UNCLASSIFIED U.S. Department of State Case No. F-2018-07049 Doc No. C06768501 Date: 10/01/2019

SECRET//NOFORN

DECONTROLLED

RELEASE IN PART 1.4(B),B1,B5, 1.4(G),B7(E),1.4(D),B7(F),B7(C),B7(A),B3,B6,1.4(C)



HAVANA, CUBA

ACCOUNTABILITY REVIEW BOARD JUNE 2018

Classified by: Department of State Executive Secretary Lisa Kenna E.O. 13526, Reasons: 1.4 (b), (d), and (g) Declassify on: June 7, 2043

UNCLASSIFIED U.S. Department of State Case No. F-2018-07049 Doc No. C06768501 Date: 10/01/2019

UNCLASSIFIED U.S. Department of State Case No. F-2018-07049 Doc No. C06768501 Date: 10/01/2019

SECRET//NOFORN

(U) Table of Contents

(U) Executive Summary	1
(U) Board Mandate	3
(U) Consolidated Recommendations List - Prioritized	5
(U) Narrative	9
(U) Findings and Recommendations	
(U) Accountability	21
(U) Interagency Coordination	24
(U) Medical	26
(U) Communication and Information Sharing	30
(U) Risk/Benefit Analysis	33
(U) Bureau of Diplomatic Security	34
(U) List of Attachments	36

<u>SECRET//NOFORN</u>

(U) EXECUTIVE SUMMARY

(C) The Cuba Accountability Review Board was convened on February 8, 2018 to investigate incidents resulting in the injuries to Embassy Havana community members during their service in Havana, Cuba. As of May 2018, we know 24 Embassy Havana community members have been medically confirmed to have sustained brain injuries while serving in Havana with the severity of injury ranging from mild impairment to injuries in a few patients so severe they may never be able to return to their previous jobs. It is unknown at this time if any of these injuries are permanent. The mechanism for the cause of the injuries is currently unknown. We do not know the motive behind the incidents, when they actually commenced, or who did it.

(C) The mandate of this Board is not to determine the mechanism or identify the perpetrator, but to make written findings on the adequacy of security and recommendations related thereto. While the Board found security at the mission was generally adequate at the time the incidents began,

(U) Per the statutory mandate, the Board finds the following:

- 1. (C) The Board finds that the events were security related.
- 2. (U) The security systems and security procedures were adequate, despite significant vacancies in security staffing.
- 3. (C) The security systems and security procedures were properly implemented, although traditional reporting mechanisms were not always used.
- 4. (S)
- 5. (SBU) The Board did not find any U.S. government employee engaged in misconduct or performed unsatisfactorily in a way that contributed to the incident. As information developed, all parties involved, up to and including Secretary Tillerson, prioritized the medical treatment and safety of those affected.

(U) In the course of this review, the Board interviewed more than 116 individuals, including members of the Embassy Havana community, other State Department employees, representatives of other government agencies, and medical specialists. The Board reviewed all available information but, because traditional reporting channels were not always used, we acknowledge the possibility that additional information exists to which to the Board did not gain access.

(S) Beginning in November 2016 and continuing through late August 2017, some Embassy Havana community members and several temporary duty personnel experienced incidents they described as a loud piercing noise. The majority of these incidents occurred in residences, but several took place in hotels. Many of those injured reported a piercing directional noise and sometimes a physical sensation or discomfort immediately prior to the onset of symptoms. The affected individuals had varying combinations of cognitive, vestibular, and oculomotor dysfunction as well as sleep disorder and headache. The last known incident in Havana that resulted in a *medically confirmed* injury is reported to have occurred in late August 2017.

SECRET//NOFORN

В3

1.4(D)

B1

B1	4(D)
(C) Also in late May 2018, Embassy Havana reported two additional incidents for which medical confirmation is pending. In addition to Embassy Havana, there were reports of similar incidents at several other posts (Tashkent, and China), which resulted in one recent, medically confirmed case in in China.	
Р. т.	(D)
	B3
The Department of State eventually arranged the medical evacuation of all affected employees and family members who requested it to the University of Pennsylvania Center for Brain Injury and Repair, where they received comprehensive multiple disciplinary evaluations.	
(C) The Department of State's response to these incidents was characterized by a lack of senior leadership, ineffective communication, and systemic disorganization. No senior official was ever designated as having overall responsibility, which resulted in many of the other issues this reports presents. The interagency response was stove-piped and largely ad hoc. In our report, the Board makes recommendations on accountability, interagency coordination, communication and information sharing, medical issues, risk benefit calculations, and security operations.	
(S)	В3
On September 29, 2017, the Secretary of State ordered the departure of non-emergency personnel and family members. No formal risk benefit analysis of USG presence in Havana was ever conducted. Following six months on Ordered Departure, Havana became an unaccompanied post in March 2018.	4(D 1
(5)	4(D)
B1	1 7(A)
<u>SECRET//NOFORN</u> 2	

UNCLASSIFIED U.S. Department of State Case No. F-2018-07049 Doc No. C06768501 Date: 10/01/2019

(U) BOARD MANDATE

1. (U) The extent to which the medical conditions (with respect to which the Board was convened) were security related:

(\bigcirc) The Board finds the events were security related. The fact that, to date (June 7, 2018), only American and Canadian diplomats and their family members have been medically confirmed to have sustained brain injuries as a result of service in Havana suggests a targeted action, even though the mechanism of injury, the perpetrator, and the motive remain unknown.

2. (U) Whether in this situation the security systems and security procedures were adequate:

(U) The Board finds the security systems and security procedures were adequate, despite significant vacancies in security staffing.

3. (U) Whether in this situation the security systems and security procedures were properly implemented:

 (\mathbf{C}) The Board finds the security systems and security procedures were properly implemented, although traditional reporting mechanisms were not always used.

4. (U) The impact of intelligence and information availability in this situation;

(\$)	1.4(D)
	B1 1.4(C) B3

5. (U) Such other factors and circumstances which may be relevant to the appropriate security management of United States missions abroad:

(SBU) Based on the information available at this time, the Board does not find that any U.S. government employee engaged in misconduct or performed unsatisfactorily in a way that contributed to the incident. The deficiencies documented in this report are confined to the response to the incident.

(U) As the mechanism of injury has not yet been established, nor has responsibility for the events been affixed, the Board considers this report to be an interim response and an interim set of findings. As the Board was concluding its review, it learned of two, additional incidents in Havana that are pending medical review. Recent information indicates the incidents have not ceased in Havana and are occurring elsewhere. When the technical and investigative processes underway yield concrete results and a firm understanding of what happened to our personnel, a final review should be undertaken to validate or revise our conclusions in light of new information.

<u>SECRET//NOFORN</u>-3

UNCLASSIFIED U.S. Department of State Case No. F-2018-07049 Doc No. C06768501 Date: 10/01/2019

SECRET//NOFORN

(U) The Board learned many communications related to the incidents did not travel in the usual Department of State channels, and therefore there may be documentation that has not been made available. Should additional documentation come to light, it could alter the conclusions of this report.

<u>SECRET//NOFORN</u> 4

UNCLASSIFIED U.S. Department of State Case No. F-2018-07049 Doc No. C06768501 Date: 10/01/2019

(U) CONSOLIDATED RECOMMENDATIONS LIST - PRIORITIZED

(U) For additional detail regarding the Board's recommendations, refer to the Findings and Recommendations sections.

1. (SBU) Overall responsibility for the Cuba response needs to be assigned to the Deputy Secretary of State.

2. (U) Although belated, the Department needs to establish a Department-wide task force reporting directly to the designated senior official to develop a proposed strategy for the future state of Embassy Havana and remedy the deficiencies identified in this report. The task force should report weekly to the Deputy Secretary of State and should have a broad mandate to include developing a strategy for future state of Embassy Havana and potential global response.

3. (C)

4. (SBU) The Department of State, in coordination with other USG agencies and academic medical institutions, should provide the funding and resources necessary to conduct a comprehensive CDC- led medical and epidemiologic study of the clinical entity related to the incidents in Cuba. The study should include all individuals who may have been exposed to incidents in Cuba, including U.S. mission employees and their family members, and any other American citizens who may have been exposed, with case definitions and at-risk time frame to be determined by the appropriate medical experts. The study should also address possible counter measures and best available treatment modalities. In addition to the currently identified cases, and exposed adults, the study should assess possible long term effects on young children or unborn children who may have been exposed.

5. (SBU) The Department of State Legal Adviser should immediately engage with the senior legal official at CDC to resolve disagreement that is impeding the sharing of medical records with the CDC to enable CDC to begin the medical study immediately.

6. (U) The Department of State, in coordination with other USG agencies, should provide the resources and establish funding mechanisms to provide long term medical follow-up and required treatment to U.S. Mission personnel and families impacted by the incidents in Cuba. The follow-up plan should be made available to all U.S. Mission medically affected personnel and families.

7. (U) The Department should make pre-departure and post-assignment medical screenings a mandatory condition for assignment to, or temporary duty in, Havana.

8. (S//NF)	1.4(
	B1
	B3

D)

5

1		

1.4(D) B1 B3

10. (**SBU**) The Department should review (and revise if necessary) its procedures for ensuring continued senior-level leadership at all times. Under Secretary positions filled by individuals in an acting capacity need to have sufficient acting and delegated authorities and clarity about those authorities in order to fulfill their responsibilities.

11. (S//NF) The Bureau of Diplomatic Security (DS) should appoint and appropriately resource a formal DS working group from across its competencies of counter-intelligence, technology, investigations and international programs with a designated, accountable leader. The working group should continue to examine the incidents, actively participate in interagency working groups, and consult with technology experts as needed, to determine the cause and responsible entity, as well as assist in the interagency development of a mitigation strategy and countermeasures. The working group should report directly to the DS Assistant Secretary with a clearly defined, formal reporting structure and schedule.

12. (C) Chargé Havana, in coordination with the Bureau of Diplomatic Security, should ensure Embassy Havana's Emergency Action Plan is updated. The update should include a section on managing and responding to such incidents. The Department should determine if an expansion of this type of incident response plan is warranted for posts other than Embassy Havana and, if so, should develop worldwide guidance for inclusion in EAPs.

13. (C) The Department should expand its procedures for conducting risk/benefit analyses and staffing reviews to include posts that are not classified as High Threat High Risk for terrorism, and assign responsibility for convening such a review when unanticipated risks (such as the one that is the subject of this report) develop at posts not on the HTHR list.

14. (U) The Department should convene a high level review of the NSDD-38 process as it is currently implemented. Following the review, the Department should issue guidance to all employees and agencies regarding requirements and should hold agencies accountable.

15. (U) The State Department should delegate standing authority to approve domestic medevacs to the Medical Director of the Bureau of Medical Services that can be utilized immediately in future medical situations that require medevac from one domestic location to another.

16. (**SBU**) Representatives from the State Department Bureau of Medical Services and HR should brief the appropriate offices at the Department of Labor (DOL) regarding the unique nature of the clinical entity related to the Cuba incidents, in order to inform DOL decisions on worker's compensation claims that may be filed by those employees affected.

17. (U) The Board strongly recommends the Department review its well-established and successful procedures for dealing with crisis situations and ensure leaders throughout the

SECRET//NOFORN

6

Department are aware of and implement them accordingly. Examples of these procedures include Emergency Action Committee responsibilities and reporting requirements, High Risk and High Threat Process, SCORE Review Process, and counter-intelligence incident reporting requirements.

18. (SBU) Every Chief of Mission who is not confirmed by the Senate should receive a Letter of Instruction from the Secretary that clearly details authorities and responsibilities for oversight and safety and security of American citizens and U.S. government employees. The Bureau of Western Hemisphere Affairs should provide the Chargé in Havana with a letter of instruction comparable to those given other chiefs of mission. This letter should include specific guidance on the responsibility for safety and security of staff.

19. (S//NF) INR should ensure that long term Chargés (chiefs of mission who are not Senate-confirmed) are included in their COM intelligence oversight briefings.

20. (U) The Department should create a position modeled upon OPM's Post-Combat Case Coordinator to allow for the centralization and longer-term comprehensive outreach and assistance to medically impacted Embassy Havana community members.

21. (S//NF)	1.4(D) B1
	B7(E)
22. (S//NF)	

23. (**C**) The Department, in coordination with interagency partners, should request funding for mitigation countermeasure(s) once a confirmed mitigation strategy has been developed and should implement these measures promptly.

24 . (S//NF) The Department should ensure that the NSDD-38 processes are f	1.4(D) B1
25. —	B3
	1.4(D) B1

26. (C) WHA and S staff should create a timeline (tick tock) of communication, decisions, and actions taken to date (June 7, 2018) in response to the incidents. The investigation into the incidents and Department's response should remain open until the Department determines what happened. This timeline is a critical part of the discussion and lessons-learned process.

27. (U) WHA should appoint a senior management officer to resolve any and all remaining management issues resulting from the Cuba incidents as well as any issues resulting from the Post's change in status following the ordered departure. This senior officer should report

SECRET//NOFORN

directly to the Assistant Secretary and coordinate closely with the WHA Executive Director. WHA should provide funding and staffing to facilitate these efforts.

28. (C) The Secretary of State should advise employees, and his counterparts at other agencies represented at missions overseas, that he expects complete transparency and prompt notification regarding any episode that results in harm or increased danger for USG employees.

29. (C) The Secretary, or his designee, should ensure that Chiefs of Mission, Deputy Chiefs of Mission and Principal Officers are personally responsible for Emergency Action Plans. Additionally, the Department of State should re-issue guidance reminding Chiefs of Mission that Emergency Action Committee (EAC) meetings should be convened whenever information surfaces indicating the potential for harm to USG employees or American citizens. EAC meetings must allow for and encourage robust discussion and information sharing by all entities represented and make a determination as to the proper dissemination of said information.

30. (C) WHA leadership should designate a senior official within the bureau to be responsible for ensuring that all involved parties are promptly notified of any event, action, or decision that affects those impacted by the Cuba incidents to date (June 7, 2018) and in the future.

SECRET//NOFORN-8

(U) NARRATIVE

(U) Introduction

(S//NF) As of May 2018, 24 Embassy Havana community members have been medically confirmed to have sustained brain injuries during their service in Havana, Cuba with the severity of injury ranging from mild impairment to injuries in a few employees so severe they may never be able to return to their previous jobs. Although the majority of those injured reported a piercing directional noise and sometimes a physical sensation or discomfort immediately prior to the onset of symptoms, the mechanism of injury remains unknown, as does the precise timeframe during which the injuries were sustained. In their article published in the February 2018 issue of the Journal of the American Medical Association, the University of Pennsylvania medical experts described the cluster of symptoms associated with these brain injuries as a possible "novel clinical entity."

(S//NF) Affected individuals had varying combinations of cognitive, vestibular, and oculomotor dysfunction as well as sleep disorder and headache. These individuals appeared to have sustained injury to widespread brain networks without an associated history of head trauma. The last known incident in Havana that resulted in medically confirmed injury appears to have occurred in August of 2017, although reports of other possible incidents continue to trickle in, both from Cuba and from other posts. At the time of this report, there are two additional incident reports from Embassy Havana. Medical confirmation is pending.

