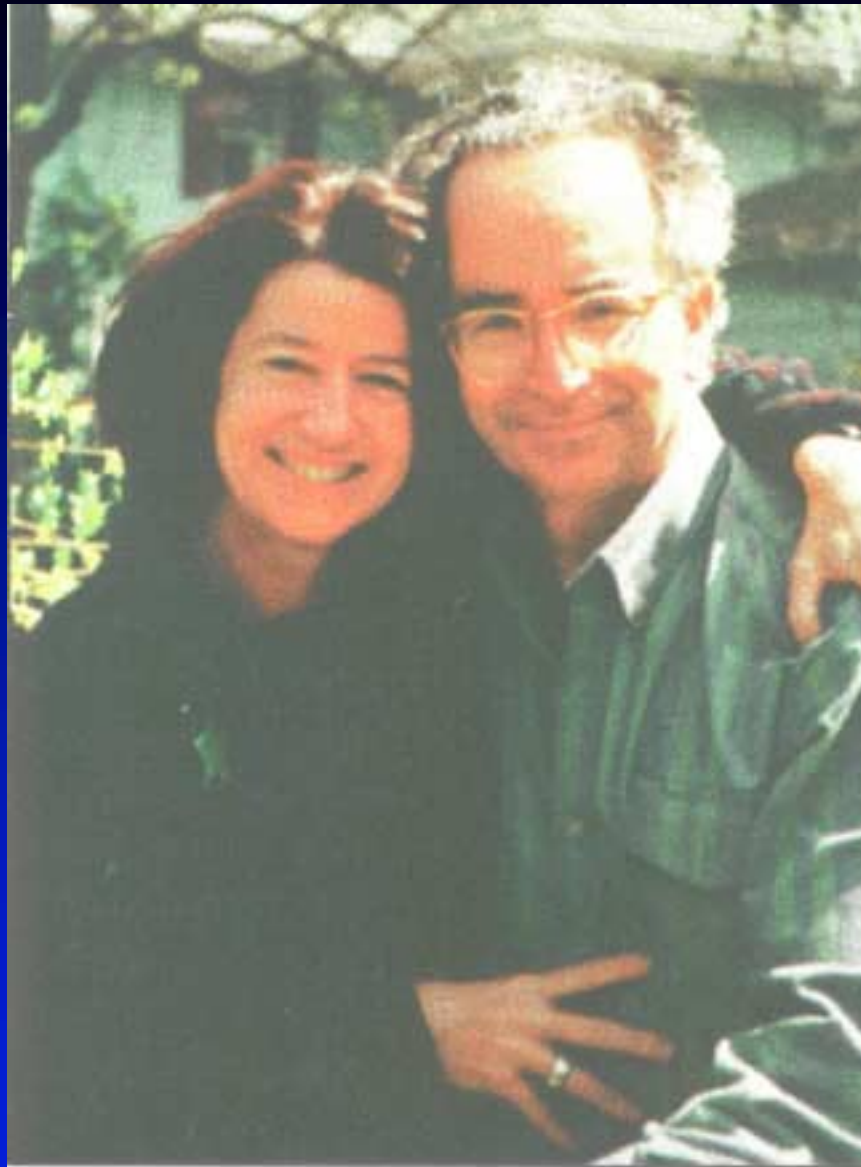




"Double great loss." AIDS researchers Mary Lou Clements-Mann and Jonathan Mann.

AIDS

A Paradigm of Public Health (or System) Failure

Donald P. Francis, MD, DSc.

Disease Prevention and Government

- Long lasting prevention efforts – a key to success of modern societies (“social maturity”)
- Little social value given to prevention
- Little support given by democratically elected officials (those who will be afflicted don’t know it)
- The slower the evolution of an phenomena, the less the public interest
- Importance of Prevention – Government must translate for the people
- Bad governments cause misery for their people
- For public health, a National Public Health Board is required to translate social values and needs.

AIDS – Social and Virologic Combination

The virus, its transmissibility:
Extremely high mortality
Effective invader

Social/political taboo
Sex
Homosexual sex
Intravenous drug use

Deniability
Long incubation period

Long Incubation Phenomena

- Ebola - 75% mortality, 2 week incubation
- HIV – 99% mortality, 10 year incubation

Timing of the AIDS Epidemic

United States

- Anti-government movement

- Conservative movement

- US guidance of other countries'
public health response

Developing Countries

- Collapse of government

AIDS-Related Behavior Change Within the Political System

“Training gay men how to have safe anal intercourse, training intravenous drug users how to inject their drugs safely, and training youth and female sex workers how to use condoms are programs that are essential for protecting the public’s health. But they are hardly programs that attract even well intentioned public figures. Worse, they are lightening rods for ill-willed politicians who use divisiveness to gain public attention. “

D. Francis, Pub Health Rep, 2001; 116:390-5

20 Years Later

“The CDC’s number one mandate right now is fighting bioterrorism. Instead, we find out that our money is being used for promoting teen abortion and expanding pornography.”

