Hearing on

NASA's ASTRONAUT HEALTH CARE SYSTEM
RESULTS OF AN INDEPENDENT REVIEW

before the

Subcommittee on Space and Aeronautics of the
Committee on Science and Technology,
United States House of Representatives
Hon. Mark Udall,
Chairman of the Subcommittee, presiding

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CHAIRMAN UDALL: Good morning to all of you. This hearing will come to order.

I want to first welcome all of our witnesses to today's hearing. We appreciate your service to the Nation and your assistance to this Subcommittee as we carry out our oversight responsibilities.

In particular, I would like to thank Colonel Bachmann and his review committee for their efforts to provide NASA and the Congress with an independent assessment of NASA's Astronaut Health Care System.

I would also like to thank Administrator Griffin for his willingness to ask for such a review. I think it was a good decision that reflects well on the agency.

It is clear to me and I think all Americans that NASA's astronauts represent the Nation's best and brightest. We all respect their skill and bravery. In carrying out their challenging missions, they often make it look so easy that we sometimes forget that they are human beings who face the same medical and behavioral issues that the rest of us have to deal with, along with the added rigors of high-stress jobs, long hours of training,
extended absences from families and friends in high-risk space flights. It is, thus, critically important that NASA ensure that the astronauts be provided with the best possible medical and behavioral care throughout their careers.

In addition, NASA astronauts, flight surgeons, and support personnel need to be confident that the lines of communication within the agency are open and responsive, so that concerns can be quickly identified and addressed in a manner that maintains the level of trust so vital to safety and optimal performance. I don't think anyone inside NASA would disagree with those goals.

That is why after reviewing Colonel Bachmann's committee's report, I decided that this Subcommittee needed to hold a hearing to examine the report's findings and recommendations. However, my decision was not made for the reasons you might think.

While there has been a great deal of attention given to the finding related to alcohol use -- and I have little doubt that there will be discussion of that finding at today's hearing, too -- I think we do a real disservice to the independent review committee if we ignore the
warning flags they are raising about the state of communications within the agency on both medical and behavioral matters affecting the astronauts.

Let me read just a few of the findings from the report that I think should concern us all. "Many anecdotes" -- and I am now quoting from the report -- "were related that involved risky behaviors by astronauts that were well known to the other astronauts, and no apparent action was taken. Peers and staff feel ostracism if they identify their own or other's problems."

To continue, quoting from the report, "Several senior flight surgeons expressed their belief that their medical opinions regarding astronaut fitness for duty, flight safety, and mission accomplishments were not valued by leadership other than to validate that all medical systems were a go for an on-time mission completion. Instances were described where major crew medical or behavioral problems were identified to astronaut leadership, and the medical advice was disregarded. This disregard was described as demoralizing to the point where they said they are less likely to report concerns of performance decrement. Crewmembers raised concerns
regarding substandard astronaut task performance, which were similarly disregarded."

"As the review progressed," again, I am quoting from the report, "it became apparent that major vulnerabilities underlying root causes and contributing factors extend well beyond the specific medical aspects of NASA operations. These issues are so ingrained and long-standing that it will take senior leadership action to remediate them. There is no periodic psychological evaluation or testing conducted on astronauts. Once selected as an astronaut candidate, astronauts have no psychological evaluation for the remainder of their careers unless selected for long-duration missions. Astronaut medical and behavioral health care is highly fragmented."

That ends the quoting directly from the report itself.

And I don't think anyone can listen to those findings and think all is well within NASA's Astronaut Health Care System. This Subcommittee needs to hear from Colonel Bachmann, the basis for his review panel's findings. Equally important, the Subcommittee needs to hear from NASA management, their plans for addressing the concerns raised by the independent review, not just the
alcohol-related ones.

   Whatever the merits of focusing the agency's attention on trying to get employees to publicly verify or refute reports of alcohol use that those employees had provided in confidence to the independent review committee, I think it runs the risk of unintentionally worsening a communications environment at NASA in which, to quote the independent review committee, "Peers and staff fear ostracism if they identify their own or other's problems."

   Instead it may be more appropriate to take the disconnect, what is being said in private and what is being said in public by NASA personnel, as another indicator that the broader issues raised by the independent review committee warrant close and sustained attention, and I certainly hope that that will be the approach taken in the days and weeks ahead.

   We have a great deal to examine today. I again want to welcome our witnesses, and I look forward to your testimony.

   The chair now is pleased to recognize the gentleman from Florida, the Ranking Member, Mr. Feeney, for an opening statement.
REPRESENTATIVE FEENEY: Well, thank you, Mr. Chairman, and thank you for having this important hearing. I want to tell you that it is important enough that the Ranking Member of the Full Committee, the esteemed Mr. Hall, is here. I offered to defer to let him give the first opening speech, but he thought our weakest link ought to go first.

[Laughter.]

REPRESENTATIVE FEENEY: We take the challenges that NASA has in the behavioral and the physical and the psychological well-being as very, very important, and this is an opportunity both for oversight committees of Congress, of NASA, and other outside experts to find ways to dramatically improve, as we go forward, the well-being of astronauts in a wide variety of areas.

After the Lisa Nowak incident earlier this year, NASA Administrator Mike Griffin, to his credit, convened the NASA Astronaut Health Care System Review Committee. I want to thank this distinguished panel of aerospace medical experts for their service. I also want to comment Administrator Griffin for inviting independent review of the health care system.
If we can put the report's sensationalistic elements aside for a moment, the committee provided several thoughtful recommendations to heighten the importance of human factors to improve the monitoring of each astronaut's physical and mental well-being. After the Shuttle was retired, NASA's Constellation program will return Americans to the Moon for extended stays. An astronaut's physical and psychological well-being will be more important in the future of America's space program and not less important. So it is imperative to thoroughly examine this issue and establish an astronaut health care system that properly addresses future and not just current medical concerns.

I note that one of the challenges in going beyond low-Earth orbit with human beings, even bigger perhaps than the mechanical and technical and scientific challenges, are the physiological challenges on astronauts that will spend extended periods in space.

Unfortunately, the report's sensationalistic element, specifically allegations of astronaut intoxication shortly before space flight, ground out the remainder of the report. Since the report's issuance in late July, these allegations remain uncorroborated. No eye witness
has come forward to specifically state who, what, when, and where. So far, this search for corroboration reveals the shortcomings of relying on anonymous allegations.

And I know that Colonel Bachmann's committee had its mission, and it did it well, and there are advantages to having anonymous and voluntary people come forward, but there are disadvantages, too. Anonymity can certainly promote candor, but without corroboration, such allegations often unfairly force good men and good women to prove a negative.

My office has heard from astronauts and NASA officials, all deeply devoted to human space flight and highly credible, who adamantly deny this misbehavior represents current or recent conduct. These people have long-standing firsthand knowledge of the astronaut program and simply state that alcohol influence during the immediate preflight period does not exist. Because an astronaut interacts with so many people during this period, I find it difficult to believe that such behavior could go undetected.

But I don't want the alcohol issue to detract from a more troublesome finding that flight surgeons and
astronauts in general may be hesitant to report major crew
medical or behavioral problems because their concerns would
be disregarded or ignored.

James Oberg, a distinguished and respected space
commentator, followed up last month with a very thoughtful
story detailing inconsistent approaches to significant
astronaut health concerns. I want to applaud NASA for
being open to the committee's recommendations, and I join
the distinguished chairman of this Subcommittee in
suggesting that we focus on the future and how we can
improve astronaut safety and well-being. I think that is
the approach NASA should and will take.

This type of culture, formerly called a
"normalization of deviants" after the first Shuttle
disaster, has contributed now to two Shuttle accidents. It
cannot be allowed to flourish in the most demanding of
human endeavors; that is, human space flight. We have to
be ever vigilant against such behavior, and I am very much
appreciative to Chairman Udall for calling this hearing.

CHAIRMAN UDALL: Thank you, Mr. Feeney.

At this point, I am pleased to acknowledge the
presence of the chairman of the Full Committee, Chairman
Bart Gordon, at the hearing. I would like to ask unanimous consent to recognize him for any remarks he would like to make.

Without objection, so ordered.

Mr. Gordon?

REPRESENTATIVE GORDON: Thank you, Chairman Udall.

Let me say that you and Ranking Member Feeney have made my job a lot easier. You have summed it up very well. I think there is a bipartisan interest, obviously, in this issue, and although the alcohol issues got a lot of the early publicity and certainly is something to be concerned about, in all reports I think it indicates that that was a situation that was an anomaly.

The bigger concern is, is there an openness, is there a comfortableness within the NASA organization to other issues of flight safety, and we just have different testimony here.

I think that what I know is that there is certainly smoke. Whether there is fire, we want to be able to determine that today. I have no question that both panels are of individuals of integrity, trying to do the
right thing, and I think this will be a healthy exercise for NASA, but the real question is, is there that comfortableness within the NASA flight safety operation that allows everyone to step forward without feeling somehow they are ostracized, without feeling somehow they have been "demoralized," quoting the report, about prior overlook.

So, again, welcome, and I think Mr. Feeney and Mr. Udall have summed up our charge today, and I look forward to hearing this testimony and some interaction between members of the panels.

CHAIRMAN UDALL: Thank you, Chairman Gordon.

As Mr. Feeney noted, the Ranking Member, Mr. Hall, is also present. I would like to ask unanimous consent that he also be recognized for any opening remarks he would care to make.

Without objection, so ordered.

REPRESENTATIVE HALL: Mr. Chairman, thank you, and I thank you for doing what you are doing. I realize that you had to do it. Bart Gordon is a fine chairman and a great native Tennessean, and I admire him very much, enjoy working with him.
But you know, I am so pro NASA and pro space and pro Mike Griffin that it is just really something that accusations sound more to me like someone that is wanting to be quoted rather than something that might have happened by our most red-white-and-blue members of public service at any stage here, our very finest educated men and women that put their life in the hands of those of us who like the stick of dynamite that sends them off, just above and beyond public servants, and I hate to even see a hearing on something like this, but I understand the chairman. It is something when you have these allegations, you have to hear it. It is best to clear the air, and I hope we can do that here.

I do want to thank you, Mr. Chairman, and I thank the panelists for being here today to speak on this health report, what I like to look at it as.

As most of you know, I have been a longtime supporter of astronaut safety, and indeed, it has been my primary goal in relation to the U.S. space program. I have argued for years that we need to do everything we can to ensure that the men and women who are launched into outer space are prepared and equipped with everything they need.
to do the job and return to Earth safely. I believe this is also the goal of each and every person working on the Shuttle program at NASA.