(C) Although a number of private American citizens contacted the Bureau of Consular Affairs with concerns that they might have been victims of similar attacks in Cuba,

(S//NF) As of May 2018, there is one medically confirmed report regarding a Consulate Guangzhou employee, who described incidents in Guangzhou, China, similar to those experienced by Embassy Havana community members and whose injuries were confirmed by medical experts to match those of the Havana victims.¹

(U) Board Circumstances and Mandate

(C) An incident that results in the convening of an accountability review board is usually over by the time the board convenes, and usually it is reasonably clear what has happened and when. Although there may be unresolved questions about exactly who was responsible for the event resulting in injury or death, or the precise motive for an attack, prior boards knew in considerable detail what happened to cause the death or serious injury. This accountability review board faced a significantly different challenge. We do know that USG and Canadian diplomatic community members², were injured, but we do not know how. We do not know what happened,

<u>SECRET//NOFORN</u> 9 B6

¹ 18 Beijing 927

² Based on official Canadian government reports

when it happened, who did it, or why. These significant unknowns complicated the challenge of evaluating the adequacy of security and making recommendations.

(U) While the Board heard many theories about what might have caused the injuries, some plausible and others less so, and much speculation about who might have been responsible and their motives, it is not our mandate to discover the mechanism or identify the perpetrator. The mandate of the accountability review board is to make written findings on: the extent to which the incident was security related; whether security systems and procedures were adequate; whether security systems and procedures were properly implemented; and the impact of intelligence and information availability. The Board is further charged to make recommendations related to its findings.

(S//NF) Medical confirmation of injury to an employee at Consulate Guangzhou and two additional unconfirmed incident reports from Embassy Havana emerged as the Cuba ARB report was being finalized.

(U) Incident Summary

(S//NF) Beginning probably in November 2016 and continuing at least through late August 2017, some Embassy Havana community members and several temporary duty personnel experienced incidents, described as a loud noise, primarily in their residences; these incidents resulted in medically documented brain injuries to 24 people.

(S//NF) However, beginning in late March 2017,

Post leadership took administrative actions to protect the community members from this unknown threat, beginning with liberal curtailment policies in March 2017; at the same time the Bureau of Medical Services focused on understanding the nature of the injuries and organizing specialist evaluation and treatment. Initially, individuals reporting symptoms or concerns were medavaced to Miami for evaluation and referral.

_____ In August 2017, two TDY personnel experienced medical injury from an incident at a Havana hotel.

(S//NF

SECRET//NOFORN-10 B7(E)

1.4(D)

B1 B3

At the end of September, the Secretary of State ordered the departure of all non-1.4(D)emergency staff in response to the health attacks. In March 2018, after six months of orderedB1departure, Havana was designated an unaccompanied post.B3

(SBU) To date (June 7, 2018), 24 members of the Embassy Havana community have been medically confirmed to have been affected as a result of permanent assignment or temporary duty in Havana. Beginning in August 2017, 21 of these individuals consented to comprehensive multi-disciplinary evaluations at the University of Pennsylvania Center for Brain Injury and Repair; some have also received follow up treatment or rehabilitation as indicated.

(U) Initial Reports

(\$//NF)		
(S//NF)		

(SBU) Impacted Group Broadens

Several individuals believed they may have been impacted as early as November 2016. Post leadership took administrative actions to protect employees from this unknown threat, beginning with liberal curtailment policies in March 2017. At the same time the Bureau of Medical Services focused on understanding the nature of the injuries and organizing specialist evaluation

SECRET//NOFORN-11

and treatment both at Post and in the U.S.	B7(E)
	B7(A)

The group of affected individuals continued to grow throughout the spring of 2017, as medical understanding of the injuries advanced and additional incidents were reported.

(U) Medically confirmed Havana incidents, drawdown, and aftermath

(S//NF) The last Havana incidents resulting in medically confirmed injury took place at the end of August 2017. (Two additional incidents reported on May 27, 2018, are pending medical confirmation at the time of this report.)

At the end of September, the Secretary of State ordered the departure of all non-emergency staff in response to the "health attacks." The decision to draw down the staff in Havana does not appear to have followed standard Department of State procedures and was neither preceded nor followed by any formal analysis of the risks and benefits of continued physical presence of U.S. government employees in Havana. After six months of ordered departure, Havana was designated an unaccompanied post in March 2018.

(SBU) Risk Benefit Analysis or Lack Thereof

(S//NF) As noted above, the cause of injury to Embassy Havana community members has not been identified.

The State Department has had such a process for a number of years; however, no such analysis has been done to date (June 7, 2018) for Cuba. Of the many Department leaders interviewed by the Board, no one could explain why this has not happened, except to suggest that

(C) Since March 2018, Embassy Havana has been an unaccompanied post,

In July of 2017, the Administration published its revised Cuba policy, which listed four key objectives: enhancing compliance with U.S. law, in particular provisions that govern the embargo and ban on tourism; holding the Cuban regime accountable for human rights abuses and oppression; furthering the national security and policy interests of the U.S. and those of the Cuban people; and laying the groundwork to empower the Cuban people to develop greater economic and political liberty.

> <u>SECRET//NOFORN</u> 12

1.4(D) B1 B3

1.4(D) B1 B3 UNCLASSIFIED U.S. Department of State Case No. F-2018-07049 Doc No. C06768501 Date: 10/01/2019

SECRET//NOFORN-



³ mTBI: mild traumatic brain injury

SECRET//NOFORN-13

UNCLASSIFIED U.S. Department of State Case No. F-2018-07049 Doc No. C06768501 Date: 10/01/2019

	1.4(D)
(U) Adequacy of Security through February 15, 2017	B1 B7(A) B7(E)
(S//NF) For the purposes of making a finding on whether security systems and procedures were adequate and properly implemented, we find it useful to divide the assessment into two time periods: the time before officials at Post and in Washington had the first (unverified) information	B3
of injury (February 15, 2017) and the period after.	1.4(C B1
(S//NF) Before February 15, 2017, the Board assesses security at the U.S. Embassy in Havana to have been adequate.	B3
The Board assesses that the security systems and procedures were generally adequately implemented at Post before mid-February 2017.	1.4(D B1
(S//NF)	
	1.4(D) B1
	B3
(S//NF)	
	1.4(D) B1

(SBU) Shortcomings in Department's response after February 15, 2017

(S//NF) For the period after February 15, 2017, the Board found serious deficiencies in the Department's response in areas of accountability, interagency coordination, and communication, at all levels, both at Post and in Washington. These deficiencies contributed to the confusion surrounding the events, and delayed effective, coordinated action. The Board finds the lack of a designated official at the Under Secretary level to manage the response to be the single most

SECRET//NOFORN

significant deficiency in the Department's response. To this day no senior official at the Department has been assigned responsibility for leading and coordinating efforts to assess past incidents and prevent/mitigate future events. No Department of State task force was formed.



	1.4(D) B1 B3
(S//NF) The Emergency Action Committee (EAC), an Embassy Front Office responsibility, is an essential element of security policy infrastructure,	1.4(D) B1
(S//NF) Once the EAC cable was received, the Department's response tempo increased, although in a stove-piped and inadequately coordinated manner in the absence of an Under Secretary for Management or a designated responsible Department official. (S//NF) However, within the Bureau of Diplomatic Security, individual directorates and office(s) engaged adequately within their areas of expertise supporting Post's security program and participating in Washington based meetings. (S//NF) (S//NF)	1.4(D) B1 B7(E) B7(A) B3

 $^{\rm 4}$ NODIS 17 Havana 29 $^{\rm 5}$ Emergency Action Cable (EAC) 17 Havana 31

SECRET//NOFORN 16

(S//NF)	1.4(D) B1 B7(E) B3
(SBU) Community Reactions: widespread differences of opinion	
(S//NF)	1.4(D) B1
	1.4(D) B1 B3

(C) The Board finds the delay of almost six weeks between first knowledge of injury and the first briefing of Embassy staff to be unfortunate and the exclusion of family members from this knowledge to be unjustified, given the incidents were taking place at residences. Despite the delay, the University of Pennsylvania medical team assessed that there was no indication that a delay negatively impacted medical treatment or recovery.

1.4(D) B1

<u>SECRET//NOFORN</u> 17



(SBU) In exploring the guidance given to the COM regarding his responsibility for the security of all executive branch employees, the Board learned the COM did not have a letter of instruction. Presidentially-appointed, Senate-confirmed ambassadors all receive a letter of instruction from the President detailing their responsibilities. Typically the responsibility for the

⁶ 17 Havana 67

<u>SECRET//NOFORN</u> 18

safety and security of American citizens and U.S. government employees features prominently in these letters. In other posts where a COM is not Senate confirmed, the Department sometimes issues a letter of instruction from the Secretary of State which serves a similar purpose. While the COM attended the Ambassadorial Seminar at FSI and stated he was familiar with the provisions of the Presidential letter regarding security responsibilities, the Board finds the absence of a formal instruction in Cuba to be vulnerability.

(C) WHA Role: De Facto leadership but insufficient authority and response

 (\mathbf{C}) While various bureaus and individuals took action to address their specific part of the problem, everyone the Board interviewed agreed there was no official in charge. As a result, a whole-of-government comprehensive effort to identify the mechanism of injury and perpetrators, to understand the universe of potentially affected individuals, to treat and rehabilitate the injured employees as well as to deal with the many administrative issues associated with this anomalous event never emerged. Even a "whole of State Department" effort never got off the ground, despite some early attempts to provide consistent support for potentially affected employees.

(C) The Bureau of Western Hemisphere Affairs was frequently cited by those interviewed as the "de facto" lead bureau within the State Department. WHA leaders attempted to fill some of the gap created by the lengthy vacancies at the Under Secretary level, and convened a number of meetings for the purpose of sharing information. They were largely unsuccessful at actual coordination, in part because they did not have the authority to direct action on the part of other bureaus. They were almost invariably in a reactive mode and never put forward a cohesive plan of action for the future. They were also hampered by their very limited access to the senior leadership of the Department.

(C)			
			1.4(I B1
			DI
	A	-	

(C) Communication: uncoordinated and inadequate

(C) Overall, the Department of State failed to maintain effective communication with employees evacuated from Havana (both medical evacuees and those evacuated for the ordered departure), again, in part, because no one was assigned this responsibility. While there was the occasional, uncoordinated, ad hoc communication, there was no systematic plan for tracking, communication, and providing definitive guidance on various issues of concern to the Havana community. Employees, who left Post in September 2017 under ordered departure, learned about the March 2018 decision to make Havana an unaccompanied post by reading about it in the press. As far as the Board could determine, there was no advance notice to the Embassy Havana community regarding the journal article about the "novel clinical entity" was going to be published in the Journal of the American Medical Association.

<u>SECRET//NOFORN</u> 19

D)

(C) The Board understands that the Bureau of Medical Services (MED) is largely constrained in its dealings with both the injured employees and the broader universe of those potentially affected by medical privacy laws and policies; these are based on an assumption of confidential communication with individual patients. This caused MED to be poorly positioned to take on the administrative responsibility for dealing with a group such as those injured in Havana, and is a cause of frustration to some in the group. A working level representative from the Human Resources bureau (M/DGHR) had previously been named as a point of contact to assist employees in identifying the appropriate entity or responsible individual to address issues that arose, particularly issues related to worker's compensation; she continues to fill her primary role without the authorities necessary to address the myriad of other administrative and procedural issues faced by employees in treatment.

(C) MED role: strong performance, concern about delay in engaging CDC

(C) The Bureau of Medical Services (MED) performed strongly and, making patient evaluation, treatment, and rehabilitation its priority, gets high marks for dealing with an unprecedented situation in a competent, professional manner. It took some time for MED officials to understand what they were dealing with medically, which is understandable given that this is a "novel clinical entity"; however, once they confirmed that employees were dealing with brain injuries, MED set in motion processes to identify and deliver the best possible evaluation and treatment and dealt with myriad of issues associated with the unprecedented nature of the events in Havana, including supporting domestic medevacs. The facility selected for evaluation and treatment, the Center for Brain Injury and Repair at the University of Pennsylvania Perelman Medical School (UPenn), is a world-class medical center with a cutting edge program in brain injury diagnosis and treatment and one of only five NIH-designated centers nationwide. The vast majority of the injured employees expressed to the Board their confidence in the care they received at UPenn. MED then obtained the required authorities to expand medevac procedures to include medevacs within the U.S. to enable patients to travel from domestic locations to the medical center of excellence for evaluation and treatment. The bureaucratic approval process required by MED to obtain domestic medevac authority for the Cuba medevac patients took time and added to the administrative burden for MED.

(C) Even though there was delay in completing evaluations and beginning treatment, medical providers at the University of Pennsylvania expressed to the Board their professional view that this delay would not have a significant negative impact on successful rehabilitation. On the other hand, agreement with the CDC to do the necessary epidemiology study has not been finalized; the Board urges the Department to take the steps necessary to speed up this process and to allocate funding to support this critical endeavor. Further, the Board recommends the Department develop a long term plan for follow-up not only with the existing patient group, but with anyone who served or visited Havana during the identified period and share their plan in writing.

<u>SECRET//NOFORN</u> 20

(U) FINDINGS and RECOMMENDATIONS: ACCOUNTABILITY

(U) Finding #1:

 $(\bigcirc$ No senior official has ever been assigned overall responsibility for leading and coordinating the State Department's response to the Cuba incidents.

(S) Discussion: No senior official was identified as having ownership of the issue overall. As a result, there was no accountability for 1) determining what had happened, 2) ensuring that standard bureaucratic procedures were used, 3) communicating with and responding to the affected and potentially affected employees, 4) using authorities to overcome bureaucratic obstacles,

coordination or to direct needed action across bureau lines within the State Department.

(S) There was no Department-wide task force formed. The establishment of a task force could have alleviated many of the shortcomings identified in the report. Standard Department of State procedures which have been used effectively in other crises were not utilized. The problems caused by lack of ownership were compounded by the many vacancies in key positions, the incumbents of which would normally have provided leadership. Given the recent confirmed report of medical injury to an employee at Consulate Guangzhou, China reporting a similar incident, it is critical that there is a focal point for monitoring and formulating the Department's response globally.

(SBU) Recommendation #1: Overall responsibility for the Cuba response should be assigned to the Deputy Secretary of State.

(S//NF) Recommendation #2: Although belated, the Department needs to establish a Department-wide task force reporting directly to the designated senior official to develop a strategy for the future operation of Embassy Havana and to remedy the deficiencies identified in this report. The task force should report weekly to the Deputy Secretary of State and should include in its mandate:

1.4(D) B1

> 1.4(D) B1

(U) Recommendation # 3: The Department should create a position modeled upon OPM's Post-Combat Case Coordinator with formal responsibility for the centralization and longer-term comprehensive outreach and assistance to medically impacted Embassy Havana community members.

(U) Finding #2:

(SBU) Vacant senior positions and lack of clarity regarding delegated authorities delayed an effective response.

(U) Finding #3:

(C) Individuals filling Under Secretary and Assistant Secretary Positions in an acting capacity during an extraordinarily prolonged transition were hampered by the rescinding of delegated authorities and the ensuing confusion regarding those authorities that were eventually redelegated.

(U) Finding #4:

 (\mathbf{C}) Seriously constrained communication between the senior leadership of the Department and Acting Under Secretaries and Assistant Secretaries (with the exception of P) inhibited action.

