PILOT EDUCATION AND SAFETY AWARENESS PROGRAMS

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MR. SHEARER: I'm going to say a little bit and then hand it over to Bill.

In our discussions on safety, there was an assumption made which we found was not true, and the assumption was that commuter airlines have, to some degree or other, a safety program already in force, and we found out this was not so. The programs that we did see were rudimentary, although some companies are trying to expand on it, to improve it, but for the majority of people in our room there really was not a safety program. So the discussion of what was available as far as publications, people that you could bring in to teach you, or how you could improve your programs, as Bill said, was putting the cart before the horse. So we had to backdrop. And what I felt a need for was I wanted to establish a safety program, but how do I do it? Give me some guidelines or show me a publication that tells me how to do it or let me bring in a person who can instruct me how to do it.

So after our initial discussion, we really started focusing on how do I start a training program or safety program. What elements are involved. And after that, then, we started to proceed into the various avenues of information, NASA,FAA, et cetera, et cetera.

So I think I'm going to turn it over to Bill, so he, with all his expertise, can carry off the rest of this.

MR. REYNARD: Hello again. After sitting here listening to this this morning, I'm reminded of a story I heard one time about a very successful business person that was being interviewed on TV, and he said, tell me, sir, what do you attribute your success to? And the man says, two words, right decisions. And he said, well, what do you attribute your decisions to? And he says, one word, experience. And he says, well, where did you get all the experience? Two words, wrong decisions.

Well, as Marty pointed out, we found out that we were about one step ahead of where we should have been when we started, so consequently we started with Step 1, and that was to establish the need for some type of safety program or office. It became apparent, the first thing you have to do in the course of developing this idea and then being able to

present it to the "bean counters" or people who approve such things, is a risk assessment, find out just exactly what risks your company is exposed to as a result of not having a safety program. That shouldn't be too difficult to do. But the thing about it is if you can show that you have done some type of creative homework before you head into the management chambers to say that you need a safety program, and you can enumerate the type of risks most generally and specifically that you seem to have encountered in the course of your assessment, it will have that much more impact.

The second major issue you have to attack is the structure. You want to create a safety program to address the risks that you've just identified, and we'll get into that a little bit further in the next section here, but after you've identified the risks, and identified the type of structure you want to try and achieve, you have to essentially design the function, and that shouldn't seem to be too difficult until you realize that there are really two functions to a safety office. Depending upon how you view it, and more particularly upon how your flight crews view it, it may or may not be successful. You can either look at a safety office as fulfilling an education and training function, or for want of a better term, you can look at it as fulfilling a quality assurance function. And if it's strictly education and training, you'll probably have a lot more cooperation and a better perception on the part of the flight crews, than if it's confused with the very necessary function within a company that involves check flights, operations, et cetera. So you want to create a little space between the education and training and the quality assurance function of a safety office, if in fact, you incorporate the two. It would be better yet if you could have a chief pilot that does the quality assurance type activity and then a safety office. One of the thoughts that was brought up is the fact that when a company is the size that most of yours are, the tendency might be to try and make the chief pilot safety officer. Well, in fact, it's almost a contradiction because of the fact that he's trying to wear two hats. So consequently you might want to take a look at that function dichotomy and find out just exactly how you can fulfill both of those, because both of them do have to be present in any company organization.

And then finally the fourth major issue under the broad concept is motivation. And that comes again in two forms: How do you motivate the flight safety program, and, at the same time, motivate management to continue their support of the safety initiative. Point out to them that it's worth it, it's an ongoing type procedure.

We then went into the second basic issue which would be the elements associated with the implementation of a safety

program, and we don't mean to imply that this is a comprehensive list. This is what one afternoon's worth of talking came up with, and some random thoughts after this filled in some of the gaps.

The first thing you have to do is define the objectives of the program, do an assessment of the program goals and of the proposed program structure. You want to know where you're going to end up before you start. It's like anything else, if you have a goal to achieve, it makes it a lot easier, not only for yourself, but also to sell it to management. Establish the criteria for selection and designation of a safety office or officer, depending upon how you want to do it. Some of the considerations there are qualifications, both aeronautical and managerial. Again it goes back to the issue, perhaps, of whether or not you want the chief pilot to be the safety officer. Those people who have experienced that have found that it has marginal results, and they would like, if they could possibly afford it, to have two different functions there, but lacked aeronautical and managerial qualifications. You can't very well have somebody who's trying to impart safety information who maybe doesn't even know that the pointing end goes forward. You know, if you have some person who is not aeronautically oriented but happens to be the "company safety officer," chances are the program won't have too much of an impact among the flight crews.

You have to look to the credibility, the personality and the peer perception of the person who's designated to head up the safety office. It's terribly important. If you have somebody in there who simply turns off everybody, all you're going to be doing is going through the numbers, and it isn't going to be accomplishing anything, so you have to be selective in a sense that it's got to have the right characteristics to be able to manage the program, but at the same time, have the confidence and trust of the people they are trying to impart the information to.