In the wake of the Columbia disaster, Congress held a series of investigations aimed at addressing the problems that led to the accident, and these investigations culminated with the CAIB report that outlined suggestions for NASA. So I know that Administrator Griffin and his team have taken these suggestions seriously and have implemented a series of changes at NASA to address the concerns. I don't look forward to the hearing, but I do look forward to staying here and listening to the testimony, particularly from the Administrator, on the progress of these changes and what NASA can do to continue to improve as we move forward.

As my good friend, Representative Feeney, points out, we need to continue to be vigilant and as this chairman is going to do. I know him from knowing him and his family before him that they will address problems and may meet problems head on at NASA and everywhere else, so that there is a culture of safety that prevails.

I look forward to the hearing, and I yield back
my time. I thank the chair.

CHAIRMAN UDALL: I thank the Ranking Member for his always insightful remarks and look forward to his participation further in the hearing.

If there are other Members who wish to submit additional opening statements, your statements will be added to the record.

Without objection, so ordered.

At this time, I would like to turn to the panel and recognize our first panel of witnesses. I would like to introduce everybody on the panel, and then we will come back and start with Colonel Bachmann.

I did want to initially introduce Colonel Richard E. Bachmann who is appearing before the Subcommittee in his capacity as the chair of the NASA Astronaut Health Care System Review Committee. To Colonel Bachmann's left is Dr. Richard S. Williams who is the Chief Health and Medical Officer at NASA. Further to the left on the table is Dr. Ellen Ochoa who is the director of Flight Crew Operations at NASA, and our last witness on the first panel, we have Mr. Bryan O'Connor, the chief of Safety and Mission Assurance at NASA. A very esteemed and highly qualified
panel, welcome to all of you.

As our witnesses should know, spoken testimony is limited to 5 minutes each, after which Members of the Subcommittee -- and in this case, the Full Committee -- will have 5 minutes each to ask questions.

So we will begin with Colonel Bachmann. Thank you for being here, and the floor is yours, Colonel.

COLONEL BACHMANN: Mr. Chairman and distinguished Members of the Committee, good morning.

It is truly an honor for me to speak to you today about the findings of the NASA Astronaut Health Care System Review Committee. NASA chartered this committee and selected the members to review the medical and behavioral health care that is provided to astronauts, provide opinions as to what, if any, procedures or testing could be put in place to predict disordered conduct or acts of passion. The entire report, each finding and recommendation, was approved and is supported unanimously by the entire committee. The work of further evaluation and action on the information contained within the report falls to NASA.

The committee reviewed documents and conducted
interviews of medical, behavioral health, astronauts, and family members. Because we were focused on systems issues rather than the behavior of specific individuals, we encouraged NASA personnel to speak freely and assured them that the report would not include any personal identifiable information. As the review progressed, it became apparent that major vulnerabilities, underlying root causes, and contributing factors extend well beyond the specific medical aspects of NASA operations.

The report's most important issues and risks can be summarized in the following three areas: first, NASA personnel feel strongly the human factors concerns are disregarded to the point where they are reluctant to identify such concerns in the future; second, that supervisors, peers, and other NASA personnel must be empowered and expected to enforce standards of conduct; and third, that medical and behavioral health services should be integrated and focused on astronaut performance enhancement.

The perceived disregard of human factors concerns has the greatest safety implications and demands immediate attention. Unfortunately, a disproportionate amount of
attention has been focused on astronaut alcohol use.

Separately, when NASA astronauts and medical personnel described specific instances of alcohol use to the committee as examples of a much larger issue, that NASA personnel felt that human factors concerns with significant safety implications had been disregarded when raised to local on-scene leadership. The interviewees were eyewitnesses to the events and provided the information voluntarily and unprompted to the committee.

We wish to emphasize again that the specifics of the incidents should not be the focus of the attention. The general sense of disregard for human factors described as "demoralizing" to the point where NASA personnel are less likely to report concerns of performance decrement is the fundamental concern NASA must investigate and remedy.

We understand the outrage that some members of NASA have expressed at this particular finding. However, public statements that such things are simply impossible, challenging the veracity of the findings, referring to them as "unproven allegations" or "urban legends," rather than acknowledging how difficult raising such concerns can be, do not encourage openness and safety, make future reporting
even less likely, and increase the risk of future mishaps
or incidents.

The recently released NASA Spaceflight Safety
Review did not prove that the evidence described to us did
not happen, only that NASA personnel who shared their
concerns with the committee during the interviews did not
bring these same concerns forward during the safety review.
We believe this may represent continued fear and barriers
to communication and may be a cause for greater, not less,
concern.

The committee identified a number of structural
and cultural issues that currently exist at NASA that make
it even more difficult to predict an episode of disordered
conduct and made recommendations to ameliorate them. These
recommendations include instituting a formal written code
of conduct, creating enduring supervisory mentoring
relationships with effective feedback and evaluation, and
empowering supervisors, peers, and support staff to bring
forward concerns. Solutions will require a systems-based
approach.

NASA has acknowledged the intent to act upon
most, if not all, of these recommendations. Each finding
and recommendation should be explicitly addressed and tracked to resolution with both internal and external oversight.

We believe the first and most important step that needs to be taken by NASA is to conduct a thorough, appropriately constructed, anonymous survey of the relevant populations covered by this report. This survey must be carefully worded in order to obtain valid actionable information.

NASA senior leadership must provide vocal support for the survey and encourage NASA personnel to be open, honest, and thorough in their replies. They must be assured of anonymity, freedom from reprisal, and that the information will be used appropriately. Otherwise, the concerns will be driven further underground.

Only with such a comprehensive, anonymous, valid, and visibly supported survey can NASA truly determine the scope of the problems and drive toward system solutions.

Thank you.

CHAIRMAN UDALL: Thank you, Colonel Bachmann.

Dr. Williams is recognized.

DR. WILLIAMS: Mr. Chairman and Members of the
Subcommittee, thank you for the opportunity to appear today to discuss the NASA Astronaut Medical and Behavioral Health Care Program.

I am pleased to provide you with insight into this comprehensive program and discuss our plans regarding the findings of the NASA Astronaut Health Care System Review Committee and the internal review conducted at Johnson Space Center.

The NASA Astronaut Medical and Behavioral Health Care Program has succeeded in keeping our astronauts healthy and ready to perform the challenging tasks that NASA asks of them. Over the course of our Nation's 40-year human space flight endeavor, the health care system has contributed to the success of all NASA human space flight missions. No mission has thus far been abbreviated or terminated because of a health care issue.

Longer duration exploration missions will provide new challenges, and we are committed to ensuring our program continues to provide the best medical and behavioral health care today.

The health-related recommendations of the Astronaut Health Care System Review Committee are
thoughtful and will contribute to meeting the behavioral health challenges that lie ahead. We take the recommendations of the review committee seriously, and we thank the committee for all the time and effort involved in their study.

Our overarching goal is to improve behavioral health and medical care for the astronauts. Several of the committee recommendations were accepted immediately, and many more will be accepted in the coming months.

Specifically, NASA accepts the recommendations concerning analysis and use of behavioral health data and will convene experts to address psychological testing as recommended.

Briefings by the flight surgeons to crewmembers concerning medical monitoring activities and briefings by principal investigators concerning research data collection in the context of obtaining informed consent will be reemphasized.

Effective communication between astronauts and flight surgeons will be addressed. We will ensure both groups are aware of the multiple pathways to communicate safety and health concerns, and we will be working together
in support of NASA senior leadership to reinforce these concepts.

Flight surgeon scheduling and task assignment and flight medicine clinic operations will be closely examined with the goal of enhancing continuity of care to the greatest extent feasible. Options for providing effective behavioral health services to all flight-assignable astronauts for the purposes of performance enhancement will be reviewed, and a behavioral health assessment will be conducted as part of the annual astronaut physical examination. Options for flight surgeon behavioral health assessment training will also be identified.

A common credentialing and privileging process will be applied to behavioral health and aeromedical services, and peer review of practice will be enhanced for both.

NASA's electronic medical record system will be reexamined to provide maximum privacy consistent with safe medical practice in compliance with all applicable statutes, and regulation governing privacy of medical information will be assured.

Process linkages between the behavioral health
records system and the electronic medical record will be reviewed and established, and all appropriately credentialed and privileged practitioners will be granted records access as appropriate.

NASA will examine options for assuring quality of care delivered by community consultants and practitioners. Written operational instructions and procedures for the behavioral health clinic will be examined and enhanced as appropriate. The Aerospace Medicine Board Charter will be reviewed and updated to reflect appropriate membership, authority, and accountability. Regular meetings will be scheduled between behavioral health staff and flight surgeons to enhance clinical communication.

Our initial responses to the committee's recommendation were reviewed and endorsed by the NASA Medical Policy Board on August 21st, 2007. The Medical Policy Board, consisting of medical experts both external and internal to NASA, is available to me for consultation on all NASA medical policy. The Medical Policy Board will provide ongoing implementation oversight, and I will provide progress reports.

Commitment to flight safety remains the
foundation of our effort, and we look forward to system improvements that will be realized as a result of this report.

I look forward to answering any questions you may have this morning.

CHAIRMAN UDALL: Thank you, Dr. Williams.

Dr. Ochoa, the floor is yours for 5 minutes.

DR. OCHOA: Thank you. Good morning, Mr. Chairman and Members of the Subcommittee. Thank you for the opportunity to appear before you today.

I have the privilege of managing the organization that includes the Astronaut Office and the Aircraft Operations Division at NASA Johnson Space Center.

Prior to becoming director of Flight Crew Operations a year ago and deputy director 4 years before that, I was a member of the Astronaut Office for 12 years and was fortunate enough to fly on four Space Shuttle missions.

In my experience, astronauts prepare thoroughly and uncompromisingly for their missions. One of my crew mates compared it to preparing for the Olympics. Every act, every day, is designed to make sure that you are at
your peak, both mentally and physically, when you launch
into space.

About 10 years ago, as we began assembly of the
International Space Station, it became clear that astronaut
preparation needed to be raised to a new level to
accomplish the increased complexity of establishing and
maintaining a permanent human presence in space.

Along with the Mission Operations Directorate
whose job is to plan, train, and fly missions, and the
Space Life Sciences Directorate who ensures the crew
health, the Flight Crew Operations Directorate developed
new processes, training, evidence methods, and fitness
standards to meet the challenge of assembling and operating
the Space Station.