(C) Discussion: The political transition related to the change of administration was underway when knowledge of the incidents surfaced, and most of the Under Secretary positions were vacant. Political transitions take place routinely every four or eight years and crises sometimes break out before a new administration is fully staffed. Typically very senior and experienced Assistant Secretaries are designated as acting Under Secretaries to cover the responsibilities while the appointment process for new Under Secretaries is underway. The absence of fully-empowered acting senior leaders at the Under Secretary level seriously compromised the Department of State's ability to respond effectively and in a coordinated way to the Cuba incidents. Below the level of the Under Secretaries, almost all of the relevant Bureaus were led by acting Assistant Secretaries for most or all of the period under discussion in this report. They reported they were unsure of the extent of their authorities and had limited access to the senior leaders in the Department. In addition, they reported that they were provided little or no formal guidance. The combination of lack of formal guidance and fear of overstepping their roles, served to put Acting Assistant Secretaries in a reactive, rather than a pro-active, posture.

SECRET//NOFORN-22

1.4(D) B1

Normally, the Under Secretary for Management would have played a key role in coordinating the response of a number of bureaus to a situation like the Cuba incidents. While the Under Secretary for Management position was filled by two individuals in acting capacities, neither one believed he had the authorities necessary to coordinate the response. The July 2017 decision rescinding many delegated State Department authorities by the then-Secretary of State, followed by the limited and poorly documented re-delegation of some of those authorities created widespread confusion about authorities. It resulted in understandable concern and hesitation on the part of persons in acting positions who feared exceeding their authorities.

(SBU) Recommendation #4: The Department should review (and revise if necessary) its procedures for ensuring continued senior- level leadership at all times. When Under Secretary positions are filled by individuals in an acting capacity, they need to have sufficient delegated authorities and clarity about those authorities in order to fulfill their responsibilities.

(U) Finding #5:

(SBU) The Chargé in Havana did not have a formal instruction documenting his responsibilities for the safety and security of staff comparable to the Presidential letter of instruction provided to Senate-confirmed Chiefs of Mission.

(SBU) Recommendation #5: Every Chief of Mission who is not confirmed by the Senate should receive a Letter of Instruction from Secretary that clearly details authorities and responsibilities for oversight and safety and security of American citizens and U.S. government employees. The Bureau of Western Hemisphere Affairs should provide the Chargé in Havana with a letter of instruction comparable to those given other chiefs of mission. This letter should include specific guidance on the responsibility for safety and security of staff.

(U) FINDINGS AND RECOMMENDATIONS: INTERAGENCY COORDINATION

(U) Finding #1:

	1.4(D) B1
(U) Discussion:	
(U) Embassy Havana	
(S//NF)	1.4(D) B1 B3
(U) Washington, D.C.	
(S//NF)	1.4(D) B1 B3

(U) Recommendation #1: The Board strongly recommends the Department review its well established and successful procedures for dealing with crisis situations and ensure that leaders throughout the Department are aware of and implement them accordingly. Examples of these procedures include Emergency Action Committee responsibilities and reporting requirements, High Risk and High Threat Process, SCORE Review Process, and counter-intelligence incident reporting requirements.

(U) Recommendation #2: The Department should convene a high level review of the NSDD-38 process as it is currently implemented. Following the review, the Department should issue

SECRET//NOFORN-24

guidance to all employees and agencies regarding requirements and should hold agencies accountable.

(S//NE) Recommendation #3:

B3

(C) *Recommendation #4:* The Department, in coordination with interagency partners, should request funding for mitigation countermeasure(s) once a confirmed mitigation strategy has been developed and should implement these measures promptly.

(U) Finding #2:

(S//NF)				
(\$*/NF)	Discussion:			

(S//NF) Recommendation #5: INR should ensure that long-term chargés (chiefs of mission who are not Senate-confirmed) are included in their COM intelligence oversight briefings.

(S//NF) Recommendation #6: The Department should ensure that the NSDD-38 processes are followed

SECRET//NOFORN
25

1.4(D) B1 B3

1.4(D) B1

(U) FINDINGS AND RECOMMENDATIONS: MEDICAL

(U) Finding #1:

(U) The Bureau of Medical Services (MED) did a competent and professional job responding to an unprecedented medical situation and has provided high quality evaluation and treatment for Embassy Havana personnel for this "novel clinical entity."

(U) Discussion: Throughout the events in Havana, MED focused on providing the needed medical care to the individuals affected. They established a broad medevac policy that provided or offered medevac of all persons who were affected or exposed, or thought they may have been affected or exposed, to the U.S. for specialty evaluations. Medical screening either at Post or by medevac was offered for all who thought they might have been affected. Protocols were put in place to inform and screen those who were traveling to or returning from the U.S. mission in Havana. MED instituted consultation and networking with multiple experts from U.S. medical academic centers and USG agencies to ensure that their actions were informed by the best medical expertise available; MED identified a recognized center of excellence at UPenn as the designated referral center for comprehensive evaluation and treatment.

(U) Finding #2:

(U) The Bureau of Medical Services is not resourced or funded to provide long term medical follow-up and required treatment to U.S. Mission personnel and families impacted by the incidents in Cuba.

(U) Discussion: The long term prognosis and medical requirements for those affected by the incidents in Cuba remain unknown. The required medical and epidemiologic investigation and patient follow-up will require a highly specialized multiple disciplinary efforts coordinated with USG agencies and academic institutions. The Bureau of Medical Services will need the dedicated staffing and funds to oversee and coordinate this and provide care for those affected over the long term.

(U) Recommendation #1: The Department of State, in coordination with other USG agencies, should provide the resources and establish funding mechanisms to provide long-term medical follow-up and required treatment to U.S. Mission personnel and families impacted by the incidents in Cuba. The follow-up plan should be made available to all U.S. Mission medically impacted personnel and families.

(U) Finding #3:

(U) The board considers the engagement of CDC expertise in the medical and epidemiological investigation of the incidents in Cuba to be critical going forward.

(C) *Discussion:* The State Department formally requested CDC assistance in December 2017. CDC has determined that work on the Cuba events qualifies as a Public Health Response which

SECRET//NOFORN

26

includes provisions for access to medical records when necessary for public health purposes. At the time of this report, progress in CDC's medical investigation is still pending because of Department legal concerns regarding sharing of the medical records required to conduct the required studies, authority for which CDC already has. This is significantly delaying the start of the required medical studies.

(SBU) Recommendation #2: The Department of State Legal Adviser should immediately engage with the senior legal official at CDC to resolve disagreement that is impeding the sharing of medical records with the CDC to enable CDC to begin the medical study immediately.

(SBU) Recommendation #3: The Department of State, in coordination with other USG agencies and academic medical institutions, should provide the funding and resources necessary to conduct a comprehensive CDC-led medical and epidemiologic study of the clinical entity related to the incidents in Cuba. The study should be inclusive of all of those individuals who may have been exposed to incidents in Cuba, including U.S. mission employees and their family members, and any other American citizens who may have been exposed, with case definitions and at-risk time frame to be determined by the appropriate medical experts. The study should also address possible counter measures and best available treatment modalities. In addition to the currently identified cases, and exposed adults, the study should access possible long term effects on young children or unborn children who may have been exposed.

(U) Finding #4:

			–
			 1.4(E B1
//NF) Discussion:			В В3
			20
		ureau of Medical S	

(U) Finding #5:

(SBU) The Board finds that, within the group of individuals medically impacted by the incidents in Havana, there is lack of clarity whether their conditions will be accepted by the Department of Labor as qualifying for worker's compensation.

SECRET//NOFORN-27

(U) Discussion: Federal employees may file claims with the Department of Labor (DOL) under the Federal Employees Compensation Act (FECA) for work related illness or injury. An accepted claim may entitle the employee to lifetime medical expenses for treatment of the work related illness or injury. Because of the unique nature of the clinical entity related to the Cuba incidents, concerns were expressed to the board regarding whether DOL will accept their cases as qualifying for worker's compensation. Meeting and consultation between State MED and HR with DOL may be effective in establishing procedures covering this situation.

(SBU) Recommendation #5: Representatives from the State Department Bureau of Medical Services and HR should brief the appropriate offices at the Department of Labor (DOL) regarding the unique nature of the clinical entity related to the Cuba incidents, in order to inform DOL decisions on worker's compensation claims that may be filed by those employees affected.

(U) Finding #6

(U) The lack of standing authority for the Department of State Medical Director to approve medical evacuations between domestic locations when required added additional steps and bureaucratic time requirements to the medevac process.

(U) Discussion: Under the State Department Medical Program, medical evacuations from overseas posts are provided when required for medical care. But in unusual circumstances sometimes medical travel from one location in the U.S. to another is required for the appropriate specialty evaluation or care. This was the case for many of the individuals in the Havana cohort who were referred to UPenn. To accomplish these medevacs the Medical Director was required to request special authority which was then granted specific only to the Cuba events. In the future when another event occurs which requires domestic medevacs State MED will need to repeat the same administrative process specific to that event.

(U) Recommendation #6: The State Department should delegate standing authority to approve domestic medevacs to the Medical Director of the Bureau of Medical Services that can be utilized immediately in future medical situations that require medevac from one domestic location to another.

(U) Finding #7:

(U) The medical screening for assignment to or temporary duty at Embassy Havana is optional.

(U) Discussion: Although State MED has developed pre-assignment screening to establish baseline information for employees heading to Havana, and post-assignment screening to provide an early indication of any changes that could signal possible injury, these screenings are currently optional for employees. Given that the incidents are still under investigation, it is critical to gather as much information as possible. In addition, these screenings provide additional protection for employees. These screenings should be mandatory for all employees permanently assigned to or traveling TDY to Havana.

<u>SECRET//NOFORN</u> 28

UNCLASSIFIED U.S. Department of State Case No. F-2018-07049 Doc No. C06768501 Date: 10/01/2019

SECRET//NOFORN

(U) Recommendation #7: The Department should make pre-departure and post-assignment medical screening a mandatory condition for assignment to, or temporary duty in, Havana.

<u>SECRET//NOFORN</u> 29

UNCLASSIFIED U.S. Department of State Case No. F-2018-07049 Doc No. C06768501 Date: 10/01/2019

(U) FINDING and RECOMMENDATIONS: COMMUNICATION AND INFORMATION SHARING

(U) Finding #1:

(C) Both at Post and in Washington, response to the incidents was characterized by excessive secrecy that contributed to a delayed response.

(S//NF) Discussion:

(C) Recommendation #1: The Secretary of State should advise employees, and his counterparts at other agencies represented at missions overseas, that he expects complete transparency and prompt notification regarding any episode that results in harm or increased danger for USG employees.

(*C*) *Recommendation #2:* The Secretary, or his designee, should ensure that Chiefs of Mission, Deputy Chiefs of Mission and Principal Officers are personally responsible for Emergency Action Plans. Additionally, the Department of State should re-issue guidance reminding Chiefs of Mission that Emergency Action Committee (EAC) meetings should be convened whenever information surfaces indicating the potential for harm to USG employees or American citizens. EAC meetings must allow for and encourage robust discussion and information sharing by all entities represented and make a determination as to the proper dissemination of said information.

(U) Finding #2:

 $(\bigcirc$ WHA's reliance on informal consultation with the Department's leadership made it difficult for the Board to develop an accurate picture of decision making regarding the incident.

(C) Discussion: Informal communication between WHA and the senior leadership of the State Department contributed to the lack of coherence in the response. Normal Department reporting channels and methods were routinely disregarded in the response to the Cuba incidents. WHA officials were instructed to limit distribution of information to a select group of officials. As a result, accountability was never clearly established and there was no coordination within the Department. The most frequent communication with the senior leadership was to the Secretary of State's chief of staff via email. Contemporaneous documentation of these interactions is scant.

<u>SECRET//NOFORN-</u> 30

1.4(D) B1 B3

(\bigcirc) Given that this is an unprecedented event, it would be helpful to have an accurate record of what was done, by whom, when, and why. In order to learn the right lessons from this incident, it is essential to have an accurate written record.

(C) Recommendation #3: WHA and S staff should create a timeline (tick tock) of communication, decisions, and actions taken to date (June 7, 2018) in response to the incidents. The investigation into the incidents and Department's response should remain open until the Department determines what happened. This timeline is a critical part of the discussion and lessons-learned process.

(U) Finding #3:

(C) Communication with employees was disorganized and often ineffective. Responsibility for maintaining such communication was never clearly established.

(C) Discussion: Communications with the potentially impacted Embassy community and later with the evacuated staff lacked coordination and ownership; there was no clarity about who was responsible for communication. This resulted in inconsistent or a lack of notifications. Many individuals expressed their frustration with the Department's failure to provide timely, relevant information and assistance to the Embassy Havana community. The Board was advised by the WHA executive director that under a drawdown, it is the drawdown post's responsibility to keep track of and maintain communication with evacuated staff. Even under normal circumstances, this seems counter-intuitive;

(C) Recommendation #4: WHA leadership should designate a senior official within the bureau to be responsible for ensuring that all involved parties are promptly notified of any event, action, or decision that affects those impacted by the Cuba incidents to date (June 7, 2018) and in the future.

(U) Finding #4:

(C)]
(C) Discussion:	
	1.4(D) B1
	Ы

(U) Recommendation #5: WHA should appoint a senior management officer to resolve any and all remaining management issues resulting from the Cuba incidents as well as any issues resulting from the Post's change in status following the ordered departure. This senior officer

SECRET//NOFORN

1.4(D) B1 UNCLASSIFIED U.S. Department of State Case No. F-2018-07049 Doc No. C06768501 Date: 10/01/2019

SECRET//NOFORN

should report directly to the Assistant Secretary and coordinate closely with the WHA Executive Director. WHA should provide funding and staffing to facilitate these efforts.

SECRET//NOFORN-32

UNCLASSIFIED U.S. Department of State Case No. F-2018-07049 Doc No. C06768501 Date: 10/01/2019

(U) FINDING and RECOMMENDATIONS: RISK/BENEFIT ANALYSIS

(U) Finding #1:

(C) No formal, comprehensive review of policy objectives and risk was conducted although Embassy Havana was placed in unaccompanied status with significantly reduced staffing effective March 2018.

1.4(D) B1

(C) Despite what is described as "unprecedented" reports of medical injury from an unknown cause(s) to Embassy Havana diplomatic community members between February and August 2017, and the June 16, 2017 issuance of the National Security Presidential Memorandum NSPM-5 entitled, "*Strengthening the Policy of the Unites States towards Cuba*," the decision to draw down Embassy staff in Havana was neither preceded nor followed by a formal risk/benefit analysis. Neither the Department's High Threat High Risk Post Review (HTHR) Process nor the former Vital Presence Validation (VP2) Process were enacted

The Board found widespread	1.4(D)
confusion among those interviewed about how a review of a post that was not HTHR would	B1
occur and who could or should initiate such a review.	

	(C) Recommendation #1:	
Į	Т	 S

(C) Recommendation #2: The Department should expand its procedures for conducting risk/benefit analyses and staffing reviews of posts that are not classified as High Threat High Risk for terrorism, and assign responsibility for convening such a review when unanticipated risks (such as the one that is the subject of this report) develop at posts not on the HTHR list.

(C) Recommendation #3:		
	B1	

<u>SECRET//NOFORN</u> 33

(U) FINDINGS AND RECOMMENDATIONS: BUREAU OF DIPLOMATIC **SECURITY**

(U) Finding #1:

(SBU) Although individual Directorates and Office(s) within the Bureau of Diplomatic Security (DS) responded to the Cuba incident reports based upon their areas of expertise, DS' response would have benefited from the formation and resourcing of a formal, internal DS, multidisciplinary working group.

