

Community Shielding:

A Policy Analysis

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Table of Contents

Policy Analysis Memorandum 1

Executive Summary 1

I. Policy Statement 4

II. Background 4

III. Options 26

IV. Recommendations 35

References and Endnotes 38

Appendices (1-47) 47

Executive Summary

We live in an age of ever-increasing concern over terrorism, as well as other naturally occurring catastrophic events. Such events have led federal and state governments, policy makers and the American public to question our preparedness and response as individual citizens, communities and the nation as a whole. As a democratic society, we most fear an unprecedented attack of bioterrorism causing a contagious disease outbreak of epidemic proportion. We must effectively combat these deliberate acts of violence against symbols of our democracy, which seek to force a surrender of our basic rights and principles. We must strive to respond in a way that fosters resilience and comradery, rather than divisiveness and disunity, so as to mitigate the physical and psychological injuries and damages inflicted and to maximize our recovery and survival. To do so, we must implement policies that engage the participation of American citizens, as well as communities and governments, to deliver an effective response that will restore and preserve the values and liberties we have come to know from living in a free, democratic society.

“Community shielding” is a unique opportunity to engage individuals, communities and government in a unified response to future acts of terrorism, in particular bioterrorism. The concept envisions an integrated, facilitated form of “sheltering,” wherein individuals and groups within a community employ a self-imposed isolation, or quarantine, within their natural and familiar surroundings for a temporary period of time until a threat or danger abates. The success of “community shielding” depends upon the development of partnerships between government, business, the media and the public, creating an integrated social infrastructure that facilitates a “shelter-in-place” response by providing essential resources to augment individual preparation for natural or unnatural catastrophic events.

“Community shielding” allows individuals to remain in their homes and communities, rather than evacuating an affected area in an attempt to avoid a threat or danger. Whether a government ordered mandatory evacuation or a spontaneous evacuation of citizens in the absence of instructions to leave an area, both usually result in a chaotic response, mass movement of citizens on congested roadways to nowhere, and the entrapment of vulnerable citizens suffering from illness or in need medical care. Gridlock of transportation systems in an affected area also hampers local first responders from reaching those most in need. By contrast, “community shielding” fosters empowerment and resilience in American citizens to remain at home in their communities and “fight,” rather than to “flee,” delivering a strong response to defeat the terrorist objective of disrupting and destroying American lives and the normal functioning of our society.

This analysis explores several policy options for implementing “community shielding” into emergency preparedness and response planning for future terrorism or other natural catastrophic events. A review of the data from three studies surveying American citizens on issues of preparedness for a future terrorist attack or other emergency provides instructive insight as to the optimal means for fostering awareness of and support for “community shielding.”

Four years after September 11, 2001 (9-11), a majority of Americans are still “very or somewhat concerned” about a major terrorist attack near their home or workplace that will significantly affect them and their families. They are most concerned about bioterrorism and second most

concerned about terrorism with a chemical weapon. A majority of American citizens have also taken steps to prepare for a future terrorist attack or other emergency (i.e. stored food and water, assembled first aid and emergency preparedness kits, arranged for a family meeting place). Most are willing and able to “shelter-in-place” at home or at work for a period of time following an emergency, or as specifically requested by government or public health officials following an infectious disease outbreak or dirty bomb explosion in or near their community. “Shelter-in-place” in the context of these survey results must be distinguished from the wider, more integrated form of “shelter-in-place” contemplated by “community shielding,” the success of which will be facilitated by the distribution of necessities via community and government resources until a threat or danger abates.

In the absence of the implementation of “community shielding” as part of community emergency preparedness, mere “sheltering-in-place” may be effective to some degree in preventing or mitigating injuries and damages resulting from a future terrorist attack or other natural infectious disease outbreak. However, the data demonstrates a significant increase in the willingness of American citizens to participate in a “community shielding” strategy if their “sheltering-in-place” is augmented by the provision of resources until it is safe to leave their homes or communities (i.e. delivery of food, water, medications and medical treatment; dissemination of reliable information as to the crises, its duration and the safety and wellbeing of their family members; and a means to communicate within and outside the affected community). These findings strongly suggest that if local communities’ emergency preparedness and response plans include bringing food, water, medications and other necessities directly to citizens’ homes and workplaces, and providing assurances as to the safety and wellbeing of family members from whom they are separated, citizen response would be favorable and in support of “community shielding.”

The implementation of “community shielding” as part of emergency preparedness planning and response to such future natural or unnatural events will require continued efforts toward a national initiative to increase awareness of the concept and to gain support from key government and community leaders, as well as the American public. Education will be necessary to enlist the public as significant participants in preparing for such future events, including the dissemination of information as to what steps to take to prepare, how notification of events will be provided, and how communication will be maintained during a crisis. Specially tailored emergency messages should be developed for different groups of citizens in different communities across the country. Further research is warranted to assess individual community response to the concept of “community shielding” in different areas of the United States. Partnerships must be developed with community emergency preparedness and response groups, drawing on the strengths of the media, businesses, and governmental and non-governmental organizations within and servicing those communities.

Given the current political and social climate, there is a policy issue as to whether to link an initiative for the implementation of “community shielding” to increase the level of preparedness for future terrorism or a natural catastrophic event, or both. The recent focus of the media, politicians, public health officials, public interest groups and the American public has been on the “inevitable” pandemic influenza. Indeed, the potential for this infectious disease outbreak could provide the opportunity to draw the attention of key stakeholders to the importance of

“community shielding” as a “least restrictive” alternative to other public health interventions (i.e. forced quarantine, isolation, mandatory vaccinations) that have been historically applied in such a situation. The legal barriers exist in attempting to enforce other more “draconian” measures under current statutes and constitutional standards are enormous, and there is a serious question as to the effectiveness of a present-day large-scale quarantine as the primary public health strategy for containment of the spread of infectious disease.

Based on the findings of the studies and data reviewed, as well as the criteria presented as to each policy option, this analysis concludes that the most effective approach to fostering awareness and support for “community shielding” is to link it to an initiative for increased emergency preparedness and response for a pandemic influenza. This policy option is consistent with the mission and goals of Critical Incident Analysis Group (CIAG) for increasing society’s understanding of “critical incidents” and their impact, and for minimizing resulting injuries and damages. If CIAG is successful in implementing “community shielding” as part of community emergency preparedness and response plans for a pandemic influenza, the strategy will be an integral part of such plans and be equally available as a viable and favored response to future acts of terrorism.

The implementation of “community shielding” as a favored response allows American citizens and communities to “do something now” to prepare for future natural and unnatural catastrophic events, rather than to wait and be caught unprepared. “Community shielding” will foster empowerment and resilience, and will serve to “psychologically vaccinate” the American public against natural emotions of fear, anxiety and even panic that will likely result in the wake of both natural and unnatural events. It will “contain contagion” emanating from such experiences by minimizing injuries and damages, and optimizing recovery. In the case of terrorism, “community shielding” will provide Americans with a means to defeat the terrorist’s ultimate objective to destroy our democracy society and the fundamental principles, values and liberties for which it stands.

I. Problem Statement:

What is the most effective approach to foster awareness of and support for “community shielding” and its implementation into federal, state and local emergency preparedness and response planning for future terrorism and/or other natural catastrophic events?

II. Background:

Concept of “Community Shielding” as a Response to Terrorism. Terrorism is “the unlawful use of -- or threatened use of -- force or violence against individuals or property to coerce or intimidate governments or societies, often to achieve political, religious or ideological objectives.” [1] More apropos to this analysis, terrorism has also been defined as “a psychological strategy of war for gaining political ends by deliberately creating a well-founded climate of fear among the civilian population.” [2] There can be no doubt that “the battlefield” of terrorism “is not the land upon which the terrorist act has been perpetrated, rather, it is the minds, that is, the psychology of those who survive!” [3] The terrorist’s objective is to seek to disrupt and destroy both the physical and psychological lives of affected individuals by forcing a

surrender of fundamental principles and liberties in the protection of themselves, their families, their properties, and their way of life. [3] The terrorist's ultimate goal is to traumatize and stymie the functioning of our democratic society as a whole, and those of our democratic allies. As such, our developed western democracy has become a keystone that supports and is supported by other democratic nations in the fight against terrorism; the terrorist's goal against these democracies is to project a global resonance of terror and dysfunction.

Biological terrorism, commonly referred to as "germ warfare" or "bioterrorism," is the deliberate release of naturally occurring or human-modified toxins or biological agents, to accomplish an act of terrorism. [3, 4, 5] It is perhaps the most feared form of terrorism and one that provokes the highest level of anxiety. The clear distinction of bioterrorism from "conventional terrorism" (i.e. bombs, hijackings) lies in the nature of the lethality, persistence and incubation period of the biological agent used in a bioterrorism attack. [5] Moreover, the transmissibility of diseases caused by biological agents and the potential for infecting large segments of the population for extended periods of time are characteristics that most separate bioterrorism from other forms of terrorism (i.e. chemical, nuclear and radiological). [5] The concept of "plague" and "pandemic" are embedded in our minds as representing feared, catastrophic events of the most devastating and widespread nature. Whether such events occur naturally or are precipitated through acts of bioterrorism, the effect is the same; they are the most comprehensive form of "contagion," especially in the advent of jet travel where the risk of rapid transmissibility is far greater than in past pandemic events. [3]

Any form of terrorism constitutes an attack on the physical and psychological health of an entire nation: the extent and success of recovery is highly dependent upon the social and behavioral responses of those affected by the terrorism, and of the first responders and others responsible for managing the terrorist event. [5] Hence, terrorism must be combated with a policy and a plan, developed well in advance of a terrorist act, that specifically addresses both the physical and psychological aspects of recovery. An integral part of a planned response to future acts of terrorism is the ability to "psychologically vaccinate" the American public against their natural emotions of fear and panic, so as to "contain contagion," minimize damages, and optimize recovery. [3]

The concept of "community shielding" provides the opportunity and unique means to prepare for and respond to terrorism. "Community shielding" is an integrated, facilitated undertaking by communities and citizens to allow them to remain in their homes or other safe havens within the community following a terrorist event. By "community," we mean a defined group of people living in a particular locality or geographic area, and having common ethnic and cultural characteristics. "Community" has also been defined as "a group of people living in the same locality and under the same government" and "having common interests." [6] "Shielding" signifies protection and refuge of individuals, also an important component of a "community shielding" strategy. [5] Although individual preparation through stockpiling of essentials is optimal and preferred, "community shielding" acknowledges the fact that not all citizens will be equally prepared (particularly in more urban, lower-socioeconomic areas) and recognizes the need for a government-facilitated infrastructure, which would augment individual preparation by delivering essential necessities (i.e. food, water, medications, etc.) via community or governmental resources, until the threat or danger abates and it is safe to leave. [3, 7] Remaining

in our homes and within our communities, with the support of community and governmental resources, provides for the greatest physical and emotional security by allowing individuals to maintain control over their lives, their health and their recovery following an act of terrorism.

A “community shielding” response to terrorism is to be distinguished from the more commonly known strategy of “sheltering-in-place.” As part of disaster preparedness counseling relative to an accidental or intentional release of a chemical, biological or radiological contaminant into the environment, the American Red Cross defines “sheltering-in-place” as selecting a small, interior room (whether at home, work or school), with no or few windows, and taking refuge there with a television or radio so that instructions can be received from local authorities as to what to do. [8] Indeed, under these circumstances, it is contemplated that instructions to “shelter-in-place” are intended for a duration of a few hours rather than for days or weeks. [8] By contrast, “community shielding” contemplates that individuals may “shelter-in-place” for up to a few weeks, and that, while “sheltering” is a necessary part of “community shielding,” it is not sufficient. “Community shielding” builds upon the “shelter-in-place” model by recognizing an extended, more integrated form of “shelter-in-place,” the success of which is facilitated by the distribution of resources by government and private services in the community until the threat or danger abates. Simply stated, the concept of “community shielding” proposes that citizens remain in a safe place within their communities, with necessities provided by community or governmental resources, until the threat or danger abates. [7] Hence, this involves more than just asking citizens to “shelter-in-place.” Moreover, to be successful, “community shielding” requires a preparedness and response plan addressing the specific needs of each community and its citizens before an act of terrorism or other natural catastrophic event. [7]

The following table illustrates these major differences between “community shielding” and “shelter-in-place.”