Standards for fitness for duty are determined,
measured, and documented using a number of processes and
tools. Comments and quantitative evaluations by
instructors are documented in every phase of training and
included in each astronaut's personnel file.

In addition to training in many areas ranging
from spacecraft systems to robotics and space walking to
expedition preparation, NASA uses other processes to
prepare and evaluate astronauts, including the Instructor Astronaut Program, the Commander Upgrade Program, and the Astronaut Evaluation Board. All of these are used by the chief of the Astronaut Office in the flight assignment recommendation process.

Medical standards for flight are used by the Aerospace Medicine Board to make certification decisions. The certification results are addressed during biweekly meetings between astronaut and flight surgeon management. The communication and relationship between Flight Crew Operations and the space medicine community is strong, allowing NASA to effectively address concerns regarding crew health and fitness.

Flight surgeons are aware of their responsibility to assure that an astronaut's health or behavior does not present a risk to themselves or the mission, and the flight crew management as well as NASA's leadership support their efforts to do so.

Flight crews are very fortunate to have a group of flight surgeons who are not only excellent physicians, but who understand the training and the operational environment of an astronaut and the implications of that
astronaut of that environment to astronaut health. The flight surgeons are dedicated to maintaining or returning astronauts to flight status when at all possible, keeping within the medical standards that protect health and mission success.

Following the events of last February, Johnson Space Center conducted an internal assessment, and NASA Headquarters chartered the Astronaut Health Care Review Committee. While behavioral health recommendations were the focus of the Health Care Committee report, the report also included a number of comments related to Astronaut Office behavior and processes.

As the committee itself noted, they did not attempt to determine the veracity of those comments, nor was there any request for information on Astronaut Office processes, policies, or anything that could be characterized as Astronaut Office culture.

In response to the committee report, NASA has taken decisive steps. Bryan O'Connor's thorough investigation confirmed my own personal experience as both a crewmember and a manager of flight crew. We have found no instance where astronauts have used alcohol in the
immediate preflight period or were under the effects or influence of alcohol at launch, and no case where a flight surgeon or astronaut raised a concern about this to management.

NASA has also responded to the committee's report by developing an anonymous survey to determine what issues actually exist and their scope. This survey will be provided to the Astronaut Corps and flight surgeons this month. Both groups will be asked to respond to questions regarding communication, trust, and responsibilities, and regarding potential concerns or barriers to raising issues with flight safety or crew suitability for flight.

Additionally, astronauts will be asked about policies and procedures dealing with astronaut performance and feedback, crew assignment, and space flight alcohol use. NASA will then develop a plan to address any issues identified by the survey report, a course of action that the committee indicated they intended as NASA's response.

In conclusion, I am extremely proud to represent the Astronaut Office, both within NASA and externally, to Members of this Committee, to the media, and to the public. Our astronauts are well prepared to carry out the Nation's
human space flight program. They take their responsibility very seriously. The same can be said of the entire NASA team that prepares and executes human space flight missions.

The real proof of that lies in the tremendous accomplishments of our human space flight programs, accomplishments made possible by the dedicated people at NASA, our engineers, flight controllers, scientists, doctors, and astronauts.

I would be happy to respond to any questions.

CHAIRMAN UDALL: Thank you, Dr. Ochoa.

Mr. O'Connor?

MR. O'CONNOR: Mr. Chairman, Members of the Subcommittee and the Committee, thank you for this opportunity to address you on the subject of space flight crew safety.

As NASA's chief of Safety and Mission Assurance, I report directly to our Administrator on matters dealing with ground safety and flight safety, and I also have policy and functional oversight responsibility for this agency and for the safety organizations assigned to each of the centers across the agency.
My organizational relationships with flight crew operations and with the chief health and medical officer are included in my written remarks.

In its final report dated 27 July 2007, the Astronaut Health Care System Review Committee found the following, "Interviews with flight surgeons and astronauts identified episodes of heavy use of alcohol by astronauts in the immediate preflight period which led to flight safety concerns. Two specific instances were described where astronauts had been so intoxicated prior to flight, that flight surgeons and/or fellow astronauts raised concerns to local on-scene leadership regarding flight safety. However, the individuals were will permitted to fly."

In response, the Deputy Administrator appointed me to review the reported allocations. The purpose of my review was twofold: number one, evaluate the committee's finding related to the inappropriate use or abuse of alcohol by astronauts in the immediate preflight space flight period, and two, evaluate relevant existing policies covering alcohol use and abuse at NASA.

My approach to the review was to learn as much as
I could about the reported allegations through interviews, data searches, and history review. The goal here was to establish the nature and the scope of any flight crew alcohol abuse, thus enabling a more informed course of action in our policies, procedures, risk mitigation strategies, our authority structure, and communications systems.

The scope of my review was limited to space flight with focus on the activities on launch day from crew wake-up until launch. For this potential flight safety issue, the relevant question was did we have an instance where a crewmember presented on launch morning in an impaired state, was observed as such by the flight surgeon or another crewmember, and then over their objections was cleared to fly that day by operational management.

Consistent with our standard approach to anonymous safety concerns, my investigative method included a search of over 1,500 anonymous reporting system and confidential hotline reports going back to 1987 when we first established the NASA Safety Reporting System.

With the help of the NASA Safety Center, we searched literally tens of thousands of mishap and
close-call records going back that same length of time.

I received inputs by phone, e-mail, in person, from over 130 individuals who have been involved one way or another in activities during the last few days before launch either at the Kennedy Space Center or at the Baikonur Cosmodrome in Kazakhstan.

I heard from every one of our current operational flight surgeons and nearly 80 percent of the current Astronaut Corps and many former astronauts. I also talked to suit technicians, medical staff, operational managers, crew quarters managers, food preparation and service staff, and close-out crew technicians. The close-out crew are the last people to see the crew before launch.

To supplement this review, I reminded members of the flight community at all times that they should use the hotlines and the NASA Safety Reporting System for any flight safety information they felt reluctant to provide to me in an open forum, and I reviewed those, hotline and NSRS system, throughout.

Also, NASA is preparing a focused anonymous survey as a follow-up to this. This survey will try to flesh out any residual concerns in this or other areas.
covered by the committee report.

Within the scope and the limitations of my review, I was not able to verify any case in which an astronaut space flight crew member was impaired on launch day or any case where a NASA manager disregarded recommendations by a flight surgeon or another crewmember that an astronaut crewmember not be allowed to fly on the Shuttle or the Soyuz.

Should such a situation present itself in the future, I am confident from my review that there are reasonable safeguards in place, including such things as the flight surgeon check that morning, the presence of flight crew managers, TV cameras, suit technicians, and other technical and administrative staff and supervisors that would keep us from ever allowing an impaired crewmember from boarding a spacecraft.

As for the chance that we will disregard a flight surgeon or crewmember safety concerns, I found that although there may be occasional disagreements among operations and medical team members, all parties understood their roles and authorities and the multiple safety reporting and appeal paths we have put in place, some as
late as the last 2 years.

My report makes one recommendation to improve flight surgeon oversight during launch day activities and several recommendations concerning relevant agency policies that should be improved for scope and clarity. This review is complete, but I have reminded our workforce that any alcohol abuse or other flight safety threats should be reported in an open forum or, if necessary, through any one of the several anonymous reporting systems we have in place at NASA.

Thank you.

CHAIRMAN UDALL: Thank you, Mr. O'Connor. Thank you to the panel.

We should give everybody an update. We have a looming set of votes, but we are going to start now with the first round of questions, and we will play it by ear because we do really want to hear from everybody on the panel and give everybody on the dias a chance to ask their questions.

At this point, the chair recognizes himself for 5 minutes.

Colonel Bachmann, I would like to focus on your
testimony. I speak for myself, although I think I might speak for other members of the Subcommittee, when I say it is hard for us to hear your testimony followed by that of the NASA witnesses and not be somewhat troubled.

On the one hand, your committee found that, quote, quoting you, "Several senior flight surgeons expressed their belief that their medical opinions regarding astronaut fitness for duty, flight safety, and accomplishments, were not valued by leadership other than to validate that all medical systems were a go for an on-time mission completion," and to continue, "Instances were described where major crew medical or behavioral problems were identified to astronaut leadership, and the medical advice was disregarded."

And finally, your testimony and your committee related the following, "Crew members raised concerns regarding substandard astronaut task performance, which were similarly disregarded."

I then contrast that with Mr. O'Connor's Space Flight Safety Review report in which he includes an e-mail letter from all of the JSC Mission Operations flight surgeons in which they state, "In the course of Astronaut
Mission Operations and training, our safety and medical concerns have not been ignored by NASA medical operations, the Astronaut Office, Mission Operations Directorate, the Aircraft Operations Directorate, and ISS and Shuttle Program management," and then with Dr. Ochoa's written testimony which states that, "The communication and relationship between flight crew operations and the space medicine community is strong and effective, allowing NASA to effectively address concerns regarding safety and crew health," to pick up on what Chairman Gordon said in his remarks, it almost seems as though we are hearing about two completely different organizations.

Why does your committee paint such a different picture than the one that NASA personnel are describing to this Subcommittee, and could you provide some specifics to help us better understand the basis for your committee's findings?

COLONEL BACHMANN: Yes, sir. And I agree that the pictures that are painted by the two reports are diametrically in opposition. Any answer about why would be speculation on my part.

What the committee gathered together and wrote in
the report and unanimously supports is what the astronauts, flight surgeons told us either face to face or over the phone during the course of our committee investigation evaluation. The fact that they are not coming forward with similar concerns when NASA asked the question, I believe still represents a problem. The why, I think is a barrier to communication and concern about what is going to happen to them and what is going to be done with the information. That is why we really put a great deal of emphasis on the anonymous survey, so that people will feel that they can speak freely.

CHAIRMAN UDALL: Returning to your report, Colonel, "Many of the cultural and structural issues identified in this report" -- and I am again quoting from what your committee wrote.

Let me start over. "Many of the cultural and structural issues identified in this report as problematic existed for many years, and some of it existed since the earliest days of the space program. These issues are so ingrained and longstanding that it will take senior leadership action to remediate them."

These are sobering words. Could you give me one
or two examples of the cultural and structural issues your committee is talking about?

COLONEL BACHMANN: Please keep in mind that the makeup of the committee was very diverse. We had military flight surgeons and behavioral health experts. We had civilians. All but one of the members of the committee had some military experience, but we did have a member from the VA who not -- we are familiar with the military environment, behavior of highly skilled, highly professional, highly selected groups of people that still have human issues. They still fall victim to all the same kinds of issues that we do. There are doctors and military pilots and airline pilots who have trouble with drinking alcohol when they shouldn't. We have behavior problems that come as a surprise to coworkers, and I think NASA is no different in that regard.