(S//NF) Discussion:



(S//NF) Recommendation #1: The Bureau of Diplomatic Security should appoint and appropriately resource a formal DS working group from across its competencies of counterintelligence, technology, investigations, and international programs with a designated, accountable leader to continue to examine the incidents, actively participate in interagency working groups, and consult with technology experts as needed, in an effort to determine the cause and responsible entity, as well as assist in the interagency development of a mitigation strategy and countermeasures. The working group should report directly to DS' Assistant Secretary with a clearly defined, formal reporting structure and schedule.

(U) Finding #2:

(C)-Embassy Havana's Emergency Action Plan (EAP) is in need of review and updating.

(C) Discussion: In light of the incidents in Havana, Cuba that resulted in medical injury to USG and Canadian government community members and Embassy Havana's current status as an "unaccompanied" post, Embassy Havana's Emergency Action Plan requires a thorough review and update.

(C) Recommendation #2: Chargé Havana, in coordination with the Bureau of Diplomatic Security, should ensure that Embassy Havana's Emergency Action Plan is updated. The update should include a section on managing and responding to the incidents. The Department should determine if an expansion of the incident response plan is warranted for posts other than Embassy Havana and, if so, should develop worldwide guidance for inclusion in EAPs.

34
SECRET//NOFORN

<u>(U) Finding #3:</u>	
(S//NF)	
	1.4(D)
(S//NF) Discussion:	B1
	B7(E)
	B3
(S//NF) Recommendation #3:	

(U) Finding #4:

(S//NF)	
(S//NF) Discussion:	1.4(D) B1 B7(E)
(S//NF) Recommendation # 4:	

<u>SECRET//NOFORN</u> 35

SECRET//NOFORN

(U) LIST OF ATTACHMENTS

- 1. (SBU) Timeline Summary compiled by the Bureau of Western Hemisphere Affairs at the request of the Cuba Accountability Review Board (Cuba ARB)
- 2. (U) JAMA article dated, February 12, 2018 entitled, "Neurological Manifestations Among US Government Personnel Reporting Directional Audible and Sensory Phenomena in Havana, Cuba
- 3. (U) Memorandum dated, April 11, 2018 from Deputy Legal Adviser to ARB Chair entitled, "ARB Questions Related to the Exercise of M Authorities from January 21, 2017 to present
- 4. (S//NF) 17 Havana 67 dated, June 6, 2017 entitled,

1.4(D)

B1

- 5. (U) National Security Decision Directive (NSDD) 38 dated, June 2, 1982 entitled, "Staffing at Diplomatic Missions
- 6. (SBU) Department of State's High Treat High Risk Post Review Process effective, January 2, 2018
- 7. (U//LES) B7(A) B7(E) B3 B3
- (S//NF) 18 Beijing 927, May 21, 2018, Beijing EAC Convened Reference Victim of Auditory or Sensory Phenomena
- 9. (S//NF) 17 Havana 31, April 4, 2017, Embassy Havana convene emergency action committee meeting

<u>SECRET//NOFORN</u> 36

Attachment 1

WHA Timeline of Events Related to Health Incidents

This timeline reflects WHA's best understanding of events as they were described and reported at the time they occurred. New information will be added as it becomes available or is requested.

1.4(D)
B1
B3

the

totality of reported incidents and the medical determinations of all 24 victims are not included in the chronology because of either medical privacy concerns or because their information was not reported to WHA or Post by MED.

Date	Activity	
December 30, 2016		
		1.4(D)
		1.4(D) B1 B3 B6
		B6
		1.4(D) B1 B5
		B5

SECRET//NOFORN/NODIS Classified by: WHA SBO Francisco L. Palmieri E.O. 13526, Reasons: 1.4 (b,d) Declassify on: February 21, 2043

January 5, 2016	1.4(D) B1 B3 B6
January 10, 2017	1.4(D) B1 B5 B3
February 6, 2017	
February 8, 2017	1.4(D) B1 B6 B5 B3
February 10, 2017	

SECRET // NOFORN/NODIS-

Page 2 of 22

February 15, 2017		1.4(D) B1 B6 B3
		1.4(D) B1 B3
February 16, 2017		1.4(D) B1 B6 B3 1.4(D) B1
		B3
February 17, 2017		1.4(D) B1 B6
		1.4(B) 1.4(D) B1
		1.4(D)
		1.4(D) B1 B3
	-	

SECRET//NOFORN/NODIS

Page 3 of 22

February 21, 2017 February 23, 2017	1.4(D) B1 B3
February 24, 2017	1.4(D) B1 B5 1.4(D) B1 1.4(D)
March UNK, 2017 March 21, 2017	B1 B3 B6 - 1.4(D) B1 B5 B3
March 24, 2017	1.4(D) B1 B6 B3 1.4(D) B1 1.4(D) B1 B3
March 27, 2017	B5

SECRET//NOFORN/NODIS

Page 4 of 22

March 29, 2017		1.4(D) B1
	Embassy Havana holds all hands meeting for all cleared Americans sensitizing to incidents. Options of compassionate curtailment and Separate Maintenance Allowance announced.	B3
	-	1.4(D) B1 B6
		_
		1.4(D) B1 B7(A)
		1.4(D) B1
March 30, 2017		1.4(D) B1 B7(A)
March 31, 2017	n Cubans deliver simultaneous demarche in Washington and Havana	1.4(D) B1 B6
DipNote 746 -	-	1.4(B) 1.4(D) B1
170331.pdf	-	

SECRET//NOFORN/NODIS-

Page 5 of 22

SECRET//NOFORN	/NODIS-	B1 B5
	11 1	
April 3, 2017		1.4(D) B1
11-HAVANA-31 - EAC - 170403.pdf	Embassy Havana holds Emergency Action Committee (EAC) meeting (17Havana31) to assess the threat and holds an all hands meeting for cleared Americans.	DI
		1.4(D) B1
April 4, 2017		
(contact <u>Ops Center</u> for NODIS cables)	Embassy Havana reports on the findings of the EAC (17 Havana 31) and sends a cable detailing the information uncovered to date via NODIS (17 Havana 29).	
April 5, 2017		-1.4(D) B1 B6 B7(A) B7(C)
April 5-9, 2017		
April 6, 2017		= 1.4(D) B1 B6 B3
April 7, 2017		1.4(D) B1 B3
		1.4(B) 1.4(D) B1
	CCA Coordinator and WHA/EX Sullivan and Luchessi meet with MED SECRET//NOFORN/NODIS-	

Page 6 of 22

		п B5
	Doctors Rosenfarb and Shabazhian	
April 8, 2017		
DipNote 808 - 170407.pdf		1.4(B) 1.4(D) B1
April 11, 2017	Embassy holds all hands meeting.	1.4(D) B1 B7(A)
April 12, 2017		-
April 13, 2017	Embassy staff has DVC with MED (RMO/P).	_ 1.4(D) B1 B6
April 14, 2017		B5
		 1.4(D) B1
		B7(A)
April 17, 2017	US Embassy Havana holds first meeting with Embassy spouses	1.4(D) B1
April 18, 2017	Embassy holds all hands meeting.	_
170419 - Havana Written Guidance.doc	WHA finalizes guidance to be shared with employees at Post and future assignees to Havana.	
April 19, 2017	WHA/CCA, WHA/EX, M staff, HR/CDA and MED meet regarding notifications for personnel transferring to post. WHA/EX begins briefing employees PCSing to Havana. HR/CDA begins notifying officers assigned to Havana.	
		1.4(D) B1 B3

SECRET//NOFORN/NODIS-

Page 7 of 22

SECRET//NOFORM	\/NODIS	1.4(D B1 B7(A)
	WHA holds DVC with Embassy Havana	
April 20-24, 2017		
April 21, 2017		
9	Post all hands meeting with	
17-HAVANA-41 - EAC - 170420.pdf	Post sends second EAC cable (17 Havana 41).	 1.4(D
April 22, 2017		B1 B7(A) B7(E)
April 24, 2017	WHA/EX and WHA/CCA brief to USDA (FAS and APHIS) on incid	
April 25, 2017		
8		
DipNote 381 -		
170425.pdf		1. B
April 26, 2017	WHA/CCA sends up IM to S on incidents.	B
170425 - IM to S on		
attacks - as submitter	Start briefing individual TDYers to Havana.	E
April 28, 2017	Embassy all hands meeting.	 1.4(D
		B1 B7(A) B3

170428 - Medical Examination Trip Rep	Non-paper details that eleven embassy-affiliated personnel had medically confirmed symptoms.NODIS cable (17 Havana 47).		
(contact <u>Ops Center</u> for NODIS cables)			
May 1, 2017			B5
May 2, 2017		1.4(B) 1.4(D) B1 B6	
17-HAVANA-49 - EAC - 170502.pdf	Written guidance for staff amended and distributed subsequent to May 1 meeting with M, L, WHA equities and MED.		
May 5-13, 2017	Post holds EAC meeting (17 Havana 49).	B7(A) B7(E)	
May 8, 2017	Post issues Management Notice in all hands meeting with options for departure to Embassy staff (compassionate curtailment, separate maintenance allowance). Management Notice formalizes curtailment options first announced and in force since March 29.	-	
May 9-12, 2017	University of Miami Dr. Hoffer and medical associates visit Post to conduct medical screenings.		
May 10, 2017			
May 12, 2017		1.4(D B1 B7(A)	
170512 - Notes from May 12 Meeting with		B7(E) B3	l
May 15, 2017	AM approved by P regarding expulsion of two Cuban diplomats.		

SECRET//NOFORN/NODIS

Page 9 of 22



SECRET//NOFORN/NODIS-

Page 10 of 22

SECRET//NOFORN	<u>/NODIS</u> 1.4	(D)
June 7, 2017	1.4	(B)
₩		
DipNote 158-32 - 170607.pdf		1.4(B) B1
June 8, 2017	1.	- 4(B)
June 9, 2017		4(D)
ب		
DipNote 1290 - 170609.pdf		⊥ 1.4(D) B1 B3
June 13, 2017		– 1.4(D) B1 B6
June 14, 2017	All hands meeting at Post.	1.4(D) B1
June 16, 2017	All hands meeting at Post.	B5 B3
June 21, 2017		_ 1.4(D)
		B1 1.4(B) B3
170621 - Notes from June 21 Meeting with		
June 26-30, 2017		1.4(D) B1 B7(A)
July 3, 2017		B3
July 6, 2017		1.4(D) B1
		B3
July 7, 2017	COM DeLaurentis finishes tour. Acting Chargé Hamilton assumes COM duties.	-

Page 11 of 22

July 11, 2017		1.4(D) B1 B3
July 13, 2017		1.4(Ď) B1
July 14, 2015		B7(E)
July 17, 2017		1.4(D) B1 B3
July 17 Meeting with : August 3, 2017		
170803 - Notes from August 3 Interagency		
August 5, 2017		1.4(B) 1.4(D) B1
August 8, 2017	Department received first press inquiry regarding incidents.	D I
August 9, 2017	First article published on incidents.	
August 11, 2017	All hands meeting at Post.1.4(B)IM to S on incidents.1.4(D)B1	
August 12, 2017		
August 14, 2017	1.4(B) 1.4(D) B1	1.4(D) B1 B7(A)
August 15, 2017		1.4(D) B1 B3 B6

SECRET//NOFORN/NODIS

Page 12 of 22

		1.4(D)
August 17, 2017		B1 B3 1.4(D)
August 22, 2017		B1 B3
August 23, 2017		_ B6
August 23-24, 2017	FSI conducts resilience training DVCs with focus groups from Embassy Havana (three sessions) in advance of full resiliency training ultimately postponed because of the hurricane.	_ 1.4(D) B1 B3
August 24, 2017		1.4(D) B1
August 25, 2017	All hands meeting at Post.	
August 30, 2017		1.4(D) B1 B5
170830 - Notes from August 30 Interagenc		B3
August 31, 2017		1.4(D) B1 B7(A)
September 1, 2017		1.4(D)
17-HAVANA-107 - EAC - 170901.pdf	Post holds All Hands meeting; EAC held (17 Havana 107).	B1 B3
September 4-7, 2017		1.4(D) B1
September 5, 2017		B7(A) B3
17-HAVANA-109 - EAC - 170905.pdf	Post EAC (17Havana109).	1.4(D) B1
September 6, 2017	Post EAC (17 Havana 113).	

SECRET//NOFORN/NODIS

Page 13 of 22

<u>-SECRET//NOFORN/NODIS</u>-

17-HAVANA-113 - EAC - 170906.pdf			
September 7, 2017	Post EAC (17Havana115).		
17-HAVANA-115 -			
EAC - 170907.pdf September 13, 2017	CIA informs A A/S Palmieri of its decision to withdraw its personnel from Havana for the foreseeable future.		
September 14, 2017			1.4(D) B1 B3
September 14 Interac September 15, 2017			
September 18, 2017			1.4(B) 1.4(D) B1 B3
170918 - Notes from September 18 Interaç	Post EAC (17 Havana 111) and all hands.		
17 HAVANA 111.msg			
September 19, 2017			
			1.4(D) B1
		añas or	

SECRET//NOFORN/NODIS-

Page 14 of 22

September 20, 2017		1.4(D) B1 B5
<u> </u>	All hands meeting at Post.	_
September 21, 2017		
<u>G</u> (1 05 0017		1.4(D)
September 25, 2017	Post EAC (17Havana117).	B1
17-HAVANA-117 - EAC - 170925.pdf		
September 26, 2017	Secretary Tillerson meets with Cuban FM Rodriguez regarding incidents in Washington.	
September 29, 2017	All hands meeting at Post.	
	Secretary Tillerson Orders Departure of Non-Emergency Personnel from Havana.	
October 2, 2017	Post holds EAC (17Havana129) 17 Havana 127).	1.4(D) B1
	17 Havana 119).	
17-HAVANA-129 - EAC - 171002.pdf		
1		
17-HAVANA-127 - - 171002.pdf		1.4(D) B1
17-HAVANA-119 - Policy Paper.pdf		
October 3, 2017		1.4(D)
		B1 B3
October 4, 2017	-	-
	State briefs Rep. Newhouse by phone about his planned travel to Cuba.	

SECRET//NOFORN/NODIS

Page 15 of 22

October 5, 2017		1.4(D) B1
		B3
October 11, 2017	Post EAC (17 Havana 121).	
	WHA hosts townhall and reception for evacuees.	
17-HAVANA-121 - EAC - 171011.pdf		
October 12, 2017		1.4(D) B1 B3
October 16, 2017	(17 STATE	
	56655).	
17-STATE-56655 - ALDAC.pdf		1.4(D)
October 19, 2017		B1 1.4(D) ³³
October 20, 2017	Secretary Tillerson meeting with Havana evacuees.	B1 B7(A) B3
October 23-27, 2017		
October 30, 2017		1.4(D)
		B1
DipNote 303-64 - 171030.pdf		
October 31, 2017	Congress requests GAO investigate response to health attacks.	
November 1, 2017		1.4(D) B1 B3
	MED holds townhall with evacuees.	

