Executive Summary

The new century has foisted on California and the nation tremendous security-related and economic uncertainties. For those in leadership positions, these uncertainties require difficult and unavoidable decisions. California, along with other states, is struggling to pursue longstanding priorities with diminished resources, while at the same time grappling with new demands to protect and serve its residents.

The public health system is central to this struggle.

In the unlikely event of a biological weapons attack, a computer-based monitoring system staffed by capable public health scientists could save a million lives in a city the size of Los Angeles, according to federal defense researchers.[1]

On a regular basis, hospital-acquired infections are killing an estimated 8,400 Californians a year, according to federal and state authorities. A robust public health system could prevent the majority of those deaths.[2]

In these and less dramatic ways, a strong public health system can reduce injury, illness and death. But the public health infrastructure is in poor repair, providing less protection than it should against everyday hazards, and unprepared to adequately protect us against the remote but substantial threats that we now face.

In California, only 20 percent of "reportable" diseases and conditions are actually reported to public health officials.[3] If collected, such information can alert scientists about an emerging influenza epidemic or a smallpox attack in time to prevent illness and death. When a California food processor was shipping contaminated juice that sickened scores of people, it took Washington State to detect the source and notify California authorities.[4]

In some cases, California has the physical capacity to do the job, such as the new laboratory at Richmond. But at one key facility, only 60 of the 100 positions are filled, delaying the timely evaluation of cultures taken from ill patients.[5]

In this report, the Commission examined California's public health system. "Public health" means different things to different people. The term is sometimes used to refer to government-subsidized medical care for the poor. It is sometimes used to describe efforts to influence

behavior – such as smoking, eating or drinking – that can determine our health.[6]

But the most essential definition – and the focus of the Commission's report – is public health as the government's efforts to protect all of its citizens from environmental contamination, disease and infection. While there are many actions that individuals and organizations can take to reduce injury, illness and death, some of those actions only government can take. In this report the Commission identifies what the State must do so that it can act with the greatest skill possible.

At the state level, for decades the core public health functions have not been within a single department, or even a single agency. They are scattered throughout the executive branch. There is no focused leadership, no coordination of efforts, no informed public process.

Recent threats of terrorism require California to reorganize existing functions so that leadership can be solely dedicated to these problems. We need to reclaim the transparency provided by a public process and the discipline provided by a scientific process. These reforms can be accomplished by creating a department of public health with expert and independent leadership, and a public advisory board to promote excellence.

Public health is not a state function alone. Local public health and other agencies, hospitals and clinics, doctors and nurses are strategic partners. But the system does not operate like a system – with clearly defined responsibilities, quality assurance and communication. While the State cannot do this job alone, only the State can network the individual components into a responsive and competent system.

While organization matters, people and the technologies in their hands matter more. Neither the public nor private sector can point to successful endeavors that did not result from the hard work of qualified individuals with the right tools. We rely on that formula to protect the national security and to make our neighbors safe. And in this case, we must rely on it to protect the overall health of Californians. Identifying diseases and contaminants, determining how to protect and serve the public, communicating information and administering programs demand exceptional skills. It is folly not to give deliberate attention to these prerequisites to protecting the public's health.

Finally, the core of most problems is funding – not just the level of resources, but how those funds are allocated and accounted for. No one in California knows what the State and counties spend collectively on public health or how they spend it.[7] The Commission was presented

with many examples of how additional resources could improve the system, and the federal government is providing millions of dollars to plug the most serious gaps. The public health system is certainly worth investing in, and maybe even investing in more. But serious efforts need to be made to document existing resources, and analyze how future resources can be better spent.

There is a nexus between traditional public health and the crisis over health care. Effective public health programs can efficiently help to maintain the health of all Californians and reduce the demand on the clinics and emergency rooms.[8] In addition, the kind of organizational changes advocated in this report – especially a volunteer board of experts and a state Surgeon General – would provide a key venue for helping state and local policy-makers understand our greatest health-related challenges and our options for resolving them.