Community Shielding vs. Shelter-in-Place		
	“Community Shielding”	“Shelter-in-Place”
Major Characteristics	<p>Integrated roles of citizens, community and government.</p> <p>Facilitated by distribution infrastructure to augment individual preparation by delivery of necessities by government and community private services.</p>	<p>Non-integrated – relies on citizens to act individually.</p> <p>Non-facilitated – relies on citizen preparation with no distribution infrastructure for delivery of necessities to inadequately prepared individuals.</p>
Implementation	<p>Implemented as part of a community emergency preparedness plan; envisions citizen participation in development; specially tailored to</p>	<p>Implemented by federal, state and/or local government, non-governmental groups, businesses, organizations;</p>

	each community to address needs of its citizens.	no citizen participation in development; not specific to community and citizen needs.
Duration	Seven to twenty-eight days (long enough to break disease cycle of biological agent); shorter duration for chemical or radiological contamination.	A few hours to three days at most based on most disaster preparedness instructions that encourage citizens to store food and water for three days.

“Community shielding” has particular application to biological terrorism. In that regard, it has been defined as “[a] partnership of government, business, media, and the public, operating under the best scientific and medical practices, to break the disease cycle and ensure minimal disruption to the routine activities of the nation.” [5]. Within this partnership framework, “community shielding” facilitates a self-imposed quarantine or isolation of individuals, groups and/or communities for a period of time sufficient to prevent or minimize the transmission of disease caused by the release of a biological agent. [5] One of most significant advantages of “community shielding” is that it provides a voluntary and “least restrictive alternative” to other public health interventions (i.e. forced quarantine or isolation) traditionally imposed by government upon the American public in an effort to control the spread of infectious disease. As such, “community shielding” is a viable “adjunct solution” for responding to bioterrorism, complementing these other measures that have become difficult to invoke in an age of growing public awareness and governmental acknowledgment of civil and personal liberties. [3, 9]

Implementation of a “community shielding” strategy prior to a terrorist threat or actual event will provide significant involvement of citizens and communities in emergency preparedness and response planning, and will be effective in “psychologically vaccinating” the American public from the fear and panic likely to be experienced. Developing an emergency response plan that utilizes “community shielding” will also serve to defeat the terrorist’s plot to disrupt and destroy the principles and freedoms of affected individuals, communities and all Americans, and to thwart the continued functioning of our nation and its institutions. Therefore, it is imperative to act now to raise the level of awareness of “community shielding” and to gain the support of federal, state and local governments, communities, organizations, businesses, and the American public, for its implementation in emergency preparedness and response planning for future terrorism. Once a “community shielding” strategy is in place, it will nourish individual and community resilience and autonomy, and will provide the distribution infrastructure that can be utilized by communities and governments, not only as an integral response to terrorism, but also as a means to facilitate a more effective response to other naturally occurring catastrophic events.

Psychological Aspects of Individual Response to Terrorism and/or Natural Catastrophic Events and the Role of “Community Shielding” in Alleviating Vulnerabilities. It is axiomatic in human nature that, when faced with danger, there are only two responses: one response is to remain steadfast in the face of danger and “fight”; the other is to “flee” to escape the danger. [3] The appropriateness of either decision can be the most important determining factor in one’s

survival. [3] During any emergency, in particular one resulting from of an act of terrorism, a natural inclination for some may be to flee the affected area for self-preservation. [3, 5]

Several past natural and unnatural events have demonstrated this common behavioral response of fear and panic, followed by an act of flight or other unwarranted action. In January 1995, several cases of meningitis were confirmed in one high school in Mankato, Minnesota, later resulting in an eventual outbreak in the community and a mass vaccination of 30,000 people. [10] Panic and hysteria set in and unnecessary movement in the area led to the need for increased vaccinations; reporting to vaccination sites resulted in traffic jams in and around the community. [10] Some were scared away from the community (i.e. truckers drove over 100 miles out of the way to avoid traveling through town which was on a main state highway), but many others drove to the town from 30 to 50 miles away to get vaccinated out of fear that the virus would spread to their own communities. [10] Emergency rooms were overwhelmed with efforts to triage individuals presenting with only flu symptoms, but fearing they had contracted the virus. [10] In short, the inefficiencies of the individual and community response to the Mankato meningitis outbreak were an expensive exercise, costing the State of Minnesota \$1.2 million. [10]

Following the Three Mile Island nuclear reactor accident in Pennsylvania on March 28, 1979, the governor's delayed "advisory" two days later for the evacuation of no more than 3,400 women and children from within a 5-mile radius of the damaged reactor resulted in panic in the community and an evacuation of as many as 200,000 people to 25 miles out from the site. [11] This phenomenon, known as "shadow" evacuation, occurs when individuals outside the perimeter of an area from which an evacuation has been ordered also elect to evacuate and thereby contribute to congestion of the transportation system that is facilitating the planned and ordered evacuation. [12] This is to be distinguished from "spontaneous" evacuation, occurring when citizens in an affected area either observe or receive unofficial notice of an actual or perceived threat and, without any official instructions to do so, choose to evacuate. [12] Unlike a planned or "mandatory" evacuation characterized by the organized, phased and supervised dispersal of citizens from an area of real or potential danger, the movement, means and direction of travel of "spontaneous" evacuees is unorganized and unsupervised, and can be deleterious to the ultimate goal of protection of citizens. [12] Spontaneous evacuation can also occur despite official governmental instructions to "shelter-in-place." This occurred following an explosion at a chemical plant in West Helena, Arkansas in May 1997. When an odorous smoky cloud drifted away from the plant, authorities ordered residents within a 2-mile area downwind of the plant to evacuate, and those in the 2- to 3-mile zone to "shelter-in-place." [13] A study of citizen response to these instructions found that, while 90% of those told to evacuate did so; only 27% of those told to "shelter-in-place" complied, with 68% receiving those instructions opting to evacuate the area. [13] This expected public response was also borne out by the recent survey by CIAG of citizens of the National Capital Region (Washington, D.C. and suburbs in Virginia and Maryland) indicating that a significant percentage of citizens would evacuate the area following a bioterrorist attack with smallpox, with (36%) or without (38%) official instructions to "shelter" at home or in their place of work. [7]

Thus, in certain situations, the decision to flee is not the best choice. "Spontaneous" and "shadow" evacuations may result in citizens becoming trapped and vulnerable in traffic jams, and may also hamper the efforts of community directed mandatory evacuations or of local

emergency responders attending those most in need. [3, 5] Instead, remaining in one's own home and community providing for a familiar, stable environment may offer the best chance for optimal survival. [3, 5] While it may initially seem counterintuitive to remain in an area of potential danger, a pre-planned "community shielding" response to terrorism or other natural catastrophic event will provide the opportunity and the means for individuals and communities to make the appropriate decision to remain steadfast and to "fight" the danger presented, and with the assistance of community and government resources to further public health objectives.

During a terrorist attack with a biological agent, the "contagion" that results from transmissibility of disease compounds the psychological crisis. [3] In addition to the medical implications of the spread of a contagious disease, "contagion" has important psychological and sociological aspects. [3] Although the attacks of 9-11 were not bioterrorism, the spread of "contagion" in the psychological sense has been demonstrated by studies examining post-traumatic symptoms and psychological morbidity resulting from the attacks. [3] This type of "contagion" inflames the natural emotions of fear and anger, culminating in behaviors that can disrupt and destroy the cohesive and nurturing tenets of family and community. [3] "Community shielding" will serve to mitigate the impact of psychological "contagion" by addressing mental health recovery as an integral part of a response. [3] An important component for emotional recovery lies in the very premise of "community shielding," that is, providing the means for individuals to remain within the familiar, stable surroundings of their homes and communities, where they are best prepared to deal with their emotions and behavioral responses, and to make the best decisions for their physical and mental wellbeing, and that of their families.

The current professional model for emergency response to bioterrorism does not call for the significant, integrated participation of the civilian population. [14] "Largely contributing to the neglect of the public's role in a response to bioterrorism is the assumption that the general public tends to be irrational, uncoordinated, and uncooperative in emergencies -- not to mention prone to panic. Such a view. . .will lead public health professionals and emergency managers to miss the opportunity to harness the capacities of the civilian population to enhance the effectiveness of a large-scale response." [14] Despite the natural emotions of fear and anxiety in response to both natural and unnatural disasters, history and research have shown that, with adequate planning and preparation, the American public has the wherewithal to respond to disaster both effectively and constructively. [3, 14] Indeed, panic and lawless behavior (i.e. looting, riots) are not that frequent. [3, 14] Although human-made disasters are prone to producing greater psychological overlay than natural disasters, the capacity of the American public to participate in a large-scale response to a terrorist attack should not be underestimated and should be considered and incorporated into emergency preparedness and response planning. [3, 14] Planning that includes "community shielding" calls for the significant, integrated participation of every American citizen, affording each a distinct opportunity to exercise that role while remaining with their families in their own communities.

"Community shielding" provides individuals and communities with empowerment, hope and resilience in taking control of their destiny in the wake of a terrorist attack and in confronting the terrorist objective to destroy lives, communities and the fundamental rights and liberties of our democratic lives. This psychological impact on individuals and communities provides the necessary social infrastructure that facilitates the success of "sheltering" in the community as an

integral part of “community shielding” until community and governmental resources become available. Based upon what we have observed recently in the aftermath of Hurricane Katrina, American citizens and communities may have developed an over-reliance on the federal government for providing resources in times of disaster. Efforts should be made to raise awareness that the federal government may not have the capacity or ability to provide timely and adequate resources following such catastrophic events, whether natural or unnatural, and that individuals and communities should not rely primarily on federal governmental resources. [3] The concept of “community shielding” focuses on community and local rather than the federal government as the first “actors” following a terrorist attack, since they will most likely launch the initial response to address the needs of citizens and community. [3] As a wider, more integrated form of “shelter-in-place,” “community shielding” presumes that citizens will have prepared adequately to survive on their own in their individual family or residential units, but also recognizes that the success of “sheltering” must be facilitated through the distribution of essentials by government and private services where individual and community preparation is inadequate. [3, 7] In short, “sheltering-in-place” is a necessary, but not sufficient, component of “community shielding,” which elicits the significant, integrated participation of individuals and communities, as well as the government and other resources, and thereby empowers American citizens and communities to advance a bold response to counter the terrorist objective.

Legal Framework of “Community Shielding” Response to Terrorism. “Community shielding” is closely aligned with our democratic system of government and with the faith the framers of our Constitution had in the “wisdom of an informed citizenry to make decisions about what is best for themselves, their families, their communities and their nation.” [15] Its voluntary application by citizens and communities in planning for and responding to a terrorist attack allows for individual and community-based decision-making that not only builds upon and strengthens the principles of a democratic society, but also defies the terrorist objective of destroying that democracy. [15]

By contrast, other strategies historically used for responding to public health emergencies, including forced quarantine, isolation, and mandatory vaccination, are authoritarian and coercive in nature and interpose a multitude of legal hurdles to effect their implementation and enforcement. [15] Utilization of these measures, primarily relying upon antiquated statutes granting states “police powers” to take certain actions in public health emergencies (i.e. impose forced quarantine, mandatory vaccination of the public, seize and destroy property without compensation, etc.), is difficult to accomplish while at the same time protecting the individual rights and liberties Americans have come to know. [5, 15] A question exists as to whether current legislation could even withstand judicial scrutiny under today’s constitutional standards (i.e. that the measure imposed is “necessary” and the “least restrictive” means to protect the public health, that it is applied in a non-discriminatory manner, that those affected have the right to judicial review, etc.). [5, 15, 16]