SECRET//NOFORN/NODIS

Page 16 of 22

		1.4(D) B1 B3
November 2, 2017		B3
November 9, 2017	Acting A/S Palmieri meets with evacuees.	
November 14, 2017		1.4(D) B1 B7(A)
November 20, 2017		B7(E) B3
171120 - Notes from November 20 Interag		
-		B7(A B3
November 21, 2017		1.4(D)
17-HAVANA-133 - HSR - 171121.pdf		B1 B6
November 22, 2017	Post EAC (17 Havana 135).	
17-HAVANA-135 - EAC - 171122.pdf		 1.4(D) B1
November 30, 2017	First request received from GAO.	B7(A)
December 11, 2017		
		 1.4(D) B1

SECRET//NOFORN/NODIS

Page 17 of 22

B7(A)

SECRET//NOFORN/NODIS

December 14, 2017	
17-HAVANA-145 - EAC - 171214.pdf B70	(A)
December 15, 2017	
	1.4(D) B1 B7(A)
	B3
171207 - IM to S on Investigation Update	
January 9, 2018 PDAS Palmieri, Dr. Rosenfarb, DS DAS Todd Brown testify before SFRC in open hearing; Todd publicly discloses	B3
January 10-11, 2018	
20180110 - Meeting	
Notes on US Canada January 16, 2018	1.4(D)
	B1 1.4(B) B7(A) B3
January 17, 2018 Post sends EAC (18 Havana 1).	
18-HAVANA-1 - EAC - 180117.pdf	
January 22, 2018	-
B ² B7	7(A)
B3	3

Page 18 of 22



SECRET//NOFORN/NODIS

Page 19 of 22

March 23, 2018	1	.4(B) .4(D) 81 86
April 5, 2018		
20180405 - Notes from Interagency Me		
April 10, 2018		1.4(D) B1 B5
20180411 - Notes from Interagency Mee		B3
April 16, 2018	Canadian government announces change of status to unaccompanied, announces 10 individuals displaying symptoms of "acquired brain injury"; does not rule out manmade cause; says environmental assessment yielded no new clues.	
April 24, 2018		1.4(D) B1
20180425 - Notes from April 24 Interage		B5
May 3, 2018		1.4(D) B1
E.		Ы
18-STATE-20883 - Demarche Pressing Cı		
May 17, 2018	IM to S on staffing.	
AM to S_Havana Embassy Staffing Ret		B6
May 18, 2018	MED confirms employee stationed in Guangzhou and evaluated by UPENN has medically confirmed symptoms consistent with Havana syndrome.	
		1.4(D) B1 B5

SECRET//NOFORN/NODIS

Page 20 of 22

May 22, 2018 20180522 - Notes from May 22 Phone C	CCA meets with EAP/CM, EAP press, CA, EAP/EX to coordinate response and advise EAP rollout. (evening) Mission China holds town halls across Embassy and consulates in China, congress notified, and warden message sent after S approves	1.4(D) B1 B5 B7(A) B3
AM (3).docx	actions via AM. Press aware.	1.4(D) B1 B6
May 23, 2018	S briefs Congress at budget hearing, mentions Guangzhou "incident" and promises to lead interagency task force.	
May 25, 2018		1.4(D) 31
May 27. 2018		36 37(A)
May 28, 2018	g	1.4(D)
May 29, 2018 18-HAVANA-39 - HSR - 180529.pdf 18-HAVANA-41 - EAC - 180529.pdf	EAC convened (18 HAVANA 41); (18 HAVANA 39) 1.4 1.4 1.4 1.4 B1	B1

SECRET//NOFORN/NODIS

Page 21 of 22

May 30, 2018 20180530 - Notes from May 30 Interage		1.4(D) B1 B3
May 31, 2018	12 person MED team departs for Mission China to conduct baseline testing.	1.4(D) B1 B5 B3
June 1, 2018		

SECRET//NOFORN/NODIS

Page 22 of 22

Attachment 2

Research

JAMA | Preliminary Communication

Neurological Manifestations Among US Government Personnel Reporting Directional Audible and Sensory Phenomena in Havana, Cuba

Randel L. Swanson II, DO, PhD; Stephen Hampton, MD; Judith Green-McKenzie, MD, MPH; Ramon Diaz-Arrastia, MD, PhD; M. Sean Grady, MD; Ragini Verma, PhD; Rosette Biester, PhD; Diana Duda, PT, DPT; Ronald L. Wolf, MD, PhD; Douglas H. Smith, MD

IMPORTANCE From late 2016 through August 2017, US government personnel serving on diplomatic assignment in Havana, Cuba, reported neurological symptoms associated with exposure to auditory and sensory phenomena.

OBJECTIVE To describe the neurological manifestations that followed exposure to an unknown energy source associated with auditory and sensory phenomena.

DESIGN, SETTING, AND PARTICIPANTS Preliminary results from a retrospective case series of US government personnel in Havana, Cuba. Following reported exposure to auditory and sensory phenomena in their homes or hotel rooms, the individuals reported a similar constellation of neurological symptoms resembling brain injury. These individuals were referred to an academic brain injury center for multidisciplinary evaluation and treatment.

EXPOSURES Report of experiencing audible and sensory phenomena emanating from a distinct direction (directional phenomena) associated with an undetermined source, while serving on US government assignments in Havana, Cuba, since 2016.

MAIN OUTCOMES AND MEASURES Descriptions of the exposures and symptoms were obtained from medical record review of multidisciplinary clinical interviews and examinations. Additional objective assessments included clinical tests of vestibular (dynamic and static balance, vestibulo-ocular reflex testing, caloric testing), oculomotor (measurement of convergence, saccadic, and smooth pursuit eye movements), cognitive (comprehensive neuropsychological battery), and audiometric (pure tone and speech audiometry) functioning. Neuroimaging was also obtained.

RESULTS Of 24 individuals with suspected exposure identified by the US Department of State, 21 completed multidisciplinary evaluation an average of 2O3 days after exposure. Persistent symptoms (>3 months after exposure) were reported by these individuals including cognitive (n = 17, 81%), balance (n = 15, 71%), visual (n = 18, 86%), and auditory (n = 15, 68%) dysfunction, sleep impairment (n = 18, 86%), and headaches (n = 16, 76%). Objective findings included cognitive (n = 16, 76%), vestibular (n = 17, 81%), and oculomotor (n = 15, 71%) abnormalities. Moderate to severe sensorineural hearing loss was identified in 3 individuals. Pharmacologic intervention was required for persistent sleep dysfunction (n = 15, 71%) and headache (n = 12, 57%). Fourteen individuals (67%) were held from work at the time of multidisciplinary evaluation. Of those, 7 began graduated return to work with restrictions in place, home exercise programs, and higher-level work-focused cognitive rehabilitation.

CONCLUSIONS AND RELEVANCE In this preliminary report of a retrospective case series, persistent cognitive, vestibular, and oculomotor dysfunction, as well as sleep impairment and headaches, were observed among US government personnel in Havana, Cuba, associated with reports of directional audible and/or sensory phenomena of unclear origin. These individuals appeared to have sustained injury to widespread brain networks without an associated history of head trauma.

JAMA. 2018;319(11):1125-1133. doi:10.1001/jama.2018.1742 Published online February 15, 2018. Editorial page 1098

- 🗱 Author Audio Interview
- Related article page 1079
- 2013 Supplemental content

Author Affiliations: Author affiliations are listed at the end of this article.

Corresponding Author: Douglas H. Smith, MD, Department of Neurosurgery and Center for Brain Injury and Repair, University of Pennsylvania, Preelman School of Medicine, 3320 Smith Walk, 105 Hayden Hall, Philadelphia, PA 19104 (smithdou@upenn.edu).

© 2018 American Medical Association. All rights reserved.

1125

Research Preliminary Communication

Clinical Findings and Outcomes in US Government Personnel Reporting Directional Sensory Phenomena in Cuba

n late 2016, US government personnel serving in Havana, Cuba, began presenting to their embassy medical unit after experiencing unusual auditory and/or sensory stimuli of variable intensity and character, with associated onset of varied neurological manifestations. Initial signs and symptoms pointed toward injury of the auditory system, leading to the establishment of a triage program at the University of Miami centered around otolaryngology evaluation. Eighty embassy community members underwent initial evaluation between February and April 2017, and 16 individuals were identified with similar exposure history and a constellation of neurological signs and symptoms commonly seen following mild traumatic brain injury, also referred to as concussion.¹ Exposures continued with time and 8 additional individuals were identified who had similar findings. The US Department of State, Bureau of Medical Services, subsequently convened an expert panel in July 2017, which came to consensus that the triage findings were most likely related to neurotrauma from a nonnatural source and recommended that further investigation into this novel cluster of findings was necessary.

The University of Pennsylvania's Center for Brain Injury and Repair was subsequently selected to coordinate multidisciplinary clinical evaluation, treatment, and rehabilitation of individuals identified during initial triage and additional patients with exposure. The purpose of this preliminary communication is to describe preliminary findings from 21 patients who were exposed to the same nonnatural source.¹

Methods

Design

This retrospective study was approved by the institutional review board of the University of Pennsylvania's Perelman School of Medicine, which waived the need for informed consent. The participants signed general consent forms for treatment permitting use of their data in research. Because of security and confidentiality considerations, individual-level demographic data cannot be reported.

Clinical Approach

The US Department of State directly referred individuals with suspected exposure to the University of Pennsylvania for comprehensive evaluation and treatment. A multidisciplinary team was convened consisting of physical medicine and rehabilitation, occupational medicine, neurology, neuroradiology, and neurosurgery. Each specialist independently obtained clinical histories and conducted comprehensive assessments. Reported signs and symptoms were extracted from these interviews.

Based on individual clinical indication, additional referrals were made to vestibular physical therapy, neurooptometry, neuropsychology, occupational therapy, speech therapy, audiology, otorhinolaryngology, and sleep medicine for focused evaluation and treatment. Patients were referred to the University of Pennsylvania for clinical care, as opposed to enrollment in a structured research study. The **Box** shows

Key Points

Question Are there neurological manifestations associated with reports of audible and sensory phenomena among US government personnel in Havana, Cuba?

Findings In this case series of 21 individuals exposed to directional audible and sensory phenomena, a constellation of acute and persistent signs and symptoms were identified, in the absence of an associated history of blunt head trauma. Following exposure, patients experienced cognitive, vestibular, and oculomotor dysfunction, along with auditory symptoms, sleep abnormalities, and headache.

Meaning The unique circumstances of these patients and the consistency of the clinical manifestations raised concern for a novel mechanism of a possible acquired brain injury from a directional exposure of undetermined etiology.

an abbreviated list of objective measures used during clinical assessments and supplements for additional information.²⁻²⁹

Cognitive, Neurobehavioral, and Mood Evaluations

When clinically indicated, comprehensive neuropsychological assessments were conducted by experienced neuropsychologists, who were not blinded to patient status. Neuropsychological test batteries included assessment of the following domains: (1) auditory attention, (2) auditory and visual working memory, (3) auditory and visual memory, (4) visual-spatial perception, (5) visual-motor construction, (6) motor function, (7) language function, (8) executive function, (9) processing speed, (10) academic achievement, (11) reasoning, (12) mood functioning, and (13) effort (Box and eAppendix in the Supplement). Following neuropsychological testing, individuals with cognitive deficits were referred for cognitive rehabilitation with occupational therapy, speech therapy, or both, depending on the individual clinical indication. Cognitive rehabilitation was intentionally not started prior to completion of neuropsychological testing to avoid affecting results.

Balance and Vestibular Evaluations

Clinical evaluations identifying balance abnormalities prompted referral to vestibular physical therapy. Focused vestibular evaluation included expert clinical assessment and the use of validated measures of static and dynamic balance (Box).¹⁵⁻²¹ Also per clinical indications, patients were referred to audiology for comprehensive evaluation of the peripheral vestibular system, including caloric reflex testing.^{23,24} Individuals confirmed to have a unilateral peripheral vestibulopathy (ie, relative vestibular reduction of \geq 25% on caloric reflex testing) underwent magnetic resonance imaging (MRI) of the head with and without gadolinium contrast, with focus on the internal auditory canals in addition to the MRI sequences detailed.

Oculomotor Evaluations

Individuals found on clinical evaluation to have abnormalities of oculomotor function were referred to neuro-optometry for further evaluation and treatment. Oculomotor function was

jama.com

Clinical Findings and Outcomes in US Government Personnel Reporting Directional Sensory Phenomena in Cuba

Preliminary Communication Research

quantified using the following standard optometric clinical measures (Box).^{25,26} Vergence testing included step vergence with prism bar, vergence facility with prisms, and near point of convergence. Accommodative testing in nonpresbyopic patients included amplitude of accommodation, accommodative facility with plus and minus lenses, and accommodative lag. Pursuit and saccadic testing was done qualitatively to assess accuracy of tracking eye movements and whether symptoms were provoked as with Vestibular/Ocular Motor Screening.²⁹ Saccadic speed and accuracy were quantified using the Developmental Eye Movement test,^{26,28} a timed visual-verbal test. Diagnoses of accommodative, vergence, and/or saccadic/pursuit dysfunction were made using standardized criteria, in conjunction with symptomatic reporting,²⁶ which were quantified using the Convergence Insufficiency Symptoms Survey.²⁷

Auditory Evaluations

Audiometry evaluations were performed prior to referral for care at the University of Pennsylvania. However, when patients had balance function testing as described here, comprehensive audiology evaluation included both pure tone and speech audiometry.

Imaging Evaluations

Initial conventional MRI sequences were acquired at 3T on a Siemens Magnetom Prismafit scanner, and included highresolution sagittal 3-dimensional MP-RAGE, T2 SPACE and FLAIR SPACE, coronal 2-dimensional T2-weighted imaging, axial 2-dimensional diffusion-weighted imaging, and axial T2* gradient echo. Resulting images were clinically interpreted by neuroradiology clinicians.

Results

There were 21 individuals evaluated (11 women and 10 men, with a mean age of 43 years). Multidisciplinary evaluations began an average of 203 days (range, 3-331 days; median, 189 days; interquartile range, 125 days) following exposure (Table 1).

Exposure

For 18 of the 21 individuals (86%), there were reports of hearing a novel, localized sound at the onset of symptoms in their homes and hotel rooms (Table 2). Affected individuals described the sounds as directional, intensely loud, and with pure and sustained tonality. Of the patients, high-pitched sound was reported by 16 (76%), although 2 (10%) noted a low-pitched sound. Words used to describe the sound include "buzzing," "grinding metal," "piercing squeals," and "humming."

The sounds were often associated with pressurelike (n = 9, 43%) or vibratory (n = 3, 14%) sensory stimuli, which were also experienced by 2 of the 3 patients who did not hear a sound. The sensory stimuli were likened to air "baffling" inside a moving car with the windows partially rolled down.

Both the sound and sensory stimuli were often described as directional in that the individuals perceived a distinct direction from which the sensation emanated (hereafter re-

Box. Examples of Standardized Measures Used in Clinical Assessments ^a
Cognitive
Boston Diagnostic Aphasia Examination ²
California Verbal Learning Test-2nd Edition ³
Grooved Pegboard ⁴
Test of Memory Malingering ⁵
Trail Making Test, Parts A and B ⁶
Wechsler Adult Intelligence Scale-IV ⁷
Wechsler Memory Scale-IV ⁸
Mood
Beck Depression Inventory (2nd edition) ⁹
Beck Anxiety Inventory ^{10,11}
Frontal Systems Behavior Scale ¹²
Post-Traumatic Stress Disorder Checklist ^{13,14}
Balance and vestibular
Functional Gait Assessment ¹⁵
Activities-Specific Balance Confidence ¹⁶
Balance Error Scoring System ¹⁷
Clinical Test of Sensory Organization and Balance ^{18,19}
Dizziness Handicap Index ²⁰
Computerized Dynamic Posturography ^{21,22}
Caloric reflex test ^{23,24}
Vision and oculomotor
Formal Evaluation of Vergence and Accommodation ^{25,26}
Convergence Insufficiency Symptoms Survey ²⁷
Developmental Eye Movement Test ^{26,28}
Vestibular/Ocular Motor Screening ²⁹
^a Measures were used based on clinical indications; therefore, every patient

res were used based on clinical indications: there did not complete all measures in this abbreviated list.

ferred to as directional phenomena). Further, the directional phenomena appeared to be localized to a precise area, as individuals (n = 12, 57%) noted that after changing location, the sensation disappeared and the associated symptoms reduced. Five individuals (24%) reported covering their head and/or ears, although doing so did not result in attenuation of the directional phenomena.