The Commission would like to thank the large number of professionals in local, state and federal health agencies, in universities and the private sector, who shared with us their knowledge, wisdom and passion. After careful review of the information presented, the Commission offers the following conclusions:

Finding 1: The State's public health leadership and organizational structure is ill-prepared to fulfill the primary obligation of reducing injury and death from threats that individuals cannot control, such as environmental hazards, bioterrorism and emerging infectious diseases.

While health science has improved the quality and length of life, new challenges jeopardize that progress. Evolving pathogens are challenging the scientific community in ways not encountered since the development of antibiotics and vaccines. For example, tuberculosis strains that are resistant to antibiotics – and cost on average $250,000 per person to treat – are spreading.[9] Preventable hospital-acquired infections are re-emerging in America as a leading cause of death.

Recommendation 1: The Governor and Legislature should create a public health department – separate from Medi-Cal and other insurance programs to serve the poor – that is focused on emerging threats, with physician and science-based leadership and an advisory board linking California's health assets and experts. The new structure should contain three essential components:

- ***The department should be led by a California Surgeon General.***

  - ✓ The Surgeon General should be a physician selected by the Governor from a pool of nominees recommended by the new public health board and the California Conference of Local Health

Officers based on strict scientific, medical, public health, leadership and management criteria.

- ✓ The California Surgeon General should report directly to the Governor, as is the case with the director of emergency services.
- ✓ Adapting The Center for Disease Control and Prevention's (CDC) parallel management model, the California Surgeon General should develop a team of physician/scientist leaders and accomplished administrators with public health expertise.

- ❑ ***A part-time, volunteer and scientific public health board should be established to provide public and expert involvement in the development of policies, regulations and programs administered by the department or directly affecting the health of Californians.***

Critical Sectors Linked Through Board

Members should be appointed by the Governor and Legislature and include:

1. A dean of a California school of public health.
2. A dean of a California school of nursing.
3. A dean of a California school of medicine.
4. The president of the California Conference of Local Health Officers.
5. The health officer of a large metropolis.
6. A rural health officer.
7. A public laboratory director.
8. The physician leader of the state's medical emergency response system.
9. & 10. Two public members of national stature (possibly selected by the board) based on their broad experience and professional expertise.
11. The Board should be chaired by the Surgeon General-Director of the Department of Public Health.

- ✓ Members should be appointed to fixed terms and imbued with a fiduciary responsibility to represent the public interest and protect the public's health.
- ✓ The board should be provided independent professional staff through reassigning existing resources.
- ✓ Through public meetings, the board should provide authoritative oversight of public health programs and regulations to improve effectiveness, examine ways to better use existing resources, analyze cost-effective alternatives for improving the health and safety of Californians and comment on regulations that will affect the public health.
- ✓ The board should encourage the participation of related government agencies, such as the health professions boards and the National Guard, as well as foundations and the professional associations, including the County Health Executives Association, the Public Hospital Association, the California Medical Association, the California Health Care Association, the Western Occupational and Environmental Medical Association, the California Conference of Local Health Department Nursing Directors, and the public health associations.
- ✓ The board should report at least annually to the Governor and Legislature on the priorities for government actions to improve the public health and on ways resources could be used more effectively.

- ✓ The board should systematically assess the opportunities to consolidate or coordinate the work of other state health-related advisory boards, such as the Health Policy and Data Advisory Committee of the Office of Statewide Health Planning and Development (OSHPD).
- ✓ The board should ensure that the State develops effective partnerships to tap the expertise of California's universities, academic medical centers, community clinics, foundations, private medicine, and the National Guard. The board should explore strategic relationships with biotechnology and other high technology sectors.