Following 9-11 and the anthrax attacks of October 2001, the Centers for Disease Control and Prevention (CDC) recommended state laws be reviewed with particular attention to the quarantine provisions that would be applied in the event of a smallpox attack. [17] At the request of the CCD, a Model State Emergency Health Powers Act (MSEHPA) was drafted by the Center for Law and the Public’s Health at Georgetown and Johns Hopkins Universities in

collaboration with members of national organizations representing governors, legislators, public health professionals and agencies, and attorneys general. [16, 18] The proposed legislation addressed preparing for, preventing, and responding to health emergencies through the exercise of necessary powers to detect and contain bioterrorism or other naturally occurring disease outbreaks. [16, 18, 19] The MSEHPA was initially released in October 2001; a revised version was released in December 2001 after much criticism of the original model act. [16, 17, 19] The proposed model legislation has continued to meet strong opposition based upon claims that it continues to infringe upon individual civil rights. [15, 16, 17, 18, 19] As of June 30, 2005, the MSEHPA had been introduced in part through bills or resolutions in forty-four (44) states and the District of Columbia. [20] Thirty-seven (37) states and DC have passed bills or resolutions that include provision from or closely related to the MSEHPA and that include powers to compel vaccination, testing, treatment, isolation and quarantine where necessary. [15, 16, 20] Indeed, controversy exists as to whether a large-scale forced quarantine following a bioterrorist attack (such as smallpox) would even be feasible or effective as a primary public health strategy as opposed to other less extreme public health actions (i.e. respiratory, body fluid or skin contact isolation rather than full physical separation from all healthy people, rapid vaccination or treatment, widespread use of disposable masks, short-term voluntary home curfew, restrictions on assembly of groups, and closure of mass public transportation). [21]

“Community shielding” will not completely obviate the need for forced quarantine, isolation or mandatory vaccination in certain circumstances, but it does provide a tool that is a “less restrictive alternative” to those measures. [15] It can be implemented more quickly and easily (at an earlier stage either before an emergency or in the initial hours following an emergency), thereby reducing the need for or the scale of a forced quarantine or other more restrictive public health intervention. [15] “Community shielding” does not face the same legal obstacles as other measures and, with appropriate education and planning, can be implemented early as part of a state, local or community emergency preparedness plan. Additional legal characteristics of “community shielding” are that (1) it can be implemented as a precautionary measure before an actual event, and without the declaration of an emergency that requires forced quarantine; (2) it can be implemented in situations primarily to assist local first responders rather than in direct response to an emergency (i.e. can be implemented to ease congestion of transportation routes so that emergency workers responding to an emergency can perform effectively); (3) its implementation is dependent upon policies of self-preservation, so that the government’s role is to assist and enable individuals to serve their own interests and not to impose legal orders upon the American public; and (4) it is voluntary rather than imposed by the government and, to that extent, is not applied in a discriminatory fashion, although where special conditions regarding implementation become necessary where more people will be affected following a bioterrorist attack (i.e. urban areas), plans for such conditions can be addressed in advance in order to reduce challenges based upon discriminatory application. [15]

Some have advocated that new legislation would be required to fully implement “community shielding,” regardless of its voluntary and non-coercive nature compared to other measures. [22] There is also skepticism by some as to whether public or private agencies would be able to deliver food, water, medicines and other necessities door-to-door following a bioterrorist attack without spreading disease, and whether state or local governments would have to exercise “extraordinary powers” to deliver resources (i.e. seize and distribute private industries’ supplies

of food, water and medicine, compensate business owners where appropriate, order private health care workers to report to certain locations, etc.). [15, 22] Clearly, these issues must be addressed in the early planning of a “community shielding” strategy, not only with local and state government officials, but also with community business and organizational leaders. [15] Moreover, there will likely be issues of liability arising out of the government’s response to a bioterrorist attack or other emergency during as part of a “community shielding” response that are premised upon unmet expectations by the public for delivery of necessities, dissemination of information, or assurances regarding the status of family members, etc. Therefore, the question of whether civil and/or criminal immunity will be granted to individual or business volunteers responding to assist others during “community shielding” will require discussion. [15] These issues should be addressed early in the process of planning for “community shielding” and may need to be formally codified into state statutes addressing its implementation. Finally, states may find it necessary to provide new legal mechanisms to certify or license individuals or businesses that will be engaged in the delivery of necessities, information or other services during “community shielding” in order to provide assurances to the public of the “authenticity” (i.e. safety and reliability) of those called upon to provide such services. [15]

Political Aspects of “Community Shielding” and Effect of Recent Events on Political and Social Landscape. The core focus of “community shielding” is on the community, its citizens, and state and local governments that are likely to play a significant primary role in emergency planning and response to a terrorist attack. It is also clear that the legal framework for “community shielding” primarily relies on state and/or local governments in exercising their authority for addressing public health emergencies in the community. The federal government will also have a significant role in providing resources, information and assistance to state and local governments, enabling them to appropriately perform their public health responsibilities (or federal legal authority may pre-empt state law in the event of a threat against national security or an emergency that transcends state boundaries). [9, 15] However, the role of the federal government will be substantially different in a “community shielding” response to terrorism or other emergencies than has been seen traditionally in disaster response and relief.

Response to terrorism or other natural or unnatural disasters has typically been based upon one of two emergency response models: (1) the “social control model” in which state and local governments engage in coercive measures to obtain compliance of the public with governmental and public health edicts (i.e. isolation, quarantine, etc., as in the outbreak of an infectious disease); and (2) the “disaster relief model,” wherein the government intervenes to provide affected citizens with basic necessities of life (i.e. provision of food, water, shelter, etc. after a hurricane or earthquake). [23] There are obvious problems associated with these models, from both a legal standpoint (i.e. issues with outdated health emergency power statutes) and a practical one (i.e. evacuating those affected by an act of bioterrorism and abandoning homes and communities that have remained essentially intact). [23]

A “community shielding” response does not specifically fall into either of these models as it is not premised upon the unilateral decision of state or local government to impose public health measures as a strategy of first resort, nor does it rely primarily upon the centralized functions and decision-making of the federal government in response to a terrorist event or other emergency. While critical leadership roles at the federal, state and local governmental levels will be

necessary in planning for and implementing “community shielding,” the roles of all participants, including the government, communities, community groups, organizations, businesses, and citizens, will be reversed from the roles in traditional models. [9, 23] “Community shielding” builds upon a model of “decentralization” in which “redundancy” permits non-governmental units, such as community organizations and businesses, citizens and individual households, to continue functioning in the wake of an event or disaster. [23] The “community shielding” model consists of multiple layers of the same participants, but the hierarchy of relationships is reversed. Citizens and individual households are the most fundamental units in the model and at the top level of the hierarchy; following a terrorist attack or other emergency, they continue to function by managing household units and the lives of their members with resources available within. [23] This top level of the hierarchy relies upon all lower levels, from the next level of community groups, organizations and businesses in providing resources, to the next level of local and state governments, and then to the lowest level of the federal government, but only to the extent necessary to provide further resources to sustain the household unit. [23]

This model of relationship reversal was recently illustrated, in part, by what occurred in the aftermath of Hurricane Katrina, where individuals and households were left “on their own” for days or weeks following the storm until federal, state and local governments could reach them to provide needed resources and other assistance. It should be emphasized that, Hurricane Katrina was a rare event in which, despite strong and deliberate official orders for mass evacuation of areas in the predicted path of the storm, many who had the ability to leave refused to do so. Indeed, this behavior is more typical in natural disasters, where residents often believe that their own judgment is better than that of the experts. [23] Areas that are prone to such natural disasters (such as hurricanes) develop regional “disaster cultures” and residents often decide to stay or leave based upon their own judgment that they believe, based upon past experience, is more sound than those of the authorities. [23] Nonetheless, while some undoubtedly view what occurred after Hurricane Katrina as a “catastrophic failure” on the part of all government, [24] that experience has likely changed the perspectives of many that the federal or even state and local governments should be the “first responders” in any kind of disaster. A lesson that might have been learned is that individuals and communities should refrain from over-reliance on the government as the primary provider of resources within the first hours to days (and even weeks) following such a catastrophic event. [3] This is consistent with the “community shielding” concept promoting self-reliance and self-sufficiency of American citizens to take all necessary precautions and preparations to primarily support their capacity for self-sustenance, at least during the initial critical period, until government and private services are able to distribute further necessary resources. [3] Although it is not expected that individuals who have experienced such a rare event as Hurricane Katrina will automatically engage in “community shielding” in response to the next natural or unnatural catastrophic event, by developing increased awareness of the concept through community emergency preparedness plans, many might be better prepared to “shelter” in their communities, until their needs are augmented by a government-facilitated provision of resources envisioned by “community shielding.”

There is another lesson to be learned from Hurricane Katrina that is closely aligned with the concept of “community shielding.” Most of those individuals who evacuated New Orleans and have not been able to return to their devastated communities have undoubtedly required more labor-intensive assistance, occasioned by their having been transplanted into foreign

communities and states for temporary residences. A 49-year-old New Orleans' woman was one of 150,000 Katrina evacuees living in 5,700 hotels throughout the country and living in one of the estimated 18,500 hotel rooms occupied by evacuees in the State of Texas. [25] After leaving her flooded neighborhood after Katrina, she was airlifted out of New Orleans to central Texas where she lived in a huge shelter for weeks, she subsequently moved with shelter acquaintances into a rented apartment but was asked to leave a week later, after which she slept on the street for several days before checking into her government-subsidized hotel room. [25] Most recently faced with FEMA assistance about to run out, she remarked "We don't know nobody here. It's sad to have us come here and do that to us." [25] On the other hand, many of those in Mississippi whose homes were destroyed have been relocated back to their own communities and neighborhoods, some in group sites and others on their own properties (once determined safe to do so), with temporary trailer housing. [26] The Federal Emergency Management Agency (FEMA) has housed over 50,000 displaced disaster victims in more than 21,300 travel trailers and mobile homes across Mississippi. [26, 27] Several of the more than 120 individuals and families able to lease trailers by this past Thanksgiving (rather than by Christmas) were grateful, even though most were located in group sites in several Mississippi counties. [27] This clearly illustrates the value of maintaining individuals subjected to such catastrophic events within their own communities, living near family and neighbors in familiar, albeit devastated surroundings, rather than being dispersed as evacuees to far away unfamiliar locations where they are expected to reside with complete strangers for some undetermined period of time before relocation.

The recent New York City subway scare demonstrates another important aspect of the role of government following a terrorist or other catastrophic event: that of communicating with the public and nurturing its trust in response to a terrorist threat or other emergency. On Friday, October 7, 2005, Mayor Bloomberg, made a decision to announce a threat alert and to increase security in the city's subway system after learning of intelligence from the FBI the previous day as to a "specific threat" against the subway. [28, 29] However, the Mayor also encouraged the public to ride the subway, as he did coming to work that morning to show his confidence in the city's stepped up security. [28] Police also closed the subway's Penn Station during the morning rush hour after a "Drano-like" substance in a soda bottle (later determined to be a hoax) was found near a ticket counter; service was also suspended on two lines during the afternoon rush hour to search an unattended bag (containing only school books) found on the tracks. [28, 29] Based upon the totality of circumstances, intense skepticism arose as to whether the initial information provided by New York officials was timely, accurate and reliable, and Mayor Bloomberg faced stark criticism as to his decisions and actions in handling the matter. [28, 29] This example reinforces the significant role government officials play in providing full, accurate and authoritative information relevant to a terrorist threat, attack or other emergency, and in maintaining the public's cooperation, confidence and trust in instances of such uncertainty.

This role of government in delivering adequate and accurate information to the American public and in nurturing public trust is equally significant in the implementation of "community shielding." Unfortunately, the government's current plan for responding to future terrorist threat or attacks focuses more on federal intervention and funding, rather than on a community-based approach to emergency preparedness and response that engenders public trust and acceptance of emergency measures. [30] The latter can only be accomplished by engaging citizen and community participation in early emergency preparedness and response planning,

communicating the risks of terrorism and terrorist agents, and initiating a dialogue with community organizations and business leaders about “community shielding” as a favorable response to terrorism. [30] By doing so, government leaders can be more effective in providing the necessary information and knowledge for informed decision-making about the risks of terrorism, in building the trust of the public, and in recruiting stakeholders to assist in developing solutions for the common good of American citizens and their communities. [30, 31] For this reason, early planning for the implementation of “community shielding” will require the strong support and guidance of government leaders at the federal, state and local levels.

Practical Implications of Implementing a “Community Shielding” Response to Terrorism.