Accurately determining the dose and duration of exposure has been difficult because of the limitations of patient recall. Some patients were awakened by sounds and were unsure of the start of the event. The shortest reported event involved two 10-second pulses reported as a single exposure episode, whereas other patients reported that they perceived sound continuously for longer than 30 minutes. Owing to security concerns, further details of potential dosage cannot be provided.

Of the affected individuals, 20 (95%) reported immediate onset of neurological symptoms associated with directional phenomena (eTable 1 in the Supplement). One individual awoke from sleep with acute symptoms (including headache, unilateral ear pain, and hearing changes) but did not perceive directional phenomena. From days to weeks after exposure, individuals reported that they experienced the onset

iama.com

JAMA March 20, 2018 Volume 319, Number 11 1127 Research Preliminary Communication

Table 2. Exposure Descriptions of the Directional Phenomena

Clinical Findings and Outcomes in US Government Personnel Reporting Directional Sensory Phenomena in Cuba

Table 1. Demographics of Patients Evaluated at the University of Pennsylvania ^a						
	Men (n = 10)	Women (n = 11)	Total (N = 21)			
Age, mean (SD), y	39 (7)	47 (8)	43 (8)			
Time from exposure to evaluation, mean (SD), d	229 (98)	180 (85)	203 (93)			

^a Potentially identifying information intentionally omitted for security and privacy concerns.

Patient No.	Associated Sound			Associated Sensory Stimuli			Duration >3 mo			
	Reported	High Pitch	Low Pitch	Reported	Pressure	Vibration	Movement Attenuation ^a	Persistent Symptoms	Objective Findings	Required Treatmen
1	Х	Х					Х	Х	Х	Х
2	Х	Х					х	Х	Х	х
3	Х	Х					Х			
4	Х		х	Х		Х		Х	Х	Х
5	Х	Х		Х	Х			Х	Х	Х
6	Х		х	Х	Х		х	Х	Х	х
7				Х	Х		X	Х		
8	Х	Х					Х	х	Х	Х
9	Х	Х		Х		Х		Х	Х	Х
10	Х	Х		Х		Х		Х	Х	х
11	Х	Х		Х	Х			Х	Х	Х
12	Х	х		Х	Х			х	Х	Х
13	Х	Х					Х	Х	Х	Х
14	Х	Х					х	Х	Х	х
15	Х	Х		Х	Х		Х	Х	Х	Х
16	Х	х					X	х	Х	Х
17	Х	Х		Х	Х		Х	Х	Х	Х
18								Х	X	Х
19	Х	Х		Х	Х			Х		
20				Х	Х		X	Х	Х	Х
21	Х	х						Х	Х	Х
No. (%)	18 (86)	16 (76)	2 (10)	12 (57)	9 (43)	3 (14)	12 (57)	20 (95)	18 (86)	18 (86)

of additional cognitive, neurobehavioral/mood, and physical symptoms. Twenty individuals (95%) reported that they experienced persistent (>3 months) symptoms, and 18 individuals (86%) exhibited objective clinical manifestations in 6 predominant domains (Table 3).

Cognitive, Neurobehavioral, and Mood Findings

Persistent cognitive manifestations were reported by 17 individuals (81%). Subjective symptoms included memory problems (n = 16, 76%), feeling mentally foggy (n = 16, 76%), impaired concentration (n = 15, 71%), and feeling cognitively slowed (n = 14, 67%) (Table 3). In addition, they reported neurobehavioral difficulties including irritability (n = 14, 67%), nervousness (n = 12, 57%), feeling more emotional (n = 11, 52%), and sadness (n = 5, 24%). For at least 6 individuals (29%), a clear change in work performance was noted by supervisors and colleagues (eTable 1 in the Supplement). Individuals also reported a "good day-bad day" pattern where significant cognitive or physical exertion would be followed by exacerbation of their symptoms for several days. Cognitive symptoms, as well as disequilibrium and headache, reportedly were also frequently exacerbated by cardiovascular exercise.

Multidisciplinary evaluations raised concern for cognitive impairment in 16 individuals (76%). Prior to referral, 4 of these individuals underwent neuropsychological evaluation (data not shown as generated outside of the University of Pennsylvania). Repetition of comprehensive neuropsychological testing is precluded within 1 year due of practice effects when material is presented within this timeframe. With previous exposure to material, the individual may score higher on a repeated neuropsychological evaluation within 1 year. Neuropsychological assessments were performed on 10 individuals after referral. Of those, interpretation was ongoing in 4 at the time of this publication. Per their preference, 2 individuals did not complete neuropsychological testing.

For the 6 individuals with complete neuropsychological testing data and analysis at the University of Pennsylvania, all had significant areas of cognitive weakness and/or impairment (eTables 2, 3, and 4 in the Supplement). Impairments were found in executive function (n = 6), motor function (n = 5), auditory and visual memory (n = 4), visual-spatial perception and visual-motor construction (n = 3), auditory attention and working memory (n = 3), language (n = 3), processing speed (n = 4), and reasoning (n = 1). All individuals

1128 JAMA March 20, 2018 Volume 319, Number 11

jama.com

Clinical Findings and Outcomes in US Government Personnel Reporting Directional Sensory Phenomena in Cuba

Preliminary Communication Research

	Subjective		Objective		
Domain	Symptom	No. (%)	Finding	No. (%)	
Cognitive and behavioral	Combined	17 (81)	Neuropsychological testing indicated	16 (76)	
	Difficulty remembering	16 (76)	Neuropsychological testing performed at Penn	10 (48)	
	Mental fog	16 (76)	Neuropsychological testing outside Penn	4 (19)	
	Difficulty concentrating	15 (71)	Neuropsychological testing not yet performed	2 (10)	
	Feeling slowed	14 (67)	Cognitive rehabilitation	13 (62)	
	Irritability	14 (67)			
	Feeling more emotional	11 (52)			
Balance and vestibular	Combined	15 (71)	Vestibular physical therapy referral	17 (81)	
	Balance problems	14 (67)	Static postural stability	16 (76)	
	Dizziness	13 (62)	Dynamic balance	16 (76)	
	Nausea	7 (33)	VOR dysfunction	15 (71)	
			Unilateral caloric impairment	4 (31)	
			Vestibular rehabilitation	17 (81)	
Vision and oculomotor	Combined	18 (86)	Neuro-optometry referral	15 (71)	
	Visual problems	16 (76)	Convergence insufficiency	11 (52)	
	Light sensitivity	13 (62)	Smooth pursuit dysfunction	11 (52)	
	Difficulty reading	12 (57)	Saccadic dysfunction	10 (47)	
	Eye strain	11 (52)	Neuro-optometric rehabilitation	14 (67)	
Auditory	Combined	15 (68)	Audiology referral	13 (62)	
	Sound sensitivity	14 (67)	Moderate to severe SNHL	3 (23)	
	Tinnitus	12 (57)	Hearing aid provided	3 (14)	
	Hearing reduction	9 (43)			
	Ear pressure	8 (38)			
Sleep	Combined	18 (86)	Pharmacological intervention	15 (71)	
	Drowsiness or fatigue	16 (76)			
	Decreased sleep duration	15 (71)			
	Trouble falling asleep	14 (67)			
Headache	Combined	16 (76)	Pharmacological intervention	12 (57)	
	With cognitive tasks	13 (62)			
	With therapy	11 (52)			
	Due to photophobia	9 (43)			
	Due to phonophobia	6 (29)			
Overall	Combined subjective	20 (95)	Combined objective	18 (86)	

loss; VOR, vestibulo-ocular reflex.

² Neuropsychological characterization ongoing. start of cognitive rehabilitation held until neuropsychological testing performed.

^a Persistent defined as presence more than 3 months after exposure.

 $^{
m c}$ Of 13 patients tested thus far during persistent symptom evaluation.

demonstrated a high level of effort during testing and had intact cognitive domains including visual working memory and academic achievement.

Neurobehavioral function was evaluated using the Frontal System Behavior Scale, a self-report measure of frontal lobe dysfunction. Specifically, comparing before and after exposure retrospectively via patient recall and self-report, individuals noted apathy (n = 5), executive dysfunction (n = 4), and disinhibition (n = 2). Two individuals met criteria for posttraumatic stress disorder and endorsed severe levels of anger on the Brief Mood Survey, 1 of whom also endorsed moderate to severe levels of depression and anxiety.

Balance and Vestibular Findings

Individuals described acute nausea (n = 7, 33%) and dizziness (n = 5, 24%) during exposure, which continued to progress

in the subacute and persistent stages (acute stage = during or hours following exposure; subacute stage = days to weeks after exposure patient recall]; and persistent stage = more than 3 months after exposure). Specifically, more than 3 months after exposure, individuals reported a higher prevalence of dizziness (n = 13, 62%) and nausea (n = 7, 33%), in addition to general balance problems (n = 14, 67%) (Table 3). These symptoms were exacerbated by walking quickly, tasks involving head movements, complex visual environments, or in some cases while simply standing still. Balance symptoms were also worsened with eyes closed or in low light conditions.

Clinical examinations raised concern for balance impairment in 17 patients (81%), prompting referral to vestibular physical therapy. Focused vestibular evaluations demonstrated impairments in static postural stability (n = 16, 76%), dynamic

jama.com

JAMA March 20, 2018 Volume 319, Number 11 1129

Research Preliminary Communication

Clinical Findings and Outcomes in US Government Personnel Reporting Directional Sensory Phenomena in Cuba

balance (n = 16, 76%), and the vestibulo-ocular reflex (n = 15, 71%) (eTables 5, 6, and 7 in the Supplement). Patients with the most severe balance impairments on clinical evaluation underwent caloric reflex testing, which demonstrated peripheral vestibular dysfunction in 4 of 13 patients evaluated. MRI findings focusing on the internal auditory canals on these 4 patients were normal. Taken together, these balance symptoms and evaluation findings are consistent with central and, in some cases, peripheral vestibular abnormalities.

Oculomotor Findings

Of the individuals with persistent symptoms, 16 (76%) reported visual problems (Table 3). Light sensitivity (n = 13, 62%) and difficulty reading (n = 12, 57%) were also frequently reported. Eye strain (n = 11, 52%) was experienced particularly with reading and was associated with headaches, disequilibrium, and nausea.

Clinical examinations raised concern for oculomotor dysfunction in 15 individuals (71%), prompting referral to neurooptometry. The most common findings confirmed on focused oculomotor evaluation were convergence insufficiency (n = 11, 52%), abnormal smooth pursuits (n = 11, 52%), and saccadic dysfunction (n = 10, 47%) (eTables 8 and 9 in the Supplement). Similar to vestibular testing that provoked symptoms, oculomotor examination elicited headache and disequilibrium.

Auditory Findings

At the onset of the directional phenomena, affected individuals reported hearing a loud sound (n = 18, 86%), associated with ear pain (n = 7,33%) and tinnitus (n = 6, 29%). Within days to weeks following exposure, individuals continued to report tinnitus (n = 12, 57%) and ear pain (n = 5, 24%), with the addition of a change in hearing (n = 7, 33%) and sensitivity to noise (n = 5, 24%). More than 3 months after exposure, sound sensitivity was the most common auditory concern (n = 14, 67%), followed by tinnitus (n = 12, 57%) and ear pressure (n = 8, 38%).

While 9 individuals (43%) reported persistent hearing reduction, pure tone audiometry, including pure tone average and word identification, revealed moderate to severe sensorineural hearing loss in 3 individuals (23%) (eTable 10 in the Supplement), who were fitted with hearing aids. For 2 individuals, the moderate to severe sensorineural hearing loss was unilateral and corresponded with the side of peripheral vestibular dysfunction on caloric testing. Otoscopy and tympanometry findings were unremarkable.

Sleep

Individuals commonly reported issues with sleep (n = 18, 86%), including reduced sleep duration (n = 15, 71%) and difficulty falling asleep (n = 14, 67%). In addition, individuals experienced significant daytime fatigue (n = 16, 76%). Most individuals required pharmacological intervention to improve subjective report of sleep architecture (n = 15, 71%) (eTable 11 in the Supplement).

Headaches

At the initiation of directional phenomena exposure, 8 individuals (38%) reported immediate onset of headache, while 5 (24%) reported intense head pressure. In the days to weeks following exposure, 17 individuals (81%) developed headaches, with 16 (76%) experiencing persistent headaches longer than 3 months after exposure (Table 3).

In the persistent stage, headaches were reported to be exacerbated or associated with cognitive tasks (n = 13, 62%), rehabilitative therapies (n = 11, 52%), photophobia (n = 9, 43%), and phonophobia (n = 6, 29%). Patients with antecedent headaches were able to differentiate the character of these headaches from that of their standard headaches. Headaches were generally reported to improve with medications (n = 12, 57%) and appropriate therapies for oculomotor and vestibular impairments (eTable 11 in the Supplement).

Imaging

MRI neuroimaging was obtained in all 21 patients. Most patients had conventional imaging findings, which were within normal limits, at most showing a few small nonspecific T2-bright foci in the white matter (n = 9, 43%). There were 3 patients with multiple T2-bright white matter foci, which were more than expected for age, 2 mild in degree, and 1 with moderate changes. The pattern of conventional imaging findings in these cases was nonspecific with regard to the exposure/insult experienced, and the findings could perhaps be attributed to other preexisting disease processes or risk factors. Advanced structural and functional neuroimaging studies are ongoing.

Rehabilitation and Return to Work

Individualized rehabilitation programs were developed, which included combinations of neuro-optometric rehabilitation (n = 14, 67%), vestibular physical therapy (n = 17, 81%), and cognitive rehabilitation with speech pathology and/or occupational therapy (n = 13, 62%). The most symptomatic patients (n = 14, 67%) requiring multiple therapies did not return to work.

Vestibular physical therapy sessions focused on balance retraining, static and dynamic posture control with substitution via visual and somatosensory systems, gaze stabilization exercises, habituation, smooth pursuits, and saccadic eye movement exercises. Patients treated with vestibular rehabilitation have demonstrated a positive response with improved balance and reduction of disequilibrium.

Formal neuro-optometric rehabilitation, including manipulation of disparity vergence and accommodative amplitude and latency, has been used to treat ocular motor deficits. Rehabilitation for abnormal smooth pursuit and saccadic dysfunction was coordinated between neuro-optometric rehabilitation, vestibular physical therapy, and occupational therapy. Vestibular physical therapy focused on oculomotor function with the body in motion and occupational therapy emphasized functional tasks such as visual scanning in a simulated work environment.

Following comprehensive neuropsychological testing, a formal cognitive rehabilitation program was initiated in the form of occupational therapy and/or speech therapy.

Early return to work with intensive cognitive loading led to an exacerbation of neurocognitive, vestibular, and visual

jama.com

Clinical Findings and Outcomes in US Government Personnel Reporting Directional Sensory Phenomena in Cuba

Preliminary Communication Research

symptoms in 7 individuals (33%). Individualized return to work plans were designed to reintegrate individuals using a stepwise process and appropriate work modifications.