And not to speak poorly of the Astronaut Corps, we think very highly of the astronauts, but we still remember that they are humans and fall victim to the same kinds of things we do.

The issues of the kinds of behaviors that are described should not come as a surprise to anybody who
deals with people. The concern for us was that they seem
to come as a surprise because NASA astronauts are so very
good. It is still unreasonable to think that they won't
have individuals that have problems with alcohol, that they
won't have individuals have problems with marital
relationships, with money, and they need to set up a system
where they can identify folks that are straying from the
path sooner and do something about it before it becomes a
major issue.

CHAIRMAN UDALL: Thank you, Colonel Bachmann.

I want to recognize the Ranking Member, Mr.
Feeney, and I am hopeful I might also be able to recognize
the chairman of the Full Committee, Mr. Gordon, before we
have to go to the floor to vote. We will recess the
committee temporarily.

Mr. Feeney?

REPRESENTATIVE FEENEY: Well, thank you.

I guess I am hesitant to ask what may be the
silliest question of 2007, but, Mr. O'Connor, just why
would it be a great risk if an astronaut or astronauts had
too much to drink before flight?

I have been in the simulator. I know that the
medical risks of, for example, vomiting into your mask are important, but if the launch is successful, the truth of the matter is that it is all technical and computer-driven. It is actually the emergency landing that is a concern.

And other than it being poor practice, are there other concerns? Because the Soviets do have this tradition where shortly before take-off, they have a toast, and you outlined that it is basically just touching to the lips, but in any event, it may be a silly question. But what other threats, other than vomiting or the inability for somebody to safely land if there is an emergency landing, would there be if astronauts were drinking immediately prior to flight?

[Audio break.]

MR. O'CONNOR: [In progress] -- members getting ready to fly the Shuttle, and one of those members really didn't have much to do for the first 3 days of the mission, and then on day four, they start working on some experiment. Even that crewmembers needs to be ready for an egress on the launch pad. Every single one of those crewmembers has to be able to convince their commander when they get on board that they would be able to in emergency
get out without assistance in case of an emergency on the
launch pad, no matter what, and that really is the first
close, I believe, even before they light off the
vehicle and launch is to have a crew that is fit and they
have their minds in order and they are not going to need to
be pulled out of the cockpit by somebody else putting the
crew at risk.

REPRESENTATIVE FEENEY: Not to mention that if
one of them were caught to be drinking, you would have to
cancel the whole flight potentially if you didn't have
anybody ready to step in.

MR. O'CONNOR: Well, that was part of my review
was to look at that launch day, is it possible that someone
could actually wind up in the cockpit impaired, and if so,
what sort of factors do we have in place to prevent that
from happening.

I found it really hard to imagine that you could
get there, but let's say it wasn't alcohol. Let's say
somebody fell down a stairs on their way to get suited up
or banged their head into something or had a stroke, and
they were perfectly fine the last time the flight surgeon
looked at them. We still need to be able to look them in
the eye, have the flight surgeon nearby, even to the point
where they walk out of the building, and I think that is
one of the concerns that we had was that impairment by any
means is something we want to prevent.

And we would hold off a launch, just as we did on
STS-36 some years ago when the crew had a sick crewmember.
The flight surgeon went to management, said we got a sick crew member. Management really didn't want to hear this.
They were right in the middle of the launch countdown, and yet, they had to agree, crewmember sick, let us know when he is ready to go, and we will launch. So we held off for 2 days.

REPRESENTATIVE FEENEY: Colonel Bachmann and Mr. O'Connor, on the much bigger issue and that is whether there is still a cultural problem with the comfort of reporting safety, whether it is technical -- and by the way, I was there when Mike Griffin recognized a technician that recognized on the wing, I think it was -- maybe he will address it later -- in front of God and country and the press and other NASA employees and administrators, he recognized somebody that was literally a hero because he was a technician and discovered a problem with the exterior
of the wing.

If that cultural change hasn't made its way to
the medical area, that seems to be the juxta of what this
committee hearing is about.

Colonel Bachmann, because of the process he used,
voluntary anonymous witnesses, finds one set of consistent
testimony, and he has got a very credible panel.

Mr. O'Connor finds a very different set of
availability of communications and independent
communication avenues and finds that nobody is reluctant to
come forward.

Could this be a bias in sampling error? I mean,
I remember the headlines, "Dewey Defeats Truman," because
the pollsters called only people that owned telephones at
the time.

You got 80 percent to participate, Mr. O'Connor.
Could it be that the 20 percent that didn't were part of
Colonel Bachmann's report? Could it be -- and he suggested
in his testimony, which was not in his written testimony,
that it may be an indication that there is continued fear
on the part of some.

So maybe I ought to ask Mr. O'Connor that because
you have read his report. He had 80-percent compliance.

Could we have a bias error here? Could we have people making false accusations to the Bachmann committee, or could we have people that participated in his committee different from the 80 percent that participated in yours?

And that would be my last question, Mr. Chairman.

MR. O'CONNOR: Well, sir, you have touched on several areas where there could have been differences.

My review was conducted on a little bit different method. I put the word out to people that they can come and talk to me about whatever they feel comfortable about. I did not use any leading questions. I used the standards safety investigation techniques.

I have to say that I got a lot more participation in this than I have ever gotten on one of these before. There were over 130 people who came forward or who answered my call specifically, because I did reach out to some people that were on certain missions, that I wanted to make sure I had coverage of all the flights back through 1987, and so those weren't just people coming forward. They were me actually asking them to talk. So it was a little bit different method.
I also tried to define flight safety in a way that everybody understood, meant no kidding or impaired crewmember in the cockpit. That is a different story than maybe flight safety from a generic view might be.

CHAIRMAN UDALL: Mr. O'Connor, if I might interrupt you.

MR. O'CONNOR: Yes, sir.

CHAIRMAN UDALL: I want to make sure the chairman, given these pending votes, has a chance to make any comments or ask any questions.

So the chair recognizes the chairman of the Full Committee, Mr. Gordon.

REPRESENTATIVE GORDON: Thank you, Chairman.

Obviously, some quick observations, one, Mr. O'Connor, I am a little surprised that your review was so narrow that the charge was simply, as you stated, limited to alcohol use on the day of launches. I would have hoped there would have been a broader view.

Dr. Ochoa, I am pleased that you are going to follow through with this anonymous survey. I think that will be very helpful.

Dr. Williams, I thought you had a very
constructive testimony. I would like, if you would -- you said you are going to accept -- had accepted and would accept most of the recommendations. If you would, please, if you would send to us a written statement on which recommendations you will not accept and why and what kind of reporting process you are going to have.

And finally, it seems that -- and again, Colonel Bachmann, you know, you have the most unpleasant job here. We thank you for that. It seems that you were looking at the broader issue with more anonymous reports, although anonymous face to face, not just over the -- where Mr. O'Connor was looking at the more narrow, on the record. So I think this can -- might play some role there, and that is why I think, Dr. Ochoa, your surveys will be helpful.

We are going to have to go, but I want to ask a question that I hope that you will answer when you come back, Mr. Bachmann. I quote, "Peers and staff fear ostracism if they identify their own or other problems." That is a very troubling statement. What was your review panel's basis for making that statement, and how confident are you that it doesn't represent just the view of one or two malcontents, particularly in respect to the letter that
came in from the various flight surgeons? And if you will
think about that and answer that when we get back.

Thank you, sir.

CHAIRMAN UDALL: Thank you, Mr. Chairman.

The Committee stands in recess. We will return
as soon as we can. Thank you.

[Recess taken from 11:02 a.m. through 11:27 a.m.]

REPRESENTATIVE LAMPSON: I call the hearing back
to order. Thank you all for your patience.

We will now return to questionings of the first
panel, and it is a great privilege to recognize the Ranking
Member, the judge and congressman from the great State of
Texas, Mr. Hall.

REPRESENTATIVE HALL: Thank you, Mr. Chairman.

Mr. O'Connor, the chairman of the big committee
asked you some questions and inquired about why it was
relegated to alcohol. There is a reason for that, is there
not, what your scope was?

MR. O'CONNOR: Yes, sir. The scope of my
investigation was to look at the specific case that the two
instances reported represented, and that was space flight
safety, Soyuz/Shuttle, and to try to deal with that and to
try to understand whether or not we had adequate controls in place, if something like this happened, what was the nature of it, so we could deal with how to remedy it.

We did not expand that to look at alcohol use among astronauts in a broader sense. That might take a different kind of a study, a little longer if we were to do something like that. We didn’t really need to do that. What we did was we kind of triaged this whole thing.

When we first saw the words "flight safety," that, of course, raises a flag in my shop, and the very first thing we did was we talked to the crew that was getting ready to launch the Shuttle. We sat down with them, and we talked to them about communications, about dissent, what happens if the flight surgeon and the managers disagree, do they know how to use the system properly, and that was the first step.

The second step was to do this investigation, focused on flight safety for Soyuz and Shuttle.

The third step then is the follow-up with the anonymous survey that we will be doing that has a much broader scope. It looks at the whole aspect of communications and relationships among flight crew and
flight surgeons in a broader sense.

REPRESENTATIVE HALL: And with not having all the purported facts at your disposal, you were somewhat at a disadvantage, were you not?

MR. O'CONNOR: Well, I was at sort of a disadvantage in that there is always a chance that someone may not feel comfortable talking to their safety guy, and --

REPRESENTATIVE HALL: Well, with no complaints against Colonel Bachmann, you weren't given the benefit of the many interviews that he made --

MR. O'CONNOR: Oh, yes, sir.

REPRESENTATIVE HALL: -- on the many thrusts of this. Tell us about that, and I am going to ask Colonel Bachmann to give us that information, too.

MR. O'CONNOR: Well, after we got Colonel Bachmann's report, he added some more information after that on two occasions for me, but he was hesitant and really could not give me more than that because of the promises that they had made to their own witnesses.

REPRESENTATIVE HALL: Up here and in this Committee and in this Congress, you soon learn who you can
depend on and whose word is good, and if their word is not
good, nothing else is very good about them usually. I
think you took that attitude toward Colonel Bachmann that
he was keeping his word.

MR. O'CONNOR: Yes, sir. That is why I didn't
challenge it and treated it as I would any other anonymous
report we get through our anonymous systems.

REPRESENTATIVE HALL: Colonel Bachmann, you
couldn't give him all the facts because you had agreed to
those from whom you extracted a lot of those facts that you
wouldn't reveal their identity nor their employer. Is that
correct?