Rep. Joseph R. Pitts (R-Penn) Washington Times Nov 8, 2001

20 Years Later

“Congressional leaders last night approved the District of Columbia’s \$5.3 billion budget, but not before House and Senate conferees “killed” a Senate-led effort to permit the city to use its own public funds for needle-exchange programs.”

Washington Post Dec 5, 2001

Looking Ahead

Vaccine:

The only way to stop the AIDS epidemic

Social/Public Health Failure

The failure of industry to develop vaccines is just another manifestation of the lack of social value given by society, led by its government, to prevention.

Profit Motive

For a society
For a company

Annual Direct Medical Costs of HIV for the World

\$18 billion in 1997*

*Modified from *AIDS in the World II*,
Ed., Mann & Tarantola

Financing Vaccine Development

HIV vaccine development
costs from start to market

\$200,000,000 to \$300,000,000

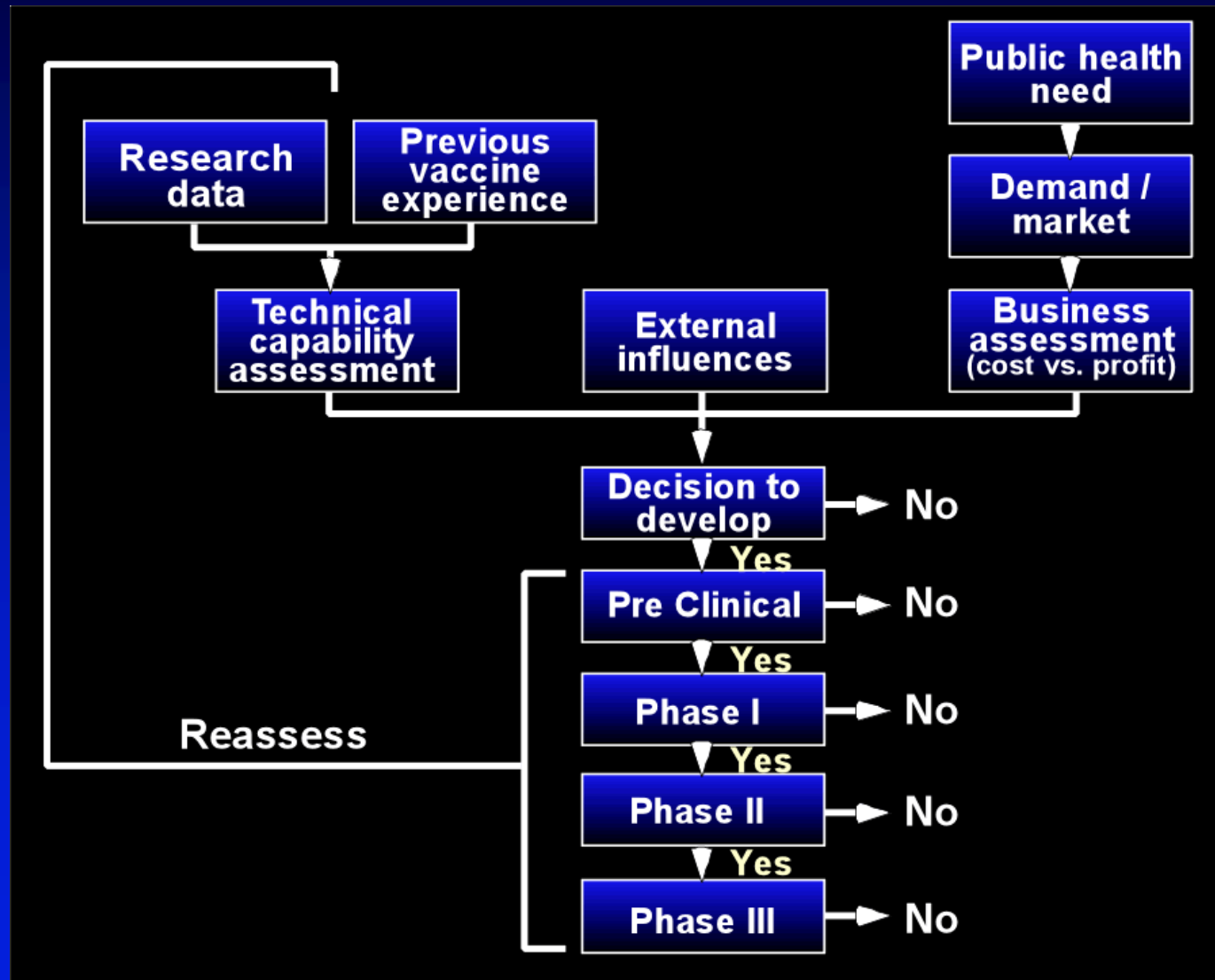
How Many Candidate HIV Vaccines Could Be Funded by One Year's Direct Medical Costs?