Discussion

Preliminary findings are described of a case series of individuals stationed in Havana, Cuba, nearly all of whom reported directional audible and/or sensory phenomena that was followed by the development of a consistent cluster of neurological signs and symptoms. The clinical manifestations may represent a novel clinical entity, which appears to have resulted from a widespread brain network dysfunction (ie, cognitive, oculomotor, and central vestibular) as seen in mild traumatic brain injury, or concussion,³⁰ as well as injury to the peripheral vestibular system in some cases. It is currently unclear if or how the noise is related to the reported symptoms. In particular, sound in the audible range (20 Hz-20 000 Hz) is not known to cause persistent injury to the central nervous system and therefore the described sounds may have been associated with another form of exposure.

Cognitive symptoms, including difficulty remembering (n=16, 76%) and feeling cognitively slowed (n=14, 67%) were the most problematic for individuals in this series more than 3 months after exposure, with neuropsychological testing identifying impairments in at least 1 cognitive domain in all 6 patients who completed neuropsychological evaluation to date (eTables 2, 3, and 4 in the Supplement). Cognitive difficulties interfered with these patients' ability to multitask, process information quickly with accurate recall, solve problems, and perform rapid decision making. Compared with vestibular and oculomotor impairments, cognitive impairments are often the slowest to improve following acquired brain injury, which was observed in this series. Therefore, extended cognitive rehabilitation with emphasis on return to work was used. In addition, it is not uncommon for patients with neurological injury resulting in cognitive impairment to have mood disturbances such as depression, anxiety, and/or posttraumatic stress disorder. Mood dysfunction can directly result from acquired brain injury or develop in response to the precipitating event and novel deficits.³¹⁻³³

The presence of subjective neurological symptoms presenting in a cohesive community has raised concerns for collective delusional disorders, including mass psychogenic illness. However, neurological examination and cognitive screens did not reveal evidence of malingering, and objective testing and behavioral observations during cognitive testing indicated high levels of effort and motivation. Several of the objective manifestations consistently found in this cohort (such as oculomotor and vestibular testing abnormalities) could not have been consciously or unconsciously manipulated. Furthermore, mass psychogenic illness is often associated with transient, benign symptoms with rapid onset and recovery often beginning with older individuals.^{34,35} In contrast, the Havana cohort experienced persisting disability of a significant nature and are broadly distributed in age. Rather than seeking time away from the workplace, the patients were largely determined to continue to work or return to full duty, even when encouraged by health care professionals to take sick leave.

While not systematically excluded, viral etiologies, chemical etiologies, or both associated with acute onset of persistent neurological impairment and peripheral vestibulopathy with the directional nature of exposure descriptions are not readily apparent. No other manifestations of viral illness, such as preceding fever, were identified. It is unlikely a chemical agent could produce these neurological manifestations in the absence of other organ involvement, particularly given that some individuals developed symptoms within 24 hours of arriving in Havana.

There are important considerations in this investigation. In particular, the anatomic substrates causing the symptoms have not yet been identified. This may represent a significant challenge because even the designation of "concussion," is not yet a true diagnosis, as no definitions include the underlying cause. Nonetheless, there is an emerging consensus that concussion, or mild traumatic brain injury, is a type of brain network disorder, based on classic symptoms (eg, slowed processing speed and memory dysfunction) as well as changes in the white matter tracts and consecutive connectivity, as detected with advanced neuroimaging studies.^{30,36}

Beyond the absence of blunt head trauma, there were additional notable differences between the manifestations observed in the Havana cohort and characteristic acute and persistent symptoms of concussion. For example, individuals experienced unilateral ear pain and tinnitus after exposure, and some were later detected to have a unilateral peripheral vestibulopathy (along with central vestibular dysfunction), a finding uncommon in concussion. Further, studies have reported that while most individuals following concussion have a relatively rapid full recovery, at least 15% are thought to experience characteristic persisting symptoms.^{37,38} In contrast to classic concussions, most patients referred following suspected exposure in Havana exhibited significant impairment that persisted for months with no significant improvement in multiple cases until rehabilitation was initiated.

For practicing clinicians, if a patient presents reporting a similar potential exposure and symptoms similar to those observed in mild traumatic brain injury, in addition to a thorough history, objective evaluation should include screening assessments of vestibular, oculomotor, and cognitive functioning. Based on findings of this assessment, appropriate referrals to subspecialists should be considered including neurorehabilitation physiatry, vestibular physical therapy, neuro-optometry, neuropsychology, and audiology.

Limitations

This study has several limitations. First, due to the sensitive nature of this publication, certain details typically reported in a case series of exposure were omitted, including specifics about geography, relationships between individuals, and individual demographics. Second, because these patients' first evaluation was elsewhere, each patient did not undergo each of the tests described. In particular, neuropsychological characterization was incomplete at the time of publication.

jama.com

Research Preliminary Communication

Clinical Findings and Outcomes in US Government Personnel Reporting Directional Sensory Phenomena in Cuba

Preliminary results were presented given the importance and strong public interest in this case series. Third, the rehabilitative course of this Havana cohort may not be representative because this represents a referral population. There may be additional individuals exposed while in Havana, Cuba, who have not been identified due to subtler manifestations that either resolved spontaneously or did not prompt presentation for medical treatment. Therefore, the actual number of individuals exposed is unknown, and the relative "dose" of exposure that causes acute and chronic symptoms remains unclear.

Conclusions

In this preliminary report of a retrospective case series, persistent cognitive, vestibular, and oculomotor dysfunction, as well as sleep impairment and headaches, were observed among US government personnel in Havana, Cuba, associated with reports of directional audible and/or sensory phenomena of unclear origin. These individuals appeared to have sustained injury to widespread brain networks without an associated history of head trauma.

ARTICLE INFORMATION

Accepted for Publication: February 8, 2018. Published Online: February 15, 2018.

doi:10.1001/jama.2018.1742

Author Affiliations: Department of Physical Medicine and Rehabilitation, University of Pennsylvania, Perelman School of Medicine, Philadelphia (Swanson, Hampton, Biester); Center for Brain Injury and Repair, University of Pennsylvania, Philadelphia (Swanson, Hampton, Green-McKenzie, Diaz-Arrastia, Grady, Verma, Biester, Duda, Wolf, Smith); Division of Occupational and Environmental Medicine, Department of Emergency Medicine, Perelman School of Medicine, University of Pennsylvania, Philadelphia (Green-McKenzie); Department of Neurology, University of Pennsylvania, Perelman School of Medicine, Philadelphia (Diaz-Arrastia): Department of Neurosurgery, University of Pennsylvania, Perelman School of Medicine. Philadelphia (Grady, Smith): Department of Radiology, University of Pennsylvania, Perelman School of Medicine. Philadelphia (Verma, Wolf); Penn Therapy & Fitness, Good Shepherd Penn Partners, University of Pennsylvania, Philadelphia (Duda).

Author Contributions: Drs Smith and Swanson had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. *Concept and design:* Swanson, Hampton, Smith. *Acquisition, analysis, or interpretation of data:* All authors.

Drafting of the manuscript: Swanson, Hampton, Biester, Duda, Smith.

Critical revision of the manuscript for important intellectual content: All authors.

Statistical analysis: Swanson, Hampton, Smith. Administrative, technical, or material support: All authors.

Supervision: Swanson, Smith.

Conflict of Interest Disclosures: All authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Dr Green-McKenzie reported receiving grants from Health Resources and Services Administration and the National Institute for Occupational Safety and Health. No other disclosures were reported.

Disclaimer: Support for this article was provided by the US government in the form of background information and referral of patients. The findings and conclusions are those of the authors and should not be construed as officially reflecting the views of the US Department of State.

Additional Contributions: We are grateful to the following individuals, who did not receive compensation for their role in the study: Michael Gallaway, OD (neuro-optometry consultant; Department of Optometry, Salus University, Philadelphia): Mary-Fran Madden, OTR/L, CBIS. MSCS (occupational therapy consultant; Penn Therapy & Fitness, Good Shepherd Penn Partners, University of Pennsylvania, Philadelphia); Darlene Mancini, CCC-SLP (speech language pathology consultant; Penn Therapy & Fitness, Good Shepherd Penn Partners, University of Pennsylvania, Philadelphia): Danielle Sandsmark. MD, PhD (neurology consultant; Department of Neurology, University of Pennsylvania, Perelman School of Medicine, Philadelphia); Grant Liu, MD (neuro-ophthalmology; Department of Neurology, University of Pennsylvania, Perelman School of Medicine, Philadelphia), Nora Johnson, MBA, MS, PsyD (neuropsychology consultant; Department of Physical Medicine & Rehabilitation, University of Pennsylvania, Perelman School of Medicine, Philadelphia); Sherrie Davis, AuD (audiology consultant; Department of Otorhinolaryngology, University of Pennsylvania, Perelman School of Medicine, Philadelphia); Michael J. Ruckenstein, MD (otorhinolaryngology consultant; Department of Otorhinolaryngology, University of Pennsylvania, Perelman School of Medicine, Philadelphia); Charles Bae, MD (sleep medicine consultant: Department of Neurology, University of Pennsylvania, Perelman School of Medicine, Philadelphia); David M. Raizen, MD, PhD (sleep medicine consultant; Department of Neurology, University of Pennsylvania, Perelman School of Medicine, Philadelphia); Sharon Schutte-Rodin, MD (sleep medicine consultant; Department of Medicine, University of Pennsylvania. Perelman School of Medicine. Philadelphia); and Douglas J. Wiebe, PhD (epidemiology and biostatistician consultant; Department of Biostatistics and Epidemiology, University of Pennsylvania, Perelman School of Medicine, Philadelphia).

REFERENCES

1. US Senate Committee on Foreign Relations, Subcommittee on Western Hemisphere, Transnational Crime, Civilian Security, Democracy, Human Rights, and Global Women's Issues. Attacks on US diplomats in Cuba. https://www.foreign .senate.gov/hearings/attacks-on-us-diplomats-in -cuba-response-and-oversight-OIO918. Published January 9, 2018. Accessed February 8, 2018.

2. Goodglass H, Kaplan E, Barresi B. *Boston Diagnostic Aphasia Examination*. 3rd ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2001. 3. Delis D, Kramer J, Kaplan E, Ober B. *The California Verbal Learning Test: CVLT-II.* 2nd ed. San Antonio, TX: Psychological Corp; 2000.

4. Brown SG, Roy EA, Rohr LE, Snider BR, Bryden PJ. Preference and performance measures of handedness. *Brain Cogn.* 2004;55(2):283-285.

5. Tombaugh TN. *Test of Memory Malingering*. North Tonawanda, NY: Multi-Health Systems; 1996.

6. Reitan R. The validity of the Trail Making Test as an indicator of organic brain damage. *Percept Mot Skills*. 1958;8:271-276.

7. Wechsler D. WAIS-IV Technical Manual. New York, NY: Psychological Corp; 2008.

8. Chlebowski C. Wechsler Memory Scale All Versions. New York, NY: Springer; 2011.

9. Beck AT, Steer RA, Brown GK. *Beck Depression Inventory Manual*. 2nd ed. San Antonio, TX: Psychological Corp; 1996.

10. Beck AT, Epstein N, Brown G, Steer RA. An inventory for measuring clinical anxiety: psychometric properties. *J Consult Clin Psychol*. 1988;56(6):893-897.

11. Beck AT, Steer RA. *Beck Anxiety Inventory Manual*. San Antonio, TX: Psychological Corp; 1993.

12. Grace J, Malloy PF. *The Frontal Systems Behavior Scale (FrSBe)*. Odessa, FL: Psychological Assessment Resources; 2002.

13. Weathers FW, Huska JA, Keane TM. *PCL-C for DSM-IV*. Boston, MA: National Center for PTSD-Behavioral Science Division; 1991.

14. McCutchan PK, Freed MC, Low EC, Belsher BE, Engel CC. Rescaling the Post-Traumatic Stress Disorder Checklist for use in primary care. *Mil Med*. 2016;181(9):1002-1006.

15. Wrisley DM, Marchetti GF, Kuharsky DK, Whitney SL. Reliability, internal consistency, and validity of data obtained with the Functional Gait Assessment. *Phys Ther*. 2004;84(10):906-918.

16. Powell LE, Myers AM. The Activities-Specific Balance Confidence (ABC) Scale. *J Gerontol A Biol Sci Med Sci*. 1995;50A(1):M28-M34.

17. Bell DR, Guskiewicz KM, Clark MA, Padua DA. Systematic review of the Balance Error Scoring System. *Sports Health*. 2011;3(3):287-295.

18. Horn LB, Rice T, Stoskus JL, Lambert KH, Dannenbaum E, Scherer MR. Measurement characteristics and clinical utility of the Clinical Test of Sensory Interaction on Balance (CTSIB) and Modified CTSIB in individuals with vestibular dysfunction. *Arch Phys Med Rehabil*. 2015;96(9): 1747-1748.

1132 JAMA March 20, 2018 Volume 319, Number 11

jama.com

Clinical Findings and Outcomes in US Government Personnel Reporting Directional Sensory Phenomena in Cuba

Preliminary Communication Research

19. Shumway-Cook A, Horak FB. Assessing the influence of sensory interaction of balance: suggestion from the field. *Phys Ther*. 1986;66(10): 1548-1550.

20. Jacobson GP, Newman CW. The development of the Dizziness Handicap Inventory. *Arch Otolaryngol Head Neck Surg.* 1990;116(4):424-427.

21. Alahmari KA, Marchetti GF, Sparto PJ, Furman JM, Whitney SL. Estimating postural control with the balance rehabilitation unit: measurement consistency, accuracy, validity, and comparison with dynamic posturography. *Arch Phys Med Rehabil.* 2014;95(1):65-73.

22. Nashner LM. Computerized dynamic posturography. In: Jacobson GP, Newman CW, Kartush JM, eds. *Handbook of Balance Function Testing*. St Louis, MO: Mosby Yearbook; 1993:280-304.

23. Barin K. Interpretation and usefulness of caloric testing. In: Jacobson GP, Shepard NT, eds. *Balance Function Assessment and Management*. San Diego, CA: Plural Publishing; 2008;229-249.

24. Shepard N, Telian S. *Practical Management of the Balance Disorder Patient*. San Diego, CA: Singular Publishing; 1996.

25. Scheiman M, Wick B. *Clinical Management of Binocular Vision: Heterophoric, Accommodative and Eye Movement Disorders.* 4th ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2014.

26. Gallaway M, Scheiman M, Mitchell GL. Vision therapy for post-concussion vision disorders. *Optom Vis Sci.* 2017;94(1):68-73.

27. Rouse M, Borsting E, Mitchell GL, et al; Convergence Insufficiency Treatment Trial (CITT) Investigator Group. Validity of the Convergence Insufficiency Symptom Survey: a confirmatory study [published correction appears in *Optom Vis Sci.* 2009;86(6):786]. *Optom Vis Sci.* 2009;86(4): 357-363.

28. Garzia RP, Richman JE, Nicholson SB, Gaines CS. A new visual-verbal saccade test: the Development Eye Movement test (DEM). *J Am Optom Assoc.* 1990;61(2):124-135.

29. Mucha A, Collins MW, Elbin RJ, et al. A brief Vestibular/Ocular Motor Screening (VOMS) assessment to evaluate concussions: preliminary findings. *Am J Sports Med*. 2014;42(10):2479-2486.