COLONEL BACHMANN: Yes, sir, that is correct. We
acknowledged that they are all NASA personnel and
astronauts and flight surgeons, but that is really as far
as we were willing to go.

REPRESENTATIVE HALL: And you did that only
because you didn't believe you could extract some of the
answers from them that you extracted had you not agreed to
give them the full cover. That is a correct statement,
Isn't it?

COLONEL BACHMANN: Yes, sir. Really two-fold.
We wanted them to speak freely, and we were focused on systems issues rather than any one individual.

REPRESENTATIVE HALL: They spoke freely knowing you weren't going to reveal their names and their employment to be scrutinized further by others who had the duty to scrutinize them further. Isn't that correct?

COLONEL BACHMANN: Absolutely. Yes, sir.

REPRESENTATIVE HALL: All right. Mr. O' Connor, then it came down to you, and you have scrutinized and observed many mishaps and many close calls. Have there ever been any that involved alcohol or drug use or abuse by astronauts since you have been doing that? Yes or no.

MR. O'CONNOR: No, sir.

REPRESENTATIVE HALL: And have you -- I think you said 680 anonymous safety concerns, that were anonymous to Colonel Bachmann, reported to and investigated by the NASA Safety Reporting System since its inception, 1987. None of them involved alcohol, astronaut alcohol or drug use or abuse. Is that a correct statement?

MR. O'CONNOR: That is correct.

REPRESENTATIVE HALL: And of the 863 safety hotline reports recorded since its inception in 1991 to the
present, none involved alcohol or drug use or abuse by an astronaut. Correct?

MR. O'CONNOR: That is correct.

REPRESENTATIVE HALL: Although Johnson Space Center doesn't reveal the identities of personnel involved in disciplinary actions, the most recent report to Ochoa covered the years 2002 through 2006, including a total of seven such actions related to alcohol or drugs at the center. Informal input from Flight Crew Operations was that none of these involved astronauts.

MR. O'CONNOR: That is correct.

REPRESENTATIVE HALL: And for the last, of more than 90 individuals who answered your call for information, not one offered any evidence of alcohol use or abuse in immediate preflight time frame. Isn't that correct?

MR. O'CONNOR: Yes, sir, with the one exception --

REPRESENTATIVE HALL: The Soyuz.

MR. O'CONNOR: -- that since then, there have been 40 more.

REPRESENTATIVE HALL: Yes.

MR. O'CONNOR: So I would raise that number to
REPRESENTATIVE HALL: All right. And I would ask you this. I know in the aftermath of the Challenger and the Columbia accidents, NASA has tried very hard to ensure that there are open independent communication paths to raise safety concerns. That is something I have been very involved in and wanting to module it with an escape hatch and insisted on it and had money in the budget for it a couple or three times. One time, I think maybe one of the older astronauts that went up there after he was my age used a little some of that to go up and back, and I didn't like that, but I did like the fact that you were letting older astronauts go now and then.

But for those safety concerns, would you please discuss policies and/or procedures that are now in place to ensure employees are encouraged to report any safety-of-flight issues, and would you please discuss how, if at all, you are changing and revising these policies?

MR. O'CONNOR: Yes, sir. As you mentioned, we put the NASA Safety Reporting System into place after the Challenger accident. The purpose of it was to address those occasional cases where an employee does not feel...
comfortable using open normal means of communication. Maybe they had a disagreement with their supervisor and didn't feel they could go any higher. We put this system in place as a last resort for safety communications.

Since its inception, as you heard, we have had 680 people who have used it for various reasons, including lack of communications or disregard for my concern, the kind of things that we talked about today. Those things have been part of that reporting system over the years.

REPRESENTATIVE HALL: And this is my last question. I know my time is up.

You in your duty to report to the NASA Administrator, you were, as we would say in Texas, not on the ranch. You were kind of bridle-halted in that you didn't have the full facts to report to him because they weren't available to you. Is that correct?

MR. O'CONNOR: That is one way of putting it. Yes, sir.

REPRESENTATIVE HALL: I yield back my time.

Thank you.

REPRESENTATIVE LAMPSON: The gentleman's time has expired, and I will now claim 5 minutes for myself.
I want to start with Colonel Bachmann. First of all, I sort of feel a little bit like what Ralph Hall's comments were at the very beginning a while ago. I think I am in so much awe and hold the Astronaut Corps in such respect that I wonder why we -- it is unfortunate that we had to have this kind of hearing, but I have a great deal of respect, and I know that the astronauts are committed to their families and to NASA and to our country and to our communities. I have a tremendous amount of respect for everything that they do.

Colonel Bachmann, I know that there are a lot of astronauts who feel that the reports of alcohol use in your report have tarnished the reputation of the Astronaut Corps unfairly.

As we have heard today, your report included two instances of astronaut use that NASA says it was unable to verify. With all the confusion we have had since the report came out, I would like to sort of ask you to help us clear the air and ask just a few questions on that.

Does the alcohol -- does the inclusion of the alcohol incidents in your report indicate your committee thought -- indicate that your committee thought that there
was widespread abuse of alcohol in the Astronaut Corps?

COLONEL BACHMANN: Sir, as we said in the report and as we said in the press conference when the report was released, the committee does not have sufficient information to describe the extent of alcohol use or alcohol problems in NASA, in the Astronaut Corps.

What we had were specific instances described to us, and we felt not as an underlying alcohol problem, but as an underlying risk, communication, human factors problem, and that the astronauts and flight surgeons were so concerned about how this information was handled that they brought those to us as kind of the prime examples, although they hadn't any others. Those were the ones that were concerning most to them.

REPRESENTATIVE LAMPSON: How many people on your committee actually heard reports from individual astronauts regarding alcohol use?

COLONEL BACHMANN: The interviews took place over the space of several days. The bulk of them took place with multiple members of the committee in the room. The concerns brought forward by the flight surgeons, as best we can recall, we had at least three committee members in the
room at the time that that particular story was told to us. The instance was described.

REPRESENTATIVE LAMPSON: How many people are on the committee?

COLONEL BACHMANN: There are eight altogether.

REPRESENTATIVE LAMPSON: Eight. And three heard the --

COLONEL BACHMANN: Sir, I say at least three. Again, people were coming and going, but I know that at least three, if not more.

The astronaut-described alcohol incident was described to one member of the committee who brought that information back to the rest of us, and we discussed it.

REPRESENTATIVE LAMPSON: What were you trying to say when you included the two incidents that were volunteered to your committee by interviewees? What did you want to try to accomplish with that?

COLONEL BACHMANN: Sir, again, we were highlighting the concerns that the NASA individuals felt, and they used these particular instances and others, but these particular instances that were of greatest concern to them that they used as examples of how significant safety
issues did not receive traction when they were sent forward, that their professional opinions about the fitness for duty or the ability of the astronauts to do the task did not receive what they considered to be sufficient attention.

REPRESENTATIVE LAMPSON: Do you think that there is any real evidence to indicate that there is a significant problem of alcohol abuse in the Astronaut Corps?

COLONEL BACHMANN: Sir, as we said in the report and during the press conference, we don't have a sufficient number of interviews to tell you how pervasive alcohol use problems might be. The description that we provided of the rules or lack of rules that governed use of alcohol in the crew quarters or the lack of a 12-hour rule explicitly defined for space flight all have been validated by NASA, and in fact, those were some of the first actions they took was to institute explicit rules on the use of alcohol in those settings.

We believe that makes the rest of the story more credible as well, that the rest of the situation that they have described has actually been validated by NASA.
REPRESENTATIVE LAMPSON: Before he left, Chairman Gordon had asked some questions, and I am going to take the remaining time to give you an opportunity to ask those. He said what was your review panel's basis for making the statement of peers and staff fear ostracism if they identify their own or other's problems, and how confident are you that it doesn't represent just the view of one or two malcontents.

COLONEL BACHMANN: Sir, the first part of that is how do we know that these don't represent just an isolated individual or a collection of individuals, and how do we reconcile that with a signed letter by, it looks like, the bulk of the flight surgeons at NASA. I would have to defer the answer back to the flight surgeons.

In the group of people that told us that story, I am confident that some of the members that signed that letter saying that essentially everything is fine were present in the room when this story was told. So I can't answer how they could tell one thing to us and sign a different letter out to NASA.

As far as the statement about ostracism and issues with their peers, again, those were the words that
the astronauts and the flight surgeons told to us. Those
were not our interpretation. It is more of a summary, but
those are the words that were used when the NASA people
described the issue to the committee.

REPRESENTATIVE LAMPSON: I know my time is up, but I am going to take a little bit of the time that Bart Gordon gave up a while ago to get his questions in and answers, and he had gotten down to the point where he made a statement of -- a restatement of the report, NASA must ensure that people can identify safety and performance concerns within NASA without fear of reprisal or career injury and asked were you told of any instances where your interviewees had been subjected to reprisals or had witnessed other individuals being subjected to them.

COLONEL BACHMANN: Several vignettes were described where -- in this particular case, the flight surgeons described instances where they brought concerns forward, and they were subjected to what they called "public humiliation." We didn't pursue it further than that, again, because the point of the issue was their reluctance to bring things forward because of how similar issues had been handled in the past.
REPRESENTATIVE LAMPSON: What does NASA need to do to fix the problem your view panel discovered, uncovered?

COLONEL BACHMANN: I think the most important thing, again, is for the NASA leadership at the highest levels to clearly state that they are concerned -- and I think they have done that -- and make every effort to get appropriate information that really will give them a sense for the scope of the issue.

Face-to-face interviews are not the best way to get sensitive information when people feel their jobs might be at risk or that they might have other career consequences. That is why, again, we emphasize the need for a valid and anonymous survey that is not seen as a mere exercise, but actually seen as vital to the success of NASA's future missions, where people will feel that they can speak freely.

If it is narrowly scoped or not clear to people that they can respond without somebody being able to figure out who said it, I am afraid that you could certainly get a useless piece of information back, and that is where I think the whole crux of the follow-up to this hearing and
this committee's work is to get good information from all NASA personnel affected by these issues.

REPRESENTATIVE LAMPSON: From the folks I have spoken with, the leadership at NASA, on areas where I have talked, I believe that their commitment is to accomplish that. I hold them in very, very high regard, and I know that they are concerned about safety and success both at NASA and is of utmost important and I know will be going forward with it.

I have gone way over my time, and I will now recognize Mr. Neugebauer from Texas -- I'm sorry. Mr. Bonner. Jo, excuse me.

