy between researchers and clinicians in the field, which allows for more immediate dialogue from both ends of the pipeline. Studies also include a patient feedback component. The NDPBRN is broken into regional nodes, which allows for scaling up of interventions from smaller pilots to large national projects.

### **Session 3 Discussion:**

Q: Where should implementation science begin in dentistry? Large group practices or smaller group and solo practices?

A: There is a range of practice models in dentistry. Where should the focus be for implementation research – individual practitioners or group practices? It might be easier to work with the larger group practices. These are more likely to have the infrastructure for implementation research activities. If dentistry as a whole does move to a large group practice system, a focus on larger groups may have an additional longer term payoff. However, solo and small group practices should not be ignored. The NDPBRN provides a model of how

---

<sup>8</sup> Rindal DB, Flottesmesch TJ, Durand EU, Godlevsky OV, Schmidt AM, and Gilbert GH (2014). Practice change toward better adherence to evidence-based treatment of early dental decay in the National Dental PBRN, *Implementation Science*. 9:177

implementation scientists might interact with these smaller dental practices. Another benefit of looking at the smaller practices is the opportunity to map knowledge transfer and dissemination of new knowledge.

Q: Do the same models that predict uptake of a new intervention also predict sustainment?

A: We don't know. Both uptake and sustainment are critical components, but there is not currently a model that predicts both.

**Session 4: What levers do we have to create change? Practice, infrastructure, policy facilitators: Peter Damiano, University of Iowa, & Todd Molfenter, University of Wisconsin**

In general healthcare the usual levers to create and sustain change are:

- Licensure – state-level professional organizations for practitioners
- Accreditation/certification – national organizations (Joint Commission, CARF)
- Legislation – State or Federal Government
- Liability – usually through case law

Medicare and Medicaid are often drivers of change in medicine; however, dentistry is not part of traditional Medicare. Therefore the impacts of the Patient Protection and Affordable Care Act (ACA) are not likely to be drivers of dental practice change. Some dentists are unwilling to participate in Medicaid, so they are likely to opt out rather than to change practice to match Medicaid requirements.

Still, Medicaid expansion offers opportunities to look at changes in dental practice.

Dr. Guerrero mentioned his experience with substance abuse treatment programs – getting them to accept Medicaid was only the first hurdle. Once the organization accepts Medicaid there are a number of additional expectations about services that will be delivered, or a perception that they now have “additional resources.”

Research funding for health services research typically receives limited support (NIH/AHRQ). Some NIH-funded intervention studies include economic components. Studying the healthcare delivery system is not easy. The industry undergoes rapid evolution of practice systems, which makes it difficult to identify the correct levers when the environment keeps changing.

- Accountable Care Organizations (ACO's) are in development and are designed to be flexible
- The dental home concept is not fully described
- Risk-based payment models are in development and are subject to change
- Dentistry is moving towards a group practice model vs solo practices
- Integration of dental services into other healthcare systems is evolving
- State and local changes – each Medicaid system is evolving independently

Where are the leverage points for promoting the uptake of evidence-based practices:

- Develop tools for implementation. Practitioners need practical methods for how to implement a new practice once they've been trained on it. They are usually left to their own devices post-training.
- Create patient demand for evidence-based practice. In medicine, pharma and treatments are advertised directly to consumers to create demand. There is little demand-side influence in dentistry.

- Can organizations push the messages to consumers around evidence-based care? For example a public service campaign on Saturday morning TV about getting kids to brush their teeth.
- De-couple dissemination activities from implementation science. Dissemination is necessary but not sufficient for achieving implementation. We need to know which dissemination strategies produce the best knowledge transfer, and how that then impacts implementation.
- Engage educational institutions. The biggest driver of practice is what the practitioner learns in school. The power of habit is strong. The practice of adopting new interventions (or stopping some interventions) is something that providers may have to learn.
- Develop a better understanding of practitioner, policy maker, and payer motivations. What are the drivers for their decision making and how can these be influenced. Make sure to balance between internal and external (e.g., motivation to help patients vs. motivations tied to reimbursement.) Are there ways to modify the reimbursement incentives?
- Consider the service delivery system as a whole rather than individual components. Focus on raising the bar for quality of care. We need to spend time looking at what's going on in the dental service delivery system before prioritizing how to change it.

“Pull” strategies might be effective in dentistry. How do we get patients to demand either certain practices or evidence-based care generally? An example from medical clinics is the office signs on hand washing – aimed to make patients engage practitioners in dialogue as a way to change physician behavior.

Think about prevention and community-based interventions and what D&I research looks like in that space. Understanding that what works in group practices might not be the same as what works in solo practices or community clinics. Provider benchmarking is largely unused in dentistry. However, this does not really measure real outcomes or savings.

#### **Session 4 Discussion:**

Q: Is dentistry getting into ACO's?

