# Advances in Oral Cancer: Applications in Public Health

"Putting it all together for use in Public Health Settings"

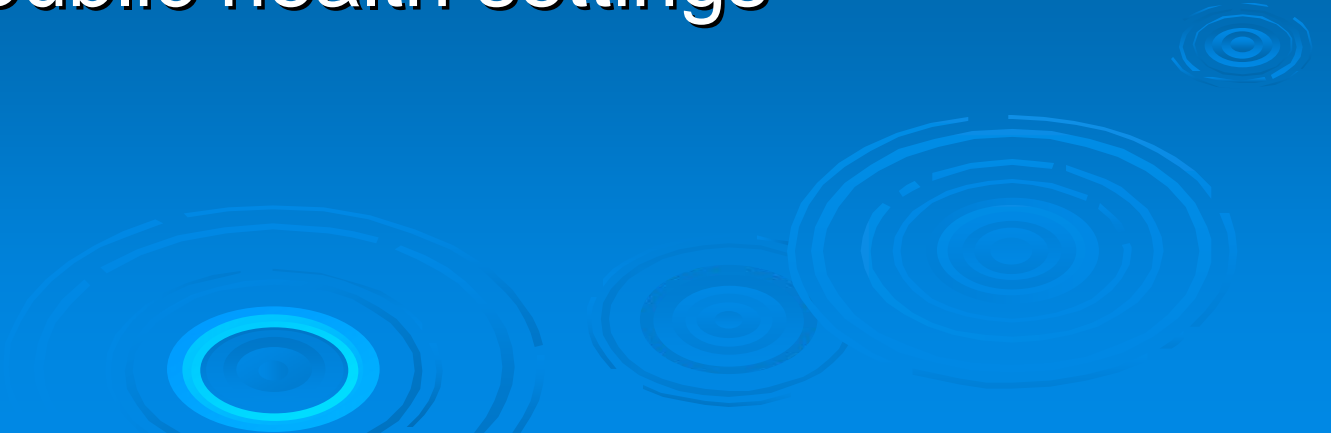2007 National Oral Health Conference

# What have we heard?

- Brian Hill- Implications of changing demographics of oral cancer
- David Wong- Salivary diagnostics: Oral cancer
- Miriam Rosin- Biomarkers an adjunct tool for oral cancer early detection

# What is our challenge?

Putting "it" all together for use in public health settings

In order to put it all together for use in public health settings – we need to know what the "it" is.

# What is "it?" Is "it":

- New knowledge?
- New technologies?
- Teams of providers?
- Changes in policies?
- Modifications in protocols of care, management of programs?
- None, some, all of above?

- New to us?
- Achievable?
- A structural issue?
- A matter of will?