30. Johnson VE, Stewart W, Smith DH. Axonal pathology in traumatic brain injury. *Exp Neurol.* 2013;246:35-43.

31. Alderfer BS, Arciniegas DB, Silver JM. Treatment of depression following traumatic brain injury. *J Head Trauma Rehabil.* 2005;20(6):544-562.

32. Bryant R. Post-traumatic stress disorder vs traumatic brain injury. *Dialogues Clin Neurosci*. 2011; 13(3):251-262.

33. Jorge RE, Arciniegas DB. Mood disorders after TBI. *Psychiatr Clin North Am*. 2014;37(1):13-29.

34. Jones TF, Craig AS, Hoy D, et al. Mass psychogenic illness attributed to toxic exposure at a high school. *N Engl J Med*. 2000;342(2):96-100.

35. Weir E. Mass sociogenic illness. *CMAJ*. 2005;172 (1):36.

36. Shenton ME, Hamoda HM, Schneiderman JS, et al. A review of magnetic resonance imaging and diffusion tensor imaging findings in mild traumatic brain injury. *Brain Imaging Behav.* 2012;6(2):137-192.

37. McInnes K, Friesen CL, MacKenzie DE, Westwood DA, Boe SG. Mild traumatic brain injury (mTBI) and chronic cognitive impairment: a scoping review. *PLoS One*. 2017;12(4):e0174847.

38. Bigler ED. Neuropsychology and clinical neuroscience of persistent post-concussive syndrome. *J Int Neuropsychol Soc.* 2008;14(1):1-22.

jama.com

Attachment 3
<u>UNCLASSIFIED</u>

April 11, 2018

MEMORANDUM

To: Ambassador Peter Bodde

From: Joshua L. Dorosin, Deputy Legal Adviser

Subject:

B5

<u>UNCLASSIFIED</u>

UNCLASSIFIED - 2 -

B5

UNCLASSIFIED

Attachment 4

CLASSIFICATION: SECRET Page 1 of 2

To: SMART Co Subject:	54:06 AM	1.4(D 1.4(C B1
	<u>SECRETI/NOFORN</u>	B7(F
MRN: Date/DTG:	<u>17 HAVANA 67</u> Jun 06, 2017 / 061254Z JUN 17	
From:	AMEMBASSY HAVANA	
Action:	WASHDC, SECSTATE ROUTINE	1 (D)
E.O.:	13526	1.4(D)
TAGS:	ASEC	1.4(G)
Captions:	NOFORN, DS CHANNEL	B1
Subject:		B7(F)
		B7(C)
		1.4(D)
		1.4(D) 1.4(G) B1

CLASSIFICATION: SECRET Page 1 of 2

CLASSIFICATION: SECRET Page 2 of 2

Signature:	DELAURENTIS		
Classified By:	Name	<u></u>	B6
Derived From:	DSCG 11-01		B7(C)
Declassify On:	2042/06/02		57(0)
Drafted By:	HAVANA	(Havana)	
Approved By:	HAVANA	(Havana)	
Released By:	HAVANA	(Havana)	
info:			
Dissemination Rule:	Archive Copy		

SECRET/MOFORM

CLASSIFICATION: SECRET Page 2 of 2

Attachment 5

NATIONAL SECURITY DECISION DIRECTIVE (NSDD) 38 COVER LETTER

SYSTEM II 90321

THE WHITE HOUSE

WASHINGTON

8215637

June 2, 1982

MEMORANDUM FOR THE VICE PRESIDENT THE SECRETARY OF STATE THE SECRETARY OF DEFENSE THE ATTORNEY GENERAL THE SECRETARY OF AGRICULTURE THE SECRETARY OF COMMERCE THE DIRECTOR, OFFICE OF MANAGEMENT AND BUDGET THE DIRECTOR OF CENTRAL INTELLIGENCE THE CHAIRMAN, JOINT CHIEFS OF STAFF THE ADMINISTRATOR, AGENCY FOR INTERNATIONAL DEVELOPMENT THE DIRECTOR, INTERNATIONAL COMMUNICATION AGENCY

SUBJECT: Staffing at Diplomatic Missions

The President has approved the attached National Security Decision Directive on Staffing at Diplomatic Missions and Their Constituent Posts.

FOR THE PRESIDENT:

(signed) William P. Clark

Attachment: NSDD 38

(Reformatted for reproduction purposes only.) g/mpnsdd/combible.doc - pg 77, #15.

NATIONAL SECURITY DECISION DIRECTIVE (NSDD) 38 06/02/82

SYSTEM II 90321

THE WHITE HOUSE

WASHINGTON

June 2, 1982

National Security Decision Directive Number 38

STAFFING AT DIPLOMATIC MISSIONS AND THEIR CONSTITUENT POSTS

This directive supersedes the directive of October 14, 1974 and subsequent directives governing the Monitoring Overseas Direct Employment (MODE) system.

In accordance with my letter to Chiefs of Mission, and the memorandum of September 22, 1981, conveying it to heads of Executive Departments and Agencies, all agencies with staffs operating under the authority of Chiefs of Mission will ensure that, in coordination with the Department of State, the Chiefs of Missions' approval is sought on any proposed changes in the size, composition, or mandate of such staff elements. Departments and agencies wishing to initiate changes should transmit their proposals to Chiefs of Missions in consultation with the Department of State. In the event the Secretary of State or his designee is unable promptly to resolve to the satisfaction of the parties concerned any disputes which may arise between Chiefs of Mission and Agency Heads or his designee, the Secretary of State and the other Agency Head concerned will present the differing views to me for decision through the Assistant to the President for National Security Affairs. Formal acknowledgment of changes approved by Chiefs of Mission or determined by me shall be transmitted to diplomatic missions by the Department of State.

2

SYSTEM II 90321

Overseas staffing of elements with U.S. diplomatic missions abroad shall conform to decisions reached in accordance with the above procedures and decisions made through the budgetary process.

Departments and agencies will keep the Department of State informed as to current and projected overseas staffing authorizations for each diplomatic post, differentiating between the number of U.S. personnel and the number of foreign national personnel authorized for each post. The Department of State shall maintain a current record of staffing authorizations for each overseas post. Agencies will cooperate with the Department of State in providing data including any data needed to meet special reporting requirements.

The Department of State, in consultation with concerned agencies, will develop guidelines by July 1, 1982 for my approval to implement this directive.

(signed) Ronald Reagan

3

NSDD 38 GUIDELINES COVER LETTER

SYSTEM II 90417

THE WHITE HOUSE

WASHINGTON

8220142

July 13, 1982

MEMORANDUM FOR THE VICE PRESIDENT THE SECRETARY OF STATE THE SECRETARY OF DEFENSE THE ATTORNEY GENERAL THE SECRETARY OF AGRICULTURE THE SECRETARY OF COMMERCE THE DIRECTOR, OFFICE OF MANAGEMENT AND BUDGET THE DIRECTOR OF CENTRAL INTELLIGENCE THE CHAIRMAN, JOINT CHIEFS OF STAFF THE ADMINISTRATOR, AGENCY FOR INTERNATIONAL DEVELOPMENT THE DIRECTOR, INTERNATIONAL COMMUNICATION AGENCY

SUBJECT: Guidelines to Implement NSDD 38

The attached Guidelines to replace all guidelines and other agreements previously in effect under the Monitoring Overseas Direct Employment System are approved.

FOR THE PRESIDENT:

(signed) William P. Clark

Attachment: Guidelines

(Reformatted for reproduction purposes only.) g/mpnsdd/combible.doc - pg 80, #16.

4

NSDD 38 GUIDELINES 07/13/82

SYSTEM II

90417

GUIDELINES

These guidelines are issued pursuant to the Presidential Directive of 2 June 1982 on Staffing at Diplomatic Missions and Constituent Posts. These guidelines replace all guidelines and other agreements previously in effect under the Monitoring Overseas Direct Employment (MODE) system.

The purpose of the Directive and these guidelines is to allow the flexible, systematic and expeditious deployment and management of personnel of all U.S. Government Agencies operating under the authority of Chiefs of Mission in support of U.S. foreign policy objectives.

These guidelines will ensure that the approval of Chiefs of Mission is sought by U.S. Government Agencies on proposed staffing changes for activities operating under the authority of Chiefs of Mission. The Chiefs of Mission will transmit their views on overseas presence to the Department of State, as department and agency representatives will communicate with their respective department/agency headquarters in this regard.

These guidelines also provide for the resolution of disagreements, should such arise between the Chiefs of Mission and department/agency representatives and between the Department of State and department/agency heads.

- A. Requests for Changes in Staffing
 - 1. Preliminary or exploratory consultation by the requesting agency with the Chief of Mission regarding staffing changes is encouraged. Such informal proposals may be initiated in Washington or by agency overseas representatives.
 - 2. Formal requests for approval of staffing changes as required by the Directive must be made by the cognizant Agency to the Chief of Mission in consultation with the Department of State. Copies of such requests will be provided to the Department of State.
 - 3. The Chief of Mission will convey his views on formal requests to the Department of State. The point of contact in the Department of State for such matters is the Office of Management Operations (M/MO), Room

5

7427 [since changed to the Office of Rightsizing the USG's Overseas Presence (M/R), SA-1, Room H-1301, Washington, D.C. 20522-0113)],

SYSTEM II

90417

Attention: Assistant for Overseas Positions. The Chief of Mission's response to the formal request should be addressed to that office for action. Copies of requests and responses will be given to the appropriate regional and functional bureaus in the Department of State and the requesting agency.

- B. Resolution of Disagreements
 - 1. If there are disagreements over staffing levels between Chiefs of Mission and Agency heads, the views of both parties will be forwarded to M/MO [M/R] for immediate presentation to the Secretary of State for decision within 15 working days of receipt from M/MO [M/R].
 - 2. If the Secretary of State is unable to resolve the issue to the satisfaction of the parties concerned, the Secretary and the Agency head concerned will present their respective views to the President for decision through the Assistant to the President for National Security Affairs.
- C. Formal acknowledgment of Changes

Changes in staffing levels at individual posts reached in accordance with the above procedures will be provided by telegram from the Department of State to the Chief of Mission, and the agencies concerned.

D. Staffing Authorization Records

The Department of State shall maintain a current record of staffing authorization for each overseas post. Staffing authorization is defined as all full-time, permanent, direct-hire, United States Government employees including Foreign Nationals, and United States Military Personnel under the authority of a Mission Chief.

Departments and agencies will provide the current and projected overseas staffing, authorization information, required by the directive, to the Department of State, Office of Management Operations (M/MO), Room 7427, [since changed to the Office of Rightsizing the USG's Overseas Presence (M/R), SA-1, Room H-1301, Washington, D.C. 20522-0113], Attention: Assistant for Overseas Positions. That official will solicit additional information from departments and agencies when necessary to meet

special reporting requirements as established by statute or as levied by the NSC, OMB, or the Congress.

(Reformatted for reproduction purposes only.) g/mpnsdd/combible.doc - pg 81-82, #16.

Attachment 6

SENSITIVE BUT UNCLASSIFIED

The High Threat High Risk Post Review Process

B7(F)

SENSITIVE BUT UNCLASSIFIED

SENSITIVE BUT UNCLASSIFIED



SENSITIVE BUT UNCLASSIFIED

Attachment 7



 \mathcal{S}



UNCLASSIFIED//LES

UNCLASSIFIED	U.S.	Department o	f State	Case No.	F-2018-	07049	Doc No.	C06768501	Date:	10/01/201	19 (A)
											B7(E)
											B3 ์

UNCLASSIFIED	0 U.S. Department of State	e Case No. F-2018-07049	Doc No. C067685	01 Date: 10/01/2019 (<i>)</i>	A)
				B7(E	E)
				B3	

UNCLASSIFIED	U.S	. Department	of State	Case No.	F-2018-0704	9 Doc No	. C06768501	Date:	10/01/20	19 (A)
										B7(E)
										B3

Attachment 8

NO DISCERNIBLE CLASSIFICATION

Vinyard, Chandali A (S/ARB)

Vinyard, Chandali A (S/ARB)

NO DISCERNIBLE CLASSIFICATION

1

NO DISCERNIBLE CLASSIFICATION

		1.4(D B1 B5 B7(A)
	······	
3. (SBU) A follow-up SV	TC will include discussion of these issues.	B
4. (SBU) Next steps will incl at each consulate, with	ude finalizing language for the Mission China staff notice, town halls at Embassy Beijing an and communication with host nation.	d B7(C
Signature:	BRANSTAD	
Classified By:	Name: Office: Agency: U.S. Department of State	
Derived From:	DSCG 11-01	
Declassify On:	2043/05/23	
Drafted By: Cleared By:	BEIJING AmEmbassy Beijing:Grulich, Edward G (Beijing) AmEmbassy Beijing:Waters, John R (Beijing) Munchmeyer, Katherine A (Beijing)	B6 B7(C)
А. Э.Ш.	AmEmbassy Beijing (Beijing)	
Approved By: Released By:	AmEmbassy Beijing:Fritz, Jonathan D (Beijing) BEIJING (Beijing)	
Info:	CHENGDU, AMCONSUL ROUTINE; GUANGZHOU, AMCONSUL ROUTINE; SHANGHAI, AMCONSUL ROUTINE; SHENYANG, AMCONSUL ROUTINE	
Action Post:	NONE	
Dissemination Rule:	DIS_EX_PRIN, DIS_EAC_INDONESIA, DIS_EAP_FAO, DIS_EX_HRU, DIS_EX_PMO, DIS_REG_IMO_OFF, DIS_RSP_SPU, DIS_CM_CONSULAR, DIS_FAO_EAP2, DIS_RSP_ASEAN_FORUM, DIS_FO_STAFF, DIS_P_PRESS, DIS_J_POL, DIS_FO_SPEC_ASST, DIS_PD_ANP, DIS_PD_MTS, DIS_AITW2, DIS_SHULMAN, DIS_RSP_CT, DIS_MTS_PRIN_2, DIS_TAGS_1, DIS_PD_REGIONAL	
	SECRET//NOFORN Sensitive	

Vinyard, Chandali A (S/ARB)

NO DISCERNIBLE CLASSIFICATION

Attachment 9

UNCLASSIFIED U.S. Department of State Case No. F-2018-07049 Doc No. C06768501 Date: 10/01/2019 CLASSIFICATION: SECRET Page 1 of 1

From:SMART ArchiveSent:4/4/2017 1:07:42 PMTo:SMART CoreSubject:Embassy Havana convene emergency action committee meeting.

SECRET/NOFORN



MRN:	<u>17 HAVANA 31</u>
Date/DTG:	Apr 04, 2017 / 041707Z APR 17
From:	AMEMBASSY HAVANA
Action:	WASHDC, SECSTATE <i>ROUTINE</i>
E.O.:	13526
TAGS:	ASEC
Captions:	NOFORN, DS CHANNEL
Subject:	Embassy Havana convene emergency action committee meeting.
,	

 1. (S/NF) On April 3, 2017 Post conducted an Emergency Action Committee (EAC) meeting regarding the subject or B1

 17 Havana 29 (NODIS) cable.

B7(C)

2.	(S/NF)	
3.	(S/NF)	1.4(D)
		B1 B5
Į		

Signature:	DELAURENTIS		
Classified By:	Name:		B6
Derived From:	DSCG 11-01		B7(C)
Declassify On:	2042/04/04		(-)
Drafted By:	HAVANA:	(Havana)	
Approved By:	HAVANA:	(Havana)	
Released By:	AMEMBASSY HAVANA:		
			~

Dissemination Rule: Archive Copy

SECRET/NOFORN