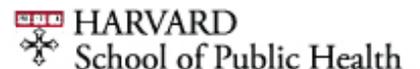




**NATIONAL
PREPAREDNESS
LEADERSHIP
INITIATIVE**

Preliminary Leadership Lessons from the Response to the 2010 Deepwater Horizon Oil Spill

An NPLI Case History



National Preparedness Leadership Initiative

A Joint Program of the Harvard School of Public Health and the
Kennedy School of Government at Harvard University

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The Deepwater Horizon drilling rig on fire (Photo: Wikipedia Commons).

Background

On April 20, 2010, there was an explosion of the ultra-deepwater drilling rig [Deepwater Horizon](#) (also known as Mississippi Canyon 252). Eleven workers were killed. Two days later, the rig sank, triggering an oil leak that spewed an estimated 5,000 barrels of oil per day into the Gulf of Mexico, portending a potential environmental and economic disaster that could affect the states of Alabama, Florida, Louisiana, Mississippi, and Texas.

Complicating the incident was its location: 40+ miles from shore in 5,000 feet of water where repair attempts could only be made by remote control robots. All of the safety mechanisms for capping the well in an emergency had failed to do so, leading to an attempt to use techniques unproven to stanch the flow of oil and natural gas in such conditions.

From May 6-9, 2010, [Dr. Leonard Marcus](#) and Eric McNulty of the [National Preparedness Leadership](#)

[Initiative](#) were in Louisiana to observe the leadership of [the response](#) at the invitation of Rear Admiral Peter Neffenger (Cohort IV) of the United States Coast Guard. Their colleague [Dr. Barry Dorn](#) returned on June 2-3, 2010. Neffenger was serving as Deputy National Incident Commander under Admiral Thad Allen, Commandant of the Coast Guard and National Incident Commander designated by President Barack Obama. During their visit, Marcus and McNulty spent time in the National Incident Command Post in New Orleans, the Unified Area Command Post in Robert, Louisiana (with Coast Guard RDML Mary Landry, Unified Area Commander and Federal On-Scene Coordinator, Cohort VI), and the Incident Command Post in Houma, Louisiana as well as the Louisiana state Emergency Operations Center in Baton Rouge, Louisiana (with Pat Santos, Deputy Director of Emergency Management, LA Governors Office of Emergency Management and Homeland Security, Cohort VI). Dr. Dorn spent time in New Orleans with RDML Mary Landry and National Incident Commander Thad Allen as well as in the LA state EOC in Baton Rouge.

Following are their preliminary observations including thoughts based on watching media reports independent of their visits.

The Impact of Time

The Deepwater Horizon spill was a relatively slow-moving event.

Terrorist attacks are over in a matter of seconds. Hurricanes can be measured in hours. The event and the response were still unfolding three weeks after they began without clarity as to how they would play out.

For leadership, this pace can be good – thinking and actions can be thought through and, if necessary recalibrated, and resources mobilized – yet bad in that the public, politicians, NGOs, and the media to name a few will also have time to process and focus on those individual aspects of the event that are most compelling to them. This can distract from the efforts directed toward the overall response.

There is typically a series of phases to an event: preparation (either general or, for a forecasted event, specific), endurance of the event, response, investigation, and assignment of accountability. In most situations, these phases occur sequentially; with the Deepwater Horizon spill, the latter four were happening simultaneously and involved agencies more used to clean handoffs than fluidity and ambiguity.

There was overlap in the phases that added distraction and confusion. Congressional hearings were well underway before the wellhead was capped whereas they would normally start after the initial response to an event was complete. Such hearings – designed to investigate and assign accountability -- can drive parties, in this case including some still actively involved in the response, into confrontational positions at a time when collaboration and cooperation still critical to the response efforts.

Everyone wants to be seen as doing something: politicians call hearings, lawyers file suits, the media broadcasts compelling stories,

environmental NGOs launch fundraising efforts – this is just what they do. Having them do it in the midst of response, however, can greatly complicate the life of the meta-leader.

What to Do

Exercising meta-leadership requires balancing – and rebalancing – myriad parties, activities, and resources. The pace of the event and response are critical inputs into this process and must be a factor in strategy and decision making. Take time to understand how variations in pacing from that on which your plans are based may affect circumstances and require you make adjustments (see The Anxiety Gap and The Control Factor below).