REPRESENTATIVE BONNER: No problem, Mr. Chairman.

Randy is a handsome fellow.

REPRESENTATIVE LAMPSON: Neither of you have much hair.

REPRESENTATIVE BONNER: I noticed that when I looked in the mirror this morning.

[Laughter.]

REPRESENTATIVE BONNER: Colonel, let me follow up to the answer you just gave the chairman because I think it is timely. Could you expand on any recommendations that
you would like to see that would help guide NASA in the
future toward a development of more adequate follow-up
surveys or questionnaires?

    COLONEL BACHMANN: Yes, sir. In fact, in the Air
Force, we have what is called "unit climate assessment"
that we routinely do upon taking command of a new
organization, and since I have had the privilege of being a
commander for a number of organizations, certainly nothing
as large as NASA, but the survey is constructed with
questions that you can answer on a 1-to-5 scale about how
important or less important or critical or going well. You
can give them the scope. You can put a number, and that
actually generates some interesting data, but the more
interesting data as a commander have been the free text
blocks where people can type as much as they see fit to
tell you what they are thinking.

    Honestly, if you see a comment made once and you
never see it pop up again on anybody else's survey, that is
interesting, and maybe you will want to go ask some more
questions, but if you see similar issues come up in
different voices, all pointing in the same direction,
whether the number scale is consistent with that or not,
you know you have got a problem, and you have to go figure
out what is going on.

And the Air Force, at least I think from what I
said, is pretty good at keeping the information on who said
it pretty secret. They have rules about demographics. If
it asks you if you are a woman and you only have two, it
will hide that information from you, so you can't go figure
out who the woman over 40 was in your unit that said that.

And again, I would say the questions need to be
broadly or at least start broad, and then they can get as
specific as NASA sees fit, so they can answer specific
questions. Are you aware of alcohol use, you know, in the
immediate preflight period, so that they were intoxicated
when they went to a vehicle? That is one question, but a
much broader question is are you aware of human factors
issues that you feel didn't get appropriate attention, and
then give them a text block where they can type in as many
examples as they can think of.

So I think there is a science to conducting
surveys, and I am certainly not an expert in that, but
there are people who are, and I think that is who NASA is
or should be looking at to help them build a survey that
will get them the information they need.

**REPRESENTATIVE BONNER:** As a follow-up -- and
this is really for the whole panel -- how should NASA deal
with an astronaut's natural reluctance to raise health or
behavioral issues that they fear or believe may jeopardize
their selection for future missions or assignments?

And especially to the two who have gone up, based
on your experience, are your colleagues or members of the
Astronaut Corps confident that they can raise health issues
or emotional or family problems without fear of
jeopardizing their NASA careers? But it is really open to
the whole panel.

Dr. Ochoa?

**DR. OCHOA:** I will take that question, and first,
I would like to say that I am glad to hear that Colonel
Bachmann and I are on the same page regarding the survey.

We are planning a survey exactly as he has
described it. We will have a combination of qualitative
and quantitative questions, so that people do answer on a
5-point scale, as well as have the opportunity to write in
a number of cases.

I have not actually noticed astronauts being shy
about bringing up issues of many different types of natures, but we want to make sure that they do feel comfortable. We believe the survey will give us some very good information about that.

We have a number of other programs in place where we emphasize to astronauts continuously about looking out for themselves and their crew mates. One of the main programs that we have is known as either Crew Resource Management or Cockpit Resource Management, and you have probably heard about it from the aviation industry, but a lot of it is to prevent crew error, obviously, in critical situations, and what they are really looking at is not skills and knowledge, but how do you understand when you or one of your crew mates may be tired, may be distracted, may not be feeling well, may be more prone to make errors.

So any time we do a training session where we have a group of astronauts as a crew training together, the very first thing that we debrief is the Crew Resource Management, and so we are always talking about looking out for each other and making sure that we are working as an effective team.

We also have a program in place called the...
Expedition Interpersonal Training Program, which was started several years ago, because we wanted to prepare people for the long-duration missions that they were going to have on the Space Station and also beyond, and part of that program, we have workshops where we learn from previous expeditions, not only space expeditions, but Antarctic expeditions, things like that, how people have dealt with interpersonal issues.

We have cross-cultural trainings since we fly with astronauts from different countries, and we send people on outdoor leadership classes with trained supervisors where they talk about human factors issues. They talk about leadership styles. They talk about how do you keep a team going even if there's issues with one or more members of the team.

The astronauts are given verbal feedback from the experienced leaders of those courses, and then each member of the team that has gone out and done this course essentially rates every other team member sort of anonymously. So, at the end of that course, each astronaut that has participated has feedback from every other person that they have been with to understand how they did.
themselves and how they are perceived by others.

REPRESENTATIVE BONNER: Thank you very much. We may have a follow-up question in writing to get a little bit more specific answer to the question, but thank you very much for that.

Mr. Chairman, thank you.

CHAIRMAN UDALL: Thank you, Mr. Bonner.

I know we have a lot of additional questions for the panel, but I am going to move to our second witness, Dr. Griffin.

If I might, I would like to pose one question for the record to Colonel Bachmann. Per the Committee rules, any Member can submit additional questions for the record.

Before we broke for the votes, Colonel, I was talking about your sobering words, the effect in the committee report, the issues of cultural and structural are so ingrained and longstanding that it would take senior leadership action to remediate them. I would ask you to provide the Subcommittee with some specifics on the type of senior leadership action that you think are needed. Another way to put it would be what are the most important three things that NASA senior leadership needs to do to
resolve the problems identified in your report, so that we don't have to have another hearing like this a few years from now.

So I am not asking you to answer that today, but if you would submit your thoughts for the record, I know the Subcommittee would appreciate it.

COLONEL BACHMANN: Yes, sir. Will do.

CHAIRMAN UDALL: Again, I want to thank the panel. This has been very enlightening. I think I would speak for everybody on the Subcommittee. When it comes to clearly every one of you, your commitment to NASA and to having the finest Astronaut Corps anywhere in the world, we look forward to working with you further.

I thank you again, and at this point, I dismiss this panel, and we will ask Dr. Griffin to join us at the table.

[Pause.]

CHAIRMAN UDALL: Thank you for joining us.

I don't think the Doctor needs an introduction of any length. We all know his talents and his commitment to NASA and his many, many successes. Thank you for joining us, and the floor is yours for as long as you need it,
ADMINISTRATOR GRIFFIN: Mr. Chairman, Ranking Member Hall from the Full Committee, Members, thank you very much for -- Mr. Feeney, Members of the Committee, thank you for inviting me here today. I do have to admit I wish it were under better circumstances.

We all recognize that the behavior that led to the arrest of former Astronaut Lisa Nowak, the murder of NASA engineer, David Beverly, in his office at the Johnson Space Center, and this recent report by a panel of outside experts containing allegations of improper use of alcohol by astronauts has shaken public confidence in NASA.

NASA is an institution comprised of our Nation's best and brightest, an institution responsible for carrying out one of the noblest missions of our Government and our Nation.

The personal conduct of NASA's workforce, including our astronauts, must be of the highest standards, beyond reproach, and day in and day out, we do indeed demonstrate just such professional excellence and dedication to our mission, but in the face of the allegations and adversity which we have encountered
recently, we must ask and answer hard questions, and we have done that.

The case of former Astronaut Nowak is a matter for the courts to decide and is not an appropriate subject of comment for me here today, but as a direct result of that unfortunate incident, we did last February begin an in-depth review of how we might better provide for the behavioral health of our Astronaut Corps.

Shana Dale and I asked Dr. Richard Williams, NASA\'s Chief Health and Medical Officer, to organize a committee with membership external to NASA and having expertise in aerospace medicine and psychiatry to review the medical and behavioral health services provided to our astronauts. We sought external advisors because we were concerned that we might have missed something with which others in the field with experience outside of NASA were more familiar.

This review committee chaired by Dr. Bachmann, Commander and Dean of the U.S. Air Force School of Aerospace Medicine, provided me with their final report this past July, and the report contained numerous findings and recommendations, many of which will be useful to us as
we go forward.

Without question, the portion of the report which has received the most attention was the citation by the panel of certain allegations of improper use of alcohol by astronauts preparing to fly, and further, that concerns expressed by flight surgeons on this point had been ignored by NASA management.

Now, given the seriousness of these allegations, the only responsible action we could take was to investigate them. Accordingly, Shana and I asked NASA's Chief of Safety and Mission Assurance, Bryan O'Connor, from whom you just heard to conduct a careful examination of claims that astronauts had been impaired by alcohol in the immediate preflight period as well as claims that management had not been responsive to concerns by flight surgeons and others about astronauts' fitness to fly.

As you have heard from Bryan, his extensive review found no evidence to support the claims that any astronauts were ever impaired by alcohol at launch time. Further, NASA's flight surgeons have voluntarily -- I would say the bulk of NASA's flight surgeons have voluntarily put their names on a communication to Bryan saying that they
had no evidence of impairment by astronauts on flight day
nor any instance of their concerns to management being
disregarded, which has been the subject of earlier
discussion.

We take and I take these allegations very
seriously, just as we would any issue that could impact the
safety of our missions, but at the same time, I have also
said that the stories cited in the report seem improbable
to those of us familiar with the astronauts' rigorous and
very public activities in the hours leading up to a space
flight.

I personally began working with our astronauts
more than 25 years ago, and I know many former and current
members of the corps as valued colleagues and personal
friends. The cited allegation of alcohol impairment prior
to flight is simply not in accord with the behavior that I
have personally seen from our flight crews.

Now, this allegation aside, the committee put
substantial time, thought, and effort into their report.
They really did, and we are grateful for their service in
helping us to make NASA a better agency, and we are taking
action to address the other concerns and recommendations
from their report which we believe will improve our
astronaut health care procedures.

    I have enumerated the actions we are taking in
response to this report in my written testimony to this
Committee. One of those is that NASA's Astronaut Office is
developing a formal code of conduct that will outline
professional standards expected of members of the Astronaut
Corps.

    Now, Chairman Udall and other Members of this
Subcommittee, you will recall that many concerns about
NASA's culture were expressed in the aftermath of both
Space Shuttle Challenger and Columbia accidents, and there
were, indeed, unfortunate similarities in how those
accidents occurred. A common theme was the reluctance of
senior managers to listen to and evaluate carefully
concerns expressed by subordinates.