$$\frac{\$ 18.0 \text{ billion (medical costs)}}{\$ 0.3 \text{ billion (develop. costs)}} = \mathbf{60} \text{ candidate vaccines}$$

Phase III Vaccine Trials

How many HIV vaccines are in
Phase III?

Vaccine Development by Industry



External Influence of AIDSVAX Development

Who Helped, Who Didn't.....

Investors	++++
------------------	-------------

Government

NIAID	- -
--------------	------------

CDC	+++
------------	------------

FDA	+++
------------	------------

Academic Researchers

Mainstream	+++
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Fringe	- -
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Public Health	++
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- David Baltimore, Ph.D.

“ . . . very, very long shot . . . ”

Phase III trial could “seriously dent the reservoir of people willing to participate in future trials of AIDS vaccine . . . ”

Wall Street Journal
June 3, 1998

Safety and Immunogenicity Data

Animals

- Toxicity
- Immune response
- Chimpanzee protection

Humans

- Minimal reactogenicity
- No hematologic or biochemical abnormalities
- No enhancing antibodies
- No enhancement of disease
 - In HIV⁺ people
 - In seroconverting vaccinees

- Binding antibodies (gp120, V-3, V-2)
- Blocking antibodies (CD4)
- Neutralizing antibodies
 - Laboratory strains
 - Primary isolates
- ADCC antibodies
- Mucosal antibodies
- DTH (skin test)

Phase III Trials

Design: randomized, double-blind placebo controlled

	<i>N. America/ Europe</i>	<i>Thailand</i>
Transmission	Sexual	Blood borne
Volunteers	5,400	2,500
Annual infection rate	1.5%	4%
Clinical sites	59	17
Start date	June 1998	March 1999
Fully enrolled	Oct. 1999	Aug. 2000
Analysis completed	Q1 2003	Q4 2003