“Community shielding” is a relatively simple concept and one that can be practically implemented without great difficulty if the process is started early and before the next terrorist attack. [9] A “community shielding” strategy can be best achieved by immediate and clear direction from government leaders in support of the concept and through community and public education and planning for its implementation. [7] CIAG has undertaken successful efforts over the past several years in presenting the “community shielding” concept to state, national and international officials, and in gaining the support of government leaders, including the Office of Vice President of the United States, the Department of Homeland Security (DHS), the CDC, the United Nations, the U.S. Department of Defense, the Office of the Governor of the Commonwealth of Virginia, the Office for Commonwealth Preparedness (Virginia), the Virginia Department of Health, and the Virginia General Assembly. [32] Nevertheless, there remains much to be done to educate other national leaders and the general public about “community shielding,” to solicit further comment and advice, and to foster additional support from federal, state and local governments, their respective agencies, and other stakeholders (i.e. first responders, local incident managers, private industry, the business sector and individuals, families and communities across the nation). [5] Early planning and implementation of “community shielding” will give all stakeholders the opportunity to “do something now” rather than to wait for the uncertainty of another terrorist attack or the next natural catastrophe. [5]

The most recent endorsement of “community shielding” was contained in a 2005 report entitled *Public Preparedness: A National Imperative Symposium*, a collaboration between The George Washington University Homeland Security Policy Institute, DHS, The Council for Excellence in Government (CEG) and the American Red Cross. [33] The report addresses recommendations of recognized experts and community leaders attending a symposium in July 2004 on public emergency preparedness. [33] The goals of the symposium were to discuss and define the meaning of “preparedness,” to identify barriers to engaging the public in preparedness activities, to develop recommendations to increase the public’s preparedness, and to identify best practices that would assist the public in becoming more prepared. [33] The report recommended that efforts be made to educate citizens about “community shielding” and to explain the benefits of a response strategy allowing the American public to remain in the familiar and stable environment of home and community. These benefits include:

- (1) allowing community members and response groups to make decisions based upon the specific needs of the community;
- (2) providing for mental and emotional reprieve in dealing with a disaster;
- (3) fostering support of each other as well as those more vulnerable within the community;

- (4) allowing government, medical, disaster response, faith-based, private sector and other groups to provide critical services to persons with special needs; and
- (5) allowing for government and private sector groups to target shielded communities for delivery of essential resources. [33]

Although “community shielding” is addressed in the report as but one solution to emergency preparedness and planning for response to a future terrorist attack, the entirety of the report’s general recommendations for increasing public preparedness can be aptly and specifically applied to the implementation of “community shielding.” These recommendations include:

Communications

- Define “public preparedness.”
- Teach the benefits of being prepared and the consequences of failing to prepare.
- Develop clear, compelling and easy-to-understand messages.
- Develop realistic, audience-appropriate messages.
- Deliver messages using multiple messengers to reach different communities.

Disaster Preparedness and Response Operations

- Develop and communicate community prevention and readiness planning.
- Improve ability of governments and first responders to work across jurisdictions.
- Develop and improve systems for information sharing before/during a disaster.
- Develop systems for sharing of best practices and success stories.
- Consider establishing benchmarks allowing communities to assess progress and set goals.
- Prepare for post-event community recovery.

Partnerships

- Establish enhanced relationships within the disaster preparedness and response community before a disaster occurs.
- Establish partnerships that draw on the strengths of the media, businesses, nonprofit and nongovernmental organizations. [33]

The 2005 *Public Preparedness* recommendations are straightforward, sensible, and encompass the strategies and recommendations contained in the literature addressing the implementation of “community shielding.” [3, 5, 9, 14] The most important aspect of “community shielding” is the recognition that, in the age of terrorism, the definition of “first responder” has evolved from one including only professionals (i.e. emergency medical or disaster responders) and that largely casts aside non-professional civilians as participants, to one that includes a significant role for all American citizens. [3, 5, 9, 14] The tenets of “community shielding” require that the general public be enlisted as capable partners with a positive and constructive role; this, in turn, requires the acknowledgement that panic in the general public is actually a rare and preventable psychological response to disaster. [14]

The 2005 *Public Preparedness* recommendations are all implicated in the implementation of “community shielding”: (1) delivering more informative and effective communication with the

public; (2) improving disaster preparedness and response operations in the community by early planning; (3) coordinating efforts of all participants; and (4) building partnerships with those in the community who will play integral roles in preparedness and response. During the initial phase of planning, it is critical for senior leadership, including officials with DHS, the U.S. Department of Health and Human Services (HHS), Congress and the Executive Branch of government, to play a role in endorsing the socio-political aspects of “community shielding” and explaining the concept to the public as well as the role they are expected to play. [9] Homeland security leaders, medical and other first responders, community incident managers, the media, businesses and the private sector, must all provide clear direction and guidance on the concept of “community shielding” and inform the public of its utility and benefits in an effort to empower and motivate citizens to become involved in its planning, and to build public trust in those charged with its implementation. [9]

Current disaster preparedness messages being delivered by national and local programs (via media broadcasts, websites, mail, etc.) fall short of promoting awareness of the “community shielding” concept (i.e. DHS “READY America,” CDC “Emergency Preparedness and Response,” American Red Cross “Preparedness Today,” FEMA)/American Red Cross “Preparing for Disaster,” United States Postal Service “Emergency Preparedness and National Security Wheel,” Citizen Corps “Are You Ready?” and the National Capital Region Emergency Preparedness Public Awareness and Education Campaign Team “Be Ready Make a Plan.”). [34, 35, 36, 37, 38, 39, 40]. However, these messages could provide a model for new emergency preparedness messages that specifically incorporate information about “community shielding.” New messages could define “community shielding” as a wider, more integrated, government-facilitated form of “sheltering-in-place” and explain the physical and psychological benefits of the strategy as a voluntary measure that allows individuals to remain in a familiar and stable environment of their homes and communities for a period of time following a terrorist event or other emergency until it is safe to leave.

Following the initial phase of planning for the implementation of “community shielding” under conditions of “calm and confidence,” the public must then be engaged in a “phase-in” to action as a threat increases or materializes. [9] It has been suggested that the operational (and timing) aspects of an “active” phase of “community shielding” might be enhanced by linkage to a threat advisory system such as the Homeland Security Advisory System (HSAS), providing for parameters for both the probability of a terrorist attack and its potential seriousness that are applicable to the entire country or to specific geographic locations. [9, 41] Linkage to the HSAS will assure coordination of communication and efforts between local, state and federal governments and corresponding agencies, and will allow for appropriate “protective measures” in response to a heightened threat alert. [9, 41] Pre-planning for operations during the “active” phase of “community shielding” will also require the designation of individuals and groups who will play a role in its implementation, such as the leadership of federal, state and local governments, non-governmental organizations, first responders and incident managers, the media, communities, businesses, and families, and what specific actions each will take during this phase of “community shielding.” [9] The actions necessary to carry out a “community shielding” response once a terrorist event has occurred might appropriately be categorized by instructions to “stand fast” (an analog to the shielding concept used overseas by U.S. State Department expatriates awaiting clarification of the nature of a threat and how to evade it), or

that the situation is “all clear” (the threat or danger from the threat has abated), or that there is some further “action required” (depending upon whether the terrorist agent is contagious or non-contagious). [9, 42]

Finally, post-event recovery must also be planned in advance of a terrorist event to address both the physical and psychological effects of terrorism, and in an effort to “contain contagion” and “foster resiliency” among those citizens and communities affected. [3] To this end, both “centralized” and “decentralized” initiatives would be implemented. [3] “Centralized” initiatives are those coordinated by governmental and other institutional sponsors (i.e. providing for television or radio broadcasting, Internet, websites, electronic mail, telephone hotlines, etc.) in an effort to keep citizens and communities informed as to details about the crisis and to provide instructions to assist in their physical and psychological recovery. [3] “Decentralized” initiatives focus on efforts to develop community resources instrumental in providing for the physical and psychological needs of citizens and, to the extent necessary, promote the maintenance of self-sufficiency. [3] As an example, since Hurricane Katrina, governmental and organizational efforts have been made to “centralize” support for psychological recovery from both natural and unnatural disasters by focusing on the psychological stress of disaster and by providing access to disaster mental health resources. [43, 44]

Surveys of Citizen Response to Terrorism. There are three studies that have involved surveying citizen response to terrorism and other related homeland security issues that are relevant to this analysis of determining the most effective approach to implement “community shielding.”

Study 1 - From the Home Front to the Front Lines: America Speaks Out About Homeland Security (February 2004/March 2004) (Council for Excellence in Government or CEG Study) The first comprehensive homeland security studies following 9-11 were surveys conducted in February and March 2004 by Peter D. Hart Research Associates, one of the country’s leading public opinion survey and research firms, in conjunction with renowned political pollster Robert B. Teeter, deceased (Hart/Teeter). [45, 46, 47, 48] The Hart/Teeter surveys were designed and developed as part of a national initiative by CEG to have “a conversation about with the American people” about homeland security. [49, 50] In addition to the Hart/Teeter surveys, CEG elicited citizen reaction to homeland security issues in town hall meetings and polls conducted from October 2003 to February 2004. [50]

The first phase of the study consisted of telephone interviews with 1,633 randomly selected adults, including oversamples of 407 New York and 400 California residents, between February 5 and 8, 2004. [47, 49] The random-digit-dial sampling technique, stratified by geographic location, was used to ensure a nationally representative sample, and data from the survey was weighted in accordance with U.S. population demographics. [49] Survey results had a margin of error of $\pm 3.1\%$. [49] A second phase of the study conducted in March 2004 consisted of interviews of first responders (i.e. police chiefs, fire chiefs, sheriffs, etc.), but due to the small sample size, was not considered representative of a larger population of first responders. [48, 49] However, certain responses in both surveys demonstrate how citizens and first responders might stand on several important aspects of emergency preparedness planning and response to

terrorism that would be important in implementing a “community shielding” strategy. With that focus, the most significant findings of the 2004 Hart/Teeter surveys that are relevant to the implementation of “community shielding” are summarized in Appendices 1 through 10 and discussed below.

Study 2 - Redefining Readiness: Terrorism Planning Through the Eyes of the Public (September 2004) (Readiness Study). This study provided the first opportunity for the American public to answer questions reacting to official protective instructions in two terrorist attack scenarios: a smallpox outbreak and a dirty bomb explosion. [51] It was conducted by the Center for the Advancement of Collaborative Strategies in Health, in conjunction with The New York Academy of Medicine, and was based upon several sources of information, including a quantitative random digit dial telephone survey in the late winter and early spring of 2004 with 2,545 American citizens from diverse racial and ethnic backgrounds, socioeconomic groups and geographic areas of the country. [52] African Americans and citizens residing in the 9-11 attack cities of New York and Washington, D.C. were oversampled to assure representative perspectives. [51] The study focused on assessing the legitimacy of certain assumptions that had previously been made by planners as to the views and concerns of citizens toward preparedness for a potential terrorist attack, how likely citizens are to react under certain situations, and what factors might determine whether citizens will follow the advice and instructions of governmental and private-sector officials in the wake of an actual terrorist attack. [51] These aspects of public behavior and of the public’s role in emergency preparedness planning and implementation had not previously been surveyed so as to afford planners with this important information. [51] Hence, the goal of the Readiness study was to assist in the formulation of more realistic emergency plans based upon accurate behavioral information. [51] The study findings that provide insight into important aspects of the implementation of “community shielding” are found at Appendices 11 through 18 and discussed below.

Study 3 - Community Shielding in the National Capital Region. A Survey of Citizen Response to Potential Critical Incidents. (June 2005) (CIAG Study). This is the most recent study and the only one of its kind specifically related to the concept of “community shielding.” The study, conducted in the spring of 2005 for CIAG, explored the responses of 1,071 randomly selected residents in Washington, D.C. and adjoining parts of Maryland and Virginia (“National Capital Region” or NCR) to questions regarding potential acts of terrorism. [7] The survey presented two terrorist attack scenarios (the release of smallpox and a dirty bomb explosion) and queried the willingness of citizens to participate in “community shielding.” [7, 54] One of the goals of the study was to assess how best to “contain contagion” in the aftermath of such terrorist attacks and to test citizen reaction to a wider, more integrated and government-facilitated form of “shelter-in-place.” [7] The significant findings of the study consistent with the development and implementation of “community shielding” are summarized in Appendices 19 through 32 and discussed below.