RDML Neffenger and staff at the National Incident Command Center in New Orleans

Meta-Leading the Anxiety Gap

In a major event, a gap grows between what is actually happening on the scene and anxiety about what is or what could happen. This is called the anxiety gap. There are a number of factors that act to widen the anxiety gap, including the “unknowns” – e.g. in this case where and when oil would hit the shoreline and when and how the oil well would be controlled; media

attention on problems; mistakes – real and perceived; concerns of elected officials about political and economic implications; and the adversarial nature of the legal process.

When people – from those in the affected area all the way up to senior elected officials in Washington – are anxious, they can become almost desperate to demonstrate control and competence. They will focus attention on details and distractions and direct activity and make decisions about those details and distractions, even when they do not have the technical expertise to do solve that particular problem. Paradoxically, as they seek to reduce their anxiety they can actually grow it: responding to details and distractions that often do not really fix the problem tends to reinforce the anxiety and further widen the gap.

There are significant gaps with the Deepwater Horizon event creating anxiety about: the responsible party, BP; the “politics” of the event; the short-and long-term affects on wildlife; control of the spewing oil; the stability of businesses from large multi-national corporations to small fishing and tourist attractions; and damage to wetlands, to name a few.

What to Do

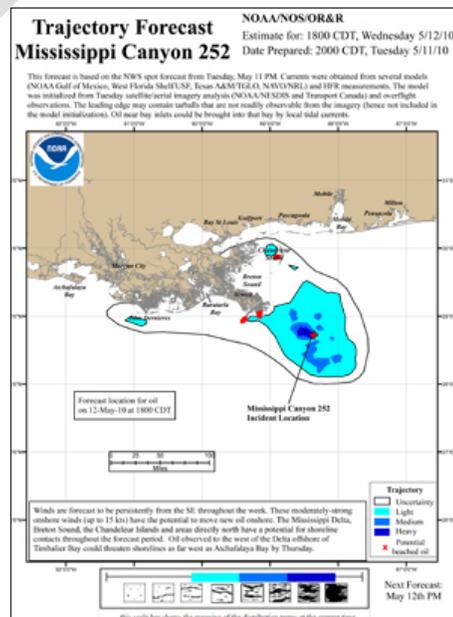
To close the anxiety gap: 1) identify it; 2) understand it; 3) provide frequent, relevant, and accurate information that is fact-, science-, and evidence-driven; enable visibility into plans and emphasize transparency; 4) direct attention toward meaningful strategies to address the concerns

based on the facts; 5) maintain fact-based attention on both short-term and long-term considerations; 6) continue to monitor the presence of anxiety gaps and return to point one.

For example, there are a number of activities directed at mitigating the oil spewing into the Gulf, including controlled burns, skimming and collection, booming, dispersants, and capping. Attention should be directed toward these overall strategic efforts to control the spread of the oil rather than focusing too much attention on any one logistical activity.

The Complexity of a National Event

A large complex national event is in fact many distinct though related events that each has different contingencies, requirements, and people associated with their execution. These distinct events and missions involve different



Forecast of the Deepwater Horizon spill on May 12, 2010

though related groups of experts and support personnel. Each must be afforded the support and space to accomplish their purposes and they must be carefully coordinated on matters where there is overlap. It is the responsibility of meta-leaders to ensure that the execution of one critical event does not unreasonably interfere with or distort another critical event. These different events could be arrayed across the horizontal plane of activities necessary for responding to a complex incident of national concern.

The Deepwater Horizon oil spill is many events. For the overall operation to succeed, each of these must be understood and supported for its unique contingencies, constituencies, requirements, as well as the interactions and interdependencies between them. These separate events include: a) An environmental impact event; b) a large corporate event; c) a small business event; d) a legal event; e) a political event; f) an engineering event; g) a media event; h) a public relations event; i) a federal event; j) a state event; k) a local or “parish” event; and l) a policy event to name but a few.

Perspectives vary: The Unified Area Commander sees a multi-sector event that affects several states as well as a large swath of the Gulf of Mexico. A governor will use a lens that puts the impact on his territory and constituencies in highest relief. A parish president will have yet a narrower view because he represents a more concentrated constituency. As [Tip O’Neill](#) famously said, “All politics is local.”