# Basic issues

➢ Getting the science we need

➢ Moving science into action

➢ Communicating, educating, evaluating

# Often we do not have research that involves the community and informs public health programs..

**Community Trials**

**Health services research**

**Public Health**

**Demonstration Research**

**Health policy research**

# Scope of the Science



**Macro social level**

Global economic and geopolitical level

National and state level

Community and workgroup level

Individual, family, and social group level

→ Lifespan

Organ level

Cellular level

Molecular level

Genomic level
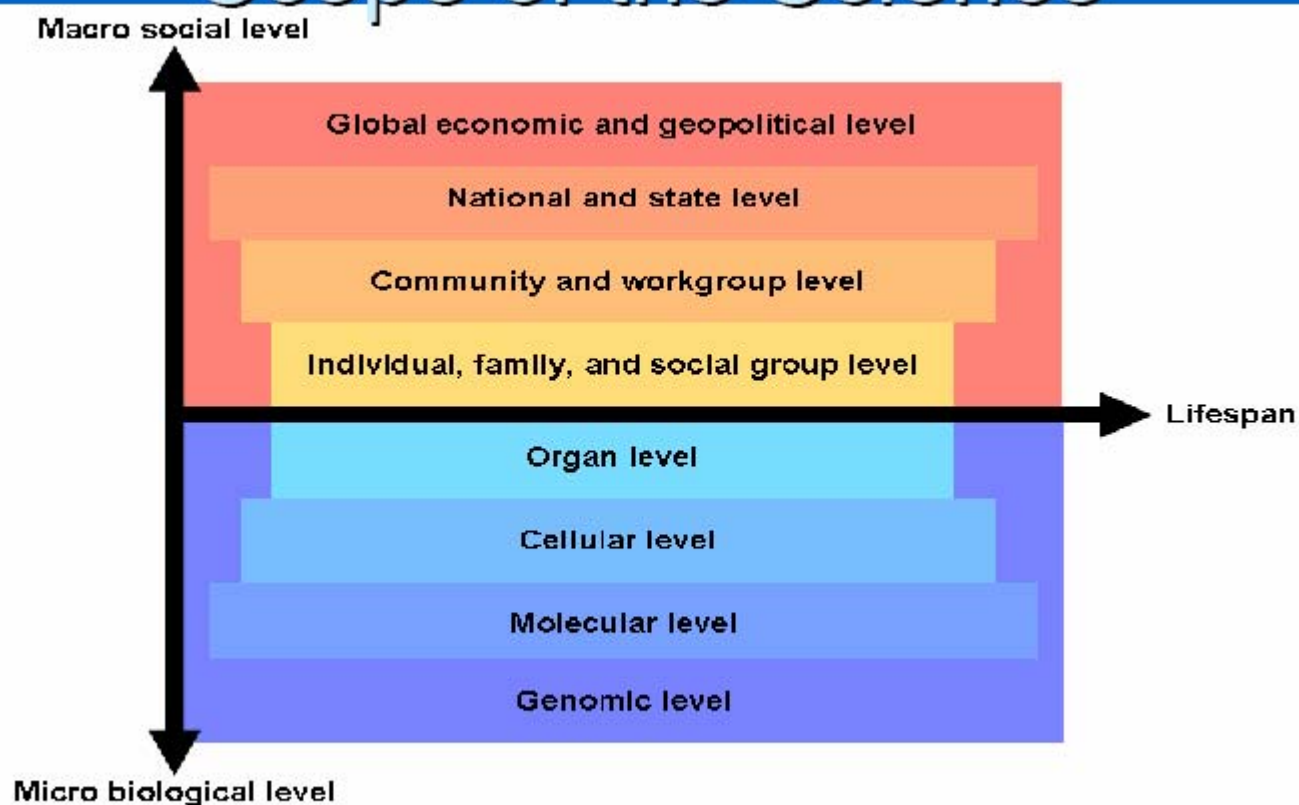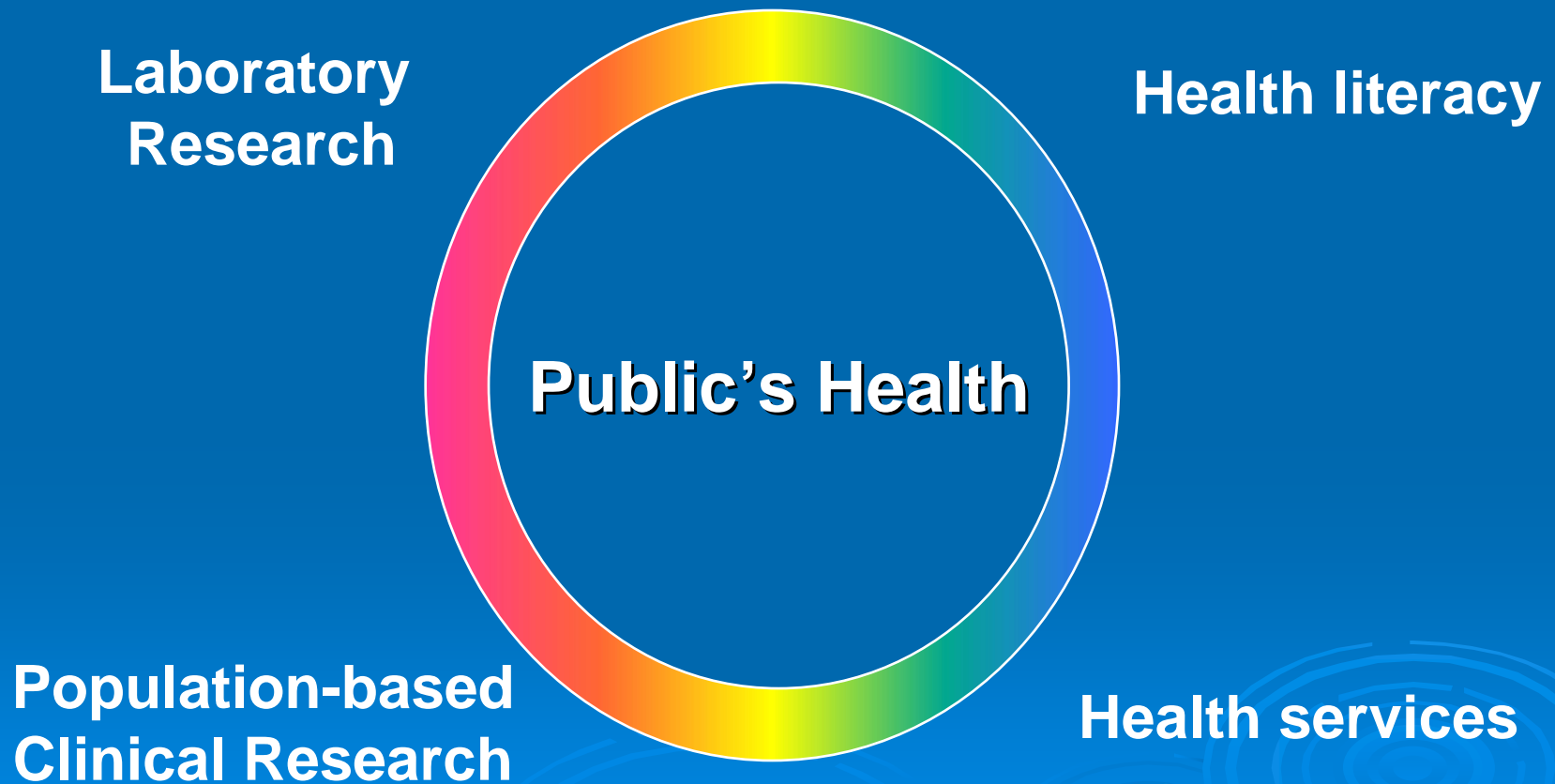
**Micro biological level**