❑ ***Core public health functions should be focused under the new Department of Public Health.***

- ✓ The department should contain laboratory, surveillance and prevention services now within the Department of Health Services (DHS), including epidemiology, communicable disease control, chronic disease and injury control, and clinical preventive medicine.
- ✓ The department should include the DHS Division of Emergency Services and the independent Emergency Medical Services Authority.
- ✓ To develop stronger relationships with the 61 local health offices, the department should assume and enhance the unit within DHS responsible for the California Conference of Local Health Officers. The department should include the divisions within DHS that ensure the safety of food, drugs and drinking water, as well as the Office of Border Health.
- ✓ It should include the Division of Health Information and Strategic Planning from DHS and the similar functions within the Office of Statewide Health Planning and Development. This would allow the State to dissolve OSHPD by transferring remaining functions, such as seismic safety, to the licensing and certification unit at DHS.

More Opportunities for Reorganization

With a department focused on public health, the State would have new opportunities to reduce duplication or improve effectiveness by consolidating or coordinating functions. Among those programs that should be considered for realignment or consolidation:

1. EPA's Office of Health Hazard Assessment and the health components of EPA's Department of Toxic Substance Control could be linked with the new department's units dealing with radiation safety and Environmental and Occupational Disease Control.
2. Food, drug and drinking water safety oversight in other departments.
3. Oversight of health facilities now conducted by DHS.
4. Oversight of health professions boards within the Department of Consumer Affairs.

- ✓ The department should be created by reassigning existing resources. The department should be created with no net gain in administrative personnel, by transferring existing administrative staff to the new department or contracting with the other departments for those services.
- ✓ Once the core public health department is operational, the California Surgeon General, working with the public health board, should assess the opportunities for either incorporating or developing formal and strategic relationships with health-related programs in other departments, as listed in the box.

Finding 2: The coordination and communication among state, local and federal public health agencies and their strategic partners is inadequate to protect Californians.

California needs a well-functioning and cooperative public health network that leverages both public and private sector assets to avoid preventable deaths and disabilities. A strong network would reduce illness and death experienced by Californians both in emergencies and under normal conditions.

Recommendation 2: The State needs to take the lead on coordinating federal, state and local efforts, as well as those of strategic partners, to improve communications, capacities and preparedness. Specifically, the State should:

- ❑ ***Set minimum standards for local health agencies.*** The standards should be evidence-based and build on efforts already underway by the federal government and the California Conference of Local Health Officers. The standards should establish minimum capacities that local health agencies would be expected to achieve, as well as a means for locally elected policy-makers and the public to assess and make decisions regarding public health assets. They should include regular emergency exercises with all strategic partners, including large private employers, the National Guard, local health providers, fire and police. Compliance with the standards should be linked to funding.
- ❑ ***Ensure agencies and providers have high quality technical assistance.*** DHS, by networking its own expertise with universities and other sources, should ensure that local health agencies have the assistance necessary to meet minimum standards, make the best use of technology, and build an expert public health workforce.
- ❑ ***Help local agencies regionalize laboratories and other assets.*** The State should develop regulatory and fiscal incentives for counties to efficiently satisfy minimum standards, and ensure they have the

technical assistance necessary to do so. Rather than replicating all assets across all jurisdictions, economies of scale must be considered to maximize available expertise.

- ***Refine and rehearse command and control procedures.*** The State should clarify to all parties the authorities, responsibilities and procedures to be followed among state and local government and strategic partners in the event of an emergency. The State should require regular exercises and drills among all parties and link funding to participation.
- ***Network must be extended to the private sector and other partners.*** The public health subcommittee of the State Strategic Committee on Terrorism should be formalized and involve all of the private, public, and non-profit organizations that need to prepare for and respond to public health emergencies. The subcommittee needs a clear mission and directed leadership that can be held accountable for building this network in a timely manner. The new public health board would be essential to building this network for hazards beyond terrorism.
- ***Fortify border health protections.*** The State should work with the federal government, local agencies and neighboring states to comprehensively assess the threats and practical ways to reduce them. The State should seek to clarify responsibilities and ensure that the collective effort guards California from the transmission of contaminants and germs. It should consider creating a bi-state commission, similar to the Arizona-Sonora Commission, to address issues of health security with Mexico.
- ***Educate the public to reduce consequences and the demand on the system.*** The State should provide citizens with educational materials about how they can protect themselves in the event of a public health emergency as described in the box.