What to Do

Over-emphasis on particular events can distort what occurs or needs to occur among the full array of distinct events. On May 7 and 8, the “political event” along with the “state event” was observed to crowd accurate assessment of the “environmental event” and the “mitigation event” when the representative of a state with primarily beach exposure wanted mitigation parity with a state with marshland exposure. A purely environmental response would assign greater resources to protected marshland because they are biologically diverse, fragile, and difficult to clean while beaches are relatively easy to clean. However, oily beaches are an ideal “photo op” that can have long-term negative consequences for tourism even if they are cleaned quickly. It is the role of the meta-leader to identify and understand each of these distinct events and perspectives, providing the space, time, and resources to engage in the necessary activities to ensure that each receives appropriate consideration. At the same time, the meta-leader must balance the activities associated with each event so that one does not infringe upon or interfere with the success of the other. Too narrow a focus on only one part of the event tends to cloud and complicate the overall mission. In the Gulf oil spill, meta-leaders are challenged to ensure that decision making and activities at sea - including capping, dispersing, burning, and booming - are not interrupted by political considerations that will interfere with mounting the best possible balanced response to the oil spill.

Keeping Strategy, Operations, and Logistics Distinct

While the many simultaneous events can be arrayed across the horizontal plane, the well-recognized distinction of Strategy-Operations-Logistics sits on the vertical plane. Policy makers sit on the strategic level responsible for critical decisions and directing inter-governmental coordination. Subject matter experts populate the operational plane translating those directives into coordinated management of activities directed to the field as well as keeping leadership well informed. Logistics functions at the field level with activities designed to bring the event competently under control.

What to Do

Those responsible on the strategic level ultimately will be judged for their attention to and success on that level.



Dr. Leonard Marcus (L) with Pat Santos and Eric McNulty at the LA state EOC.

They should therefore be attentive that distractions do not limit their strategic impact. It is the responsibility of meta-leaders to help focus the attention of people at each of these levels on matters in their scope of expertise and responsibility, and to help them

fulfill those responsibilities. While there must be communication that informs each level of the work on other levels, decisions and actions should remain at their best point of expertise and responsibility.

The "Control" Factor

There is comfort in control. One knows what will happen and what won't. The obverse is also true: there is great discomfort at the prospect of a lack of control. It is impossible to predict what will happen next. And when the public expects that events that are out of control will soon align into a favorable and predictable outcome, pressure grows on responsible government officials to formulate a satisfactory conclusion to the event.

The oil leakage in Mississippi Canyon Block 252 was beyond immediate control for several weeks and only under partial control as of this writing. Unlike a ruptured oil tanker that has a known amount of oil on board, it could not be known exactly how much oil will from a vast underground source and estimates fluctuated widely, growing over time from 1,000 barrels a day to 60,000. An operation to plug or siphon the oil at this depth has never been tried before, so it cannot be known exactly how to do it and what will work. Wind and sea currents shift daily and it is hard to predict how much oil is being discharged and where it will go.

What to Do

While the public, the media, and politicians demand that experts get this event under control, it is critical for meta-leaders to identify

what can be controlled, what can't, and what they are doing about it. *For example, it can be learned how much containment boom there is in the world, how much can be deployed to the Gulf, and when it will arrive at which locations. However, boom that does not exist simply does not exist.* During early H1N1 just one year ago, when there were many factors that were both unknown and uncontrollable, leadership addressed the nation with a clear message worthy of replication in the Gulf situation: 1) This is what we know and are doing about it; 2) This is what we don't know and are doing about it; 3) This is what you (the public) should do. In the Gulf situation, it would be modified to: 1) This is what we are doing and this is the impact; 2) This is what we are unable to do or know and this is what we are engaging to learn and do more; 3) This is what you the public can expect. Transparency is a positive factor in such an event and leadership should be cognizant that criticism will be attracted to wherever it does not exist.

It is also important to articulate what you control and what you do not control so as to align perceptions of stakeholders with reality.

The Structure of Response – HSPD₅

Over the years, a complex array of laws and structures were developed to organize government activities in preparing for and responding to a major event. Because they were often responsive to what occurred in a specific event or to thinking at a particular time, these different laws and structures do not align with one another and do not logically array the full scope of activities, authorities,

and responsibilities across the government.

The Secretary of the Department of Homeland Security seized upon the BP oil spill to rationalize the interface of the National Contingency Plan and HSPD directives to clarify her authority during an event and that of agencies within the Department of Homeland Security as well as those of collaborating Departments, including the Department of Interior, the Environmental Protection Agency and others.

It is important to understand when you are setting precedent, or have the opportunity to set precedent, that will govern future events. Use this power wisely.