Figure 1. Health as a continuum between biological and social factors across the lifespan. (Adapted from Glass & McAtee, 2006).

The challenge is to facilitate continual integration:

Laboratory Research

Health literacy

Public's Health

Population-based Clinical Research

Health services
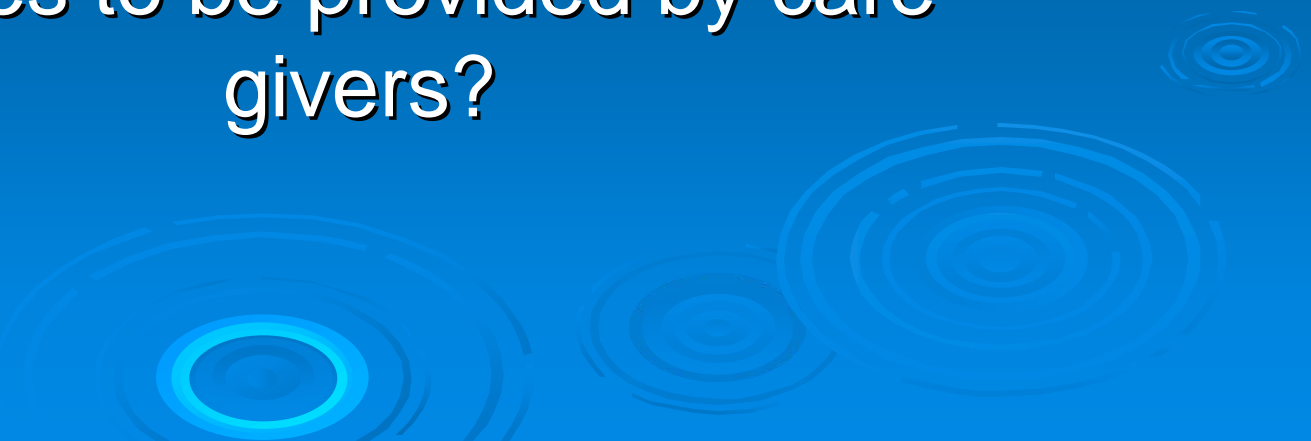
# Moving science into practice…

# We love the characteristics of the ideal public health measures:

➢ Safe

➢ Effective

➢ Easy to use

➢ Low in cost

➢ Acceptable, accessible, affordable, available, accountable, sustainable

# Do we need to develop characteristics for emerging technologies for public health settings?

What about self-care, family care, services to be provided by care-givers?

# Does our approach to public health functions need to be revisited?

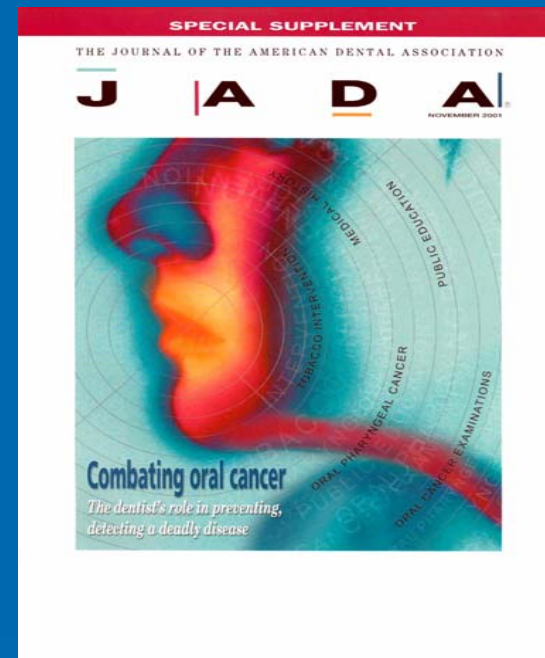"*Public Health in America*," Public Heath Functions Steering Committee, 1994.(Adapted)