Phase III Efficacy Trial Endpoints

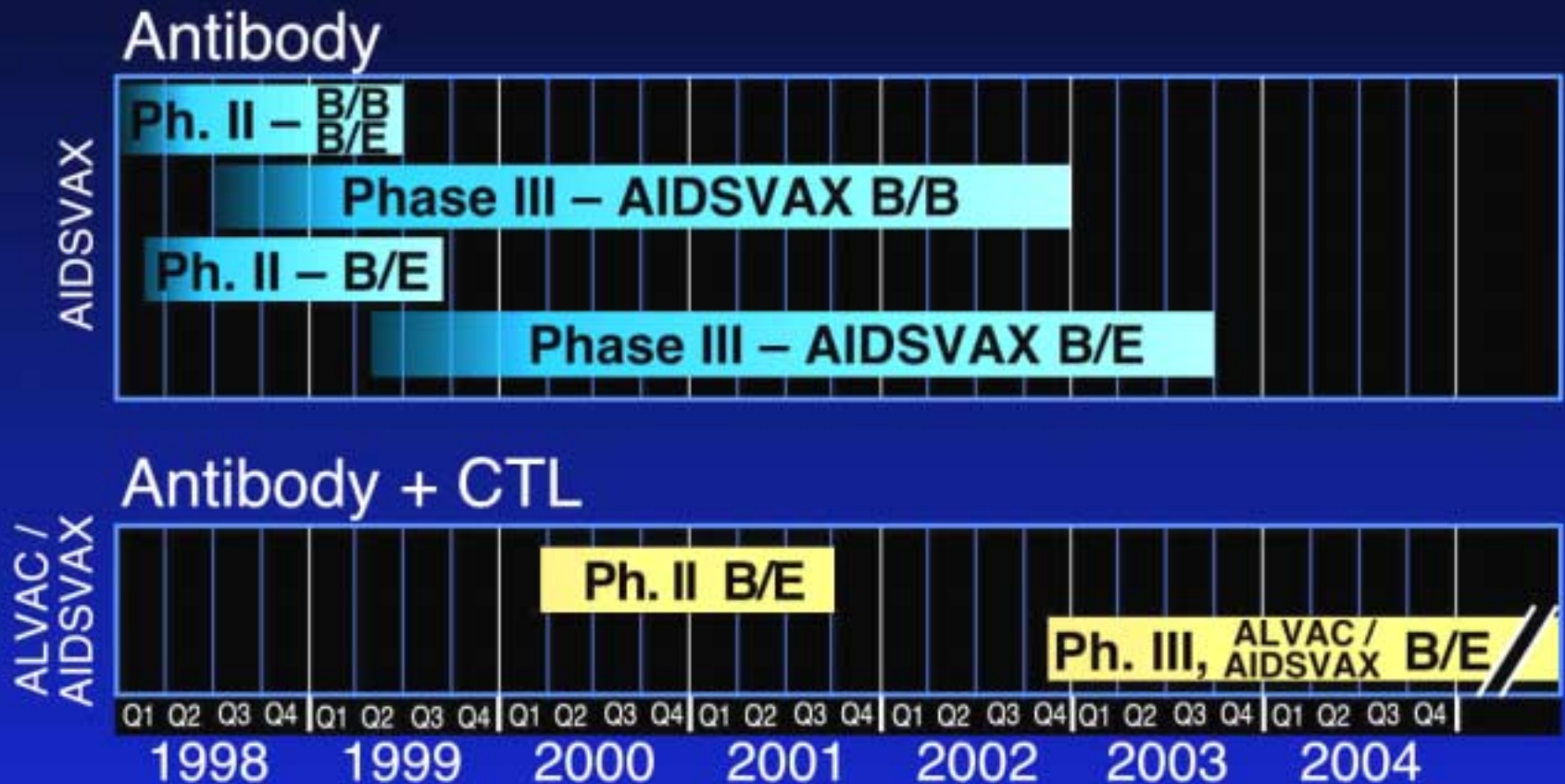
Primary – Sterilizing immunity

- Prevention of infection (ELISA / WB)

Secondary – Modification of infection

- Prevention of chronic viremia (PCR)
- Reduction of viremia (PCR)

Late-stage HIV-1 Vaccine Trials



Phase III Efficacy Trials of AIDSVAX® B/B and B/E HIV Vaccines

U.S., Canada, Netherlands, Thailand

2	Trials (3 yrs. each)
4	Countries
78	Clinics
895	Employees
12,114	Volunteers screened
7,963	Volunteers enrolled
135,371	Clinic visits
55,741	Injections
127,408	Blood draws
1,286,279	Case report forms