Analysis of Citizen Response Data – This analysis begins with the relevant and significant findings of the CIAG study, given its specific focus on the concept of “community shielding,” and compares and contrasts its data (by category) with the data obtained in the CEG and Readiness studies. Where relevant data is contained in only one study, it is discussed separately

below. Given the representative samples in all three studies, data will be presented in terms of the larger population of U.S. citizens. [55]

(1) Citizen Action Toward Emergency Preparedness – Data from the CIAG study show that only a third of Americans (34%) have assembled an “emergency preparedness kit” as recommended by the CDC, American Red Cross, FEMA and DHS (to include such items as food, water, medications, battery-powered radio, extra batteries, flashlight, clothing, etc.). Appendix 20. [7, 56] However, that does not mean the majority of Americans have taken no steps toward preparation for a future “emergency.” Survey responses regarding citizen preparedness for “an emergency” (although not premised specifically upon preparedness for a terrorist attack) demonstrates that a majority of Americans have stored enough food for an average of 17 days (73%) and enough water for 2 weeks (59%); a majority have assembled a first aid kit (82%) and some (23%) have arranged for a family meeting place. Appendices 19, 20 and 33. [7] Without any specific instructions from government officials to stay at home in the “emergency” scenario, and without a “community shielding” strategy in place as part of an emergency preparedness and response plan, almost a third of Americans (32%) are willing to shelter-in-place in their homes (without leaving) for over two weeks, and a majority (52%) would shelter for over a week. Appendices 20 and 34. [7] Further, most Americans (about 75%) do not see boredom or restlessness as a major problem if confined to their home for several weeks in the event of an emergency. Appendix 20. [7]

The CEG public survey results are relatively consistent with the CIAG study. About a third of Americans have developed a family plan for where to go and how to communicate in the event of a terrorist attack (32%) and has looked for information on what to do in case of an attack (32%); a greater percentage (41%) has stored food, water, medications and other emergency supplies and another 18-19% has contemplated doing so. Appendices 3 and 35. [47, 49] The findings of these surveys clearly show that American citizens are willing and able to take such basic steps to prepare for an emergency; at the same time, the results demonstrate the need to increase public awareness of and interest in emergency preparedness planning through various avenues, including but not limited to mass media, public service announcements and educational campaigns at the national, state and local community levels. As further findings from these studies establish, the provision of essential necessities following an emergency, such as food and water, or having information about or a means of communicating with children or family members, have significant influence over whether citizens are willing and able to “shelter-in-place” (with or without official instructions) for extended periods of time. Hence, if these necessities are provided as contemplated by a “community shielding” strategy, the response of Americans citizens would be favorable.

(2) Citizen Response to Specific Acts of Terrorism - The CIAG study demonstrates that a majority of Americans (almost 57%) will follow instructions in the interest of public health and safety to “shelter-in-place” in their home or a nearby location for 2-4 weeks or longer (until told it was “all clear” to leave) following a smallpox outbreak in their community. Appendix 27. [7] Citizens whose initial response was to leave immediately for various reasons (i.e. to find and take care of children and other family members, or to get food and water) are willing to stay for the requested time period if assured that their children and family members were safe and being cared for (additional 6%), and that food, water and other essentials would be provided (additional

19%). Appendices 28 and 29. [7] Hence, if these basic needs are met, the percentage of citizens willing to shelter-in-place for a month or longer increases twenty-five points (from 57% to 82%). Appendix 36. [7] When no instructions are given to “shelter-in-place” following a smallpox outbreak in the community, more than two-fifths of the public (41%) will stay at home or a nearby location; unfortunately, those who would evacuate or would otherwise not be willing to stay at home remains about the same in either case (38% would leave with no instructions to “shelter-in-place”, and 36% would still leave with instructions to “shelter-in-place”). Appendices 26, 27, 37 and 38. [7] This blatant disregard by nearly 40% of Americans of specific advice to protect the public from this serious, contagious and potentially fatal disease could translate into a lack of sufficient awareness of this disease (and other infectious disease entities), and broadly reinforces the need to educate the public as to the types of terrorism, as well as specific agents potentially utilized in each (primarily biological, chemical or radiological), as part of local government and community emergency preparedness planning.

The CIAG study also demonstrates that a majority of American citizens (84%) are willing to follow instructions to stay at home following a dirty bomb explosion; 97% of those (81% of total population) would stay at home for 48 hours or longer. Appendices 21 and 39. [7] The willingness of more citizens to stay at home increases with assurances that their children or other family members were safe and being cared for (additional 4%) and that food, water and other essentials would be provided (additional 1%). Appendices 22 and 39. [7] Of those whose initial response was to leave immediately (about 15%), more were willing to stay at home for the full 48 hours or longer if certain needs were provided, including knowledge that their family was safe (28%), information about the crisis (22%), fulfillment of medical needs (11%), access to TV or radio (6%) and a means to communicate with others (4%). Appendix 23. [7]

In the scenario of a dirty bomb explosion while at work or in some other building (other than home), a majority (75%) will follow instructions to stay in the building; and 92% of those (69% of total population) will stay for 48 hours or longer. Appendices 24 and 40. [7] Citizens whose initial response was to leave immediately for various reasons (to find and care for children or other family members, or to get food and water) are willing to stay if assured that the building has arranged for food and safety (additional 10%), that their children and family members were safe and cared for (additional 9%), and that food, water and other essentials would be provided (additional 2%). Appendices 24, 25 and 40. [7] Hence, if provided all of those assurances, 90% of the American public is willing to shelter-in-place at work or in another building away from home for 48 hours or longer (until they receive the “all clear” to leave). Appendix 40. [7]

The findings of the Readiness study are similar. The dirty bomb scenario in that study was based upon the existence of emergency preparedness plans to instruct all citizens in proximity to a plume of radioactive material from a dirty bomb to take shelter in an undamaged building (specifically not the home), to close all windows and doors, to shut down the ventilation system and to remain in the building until word from officials that it is safe to leave. [51] A majority of Americans (59%) will take shelter in a building (other than home) and stay as long as instructed by officials following a dirty bomb attack. Appendix 14. [51] Citizens whose initial response was to leave immediately for various reasons (i.e. to take care of children or family members, to get food and water, etc.) are willing to stay as long as instructed if one or more of the following needs are met: if they had a means to communicate with people they cared about (14%), if they

were not able to communicate with but were assured that people they cared about were taken care of (12%), or if they were assured that the building in which they were sheltering had arranged to provide food and keep people safe (8%). Appendices 15, 16 and 41. [51] Overall, if any one of the above conditions are satisfied, an additional 15% of citizens is willing to stay in the building for as long as instructed. Appendices 16 and 41. [51]

Another significant factor influencing the public's willingness to shelter-in-place in a building other than home is the extent of knowledge of the emergency preparedness plans of the building in question. [51] The Readiness study found that a majority of the public know only a little or nothing about the plans of the building in which they would be located (58%) or of the building in which their children or families or other loved ones would be (62%) during a dirty bomb attack. Appendix 17. [51] The CEG study consistently found that only a small percentage of American citizens are aware of the specific emergency preparedness plans of their city (19%) or state (18%); a greater percentage are aware of the plans of the schools attended by their children (27%) and of their workplaces (36%), but a majority (58%) of the public have not participated in emergency preparedness drills at the school, the workplace, with a family member or in their community. Appendix 3. [47]

The Readiness study further found that public willingness to cooperate with an instruction to shelter in a building for some time period following a dirty bomb attack could be substantially increased by developing and making the public aware of shelter-in-place plans, by increasing public confidence in community preparedness plans, and by eliciting greater public trust in official instructions and actions. [51] Cooperation was low (35%) in those who lacked confidence in community preparedness plans, did not know details or much about what would be done to take care of people in the buildings in which they were likely to shelter, and did not have a lot of trust in official instructions and actions. Appendix 17. [51] Cooperation was increased among those who lacked knowledge of building plans and trust in official instructions, but did not lack confidence in community preparedness plans (53%); among those who did not lack confidence in community plans, but either knew a great deal or a lot about what would be done in the buildings in which they would shelter or had a lot of trust in official instructions (65%); and among those who did not lack confidence in community plans, knew a great deal or a lot about what would be done in the buildings in which they would shelter and had a lot of trust in official instructions (76%). Appendix 42. [51]

Another important finding of the Readiness study enforces the need and desire of the public to increase their levels of awareness, knowledge and trust in emergency preparedness. A significant percentage of Americans are interested in learning more about the emergency preparedness plans of government agencies or their community organizations (77%), believe that it is important for the public to be involved in the development of emergency preparedness plans (84%), and are interested in personally assisting in their development (65%). Appendices 18 and 43. [51] These findings are particularly relevant to "community shielding," which involves more than the public's willingness to "shelter-in-place" for some designated time until the danger abates. Rather, "community shielding" embraces the participation and integration of American citizens and communities (including non-governmental organizations, businesses and the private sector), as well as government (federal, state and/or local) to the extent necessary, in providing essential resources to the homes, workplaces or other locations for the duration of the threat. [7]

These study results further demonstrate the importance of emergency preparedness plans explicitly incorporating these collaborative roles and encouraging public awareness and involvement in their development and implementation.

(3) Citizen Reaction Toward Terrorism, Responsibility to Prevent Terrorist Attacks, and Trust and Confidence in Government Institutions - The CEG study shows that almost half of American citizens (47%) feel “more safe” than before the 9-11 attacks and another 34% feel “as safe.” Appendix 1. [47, 49] Nonetheless, three-quarters (77%) feel that the U.S. is “very or somewhat likely” to be the target of a major terrorist attack at home or overseas and half (50%) are “very or somewhat concerned” of a terrorist attack near home or where they work. Appendices 1 and 44. [47, 49] This percentage is lower than findings of a Hart/Teeter survey conducted within a year after 9-11 and could reflect the public’s growing complacency since 9-11 about the occurrence of another terrorist attack. [47, 49] Nonetheless, the findings suggest that a significant portion of the public are still concerned about a terrorist attack that will personally affect them, their families and/or communities. The CEG study also highlighted that Americans are most concerned about biological terrorism (48%), followed by terrorism with chemical weapons (37%). Appendices 2 and 44. [47, 49] These percentages are lower, but consistent with those of the CEG first responders’ survey (53% feel the country is “more safe” than before 9-11, 37% feel we are “as safe,” 73% are concerned about a terrorist attack near home or work, 67% are most concerned about bioterrorism, 42% are next most concerned about chemical terrorism). Appendices 8, 9 and 44. [48, 49] The primary concern of both the public and first responders with biological and chemical attacks could be due to a fear of contamination or “contagion” with biological or chemical agents (i.e. smallpox, anthrax or ricin).

The CIAG study found that American citizens are “very or somewhat confident” in the availability of certain essential government and private utility services following a local emergency, including but not limited to radio (95%), television (77%), water and gas (74%), telephone (70%), electricity (61%), cell phones (62%) and Internet access (58%). Appendix 31. [7] However, findings in the CEG study suggest that the public is most concerned about attacks on power plants (49%) and water facilities (44%). Appendix 2. [47] First responders in the CEG study were even more concerned about attacks on the same targets (73% power plants and 66% water facilities). Appendix 9. [48, 49] These findings reflect public acknowledgment that parts of the critical infrastructure, including such essential resources as power and water, may not be available for some period following a terrorist attack. [49] The data also establishes these findings also have a significant bearing on the extent of public cooperation in following official instructions to “shelter-in-place” following a terrorist attack, as their willingness to do so will likely depend upon the provision of some or all of these necessities by government and other private services. Additionally, the findings highlight the importance that the potential for a lack of availability of such resources following a terrorist attack or other catastrophic event be taken into account in community emergency preparedness planning that includes a “community shielding” strategy.

Both the CIAG and CEG studies found the preferred sources of information and those considered most reliable by American citizens following a terrorist attack are television and radio. Appendices 4 and 30. [7, 47] The CIAG study found that local television news, local radio and national news programs are the primary sources for information. Appendix 30. [7] National

news programs and personal physicians are seen as the most reliable sources of information; local religious leaders and the city mayor are the least reliable. [7] The CIAG study further found that more than half of American citizens would utilize a shopping center computer kiosk staffed by an American Red Cross volunteer who could augment information downloaded by individuals in response to specific input inquiries to obtain information as to what to do in the event of an emergency or terrorist attack. Appendix 30. [7] Although obtaining information via the shopping center computer kiosk was not rejected by respondents, less than half would utilize the service in the absence of personal assistance also being available. Appendix 30. [7] These findings are important in planning the development and implementation of “community shielding,” in which public awareness, education and communication will play significant roles.