A: Not yet. But there are some examples of how dentistry can be included. It is unclear how many ACO's will have the infrastructure and desire to include dentistry.

Q: What is the logical starting point for implementation science in dentistry?

A: Priority should be on changes that are feasible to implement in real world settings – make it as easy to change as it is to not change.

Q: I am not an expert in implementation science. How can I find collaborators with this expertise?

A: Contact your friendly program official.

#### **Session 5: Where do we go from here?**

**Facilitators: Christopher Fox, International Association for Dental Research, & David Clark, NIDCR**

There was a brief overview of the IADR/AADR mission: to improve oral health, support the oral health research community, and facilitate communication and application of research findings.

The field of dentistry is ripe for implementation science. The global burden of disease studies indicate there are 3.9 billion people with untreated oral health conditions. For several countries oral disease ranks in the top 10.

What are the next steps for implementation science research in oral health?

### **Make implementation science resources more accessible to the existing oral health research community**

- Make sure implementation models are generalizable and replicable
  - Can we test existing implementation science models in the dentistry setting?
  - Which evidence-based practices in oral health are ready for implementation?
- Leverage the resources of the NDPBRN
- Identify and use the levers available in dentistry to create change
- Select the priority areas to address – top 3 or top 10
  - Example: dental sealants and other areas with consensus or high priority
  - Describe the process(s) the research community goes through to identify evidence-based practices; implementation science research questions to be investigated are about behavior change: patient, practitioner, organization, systems
- Summarize recommendations of this meeting and make them public (transparency)
  - A meeting summary will be posted to the NIDCR website
  - There are plans to turn the meeting proceedings into a publication
  - Inform the research community of activities going forward (initiatives, strategic planning, symposia)

### **Build interest in implementation science research among key stakeholders**

- Create and encourage public-private partnerships
- Major professional conferences could encourage sessions on implementation science; this should help to increase awareness in the field and provide education on the topic
  - Encourage researchers to submit abstracts on implementation science to these conferences
  - Emphasize implementation in other NIH funding opportunity announcements (FOA's) if those topics fit
- Reframe the research aims to getting patients and populations healthy; this broadens the target beyond individual dental practitioners to include patients, medical providers, healthcare systems, communities, etc.
- The NIDCR should embrace and encourage research projects around how to influence payers, shared decision making, and engaging consumers

### **Encourage “pre-implementation” efforts, including measuring the baseline and identifying changes in the evidence base**

- Begin collecting data to measure change
  - Ensure measures that are meaningful to practitioners
  - Develop capacity to measure quality of care and change over time (e.g., would want to be able to measure whether an implementation intervention created the intended change)
  - Maintain a high level view of the dental care delivery system – being able to quantify the gaps and the extent to which they shrink over time

- Identify high functioning providers/practices and reverse engineer their capacity and characteristics
- De-implement ineffective practices
- Develop direct-to-consumer dissemination strategies to create demand for evidence-based care; provider behavior is influenced both at the provider level (influenced by provider networks) and at the patient level (influenced by demand)
- Continue to support effectiveness studies for diagnostic and reimbursement codes with a secondary implementation focus; this should provide the data necessary to eventually build more effective codes, which could then be leveraged for changing practice
- Identify key financial drivers; primary care physicians who are reimbursed for doing dental screenings are more likely to perform them; reimbursing dentists for taking blood pressure or performing alcohol abuse screenings would likely increase these activities; it is often difficult to incentivize care integration even when these settings would be advantageous from a public health perspective

Different settings = different capacities for implementation = different implementation strategies. A one-size-fits-all approach is unlikely to be successful. While there are some general strategies that have been proven, successful implementation is context dependent. There is a balance between characterizing the field as a whole and being sensitive to unique variants.

List of Invited Attendees:

Joe Castellano	AAPD
Peter Damiano	University of Iowa
Chris Fox	IADR/AADR
Gregg Gilbert	University of Alabama, Birmingham
Erick Guerrero	University of Southern California
Julie Frantsve-Hawley	AAPHD
Sarah Hunter	RAND Corporation
Brian Laurence	Howard University
Steve Martino	Yale University and VA Connecticut
Todd Molfenter	University of Wisconsin
Chris Okunseri	Marquette University
Enola Proctor	Washington University St. Louis
Rachel Ramoni	Harvard University
Brad Rindal	HealthPartners
Julie Salvador	University of New Mexico
Scott Tomar	University of Florida
Bob Weyant	University of Pittsburgh

NIH Participants:

Jane Atkinson	NIDCR
Karina Boehm	NIDCR
David Clark	NIDCR
Lori Ducharme	NIAAA
Emily Harris	NIDCR
John Kusiak	NIDCR
Savvas Makrides	NIDCR
Dawn Morales	NIDCR
Melissa Riddle	NIDCR
Steve Scholnick	NIDCR
Lillian Shum	NIDCR
Martha Somerman	NIDCR
Tisha Wiley	NIDA