Citizen Training Needed

To reduce the impact of bioterrorist attacks or outbreaks of infectious diseases, citizens should be trained to know:

- When to seek care in clinical settings, stay in place, or evacuate.
- Who and when to call for assistance and information, such as 911 and 311.
- Other potential sources of information like radio, the Internet or community sites such as fire stations and schools.
- What to expect from public health authorities such as physician health officers and public health nurses.
- How simple efforts such as careful hand washing and use of supplies such as certain types of gloves and masks may help guard against the spread of some infectious disease.
- How and when to obtain and use specialized radiation pills and other supplies.
- What should be kept in home and office kits for use in an emergency, and how to use the supplies effectively.

Finding 3: Expert, technical and physical capacities and assets must be rebuilt and re-tooled to counter current and emerging threats.

To address the challenges and threats of the 21st Century, California must organize and deploy the best minds and capacities available. Californians have developed some of the most sophisticated technology and the State is home to world-renowned medical centers, scientific expertise, and health professionals. These resources must be brought to bear on the complex public health challenges to protect the public.

Recommendation 3: The State must significantly bolster technical, scientific and physical capacity to make sure the best available tools and talents are protecting Californians. Specifically:

- ***Commit to long-term investment in intellectual capital through training and retaining excellent public health professionals.*** Professionals are needed to provide scientifically-based, authoritative protocols, information, technical guidance and consultation to local public health authorities and medical professionals. To accomplish this:

  - ✓ ***Deputize at the State level.*** Create a state pool of deputized local health officers, public health nurses and laboratory directors who are certified as meeting standards for training, knowledge and skills. Encourage service with the continuity of state-based benefits and ongoing training, and reward improved professional skills. Consider making public health a uniformed service, like the U.S. Public Health Service, police and fire, recognizable to the public.

  California must quickly develop enhanced capacity to respond nimbly to this century's highly complex health threats by employing the best of public health's scientific methods and tools available.

  - ✓ ***Adopt CDC's policy of hiring senior staff with scientific qualifications.*** Adopt CDC's parallel management model that pairs senior scientists and doctors with public health trained managers to enable each to do what they have the training and experience to do best.

  - ✓ ***Pay for expertise.*** Elevate and reward scientific expertise with compensation that is competitive to retain employees and attract potential entrants into the field. Pay ranges should consider the high level of education and continuous training needed to achieve the required level of expertise. Compensation packages could include forgiveness of student loans.

  - ✓ ***Establish numerical guidelines for specific types of scientists.*** California should consider guidelines for key public health scientists such as epidemiologists based on specific performance criteria and expected outcomes such as turnaround time for responding to doctors' inquiries, completing lab tests and investigating hospital-

acquired infections. These guidelines should be periodically reassessed as technology and threats evolve that affect workload and productivity.

- ✓ ***Directly link the education pipeline.*** UC, together with state and local health departments, should devise specific strategies to ensure available scientific expertise. The strategy should include incentives to schools, students and work sites to create a practical school-to-jobs pipeline for public health workers. Developing needed professionals should be a priority for public education, and funding should be tied to that goal. Specific programs should be designed to attract and retain workers by providing a career ladder.

- ❑ ***Establish security clearances and security protocols.*** Employees and contractors should maintain security clearances and follow security protocols if working with highly sensitive information and harmful substances. Standard procedures must be established for the handling of secure information and for public access to sensitive information. Harmful substances must be cataloged and tracked, and access to such material must be controlled.

- ❑ ***Highlight achievements.*** To reward excellence in the public health workforce, create a "health care heroes" program with awards for excellence in public service. This will help the public to understand this core element of the public safety service while simultaneously providing a recruitment tool for potential entrants into the field.