The CIAG study elicited the view of over half of Americans (56%) that the federal government (including the President) is responsible for protecting the security of the homeland and keeping the country safe from terrorists; only 7% believe that individuals are responsible, only 3% feel that local government is responsible, only 2% feel that the state government is responsible and less than 1 % feel that private industry is responsible. Appendix 32. [7] However, despite those views, 30% of respondents volunteered that everyone shares in the responsibility for homeland security. Appendix 32 and 45. [7] The experience of the 9-11 attacks in New York and at the Pentagon may have influenced residents in the National Capital Region to assign the bulk of responsibility to the federal branch of government. Nonetheless, in implementing a “community shielding” strategy, it is important that the public become more educated about and receptive to the collaborative roles (i.e. federal government, state and local governments, community organizations, private sector groups and businesses, and individual citizens) for sharing in the responsibility for preventing and/or keeping the country safe from terrorism.

By contrast to the CIAG survey results, the CEG study found that most Americans feel they have a role in promoting homeland security (60%) and are willing to volunteer their own time to assist in emergency planning in their community (62%). Appendix 7. [47, 49] This finding suggests that a majority of the public accept their individual role and perhaps responsibility in promoting homeland security, and they are ready, willing and able to become more involved in emergency preparedness efforts, including the planning of a response to a terrorist attack in their community. The CEG survey of first responders found that, although most (64%) believe that the public is not aware of their agency’s emergency response plan, they nonetheless feel there is a greater role for citizens to play in promoting homeland security (86%) than citizens see for themselves, and that the participation of citizens is beneficial in preparing and implementing community emergency plans (48%). Appendix 10. [48, 49]

Of further significance, most first responders (90%) in the CEG study feel the communication between their agency and the citizens of the community is both effective and efficient. Appendix 10. [46, 47] This is consistent with the findings of the CEG public survey that most citizens have “a great deal or quite a lot” of confidence in their local emergency responders (73%) and the police (57%) in fighting terrorism and protecting homeland security. Appendix 5. [45, 47] While the sample of first responders was small and not considered representative of a larger population of first responders, many of the findings are consistent with the public survey and support an emergence of a greater role in American citizens and communities in the implementation of emergency preparedness and response planning for a future terrorist attack. The interactions

between citizens and first responders are of the utmost importance to a “community shielding” response to terrorism as first responders are likely to be the first to interact with citizens of the community who are in need of assistance. Their effectiveness and efficiency in the performance of their duties will be in large part dependent upon the degree to which they have engendered the trust and confidence of the American people. Their success will also be determined by the extent to which citizens agree to “shelter-in-place” for an appropriate period of time as part of a “community shielding” response, facilitated by the provision of necessities through community and governmental resources.

The CEG study found that most Americans (83%) hold a high degree of confidence in the military as a governmental institution (increased 11 points since immediately after 9-11 attacks pursuant to earlier Hart/Teeter survey); they have much less confidence in the federal (34%), state (29%) and local (33%) governments. Appendices 5 and 46. [47, 49] These findings might reflect a continuing increase in the American public’s trust and confidence in the military such that, in the event of a terrorist attack in their community, citizens will be more likely to rely on the military in obtaining information about the attack, and will cooperate more fully in following the advice and instructions of military leaders interfacing with the leaders and citizens of the community. This interfacing between the military and the community may play an important role in the implementation of “community shielding,” not only in a situation in which the military is deployed as part of a governmental response to a terrorist attack, but also in communities where the military is prominent and will necessarily be involved in coordinating a military response strategy with that of the surrounding community. [57]

The CEG study explored the public’s satisfaction with the government’s performance in homeland security efforts, finding most Americans (75%) are “very or somewhat satisfied” with efforts to prevent terrorist attacks; a majority of Americans are also satisfied with the government’s working with the private sector to prevent attacks (61%), communicating with the public with advice on how to prepare for an attack (69%), involving the public with a role to help prevent or prepare for an attack (63%) and in protecting the public’s civil liberties (65%). Appendix 6. [47, 49] Significantly, most Americans (77%) feel the federal government’s color-coded threat alert system is “very or somewhat useful,” but an even greater percentage (84%) does not change normal daily activities when the threat level is increased. Appendix 7. [47, 49] This demonstrates the resilience of American citizens to withstand the threat of a terrorist attack by controlling natural emotions of fear and anxiety, and continuing to live their lives in a manner characteristic of the values, freedoms and spirit of a democratic society. This is a hallmark of “community shielding” and one that, through early planning and implementation, will allow Americans to remain in their own homes and communities rather than to evacuate unnecessarily in order to escape the fear bestowed by terrorists or to seek housing elsewhere in the belief that their own communities would not be served. As a consequence, “community shielding” will serve to undermine the terrorist objective of instilling fear and panic and forcing Americans to flee their homes, their workplaces, their businesses, their communities and their way of life.

(4) “Community Shielding” as Least Restrictive Alternative Response to Terrorist Attack – The Readiness study explored public reaction to an official instruction to go to a public vaccination site following a smallpox outbreak in the community. [51] The survey found a

majority of Americans (57%) would not automatically follow these instructions; 55% of those (31% of total) would need more information and advice in order to make a decision (i.e. would want to speak to someone with knowledge about smallpox or who has special training, or to someone they know well, or to someone who knows their medical history, or to someone who wants the best for them). or to one with special training to give information and advice). Appendices 11, 12 and 47. [51] While the reasons varied for the reluctance to follow instructions for mass vaccination (i.e. concerns of catching smallpox, getting sick from the vaccine itself, or the investigational status of the vaccine, etc.), of particular significance is the finding that most Americans do not view vaccination as the only means of protection. [51] Almost two-thirds (65%) will engage in voluntary protective isolation; 84% of those will avoid others to reduce the chance of catching smallpox and 20% will try to avoid others to reduce their chances of giving smallpox to someone else. Appendices 13 and 47. [51] The study also highlights that going to a public vaccination site is contrary to one's natural inclination toward protective isolation and found that almost half of Americans (48%) would be less anxious if officials were to provide other options for protective action, including preferences for being vaccinated by their own physician or in their own home. Appendices 13 and 47. [51] These findings serve to bolster the importance of "community shielding" as a voluntary and "least restrictive alternative" intervention effective in breaking the disease cycle, as will be necessary in the management of a smallpox or other infectious disease outbreak. Although "community shielding" is not intended to be the only means utilized in managing this type of event, and it may ultimately be necessary to impose additional measures (i.e. forced quarantine or isolation following a biological attack, or evacuation after a chemical or radiological attack), it nonetheless offers a unique opportunity for American citizens to respond to terrorism or other natural catastrophic event, through a less restrictive measure that embraces civil rights and personal liberties.

III. Options:

Option 1. *Maintain the status quo, or "do nothing" to formally implement "community shielding," given the natural inclination and/or willingness to "shelter-in-place" following a terrorist attack or other emergency.* A majority of Americans would voluntarily abide by the instructions and advice of governmental or public health officials to "shelter-in-place" at home (or nearby) or at work (or other building) for extended periods following a terrorist attack with a biological (smallpox) or radiological (dirty bomb) weapon. [7, 51] It is reasonable to expect similar compliance with instructions to "shelter-in-place" following an attack with a chemical agent given the American public's concern about the potential for chemical terrorism. [47] This form of "sheltering-in-place" must be contrasted with "community shielding" which recognizes a more integrated, facilitated form of "sheltering-in-place," the success of which is dependent upon community and governmental resources to augment preparation by individual citizens until the threat abates. [7] Nonetheless, in the absence of the implementation of "community shielding," a majority of Americans would agree to "shelter-in-place" as instructed following an emergency and, in particular, following a smallpox outbreak or dirty bomb explosion. Nearly 60% of Americans would be willing to shelter for 2-4 weeks or longer (until "all clear" to leave) following a smallpox outbreak in their community; over 80% would shelter at home and 60%-75% would shelter at work (or other building) for 48 hours or longer following a dirty bomb explosion. [7, 51] Consistent with this willingness to "shelter-in-place" in such circumstances,

nearly 60% of Americans would not automatically follow official instructions to report to a public vaccination site following a smallpox outbreak and almost 66% would engage in self-isolation to avoid or reduce the chance of catching smallpox. [51]

While most American citizens are not even aware of a more integrated, facilitated plan for “sheltering-in-place” that is contemplated by “community shielding,” they have nonetheless taken significant steps on their own in preparation for “sheltering-in-place” following an emergency. Almost a third of Americans are willing to shelter for over two weeks and a majority would agree to do so for over a week following an unspecified “emergency” without any instructions to do so. [7] A majority have stored food and water and assembled a first aid kit. [7, 47] Although fewer have assembled emergency preparedness kits recommended by government agencies or national organizations, or made arrangements for a family meeting place, efforts to educate the public through existing national, state and local community emergency preparedness messages may serve to increase citizens’ level of preparedness over time, thereby increasing the percentage of Americans who are willing and able to “shelter-in-place.” [7]

Presumably, even without the implementation of “community shielding,” the extent of voluntary “sheltering-in-place” (with or without instructions to do so) that has been demonstrated by these data would still be effective in preventing or mitigating injuries or damages following a smallpox outbreak or dirty bomb explosion. At least with regard to the potential spread of infectious disease agents (whether due to a natural outbreak or intentional release of a biological agent), “sheltering-in-place” for some period of time would result in the decreased transmissibility, reduce the number of individuals infected, and be effective in breaking the disease cycle, even if only a portion of the population participates. The estimated time period for “shielding” (or the quarantine period) following the release of a “Category A” bioterrorist agent as classified by the CDC (those of greatest concern) is from a minimum of 7 days to 28 days at the very longest. [58, 59] In the case of a smallpox outbreak, the natural inclination of a majority of Americans (66%) is to self-isolate so as to avoid catching the disease and, if requested to do so by governmental or public health officials; more than half (about 60%) would be willing to do so for the time period required for “shielding” (28 days or longer). [7, 51]

Following a dirty bomb explosion, a shorter time period for “shielding” would be required (based on study survey questions). [7] A majority (about 70%) of Americans would be willing to comply with instructions to “shelter-in-place” for the requisite time period (48 hours or longer). [7] Presumably, this degree of “sheltering” could be expected in response to a terrorist attack with a chemical agent given that a majority of Americans are concerned about acts of terrorism with chemical weapons and would likely follow instructions to remain at home or at work for some time period until the danger from a chemical agent abated. [47] Despite the absence of a “community shielding” strategy in place as part of a community emergency preparedness plan, this degree of “sheltering” following a chemical terrorist attack for the required period of “shielding” would be effective in preventing or mitigating injuries or damages associated with exposure to radioactive dust dispersed by a dirty bomb blast. [7]

The American public’s willingness to “shelter-in-place” in the absence of a plan for “community shielding” would also serve to enhance the response effort following a terrorist attack by

relieving stress on the transportation and emergency response systems, thereby assisting in the delivery of an efficient community and governmental response to those citizens most in need. The most valuable use of the roads and highways following a terrorist attack will be the transportation of necessary provisions and services to citizens and communities affected in an effort to enhance their resilience and ability to remain intact. [12] As seen in our experiences with both natural (i.e. Hurricane Katrina) and unnatural disasters (i.e. traffic leaving DC following 9-11 attacks), a spontaneous evacuation from an area of an attack that is unorganized, unsupervised and not carried out as part of a phased operation can lead to panic, chaos and gridlock of the transportation system at a time that it is most needed by first responders. [12] Even mandatory evacuation from an area following a terrorist attack or other catastrophic event can lead to citizens becoming stranded in foreign localities or being turned away from areas that are not willing or able to accept evacuees into their communities. This occurred three days after Hurricane Katrina struck when authorities of the city of Gretna, Louisiana blocked roadways that connected it to the city of New Orleans so that evacuees could not escape the flooded city (allegedly shots were also fired over their heads). [60] This “surge” or sudden congestion of the transportation system following either a natural or man-made event would be relieved by the voluntary actions of those citizens who are willing to “shelter-in-place” for some period or time as they would remain in their homes or workplaces, and later evacuate the area, if warranted, in an organized, supervised manner and under the official direction of a mandatory evacuation. [12]

“Sheltering” by the 66% of Americans who would engage in “self-isolation” in the event of a smallpox outbreak in their community, or by the nearly 60% of those willing to “shelter-in-place” for some period of time if requested to do so by government or public health officials, might also prove effective in “containing contagion” from a naturally occurring infectious disease outbreak, such as the “inevitable” pandemic influenza recently predicted by worldwide health experts. [61] Indeed, reliance upon a majority of American citizens to “shelter-in-place” under such circumstances may be the only viable option if a pandemic occurs before adequate antiviral medications are available, and before the implementation of “community shielding” as part of emergency preparedness plans across the nation. However, the significant rate of “spontaneous” evacuation without receiving any instructions to do so (38%) and of evacuation despite instructions to “shelter-in-place” (36%) following an infectious disease outbreak (i.e. smallpox) would need to be specifically addressed and planned for. [7]

The policy option of “status quo” would present no real legal or political barriers, and would require no funding. Without engaging in further efforts to obtain the additional support and endorsement of government and community leaders to implement “community shielding” as part of community emergency preparedness plans, the only costs incurred would be for the continued efforts of CIAG in increasing the public’s preparation for responding to “critical incidents” and in promoting “community shielding” as a response to future terrorism. Optimistically, even in the absence of pursuing a costly, major national initiative to promote “community shielding” and to encourage its use as an integral part of state and local preparedness plans, the concept will nonetheless gain recognition and eventually be implemented and utilized by more citizens and communities throughout the country.