    Nothing is more important to me than this matter.
    I have established as a non-negotiable criterion for
management at NASA, starting with those who report directly
to me, that we must not fail to listen respectfully to our
people. We must not fail to investigate and adjudicate the
concerns which they express. We must not fail to act, if
necessary.

In today's NASA, with the approach we have taken to implementing the recommendation of the Columbia Accident Investigation Board to provide independent technical authority at NASA, every employee has at least two independent pathways which they may use to bring forth concerns to upper management.

I have made the point on numerous occasions that there will be no retribution for employees at any level who bring forward a concern, that there will be praise, and that there will be respectful treatment of the concern, and it will be adjudicated. I believe that this is a matter of trust, and that this trust has been kept.

Now, I must point out that respectful treatment of an opinion does not necessarily imply a decision in one's favor. Any argument or dispute which reaches NASA managers has at least two people and almost always more who disagree, and it is not possible to decide in favor of all parties, but it is possible to provide all parties with a careful and respectful hearing, and that is what I seek for our agency. Again, this is a matter of trust, and that is the culture change which I believe was needed and is
Now, one cannot prove a negative. I cannot prove that no one at NASA is afraid to speak up, but I hope that is not the case, and I will use this forum to ask once again. Anyone who is watching this testimony, if you have a concern, please come forward directly to me, if necessary, and if necessary, I will protect your identity, but I must have facts if they are out there in order to make decisions.

Mr. Chairman, in this and many other ways, we hope to restore any loss of public confidence in NASA that may have resulted from these unfortunate incidents.

Thank you.

CHAIRMAN UDALL: Thank you, Dr. Griffin.

Administrator Griffin, I know the Subcommittee would now like to turn to some questions, and the chair recognizes himself for 5 minutes.

You talked about the recommendations in the report and your intention to implement them. Do you have a timeline off which you are operating when it comes to the implementation?

ADMINISTRATOR GRIFFIN: Well, I don't know by
what date Dr. Williams plans to bring recommendations or an
assessment back to Shana and I. He probably does.

    My own view is that this is both important and
urgent, but it is more important to get right than to get
done quickly.

    It is important that we treat this advice as
respectfully as we treat all advice from our advisory
panels whether of permanent standing, such as the NASA
Advisory Council or the Aerospace Safety Advisory Panel, or
ad hoc as was this panel. It is important that we treat
their advice respectfully and that we evaluate it
carefully, while nonetheless recognizing that at the end of
the day, you and other oversight committees and committee
chairmen hold NASA responsible for our actions. So we will
evaluate the recommendations carefully.

    We are already of a mind, as I have said several
times, to accept most of them. We will report to you any
disagreement between the recommendations we choose to
accept and those that we possibly think are not a good
idea, and we will discuss. We will report back to you on
the implementation, how the implementation is going, and we
will do it as quickly as we can do it and yet do it well.
CHAIRMAN UDALL: Thank you for that straightforward answer, Dr. Griffin.

I would like to turn to the external committee's recommendation particularly about carrying out a thorough anonymous survey that is carefully worded to obtain valid actionable information.

Dr. Griffin, in the testimony of Dr. Ochoa and others, it sounds as if NASA is prepared to conduct such a survey.

ADMINISTRATOR GRIFFIN: I cannot wait to do that.

CHAIRMAN UDALL: And it is not clear to me, however, that NASA has a lot of experience in crafting that kind of a carefully worded thorough survey that Colonel Bachmann recommended.

Could I ask you if NASA is planning to have this proposed survey reviewed by any external organization that has expertise in this area, and if that isn't your current plan, would you be willing to do so in the interest of ensuring that NASA gets the best survey possible?

ADMINISTRATOR GRIFFIN: I believe that Ellen expressed her agreement with Colonel Bachmann on all the points regarding the survey, and yeah, of course, we will
craft what we think is the right survey, and we will have it reviewed by external experts in this matter to make sure that it is a well-done survey.

In the course of pursuing my studies for an MBA, I had one course in market analysis, and I feel that if that course served no other purpose, it served to sensitize me to the way in which results purportedly obtained from a survey can depend on how the survey is worded and what the sampling environment is and who the target sample audience is. So I join Colonel Bachmann in declining any expertise in this matter except to know that it is thought with concern, and we will be very careful.

CHAIRMAN UDALL: If I can editorialize briefly, knowing what I know of your private sector experience, I think you learned a lot more from that class than you suggest, given the successes you had.

ADMINISTRATOR GRIFFIN: Well, I didn't drive anybody into bankruptcy, if that is what you mean. So I will take that as an upcheck.

CHAIRMAN UDALL: Be careful. We may get you involved in the subprime lending solutions.

[Laughter.]
CHAIRMAN UDALL: A final question, Dr. Griffin.

The JSC internal review noted that if employees said they were concerned about coworkers' behaviors, they would raise concerns with the coworker management or flight medicine official. However, the external reviews, you have heard the report notes that the flight surgeons were demoralized because their concerns were not valued.

Do you have any specific plans at this point to do anything about this apparent disconnect?

ADMINISTRATOR GRIFFIN: Well, I mean, I do. Much of it will have to be we will rely -- again, I will use this forum to emphasize. If anyone has a concern, please use NASA Safety Reporting System to write it down and send it in. Your anonymity will be protected.

If anyone at NASA is concerned about an immediate supervisor or a supervisor's supervisor and that concern exists, bring it to me. Many do so. My In Box stays full.

I don't think there is a person out there who can report back that a concern which was expressed to me was not dealt with, meaning -- let me avoid the double negatives. I do deal with any concerns brought to me and follow up.

In less formally than those mechanisms, I talk
regularly, periodically with -- I visit with our flight
docs, as I am at Flight Readiness Reviews and Shuttle
launch operations. I hope that it is clear to our flight
surgeons as it is clear to our engineers and our scientists
that not only do I want them to feel free to speak up, but
they have an obligation to do so.

In fact, at this point, I have to insert a
concern. If we have people at NASA in today's environment
who believe that they can't speak up for fear of
retribution of ostracism, then I would urge them to go that
extra mile and speak up because that is their obligation.

I need people working for NASA in this most demanding of
environments where we launch people or hundreds of millions
or billions of dollars of hardware into space. To work in
this most demanding environment requires much, and it
requires that people have the courage to bring forth their
concerns through a management chain which has stated openly
over and over again that you will receive a hearing. I
think our actions as a management team over the last 2-1/2
years have supported that.

When I came on board, one of the very first
things I had to do was to delay a Shuttle launch that I
desperately wanted to go. I had to delay it by several months because some engineers expressed to me their concerns that we had not done an adequate job of calculating all the debris trajectories, particularly ice debris and particularly off of the LOX feedline bellows. So we did that.

Then I had to address a few months later a concern by some of our earth scientists or some community earth scientists who felt that their research was being modified for public release or that their concerns were not being appropriately heard, and we got all over that. And I made it clear in an extraordinarily clear written policy that the purpose of scientific and engineering investigation is to get at truth, and we do that through argument, through public discourse.

There have been other opportunities to address criticisms of lack of openness at NASA and concerns that were retribution, and in every single case, we have taken the side of open discourse, and I will do it again here.

So, if there is anyone at NASA who has a concern, bring it forward. I need to hear it.

CHAIRMAN UDALL: Thank you, Dr. Griffin.
I want to recognize the Ranking Member, but before I do, in the context of the serious and important and substantive hearing today, comment positively on the process by which the situation with Endeavour was considered. I think it demonstrated the cultural changes that outside and internal groups have recommended, and perhaps it is the model also for what we are trying to do here, which is to drive some changes in how we manage the Astronaut Corps and behavioral and medical problems, but also potential upsides are reinforced and supported.

ADMINISTRATOR GRIFFIN: I think that process was NASA in action at its finest, and we did not launch with unanimity. Some engineers disagreed that the tile -- should fly, should reenter, and that a repair needed. Others felt that it was fine. I personally heard all of the arguments on that matter, and we decided to fly, and that was the right decision, as it turned out, but the people who felt we should not reenter that way were certainly not ignored or disregarded.

During that same launch operation, I had lunch -- well, I had many occasions to visit with flight docs, and I asked one of them privately, "Is there any possible way
that you would feel a concern or an issue in bringing forth a concern?," and the gentleman laughed at me and said, "You're worried about a medical doctor bringing forth a concern?" This particular gentleman said, "I have no respect for a medical doctor who has a concern and fears that his job is in jeopardy." Now, that was an anonymous conversation, and it will stay anonymous, but there is a point there.

CHAIRMAN UDALL: Thank you.

The chair now recognizes the Ranking Member, Mr. Feeney, for 5 minutes.

REPRESENTATIVE FEENEY: Thank you, Mr. Chairman.

Again, I think this is an important hearing to clear the air, number one, and get this behind us, and number two, to improve any procedures that we can undertake that will help us improve, and I think that you have taken it in that spirit.

You said more than once in your testimony that in light of the Nowak discussion or the Nowak incident and the discussion about astronauts flying while they may have been intoxicated preflight that there has been a loss of confidence in NASA. I really don't sense that.
I can tell you I haven't lost an ounce of confidence in NASA or in you. I am confident that in complex organizations that have the most complex of obligations and challenges that things are going to go wrong, and sometimes they will be technical, and sometimes they will be human factors, and sometimes they will be bad luck, but this is modern-day America, 24/7 news, and bad luck doesn't happen. Everything is somebody's fault, and I think you are learning that, Dr. Griffin. So, like it or not, we are where we are.

I want to tell you I sympathize with how frustrating it is because there were some specific anecdotes in the Bachmann report. By the way, I don't dismiss anything about the Bachmann report. I don't think you have either.

ADMINISTRATOR GRIFFIN: Nor did I.

REPRESENTATIVE FEENEY: These are very credible people that I think undertook a very important mission, but the specific incidents that have made such news can't be documented or corroborated, and the more general allegations, that it is a cultural problem that needs attention from the top senior leadership, I think cultural
problems is a little bit like shadowboxing because I think that your administration has undertaken to change the culture about reporting, and like I said, I witnessed the one incidence live as we watched the Shuttle go off.

But I guess in light of the fact that my goal is to go forward, I think that is what the chairman of the Committee wants to do, it is what most of us want to do, and improve constantly the operations of NASA. I am glad that we have had focus on this physiological, psychological, and physical well-being.

The recommendations for the most part are not at issue that the Bachmann committee has made, but what is at issue is whether or not there is a cultural problem here. The last thing that the colonel told us is that we need to fix the communications problem, and yet you and Dr. Ochoa and Mr. Williams and Mr. O'Connor have said there are multiple avenues independently, anonymously, that have been set in place in NASA in the last few years, and that that includes flight surgeons or astronauts that have concerns about human safety.