Trial Sites

Thailand



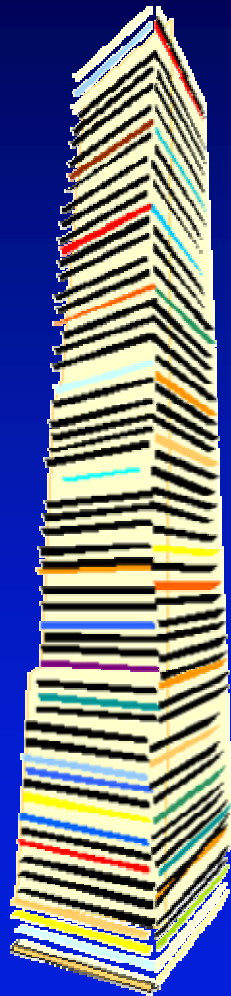
North America



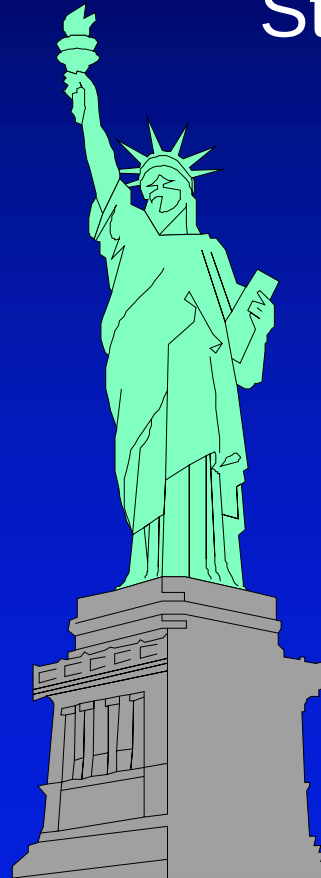
★ The Netherlands

Number of CRFs Expected by the End of Study

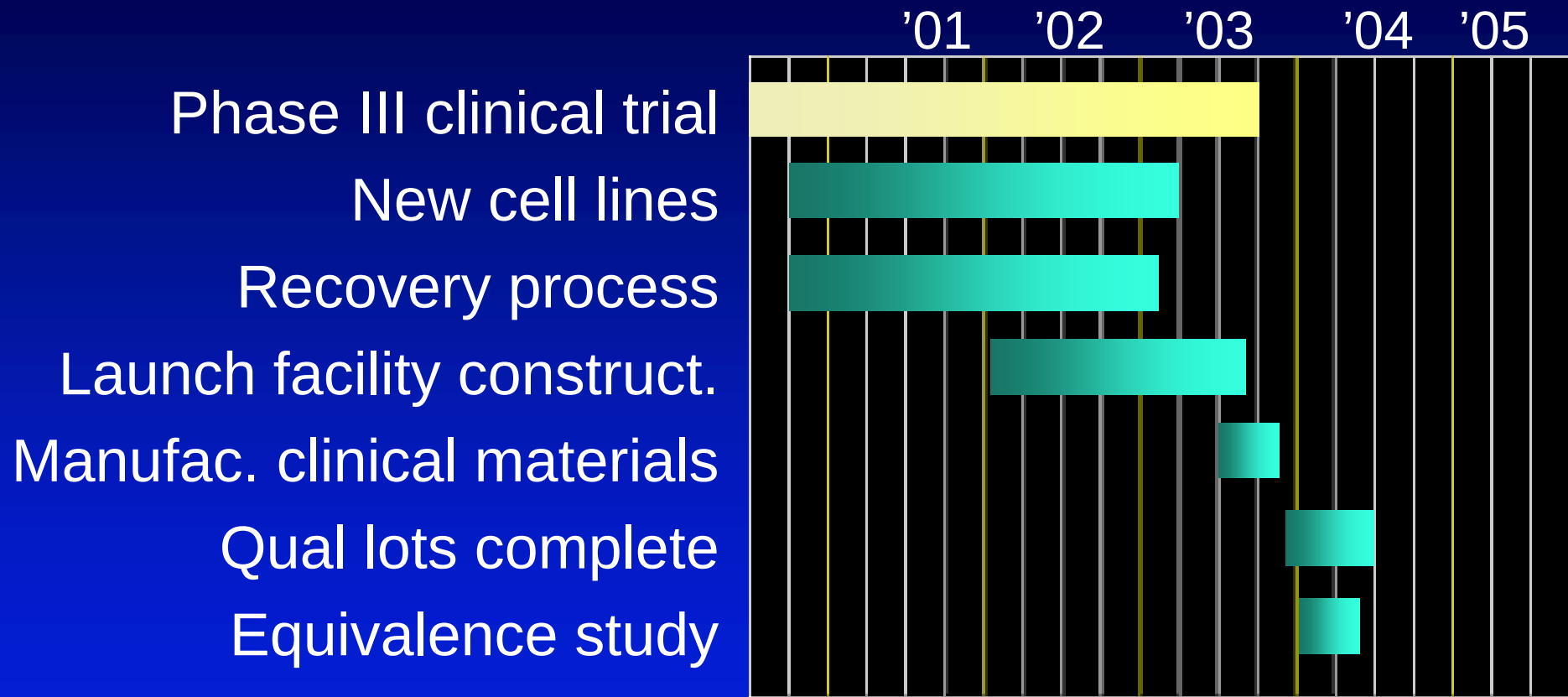
Over
1,000,000
CRFs
330 feet



Statue of Liberty
305 feet



AIDSVAX B/B Timeline – Manufacture



Projected B/B approval: Q4 '04 or Q1 '05

Bad Government

“....the fact is that poverty and misery are usually associated with bad governments.”

George Soros on
Globalization,
PublicAffairs, NY, 2002

Looking Ahead

National Health Board

- Like the Federal Reserve Board
- Supply the Nation with a long-term vision
- Protect Public Health from Extremism