The inherent flaw of a policy decision to “do nothing” and to rely upon a non-facilitated, non-integrated form of “sheltering-in-place” to be effective in responding to a terrorist attack or

other natural catastrophic event lies in the presumption that state and local governments and communities leaders are sufficiently aware of mere “sheltering-in-place” (as compared to “community shielding”) to provide appropriate instructions to citizens to shelter at home or at work for an adequate designated time period. The recommended periods for “sheltering” (a/k/a “shielding”) would depend upon the form of terrorism and type of terrorist agent utilized, or the strain of disease entity in the case of a naturally occurring outbreak or pandemic. [58, 59] Local government, public health agencies, community leaders and first responders would necessarily have to be familiar with these time periods so as to provide accurate advice to the public.

A further disadvantage of the option of maintaining the “status quo” is that, without a national initiative to promote awareness of the benefits of a wider, more integrated and facilitated form of “sheltering-in-place” contemplated by “community shielding,” we are without any knowledge of the extent to which Americans’ willingness to “shelter-in-place” might be increased. Moreover, without further research on the response of citizens in different communities (taking significant demographic and socioeconomic factors into account) to a plan for “community shielding,” there is no means to assess the degree of compliance with official instructions calling for such action on an individual-by-individual, community-by-community or region-by-region basis. Hence, it would be difficult to predict the true effectiveness of a mere “sheltering-in-place” strategy in assessing our national emergency preparedness for future terrorism or other natural catastrophe.

Option 2. *Link a “community shielding” awareness campaign to the current national strategy for preparedness for the “inevitable” pandemic influenza in order to foster awareness and support, and attain its implementation prior to a future terrorist attack or other natural catastrophic event.* At center stage in recent media newscasts, as well as discussions by political and public health officials, is the growing concern about an “inevitable” pandemic influenza caused by a new, severe strain of the flu virus. [61] Reports have criticized the United States’ lack of preparedness for such an event, both as to the state of its incomplete and fragmented planning, and in acquiring adequate supplies of the antiviral medications needed to ward off a “severe” pandemic. [61] Some predict that a severe pandemic could result in a half million deaths, two million hospitalizations and an economic impact of between \$71.3 to \$166.5 billion due to death and lost productivity alone. [61] It has also been estimated that in the absence of any vaccine or antiviral drugs, a “medium-level” pandemic in the U.S. could cause 89,000 to 207,000 deaths, 314,000 to 734,000 hospitalizations, 18 to 42 million outpatient visits, and 20 to 47 million sick. [62] The President’s National Strategy for Pandemic Influenza (“National Strategy”) announced on November 1, 2005 focuses on preventing or slowing the progression of a pandemic to the U.S.; curtailing the domestic spread of a pandemic and mitigating disease, suffering and death; and sustaining the infrastructure and mitigating impact to the economy and the functioning of society. [63] These goals are strikingly similar to those proclaimed in national and state governmental strategies for the protection of the homeland from terrorism.

It is projected that a pandemic influenza will impact 25% of the U.S. population, or 67 million citizens and, with the current amount of the antiviral medication Tamiflu, there is the potential

for 61.5 million infected Americans to go without treatment. [61] Given the unlikelihood that the recommended preparations for a pandemic influenza will be completed or that necessary medical supplies will be available if a pandemic strikes sooner rather than later (experts are unable to predict just when it will occur), some strongly advocate against reliance upon the federal government's "grand plan," but rather making preparations now at the local level of government and businesses, and proceeding to implement "non-medical measures" that will limit the spread of the virus. [64]

This policy option proposes to link further efforts by CIAG and other supporters in promoting awareness of and support for "community shielding" to the recent national, state and local government initiatives for pandemic influenza preparedness. We recognize that "community shielding" as a planned response for future terrorism (i.e. biological, chemical or radiological) would be equally effective if implemented in response to an emergency involving an unintentional, or naturally occurring infectious disease outbreak. The goal in any scenario would be to provide a facilitated, integrated form of "shelter-in-place" supported by the delivery of community and government resources for a sufficient time period until the disease cycle is broken. We also acknowledge that the attention of the federal, state and local government officials, emergency preparedness managers, communities and citizens is most recently focused on the pandemic influenza that could be upon us at any time. Indeed, there is a heightened awareness of not only the potential for, but our lack of preparedness to adequately respond to a pandemic. Perhaps there also exists some degree of fear and anxiety in American citizens created by the sense of urgency being portrayed by government leaders, agencies, public health officials, public policy and other interest groups, and the media.

While not intended to detract from the seriousness that a major bioterrorist attack (or major attack with other terrorism agents) might inflict upon us, the potential for a pandemic influenza has the attention of most Americans and the focus appears to have shifted from the "likelihood" of a terrorist attack to the "more probable" and "more imminent" occurrence of a pandemic influenza. Therefore, a campaign for implementing "community shielding" may be more favorably and effectively received by all involved stakeholders (at least in the short run) as part of a preparedness strategy for response to a pandemic influenza.

This policy option would present no additional legal implications than an initiative tying the implementation of "community shielding" to preparedness for and response to future terrorism. In the case of a pandemic influenza, "community shielding" would be utilized in similar fashion, that is, as a voluntary "adjunct solution" to additional measures of forced quarantine and isolation that may be necessary containment interventions for a pandemic influenza. The President's National Strategy for containment relies upon the use of measures to limit the movement of people, goods and services into and out of an outbreak area, and sanctions social distancing measures, limitations of gatherings, or quarantine authority as appropriate public health interventions. [63] The data for this analysis suggest that, in the event of a smallpox outbreak, the inclination of nearly 60% of Americans would be to question the credibility of official instructions before deciding whether to report to a public site for vaccination; 66% would prefer engaging in self-isolation at home, or obtaining treatment from a private physician. [51] If this reaction of citizens holds true in response to a pandemic influenza, many Americans will not agree to be vaccinated (if and when a vaccine is produced) or may not agree to take antiviral

medications even if available in adequate supply. Federal, state and local governments therefore need an adequate fallback position to that of imposing forced vaccination, quarantine or isolation. In such circumstances, “community shielding” would provide an effective means of minimizing the spread of the influenza virus during a pandemic and would serve to mitigate the government’s use of additional containment measures that will be difficult to enforce from a constitutional standpoint.

Other favorable aspects of “community shielding” are equally beneficial in the setting of a pandemic influenza. It is a voluntary, proactive, home and community-based concept that utilizes existing governmental and community plans, resources and information technology, maintains functions of society, and provides the “safe, secure, comfort zone” of a familiar and stable environment that will serve to “contain contagion.” [65] With this as a backdrop, the implementation of “community shielding” in preparation for a pandemic influenza would provide the opportunity for local levels of government, communities and the American public to “do something now” rather than to await the pandemic and hope the federal government’s plan is adequate and the necessary supply of a “wonder drug” has been produced to treat those infected by the virus. [64] The recommendations for preparation for a pandemic influenza parallel those for the implementation of “community shielding” in response to terrorism or other catastrophic events: (1) identify local community leaders who self-select and step forward to provide the community with reliable and accurate information regarding a pandemic influenza and what citizens can do to limit exposure to the virus; (2) educate the American public, community leaders and the media on the true facts of a pandemic influenza by enlisting public health representatives to provide positive, actionable, non-medical measures that can and should be taken, and by working with community leaders to distribute the information in an effective manner; (3) involve the media as an active partner and encouraging reporters to report accurate and reliable information rather than inaccurate or misleading information; and (4) assist the American public, in a time of calm and reason, to prepare for and respond to a pandemic influenza through the use of non-medical measures. [63] “Community shielding” would provide the opportunity to utilize such other “non-medical measures” (i.e. “sheltering-in-place” for adequate periods of time in order to limit exposure to and the spread of virus) in an effort to break the disease cycle.

Administratively, the implementation of “community shielding” for a response to a pandemic influenza would be the same as for its implementation as a response to terrorism, and will involve targeting key stakeholders in an effort to increase awareness and support for the concept (see Option 3 for proposal for major national initiative tied to response to terrorism). However, in promoting implementation of “community shielding” as part of a pandemic influenza preparedness initiative, the current political and social climate may be more favorable and could have such an impact so as to require less time and effort in gaining recognition and support, resulting in less costs and required funding. The extent of funding will also depend upon whether further research is conducted to gain further elucidation of citizen response to a specific scenario involving a pandemic influenza. Nonetheless, the cost-effectiveness of implementing “community shielding” for preparedness and response to a pandemic influenza is unlikely to be debated given the predicted graveness that an early pandemic influenza will inflict upon an unprepared United States.

The major advantage of this policy option is that it capitalizes upon the recent publicity regarding our lack of preparedness for an “inevitable” pandemic influenza and may more readily focus attention and gain support for the implementation of “community shielding.” Optimally, this could lead to achieving the greater goal of implementing “community shielding” more broadly (for a naturally occurring catastrophic event) even before its recognition and acceptance as a specific response to terrorism. In short, implementing “community shielding” in preparation for a pandemic influenza would pave the way for its implementation as a strategy for emergency preparedness and response to future terrorism.

Option 3. *Lobby support and funding for launching a major national initiative to increase awareness of “community shielding” as a favored response to terrorism, and to undertake further research as to citizen and community response to “community shielding” in different regions of our country.* CIAG should continue to pursue its current efforts of promoting the awareness of “community shielding” as a favored strategy for emergency preparedness and response to future terrorism, and to gain further support from federal, state and local government and community leaders and other key stakeholders for its implementation.

Administratively, this approach can be achieved through further discussion and elaboration of the concept of “community shielding” with stakeholders across the country who are interested in developing a voluntary “alternative” measure for an effective response to future terrorist attacks. “Community shielding” would provide for an “adjunct solution” to government-mandated interventions provided for in outdated legislation or under new public health law models that are continuing to face strong constitutional challenges. Further education on the concept of “community shielding” is warranted as to all stakeholders, most importantly the American citizens, who have already exhibited a strong inclination to “self-insulation” during times of emergency, without a community “community shielding” strategy in place. Continued research is also necessary in an effort to obtain important feedback from stakeholders that can be utilized to further develop the concept for inclusion in state and local community emergency preparedness and response plans.

As part of the national initiative envisioned under this policy option, measurement of awareness of and support for “community shielding” could be undertaken by creating new emergency preparedness messages that include a full explanation of “community shielding.” These messages could be recorded on CD-ROMs or DVDs and distributed to all key stakeholders for review and feedback. A web site could be established to further promote the new messages and to provide further access to information about “community shielding,” including informational contacts for those who wish to become more involved in the initiative to include the strategy in emergency preparedness and response planning. The web site could be useful in identifying and enlisting key community stakeholders in the cause, and to establish alliances with those willing to contribute to this effort, including but not limited to national organizations and public interest groups, state and local organizations, community businesses, churches and other faith-based groups, and neighborhood associations. “Community shielding” recognizes the strength of developing partnerships with these key community stakeholders who will play a significant role in its implementation.

New emergency preparedness messages containing an explanation of “community shielding” should be specifically tailored to reflect differences in communities and populations, such as those demonstrated to be statistically significant in the CIAG study. [7] All versions of the message should incorporate the recommendations for more effective “communications” as set forth in the 2005 *Public Preparedness* report: (1) they should be compelling (show appropriate level of concern and seriousness), but realistic, encouraging and hopeful; (2) they should be easy to understand and specifically addressed to the motivations of specific audiences; (3) they should provide a rationale for the role citizens are expected to play in “community shielding,” including what actions they are being asked to take, the benefits of taking such actions and the consequences of inaction; and (4) they should contain language that promotes “self-empowerment” and “self-efficacy” to provide the motivation in individuals to take responsibility for their own health and safety. [33] The latter recommendation is patterned after the “health belief model” for behavioral change, which relies upon perceived susceptibility or vulnerability, as well as self-efficacy (one’s confidence in the ability to take action), in the adoption of preventative health behaviors. [66] Such a powerful model for behavior change should be emphasized wherever possible in efforts to educate the public on “community shielding.”