Dr. Leonard Marcus (l) and RDML Mary Landry (r) at the Unified Area Command Center in Robert, LA

What to Do

One aspect of executing a logical response to a major event lies with inter-agency coordination of effort and clear lines of authority and responsibility. Another requires attention to leadership of the event. While structures, money, and machinery are critical to the success of a major response, there is ample evidence to support the notion that people and people skills are also a critical factor. Just as the Secretary took this

opportunity to fine tune the structure of response, parallel attention should be provided to effective leadership of such a response. This includes leadership development training, research, modeling, and evaluation of effective leadership models. In the field, it will be effective leadership that will determine whether this better formed structure will achieve its objectives.

Interface with the “Responsible Party”

An outcome of the [Oil Pollution Act of 1990](#) is a set of specific responsibilities and requirements of the entity deemed the “responsible party” to prevent, mitigate, and respond to major catastrophes. A multi-billion reserve fund has been established by the industry to provide funds for just the sort of event that is unfolding in the Gulf.

We met with a number of government officials as well as BP employees during our visit to the Gulf. The government officials reported that BP, from its CEO to people in the field, has been generous and responsive in the willingness to provide money and technical effort to address this event. They gave \$25 million to each of the four affected coastal states. They are providing work to affected fisherman. And they are paying for an expensive set of response activities at sea. While the media has certainly picked up stories of disgruntled people, the overall official assessment of BP that we heard was positive. This assessment was in part a function of senior government officials who took the time to meet with BP leadership and lay out a set of

expectations. These meetings were effective in getting BP leadership – still reeling from both the initial human loss as well as the financial implications of the oil spill – to quickly turn around and launch constructive work.

RMDL Landry reported that she worked with BP executives to get them to broaden their focus from the engineering event – the area in which they had the greatest expertise – to encompass the broader response efforts for which they were now the “responsible party.”

A further complication can arise from the different laws governing public agencies and publicly traded companies. For example, if information about the incident or response is deemed “stock market significant,” disclosure is governed by the rules of the relevant stock exchanges which may preclude as much openness as [the media and the public expect and demand](#).

What to Do

BP and the other companies involved will undoubtedly be distracted by competing factors as this event moves forward. One meta-leadership task will be to monitor their involvement and their focus on activities appropriate to each phase through which this event will transition. This must be applied to the many simultaneous individual events horizontally as well as to the array of strategic, operational, and logistical factors vertically. It would be easy for them to be distracted on both planes. The meta-leader must continually balance and rebalance the relationship between the public and

private parties with an eye toward long-term public resilience. Policy makers should address the question of whether certain financially driven disclosure requirements should be modified or suspended during an emergency event.

The Politics of the Federal/State Interface

This event has garnered a national response because of its scope. The federal government is in the lead. Four Gulf Coast states – that were coincidentally hit by Hurricane Katrina in 2005 – will suffer some impact from oil drifting into coastal areas. The federal government was acutely aware that this event could be “their Katrina” and were aggressively managing to both appear and be responsive to the states. The President was being briefed daily on the situation. Governors of the affected states assumed different postures in this event. Two took a pragmatic approach, focusing on specific problems and wanting to be assured that the federal government was addressing those specific concerns.



Dr. Leonard Marcus (L) and Eric McNulty joined RDML Neffenger to view the spill firsthand.

The third was less concerned with specifics but sought reassurance

that the overall effort would take care of any problems that would hit his state. The fourth assumed a far more confrontational position, carrying the memory of mistakes from the Hurricane Katrina response and wanting to take Coast Guard officials to task for perceived shortcomings during the current spill.

RDML Neffenger, in coordination with ADM Allen, took the lead in rebalancing the relationship with the confrontational governor by skillfully taking action to address his real and perceived needs without sacrificing the effectiveness of the larger response. RDML Landry also followed up with a personal call.

What to Do

Obviously, the confrontational governor would be the most difficult to manage through this event. This is a conflict management task. It is important to distinguish listening to him from agreeing with him. So that his does not become a distraction or source of distortion from the overall requirements of the response, the negotiations with him and other officials from his state should avoid getting caught up in his emotional ambushes and outbursts. He must be given something to mollify him though not to the extent that his demands are met at the expense of overall response effectiveness.