ASSESSMENT *(Examination & Diagnosis)*

ASSURANCE *(Treatment & Follow-up)*

POLICY DEVELOPMENT *(Treatment Plan)*

RESEARCH

Monitor Health

Diagnose & Investigate

Inform, Educate, Empower

Mobilize Community Partnerships

Develop Policies

Enforce Laws

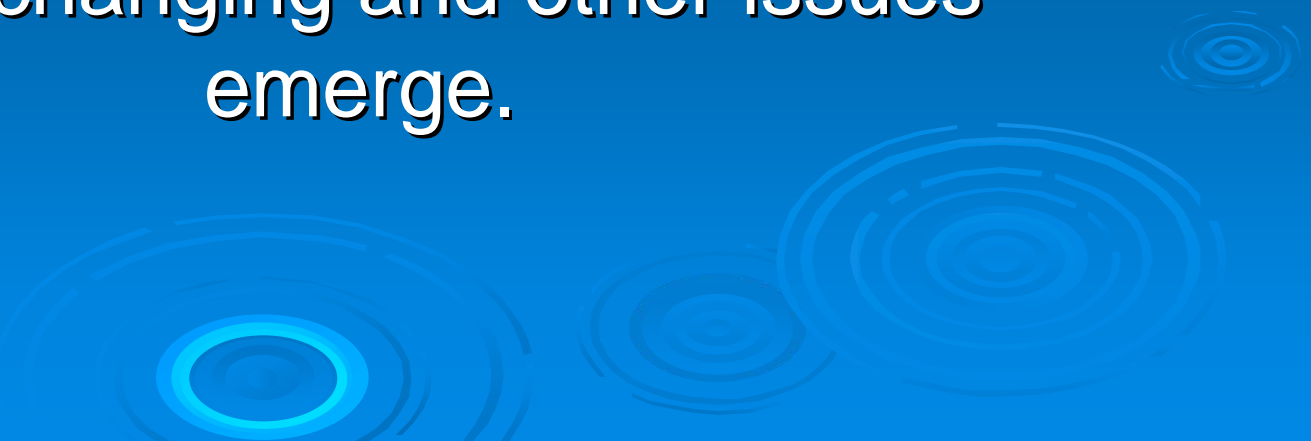Link to / Provide Care

Assure Competent Workforce

Evaluate

# Steps <u>have</u> been taken to take formal action:

- State Models for Oral Cancer Prevention and Early Detection

- "Oral visual screening can reduce mortality in high-risk individuals and has the potential of preventing at least 37,000 oral cancer deaths worldwide." (Lancet 2005; 365:1927-33) .