National agencies and other organizations with current emergency preparedness messages should be approached to develop further support for “community shielding” and these agencies and organizations could be enlisted to elaborate upon current messages to the American public to provide a detailed explanation of “community shielding,” to include:

- (1) the definition of “community shielding” as a wider, more integrated form of a “sheltering-in-place” that is facilitated through a distribution infrastructure for the delivery of necessities by community and governmental resources;
- (2) the benefits of “community shielding” as a voluntary self-isolation within the home and community that provides for a more familiar and stable environment during a time of crisis following a terrorist attack or other emergency;
- (3) an explanation as to respective roles and responsibilities of citizens, the community, and local, state and federal governments in the implementation of “community shielding”;
- (4) assurances that a crucial part of the “community shielding” strategy is to facilitate the willingness, ability and success of the American public to “shelter-in-place” for the duration of time requested by distributed necessary resources and information (i.e. food, water, medications, and medical treatment to those in need, dissemination of reliable information as to the crises and the anticipated duration and as to the safety and wellbeing of family members from whom they are separated, and facilitation of adequate means of communication both within and outside the affected community during the shielding period); and

- (5) a description of the mechanism for the provision of resources by government and private services of non-governmental groups, community organizations and businesses during the period of shielding.

Concomitant with the distribution of new emergency preparedness messages to the public, a further message could be delivered to key stakeholders inviting them to engage in a collaborative effort to promote the awareness of “community shielding” as part of a national initiative. This could serve to spark further interest in the concept and may help generate additional necessary funding for continued efforts toward education and further research (i.e. surveys, studies) that may be indicated by the results of CIAG’s National Capital Region “community shielding” survey. Not only should citizen surveys be conducted in communities in other areas of the country to assess response to the “community shielding” concept, additional surveys should be conducted of first responders, local emergency managers, community organizations, private industry and business sector leaders. The surveys should explore views of the community’s role as first “actor” following a terrorist attack in which “community shielding” is implemented, the community’s current level of emergency preparedness and capacity to develop a “community shielding” plan, and what specifically each of those surveyed could contribute to assist in fulfilling the community’s role (i.e. capacity and ability to obtain and distribute food, water, medications, health care, and other needed supplies and information).

Efforts should be made to utilize Citizen Corps and its established training program, Community Emergency Response Team (CERT), to promote further interest in the American public in participating to make our communities safe, and to assist in educating the public on the concept of “community shielding.” The data reviewed in this analysis demonstrate that a majority of Americans feel that they have a role to play in promoting homeland security and they are willing and able to volunteer time to participate in emergency preparedness planning, including participating in drills and exercises to better prepare the community for an emergency. CERT messages are directed to citizens and communities through direct mailings from the United States Postal Service in conjunction with Citizen Corps and DHS. [39] Those targeted include neighborhood groups, businesses, community leaders, communities of faith, parents, scouting organizations, school teachers, administrators and students, clubs and civic organizations and amateur radio emergency services; its training is designed to cover, among other areas, terrorism, disaster preparedness and disaster psychology. [39] Collaborating with Citizen Corps and CERT to promote “community shielding” would present a good opportunity to encourage American citizens and communities to “do something now” to better prepare their homes and communities and to exercise control over individual and community response and recovery following a future terrorist attack.

The American Red Cross should be approached about its assistance in the development and staffing of shopping center computer kiosks designed to provide the public with an interactive process for obtaining additional information about terrorism (including forms and types of agents, as well as the damages and effects on the community that are likely to result), and as to emergency preparedness and response strategies, including “community shielding.” The CIAG survey reflects the support of a majority of the American public in this means of seeking information relevant to what to do before and in the event of a terrorist attack.[7] The computer kiosks, augmented by a Red Cross volunteer available to answer questions or to provide further

information, could serve to further educate the American public as to what actions to take for emergency preparedness, what supplies and in what quantities to have on hand for an “emergency preparedness kit,” and the importance of learning their 9-digit zip codes to the development of an effective notification system.

Simulations, models and/or matrixes illustrating the implementation of “community shielding” could be developed to assist in promoting awareness of the concept and how it is anticipated to work in emergency preparedness and response following an actual terrorist attack. [9, 65] These “templates” for “community shielding” will contain designations of participants at all levels, as well as questions, guidelines, protocols and other data that can be utilized to further analyze the many interrelated factors relevant to implementation of “community shielding” in the face of a presumed or real terrorist attack. [9, 5]

In addition to promoting further support from governmental leaders, there should be an emphasis on the continued development of partnerships within the emergency preparedness and response community to gain further support for “community shielding.” [33] These partnerships should draw upon the strengths of the media, businesses, nonprofit and non-governmental organizations, which are integral parts of a “community shielding” strategy and its implementation. [33] Efforts should also be made to improve community disaster preparedness and response operations that include a “community shielding” response so that issues specific to the strategy can be addressed and solutions incorporated into planning for its implementation. [33]

One example of a partnership that would enhance a “community shielding” strategy would be the collaboration with the United States Postal Service (USPS) as a potential resource for the delivery of necessities following a terrorist attack. With such services as advanced “Carrier Pickup” or time-specific “Pickup on Demand” currently being offered, the USPS is providing more “decentralized,” customer friendly services that could prove to be very effective as part of a “community shielding” strategy. [67] Presumably, the USPS could also provide daily “delivery services” of packages to each and every American citizen providing necessities such as food, water, and medications, until it is safe for individuals to leave their homes and communities. Indeed, the USPS has already vowed to provide such “doorstep delivery” service by announcing in February 2004 that a plan was being developed so that it could be called upon to deliver antibiotics from the Strategic National Stockpile directly to residential addresses in the event of a catastrophic event involving a biological agent. [68] This USPS plan was being developed in conjunction with HHS and DHS (after the administration’s announcement of Project Bioshield) and in direct response to being approached because of its “extensive delivery reach and the trust its carriers have in the nation’s neighborhoods. [68, 69] This is clearly a system that could be utilized to facilitate “community shielding” as part of community emergency preparedness plans.

There are no significant legal barriers to pursuing this policy option. However, new legislation at the federal and state levels of government may be beneficial or necessary to address certain legal issues that might arise with the implementation of “community shielding” (i.e. liability, civil immunity) [15] Considerable funding will be necessary to launch a major national initiative to promote “community shielding” and, given the current political and social climate (resulting not only by the recently publicized “inevitable” pandemic influenza, but also by continued criticism of and questioned validity for the “war on terrorism”), it may be difficult to appropriately focus

the attention of government leaders on new forms of emergency preparedness and response planning for future terrorism as a national priority.

If this policy option is pursued rather than linking implementation of “community shielding” to preparation for a pandemic influenza (Option #2), recent media coverage of the announcement by the 9-11 Commission that the current administration has not done enough to implement the its July 2004 recommendations might have had the effect of returning political and social attention back to terrorism as a national priority, or one that is at least as important as a pandemic influenza. As the Panel’s Chairman Lee Hamilton aptly stated on NBC, “We believe that another attack will occur. It’s not a question of if. We are not as well prepared as we should be. --- There is a lack of a sense of urgency. There are so many competing priorities. We’ve got three wars going on: one in Afghanistan, one in Iraq, and the war against terror. And it’s awfully hard to keep people focused on something like this.” [70] Chairman Hamilton’s Vice-Chairman, Thomas Kean, also remarked “You don’t see Congress or the President talking about the public safety as number one, as we think it should be, and a lot of the things we need to do really to prevent another 9/11 just simply aren’t being done by the President or Congress.” [71] On the other hand, this colloquy certainly supports a view by some of inattention, at least in the political arena, to national security issues based on the potential for future terrorism.

IV. Recommendation: Given the current political and social landscape, Option 2 is recommended as the most effective approach for fostering awareness of and gaining further support for “community shielding” by linking its implementation to the current national strategy for emergency preparedness for a pandemic influenza, rather than for future terrorism (as set forth in Option 3). Notwithstanding the analysis of data from citizen homeland security surveys demonstrating that a majority of Americans are still “very or somewhat concerned” of a major terrorist attack at or near their homes or workplaces with a biological or chemical agent, we should acknowledge that such concern has likely been overshadowed by the recent publicity of an “inevitable” pandemic influenza and by the complacency that exists by the lack of recent acts of terrorism in our country. Accordingly, it may be more productive, at least for the present and near future, for CIAG to direct further efforts promoting the implementation of “community shielding” for preparedness for the “more likely” threat of a pandemic influenza than for some future terrorist attack.

Option 1 is not recommended as it is not in aligned with CIAG objectives to promote an understanding of “critical incidents” and their impact on our society, and how to minimize the physical and psychological injuries and damage that result. On the other hand, by pursuing Option 2, CIAG will not be compromising its mission and goals for implementing “community shielding” as a strategy for emergency preparedness and response to future terrorism. A policy decision to pursue the implementation of “community shielding” as a response to a pandemic influenza is, in effect, one that also embraces a policy to pursue its implementation as a response to future terrorism. Hence, there is nothing to be lost by pursuing Option 2 for the implementation of “community shielding” to provide a unique and voluntary tool to be used in response to the public health emergency of a pandemic influenza. If efforts in doing so are successful, the “community shielding” strategy will be part of community emergency preparedness plans and will be in place for utilization in response to other natural disease outbreaks, or other natural or unnatural events, including terrorism. The fallback position is that,

if efforts to implement “community shielding” as part of emergency preparedness for a pandemic influenza are not successful, CIAG’s efforts and initiative can be redirected to focus implementation of the concept as a specific strategy in response to future terrorism.

It is anticipated that some government leaders and other stakeholders will not see the implementation of “community shielding” as an appropriate and legitimate response to a pandemic influenza (or even a disease outbreak resulting for bioterrorism) given that, historically, response to such a public health emergencies has been through the government’s imposition of mandatory measures such as quarantine and isolation. These measures have been regularly proposed in various settings to effect disease containment (i.e. local, state and federal incident managers, as well as the President’s recently announced National Strategy to contain the spread of disease caused by the highly anticipated new strain of flu virus). [16, 63] However, a large-scale quarantine has not been enforced in recent history, and has only been imposed to contain small-scale disease outbreaks (or biological hoaxes) and in federally sponsored bioterrorism exercises (in which quarantine is typically called for as a line of first defense rather than as measure of last resort). [16] These measures may not be (and in all likelihood are not) the optimal response to contain a present day pandemic influenza or other disease outbreak where less extreme public health interventions are available. [16]

Our experiences in recent years with catastrophic events that have had a significant effect on our lives and those of our families beckon out for a change in the utilization of response mechanisms that are more aligned with our present day society in which citizens and communities play an integral role in planning for emergencies, as well as for the post-event recovery and survival of citizens, their families and their communities. “Community shielding” provides a unique opportunity to change how we think about, prepare for and respond to these events that have ever increasingly become a part of our lives and of our way of life. By enabling American citizens to remain steadfast in their homes and communities and to confront the dangers presented as a result of terrorism or other natural or unnatural catastrophic events, they become empowered and resilient in meeting and defeating the terrorist objective of destroying the fundamental principles and liberties of our democratic society, or in launching a more integrated response to better facilitate recovery from other “critical incidents” or natural occurring catastrophes that continue to arise with seemingly greater frequency and that have impact the lives of all Americans.

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- [54] See Note 53. The study analyzed the results of a telephone survey of 1,071 randomly selected National Capital Region (NCR) residents conducted in March 2005 that focused on the public's attitudes toward emergency preparedness and planning, and reviewed findings that were consistent with a "community shielding" strategy to emergency response. Subgroup analyses based on demographic information (age, gender, race/ethnicity, education, income, occupation, geographic area, community attachment, etc.) were conducted from the responses and relevant and *statistically significant* differences in the subgroup responses were reported in the June 1005

- report. These differences are not specifically discussed herein, except to the extent that they are implicated in a general discussion of the practical aspects of the options presented.
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