Leaders and the “Basement”

High stress circumstances spark an almond shaped structure in the brain, the amygdala that overtakes rational thinking and takes one down to basic instincts. This process is called “going to the basement.” In the basement, the

triple F – fight, flight, freeze – survival mechanisms assume control. Getting out of the basement requires the leader to first to acknowledge that she, and everyone else, are in the basement and then ascend to routine tasks, what is called the “tool box,” before the leader can reach the highest levels of thinking, the neo-cortex, where creative and original problem solving occurs.

While human lives were no longer immediately at risk – the only deaths were among the eleven oil workers who perished in the initial platform explosion – there was still much at stake. As people push and pull to ensure that their concerns are addressed, and as high pressure activities demand long hours and abundant patience, leaders go to the basement. It is a natural process and one that should be expected during an event of this nature.

What to Do

This is where meta-leadership training can be helpful, particularly an understanding of the person of the meta-leader. When leaders are aware of this tendency to descend to the basement, they can self-monitor or monitor one another to ensure that key decisions and major announcements are not made from the basement. This sort of self-awareness and self-control is a reflection of “emotional intelligence,” a term coined by Daniel Goleman and a set of skills essential to leadership in a crisis environment.

The Complexity of Situational Awareness

In a major event, it is the responsibility of leaders to develop

acute situational awareness, knowing that as more information is gathered and available, the picture of the event will change. Situational awareness is the combination of self-knowledge (Meta-leadership Dimension One) and accurate diagnosis of the reality of the situation (Meta-leadership Dimension Two). This event is unprecedented and at a depth below which humans can go; it is extraordinarily difficult to achieve robust situational awareness. Those responsible are even finding it difficult to know what to measure and where to find the information they seek. Often, surrogate measures of the situation are used to stitch together a picture. The dispersion of information can be as unpredictable and uncontrollable as the dispersion of the oil: inaccuracies, unbalanced information, and rumor flood into the mix.

What to Do

Our admittedly untrained eyes observed the site of the oil leakage from the air, seeing patches of oil splattered across the sea. All of us on the plane commented that what we saw departed in some ways from the representations seen on maps at the response centers. For example, while oil may be approaching land masses, the volume of oil, the depth of the oil, and the concentration of the oil will greatly affect its impact. We were told that the oil sheen on the surface is only one atom thick. Just as earthquakes, pandemic influenzas, and hurricanes have their numbers to distinguish their intensity, scientists may be able to develop a set of simple metrics to more robustly describe the amount

of oil concentrated in the sea and the dangers posed as a result. This could serve to close the anxiety gap for the public, for the media, and for elected officials who are being held accountable for what occurs on the Gulf. In other words, there needs to be a better vocabulary to describe exactly what is going on and the real risks – and education about that vocabulary – a tool that could help close the anxiety gap.

In the End, People will Determine Success or Failure

Those trained in meta-leadership and those who practice it by virtue of experience and intuition focus on its five dimensions (see p. 13) to build the connectivity of action necessary to mount a systematic effort across the many governmental agencies that have responsibility and out to the business sector and to non-governmental agencies. Meta-leaders are able to exercise influence well beyond their authority, a critical skill during an unprecedented event that is difficult to control and predict, and one with so many different stakeholders intimately involved.

While we choose not to single out particular individuals, we observed extraordinary meta-leadership exercised during this event. As of this writing, it is yet impossible to get control of the escaping oil and resulting slick. It is however possible to align many different people, organizations, and agencies to mount the best possible response to this complex event. This is one of the great successes of this response. It is relatively easy to construct organizational charts, to purchase equipment, or to allocate dollars. However, if the people factors do not work well,

the charts, equipment, and dollars will not go to good use. It is the people factor at which it will be most difficult to succeed yet the one that has the best chance of reaping the most robust success.

What to Do

The leadership experience during this Gulf event should be used to inform the leadership of future events, just as the leadership of the early H1N1 event informed what is occurring in the Gulf. It is the accumulation of leadership lessons learned and the transmission to future leaders that will assure the country of mounting the best possible response when lives and the welfare of the country are most at stake.

Understand the Limits of “Emergency Literacy”

The agencies directly involved with preparedness and response are familiar and comfortable with their plans, the responsibility those plans assign, the actions they require, and the language they use. Others, including the media, the general public, and in some cases the politicians who supposedly approved the plans, are not as “emergency literate.” Agencies calmly executing plans can appear to be methodical and in control or lacking urgency and intensity depending upon the lens used.