Take a look at the position within your organization. A safety office, no matter what the organization, whether it's government, military private enterprise, has ranged anywhere from the very important down to, oh, hell, who will we hang to be safety officer. And this is terribly important to create just a little bit of space because the safety office, to some extent, almost has to act as an ombudsman if it's going to fulfill all of its functions.

Take a look at the scope of the safety office. Are we looking at a flight operations safety office, or are we looking at a company safety office? Sometimes when management realizes they're going to have to get in and create a safety office, they also think, well, as long as

we're doing it, let's make this the company safety office and they can worry about forklifts, and they can worry about parking spaces and fire hydrants and everything else. This is not to say that's good or bad, but be sure you know what you're heading into when you make the initial thrust.

Take a look to see whether it's full-time or part-time activity. Obviously the size of the organization, its resources will determine that to a large extent, as well as the person chosen to do the job. And then, finally, what's the composition? Are we going to have an individual who essentially has 100 percent authority to do whatever a safety office should do, or is it going to be a committee that will then direct a greater effort of some type, or is it going to be a combination of both? The thought was also raised that sometimes this could be accomplished through external resources. One of those external resources is at least for one element of the safety program, in terms of being able to provide a form for feedback, to be some type of external group dynamics consultant. Now, we were specifically counseled that you don't call them in-house and you don't call them psychologists because that immediately turns most people off from the standpoint of well, we don't want a psychologist hanging around. The terminology seems to be accepted that what we're talking about is an external group dynamics consultant and it encompasses essentially what you want it to encompass in terms of making that person available for either just reactive counseling or some type of active program.

Possible limitations on the safety function, first is budget. And this is cost not only in terms of expense, dollars in/dollars out, but also in terms of redirected staff effort, how much is management willing to put up with having somebody that's being paid to do one job redirected to do a safety function.

The second element is time and staff availability. Obviously if you're up to your keister in a lot of other things, it's going to be awfully hard to carve out a niche for somebody to do a safety function if they're not already doing it. But, again, it seems to be an important concept and on which most organizations can't afford not to have. You don't want to overlook the use of an existing labor organization if you have one. If your pilots happen to be represented by a labor organization, take advantage of the situation and try and get some cooperation with regard to safety and training efforts.

One of the other limitations might be management philosophy and attitude. Some managements are very enlightened as far as safety in saying go for it, we understand the significance of it; others just kind of bury

their heads in the sand and say what the hell good is it, let's worry about it when the time comes. Well, usually when the time comes, it's too late.

The safety organization's position should be within the total management structure. Again, make sure that the organization has some definition and there is a line going to somebody that has some authority. If you're out in left field, chances are you may exist, but you won't get a whole lot of cooperation or support.

Finally, make sure that the safety office has some kind of access to senior management or representation in senior management circles. If all the head pilots are sitting around a table on Monday morning and every now and then something comes up and there's nobody there to counter the accusation that, well, that safety office is getting in the way, you know, that's safety's function, something like that, you've got to have representation, you've got to have a voice at the senior levels.

There are two considerations with regard to timing and implementation. Most critical is the identification of critical versus nice-to-know issues. If you're going to have a safety office, you want to attack the most critical things first. And finally, an assessment of the availability of resources both external and internal. Obviously, the internal is in regard to money and space, people, facilities, opportunities to get to the crew in terms of being able to fulfill the safety and training functions. External resources we identified, one of the most prevalent ones in terms of your own activities, would be your own manufacturers of the equipment you use. Almost every manufacturer puts out some type of information regarding his equipment, and possibly you can explore that. As somebody else pointed out, if you're going to put down three or four million bucks for an airplane, you have a little bit of leverage. The Flight Safety Foundation, as Jack Enders pointed out yesterday, has quite a few publications and information bulletins that could be useful. The Federal Aviation Administration, specifically the Accident Prevention Specialist -- most people identify APS people as being primarily associated with general aviation, but the fact of the matter is that the example that I cited in the course of this discussion was the fact that I was up at a conference about two months ago and encountered an APS guy that was an absolute genius when it came to mountain flying. Now some of you people do mountain flying, and it's entirely possible that this person who's there to serve and is quite anxious to do so would be willing to come over and do a safety program on whatever the subject is that the expertise exists. So don't overlook the fact that the FAA has an education and training function that they can fulfill

with people like that. The ASRS pointed out yesterday that their publications are available, they're there to be used. The more benefit we get from them, the better off we feel as far as getting maximum utilization from the program. Military publications and films. Most of us, I think, have been through some type of military activity, and we realize that some of the publications and films are best left in the library. But there are others that are really quite good and can be used constructively and usually are available free. Government publications and films, same thing. We have some films, for instance, here at NASA. We have the Western Region Audio-visual Library across the street. Thousands of films are available for purposes of safety and training, if, in fact, they fit the subject area that you're looking at.