- ❑ ***Adopt the best available technologies to conduct core duties.*** For instance, real-time web-based transmission of critical information and computer-assisted analysis and mapping should be employed in California's disease surveillance systems. New technologies should be reviewed by the new Public Health Board where community and strategic partners would have the opportunity to consider a variety of options, as well as system-wide impacts and potential for adoption in the private sector.

- ❑ ***Ensure critical laboratory capacity.*** Laboratory capacity must be bolstered to guarantee that Californians have access to timely review of even the most serious of pathogens, including for bio-safety level 4. Critical staff shortages should be addressed to ensure that laboratories can conduct timely surveillance and intervention programs.

- ❑ ***Improve essential communications infrastructure.*** The State, the 61 local public health jurisdictions, health care providers and other strategic partners must have real-time and secure communications.

- ***Ensure surge capacity***. When the new public health department is established, it should be given explicit responsibility to ensure that specific and dependable surge capacity is available. Meanwhile, the State should consider working with the California National Guard's State Military Reserve to ramp up this capacity. In addition, the State should consider petitioning the federal government to increase the number of California National Guard medical units. Surge capacity must include trained personnel, bed, surgery, laboratory, pharmaceutical, and specialized equipment capacity.

- ***Convene a scientific panel to counter preventable health-care-setting-acquired infections.*** Until a public health board is established, a panel of scientific experts should be convened to review California's adoption of CDC's guidelines for preventing the spread of these infections. The panel should consider mandatory reporting of health-care-setting-acquired infections and a structure of regulations and fines to ensure CDC guidelines are followed.

Finding 4: Public safety functions of public health have not been given priority, and public health resources are not adequately managed and tracked.

The erosion of central public health capacities became a heightened concern in the aftermath of September 2001. To rectify deficiencies, the federal government provided funds to states – approximately $100 million to California in 2002. Federal officials have indicated an intention to provide additional grants over the coming years to bolster public health, but the amounts are not determined.

Recommendation 4: The State should prioritize public health spending as one of the core components of public safety equal to fire and police. Specifically the State should:

- ***Ensure adequate resources to provide core protection.*** The resource allocations should be linked to meeting standards based on such efforts as the Public Health Ready competency certification developed collaboratively with CDC, the local health officers' Core Area Capacity Instrument, as well as work underway by RAND's Center for Health Security to provide specific quantitative gap analysis on California's public health system. If necessary, policy-makers should consider dedicated funding streams to ensure these competencies are not eroded. Over time, funding should be adjusted according to the changing population needs, technological advancements, and the array of public health threats, from natural to terrorism-related.

- ***Prioritize funding for critical public safety components.*** The first call on public health funds should be on core public health

duties to protect the public from threats over which they have no control. These core duties include high-quality, timely public health infection control services, laboratory analysis, and illness surveillance. Universities should also give funding priority to programs to develop critically needed scientific expertise.

- ***Use cost-benefit analysis in resource decisions***. This analytical tool, when combined with public input, can result in better resource allocation and a more rigorous way to set priorities to ensure the greatest health outcomes using long-term analysis. Cost-benefit analysis should be used to modify base funding, as well as public health program funding to ensure that additional funds improve preparedness and health outcomes. This quantitative analysis should be made public and incorporate actuarial information.
- ***Establish accounting standards and reporting mechanisms.*** The standards and reporting mechanisms should allow for accurate and ongoing tracking of public health dollars and positions. The State should require counties to maintain clear, separate and standardized budget line items that are readily traceable over time. Budget information should be reported to the State according to these categories.
- ***Make the information public.*** The trend of core public health funding should be readily evident to the public and should be included in the annual report of the Public Health Board. Given the relationship between police, fire and public health in protecting public safety, a useful metric would be to compare the numbers of personnel and budgets on a per capita basis, of each of these three public safety services.