On June 14, [the NY Times pointed out](#) how perception can fuel critical fires, “...critics continue to fault Mr. Obama less for his administration’s overall response to the spill than for what they say has been his own slow and reactive leadership style...” How you lead is as important as what you actually do in building public confidence, shaping the media narrative, and

establishing your control of the understanding and evaluation of the response. When people are hurting and emotionally fragile, the meta-leader must “touch them” in ways that let them know she appreciates their pain.

Further complicating this event was a lack of engineering literacy among the public and the media. Capping a damaged oil well 5,000 feet below the ocean surface represents one of the great engineering challenges in recent memory yet response leaders have failed to generate enthusiasm and support for those working feverishly for a solution because those people are tightly tied to the cause of the incident as well as the remedy. As one online commentator quipped about the “junk shot”, “Golf balls and tires? That’s how they’d cap an oil well on *The Simpsons*.” A glib comment like this is not at all helpful in dealing with the population but may well “go viral” and have an impact far beyond its actual significance or relevance.

Take a situation with which the public and media are more familiar: fires. When a fire is reported as burning “out of control,” there is not panic that the fire response is also out of control. With Deepwater Horizon, the lay community does not have sufficient experience or expertise to contextualize the information they receive. [Most Americans get their news watching local news broadcasts](#) – home to short reports thin on details delivered by generalists, not experts. Their second most common source is the Internet where stories can range from 140-character Twitter

“tweets” to in-depth and authoritative reporting, blatant speculation, self-promotion, and partisan posturing.

What to Do

Building emergency literacy should be a fundamental element of community preparedness. Leaders in the preparedness and response community should use every opportunity to educate the public about how an emergency “works.”

Israel has pre-produced educational videos that can be broadcast in the event of an emergency to ensure that the public knows what to do. In London, basic plans are posted online for anyone to review at any time (<http://www.leslp.gov.uk/>).

When an event occurs, leaders must endeavor to move beyond the standard press briefing or news release to aggressively engage the public through the full range of media including social media such as Twitter and Facebook. There will be a tremendous appetite for information that will be met either by you – or someone else who may be speculating or lacking facts. The more accessible, authoritative, and engaged your public affairs operation, the more likely the public and the media will look to you for information.

Note that “engaged” requires dialogue, not a monologue. Answering questions, explaining terms and actions, and responding to misinformation are critical to successful communication. Monitoring the tenor of online postings regarding the incident is as important as watching CNN. Capabilities for doing so should be part of your EOC.

About the National Preparedness Leadership Initiative

The NPLI, a joint program of the Harvard School of Public Health and Harvard's Kennedy School of Government, was established in 2004 to help ensure that public officials are prepared to meet the challenge of mass casualty terrorist attacks through training and research. The initiative is supported by the Centers for Disease Control and Prevention.

About Meta-Leadership

The meta-leadership framework and practice method is part of the initiative's curricula and was developed by Drs. Leonard Marcus and Barry Dorn, co-director and associate director of the NPLI, respectively; Colonel (Ret.) Isaac Ashkenazi, formerly Surgeon General of the Israel Defense Forces Home Front Command; and Joseph Henderson, formerly director of the CDC Office of Terrorism Preparedness and Emergency Response.

“Graduates of the NPLI executive education program report that this framework has made a significant difference when applied in their real world,” said Marcus. “For example, several related that what they learned through the NPLI had informed their response to Hurricane Gustav and preparations for the Obama inauguration. They reached out to each other and coordinated their actions more pro-actively than they otherwise would have. This sort of meta-leadership in a crisis or other major event has important public health impact insofar as agencies are better able to serve the population and reduce the loss of life.”

The Meta-leadership framework has five dimensions to teach leadership skills:

- 1) personal self-knowledge and awareness;
- 2) diagnosis of the situation;
- 3) leading one's organizational base;
- 4) leading up, or understanding and delivering on the expectations of one's superiors;
and
- 5) leading connectivity among people and organizations over which the leader does not have direct control.

The meta-leadership framework and vocabulary have become common across a swath of the government preparedness and public health communities. Marcus and Dorn have led more than 400 training sessions including efforts with the leadership at the CDC, DHHS, and the National Security Council of the White House. A national series of seminars for business, non-profit, philanthropic, and public leaders — the Meta-Leadership Summits for Preparedness sponsored by the CDC Foundation and Robert Wood Johnson Foundation — is also under way.

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