So I guess the question I have is the Bachmann report suggests that is a cultural problem which is decades
old involving communications about human well-being. I am hearing from the NASA team unanimously that you do not believe that to be the case, even though you have adopted the recommendations or most of them about how to fix that communications problem. Can you address that? Because why are we fixing something that is not broken, I guess would be a simple way to ask that question.

ADMINISTRATOR GRIFFIN: And as the Administrator, actually that is the most important question for me.

I think I have made it clear, and if anyone doubts my word, then I guess they do, but there is nothing more important to me in an agency like NASA than having an open, free, non-political discourse on difficult topics because what we do is not easy. We have to work very, very hard to get it right, and we don't always do that, but when we get it right, when we decide what we think the right course of action is, we should pursue that no matter what, and that we only arrive at that through extensive and open discourse by all parties, and I believe in that.

Now, if we have had in the past cultural problems and we are trying to fix those, I can't guarantee that they are completely fixed. I can only again entreat people to
trust this management team.

I believe it when Colonel Bachmann says that the fact that people are willing to speak anonymously and not willing to speak face to face on the record is itself a problem. Yes, it is.

At the same time, I have no mechanism to deal with the fact of somebody saying, "I have a concern, but I am afraid if I speak my concern that I will be ostracized. So I will keep it to myself." I mean, you can see the logical conundrum there.

So all we can do is, again, create a record, create a longstanding record of responding fairly, respectfully, positively to any concern brought to us and hope that that record of behavior will bring forth further behavior of the type that we seek. That is what I am desperately trying to do.

REPRESENTATIVE FEENEY: Thank you. I will yield back, Mr. Chairman.

CHAIRMAN UDALL: Just briefly, I think it is very hard sitting here to tell. Either the Bachmann report was correct if multiple witnesses consistently said there is a communications intimidation factor or what the NASA team,
including you and the folks that testified before you, have said that you have done everything reasonably possible to fix it, and you are encouraging people.

The recommendations that the committee made, whether the communications system now works as well as it can or not, will they do any harm if you adopt their -- is it going to add new bureaucracy, costs, or do you think those recommendations will enhance human safety, regardless of whether there is a communications problem?

ADMINISTRATOR GRIFFIN: Well, our Medical Policy Board just looked at those issues and expressed an early view that our response to those recommendations being generally accepting of them was a good thing, and I support that view. I certainly don't think they will do any harm.

Yes, if we add additional process and procedure, there is an opportunity cost of that. That means that some other activity of lesser importance will not get done. We will try to be judicious about that, and we will try not to impose a bureaucracy in our health care system, but because communication is the semiquinone of all organizational management, we must invest in improving communications if, in fact, there are issues.
I don't believe we have the issues that have been raised, and I have said that, but I am prepared to have my belief overturned by facts. I absolutely am.

I can assert to you beyond question that my face-to-face communications, my telephone communications, and my e-mail communications are filled up with people who do not find me too intimidating to talk to, but of course, I can't identify those out there who find me too intimidating to talk to and thus are reluctant to express their opinion. So we will continue to work on encouraging open communications.

I believe in our -- I love this agency. I love this enterprise. I love these people that we work with, and we want to make it the best that it can possibly be. I have never worked with finer people, and we have engaged in the process of launching folks into space or the folks who go into space. I have never worked with finer people. They are not perfect, and, oh, by the way, I am not perfect either, and trying as hard as we can to get this right, it is most difficult. It is most difficult in the softer areas.

If you want to ask me about the thermal margin on...
a tile, I can deal with that, probably until you fall asleep. If you want to ask me how do we know we have the best possible communication processes, I don't know. It is very hard, but we are trying.

REPRESENTATIVE FEENEY: Well, a great philosopher, Woody Allen, once said that 90 percent of life was just showing up, and what you are telling people, if they have got problems with NASA issues, technical or human factors, they have got to show up.

ADMINISTRATOR GRIFFIN: Please show up. The decisions are made by the people who show up.

REPRESENTATIVE FEENEY: I will yield back, Mr. Chairman.

CHAIRMAN UDALL: Mr. Hall is recognized.

REPRESENTATIVE HALL: Mr. Chairman, thank you. I am a little disappointed in your testimony because you have always indicated to me that you were perfect.

[Laughter.]

ADMINISTRATOR GRIFFIN: Don't tell my wife.

REPRESENTATIVE HALL: All right.

Seriously, you know, you have to use the
information you have, and you are not going to discard any of it because you need it. You need to know what the facts are, and you will run down every fact, if I know you, very well.

I guess I can just cut mine short by saying when there is no degree of authenticity and no completely confirmed testimony, coupled with a cry or a whimper of a non-entity, they don't want to be -- know who they are. They are afraid they lose their job. When you got that type witness, compared with the witness such as yourself and this panel of every one of these people that are testifying -- and you could testify under oath because we could require that and you would be willing to -- and the testimony that is going to be read by the 435 Members of the United States House of Representatives of their staffs over there and by millions of people that listen to you calling them forth, to come forth and give me that information, not much else you can do, is there?

ADMINISTRATOR GRIFFIN: If there is, I really wish someone would suggest it to me because I would try it.

REPRESENTATIVE HALL: But you can sure remember that there is a difference in the authenticity of a guy who
says I am going to tell you this, but you can't tell
anybody who tell it and be sure and don't tell them I work
them, and a guy that steps up there and tows the line and
tells you what the facts are and leaves you to make that
decision. You are not so unfair that you would fire a guy
that gave you news that you didn't like or shoot the
messenger, are you?

ADMINISTRATOR GRIFFIN: No. I truly -- I would
like to assert -- and it is an assertion, but I believe it
can be backed up. I believe that I am and that the
management team I have hired consists of people who can
hear bad news. Act on it, and deal with the truth and not
punish the messenger. I believe that is what we have in
place at NASA. If someone else believes to the contrary,
then, again, I would like to hear about that because I will
fix it.

REPRESENTATIVE HALL: You are in the same
situation of Mr. O'Connor when he said, "I cannot say
conclusively that none of the incidents reported to the
committee ever happened. However, I was unable to verify
that they did," and you have to have verification, don't
you?
ADMINISTRATOR GRIFFIN: That is correct, sir.

REPRESENTATIVE HALL: And you have a chairman here, Mr. Gordon, and you had the chairman of the Subcommittee that have expressed their belief in your and belief in the system and belief in the men and women that go at great peril into a fragile mission that is still fragile -- I don't care what anybody says -- and carry it out for us. Those are the people you want to believe and that you have to take testimony from that you can rely on.

I yield back my time.

CHAIRMAN UDALL: Thank you, Mr. Hall.

Mr. Griffin or Dr. Griffin, I thank you and all of the witnesses for your time today. I apologize for the musical chairs. We have had different meetings going on.

Let me just quickly conclude, once again, complimenting you and congratulating you on a successful Endeavour mission. I think it, once again, proves that when things work out, you are brilliant.

[Laughter.]

CHAIRMAN UDALL: Let me just quickly quote some conclusions from the earlier report.

"Many of the cultural and structural issues
identified in this report as pragmatic have existed for many years, and some have existed since the earliest day of the astronaut program. The current medical and operational leadership at NASA inherited most of the cultural and structural issues identified in this report. These issues are also ingrained and longstanding, and that it will take senior leadership action to remedy them."

To some extent, it puts you in the position of having to push the noodle from behind on the less difficult. You have said all the right words today, and you meant it, and you are sincere about your openness. You do have to keep in mind, though, a lot of reports don't report directly to you. So you know all of this. We don't have to go through that.

So let me just once again say that I was pleased with Dr. Williams' testimony, and I am sure he is going to get back to us on what will be done and what won't be done. That will be very helpful.

I guess I will have to ask you why did you so narrowly define Mr. O'Connor's mission as to only inquire about alcohol abuse on the day of the mission rather than what I think are the more and I think everybody here -- the
larger issue of an openness and a feeling of comfort with the folks involved being able to come forward.

    ADMINISTRATOR GRIFFIN: Well, there is a bit of a misperception there. Bryan did as part of his charter ask also of each and every flight surgeon, "Have you felt uncomfortable coming forward? Do you feel comfortable coming forward?" So that was part of it.

    Now, the restriction to dealing with alcohol abuse in the immediate surroundings of a flight, distinguishing between urgent and important, it was the most urgent aspect of all of this because that is an actual flight safety issue.

    Colonel Bachmann pointed out the sad truth that we are all flawed human beings and that many very highly accomplished people do have problems with relationships or problems with alcohol, but if there were to be -- and I am not saying that there is because I have not seen it, but if there were to be an astronaut who had a problem with alcohol, but managed to suppress that problem in the immediate flight environment, we would not have a safety-of-flight issue. Whereas, if somehow someone managed to show up impaired for a flight, that would be a
safety problem.

So, with a limited amount of time to get on top of the more urgent issues, we asked Bryan to focus on dealing with those things which had been specifically raised in the report that I felt as Administrator absolutely required an early investigation.

Now, we have other things going on. We are not ignoring the other aspects. You heard Ellen Ochoa talk about the survey. We absolutely accepted that recommendation. As I said, I can't wait for the results of that survey. I want to know. We have reemphasized NSRS. I have made personal and public appeals of any concerns to be expressed with promises of protection for those expressing the concerns. So we are not ignoring the other aspects, but the most urgent thing was to deal with immediate safety-of-flight issues that potentially had been raised by that report, and that is what I asked Bryan to do.

CHAIRMAN UDALL: Well, I just read it differently. I read the alcohol problems as isolated in the past and that he said that the bigger problem was a lack of comfort by surgeon generals and others to be able
to come -- of medical surgeons to be able to come forward, whether it is a diabetes problem, whether it is a migraine headache that day, whether, you know -- again, you know, we saw the accident two different ways. I thought he raised other issues that were more important, but I think that through this anonymous -- and, Doctor Ochoa, I congratulate you on moving forward with that, and, Dr. Williams, again, I think you have a good plan, and I think simply by raising this issue in an uncomfortable way for you, unfortunately, that it will probably do more good than anything you can do to put people on notice that these problems that you inherited need to be -- or potential problems that you inherited need to be change.

And I again thank you for your candor, for your service to the country, and for another successful flight, and this meeting is adjourned.

ADMINISTRATOR GRIFFIN: Thank you, sir.

[Whereupon, at 12:30 p.m., the Subcommittee on Space and Aeronautics of the Committee on Science and Technology was adjourned.]