- Oral Cancer Foundation www.oralcancer.org



SPECIAL SUPPLEMENT

THE JOURNAL OF THE AMERICAN DENTAL ASSOCIATION

J |A D A|

NOVEMBER 2001

Combating oral cancer

*The dentist's role in preventing, detecting a deadly disease*



26  ADA NEWS JANUARY 21, 2002

# N.Y. moves on oral cancer

Law requires CE for dentists

# We have put "it" together – here and there.

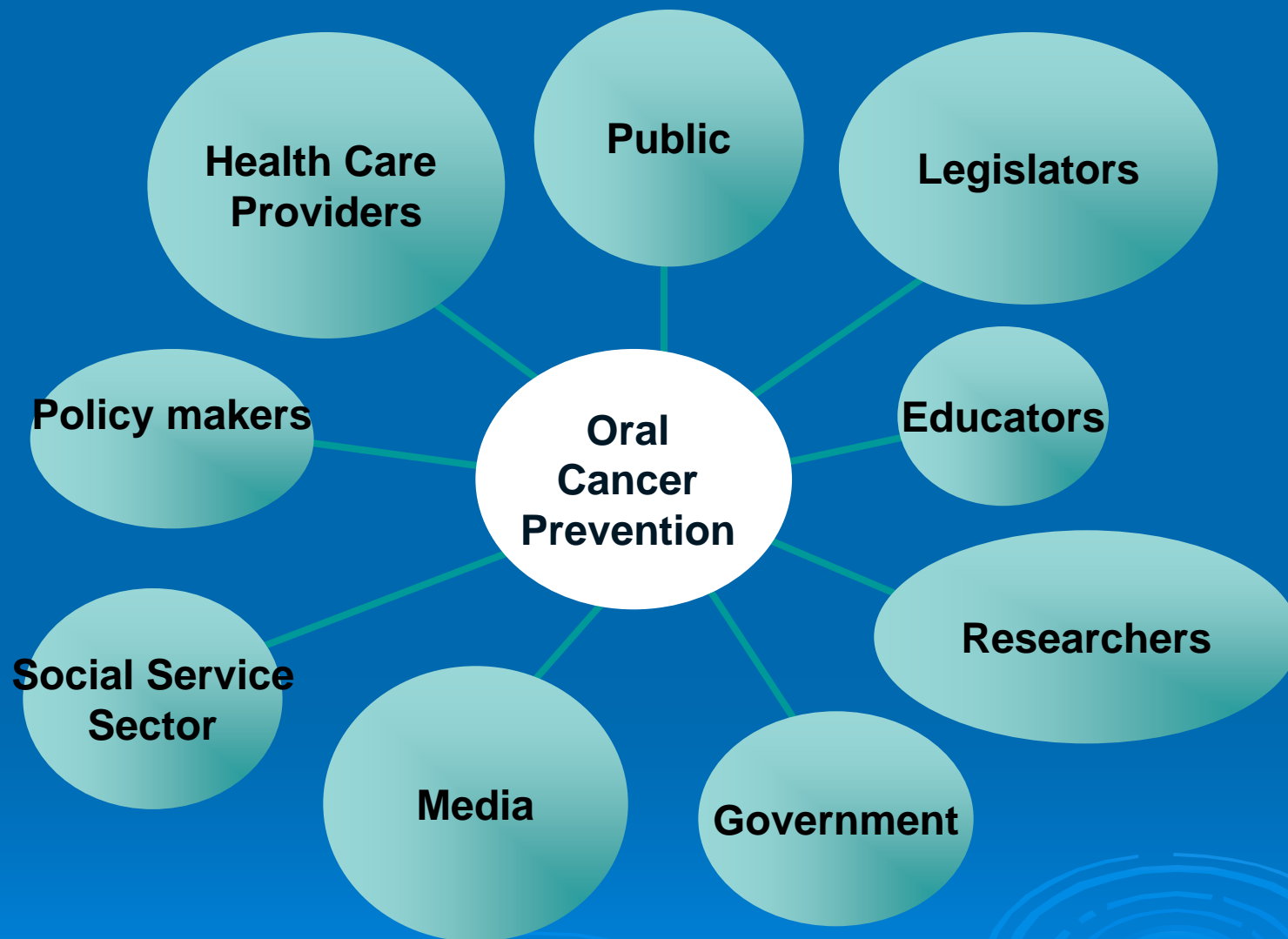The challenge is, that the "it" keeps changing and other issues emerge.

# The Future Paradigm:
*Transform Medicine from Curative to Preemptive and focused on the individual*

**Predictive** ↔ **Personalized** ↔ **Preemptive**

*Participatory*

# Enough of the problems,

what are the solutions for putting it all together in public health settings?

# Moving "it" takes perseverance and will – political and personal

- Redefine "public health settings"
- Launch new Task Force – start now – education, oversight, science
- Set formal plan for actions at local, state and national levels

- Extend the science base; stimulate successful proposals
- Support community-based multi-sectoral, multi-professional partnerships
- Think local and global

# Why is this time different from all other times?

- ➤ We are being challenged to go beyond the traditional causal factors – and beyond a traditional screening approach

- ➤ New technologies are at the frontier of development – further refinement of these technologies are needed for ultimate personal use; and for real time analysis and response

- ➤ Oral cancer detection is one of many diagnoses the emerging technologies can provide -- our role as primary care providers/public health practitioners continues to expand

# Take leadership for the nation's health

*"Of no one thing are we more assured than that dentistry of today must either advance or give place: to attempt to confine it to its present limits is to seek to control that progress which is itself evolution."*

*Editorial:"The Future of Dentistry," Dental Cosmos, 14(11:18:1872)*

# Sources that influence diffusion: organized by effect of policymakers (PM)

| Insensitive to PM | Subject over time to PM | Susceptible to PM |
|---|---|---|
| Prevailing Theory | Practice setting | Environmental constraints and incentives |
| Attributes of Innovation | Decision-making process | Conduct and methods of evaluation |
| Features of Clinical Situation | Characteristics of potential adopters | Channels of communication |
| Presence of Advocate | — | — |

** also consider reimbursement, training, patient/community acceptance, etc.**