The University of Southern California Safety Center puts on a series of seminars, programs that could be useful for your organization, and then, finally, it's a somewhat obscure source, but believe it or not, they do put out some publications dealing with aviation, particularly ground safety, and that's the National Safety Council. They, in fact, have an aviation safety section.

Some miscellaneous thoughts. This is the one that surfaced right toward the end of the program, and I think it's a very valid one, no matter what else we say, you've got to keep in mind, and you've got to stress to the flight crew members that safety really begins and ends with the individual in the operational environment. You can have a real whiz-bang operational environment. You can have the greatest guy in the world being the safety officer, but if the flight crews and the cabin crews and the mechanics and the people who actually do the operational work don't comprehend the significance of it, it's all down the tube.

Keep publications and communications simple, concise and, if possible, confine them to a single issue. Exploit the fact that emerging flight crew members are the product of a video generation. Maximize impact with available training devices and software that can take advantage of their orientation towards this type of training mode. Use mandatory response techniques to critical publications and communications. First identify the criticality of the issues, and then create for all intents and purposes an information file with a mandatory sign-off by each crew member, I have read and understand the foregoing, et cetera. And then, of course, don't overlook the value of the simple casual distribution of the nice-to-know type items.

Don't underestimate the value of peer pressure and constructive tension. An example of this would be the use of recurrent refresher training. Before they start,

identify the issues to be examined ahead of time, what elements are going to be pursued, what bulletins are going to be discussed, what procedures are going to be examined. This allows for two things: Number one, it facilitates prestudy of these particular issues, it creates a more efficient training session, and, in line with the basic item, it creates a constructive peer tension. Essentially what that boils down to is I damn well better study this because I don't want to be conspicuous being the only person that doesn't know the answers. As we've discovered in the course of doing some training research there is such a thing as constructive peer tension, and it can be used to your advantage.

Encourage dialogue among crew members. Use a post-flight critique by the crew members, not necessarily the chief pilot or the safety officer, but when the opportunity permits, encourage the guys to sit down and say, okay, how did that go, what did we do right, what did we do wrong.

Solicit issues and ideas from the flight crews themselves. Don't assume an ivory tower approach to issue identification and methods of information dissemination. Increased involvement creates increased interest. Also, create a clear understanding of why this information is important whenever possible, not only from the standpoint of why it's important that flight crews read the information, but also create an understanding of why the safety office or the safety officer would like to have a response, some feedback. You know, it's the old bit about closing the loop, and that's a very large element in safety.

Increase the emphasis on standardized crew procedures. It's proven to be very effective and can continue to be so with the increased emphasis and understanding on the part of flight crews on why this is important. Be creative in the use of role playing training sessions. You know, if you don't happen to have a simulator or you don't happen to have some of the hardware goodies that are available, several parties pointed out in the committee that what they do is set the crew down and create situations.

There may not be any hardware at all, there may be just a table and chairs, but you create a scenario. What would you do if? And you go through essentially some procedural training without all the hardware.

In line with the previous session's comment, encourage, even pressure manufacturers to develop and offer simulators for commuter aircraft. Some type of simulation capability is becoming an integral element of safety and training within all fields of aviation. There's no reason why the manufacturers who are selling aircraft for big bucks can't

do something to at least assist in that effort.

Recognize that safety management won't be permitted to exceed the level of sophistication of the company's overall management. Lee Bolman pointed this out yesterday, the fact that you may have a really good safety office, a very good safety officer, who has some really good ideas about management, but if he's got a senior management that is short-term, bottom-line period, chances are he won't be allowed to exceed the sophistication of the top management. So you've got to be able to work within your own management and do it constructively.

Pursue the possibility of decreased insurance cost as a result of increased expenditures on flight safety training and education programs. It's entirely possible that you may be able to show a tradeoff, you know, if I can spend sixty bucks for training and we get a sixty buck tradeoff on the insurance cost, then we haven't really spent any money and we're a lot better off in terms of our safety training effort.

To further examine this, and perhaps make your case stronger, you can extrapolate to worse case scenarios: accidents, fatalities, bad public relations and extensive litigation. Point out the fact that insurance doesn't cover all of the cost of a bad incident or an accident. You may get the up-front damages taken care of by insurance, but you've still lost a lot of staff time, you've lost incidental damages. It is really a very expensive proposition. It isn't original, but it's still a very effective approach and that is to say that if you think safety is expensive, try having an accident.

Finally, you ought to point out the fact that the lack of a safety program is a very, very negative element, if in fact you do get yourself into a litigation or a regulatory crunch. If I were a plaintiff's attorney and I was representing the estate of somebody who had a person die in an accident involving an air carrier, and I could prove that that air carrier didn't have a safety program, after I went out and ordered my Porsche, I would go to the courtroom and just make your life miserable, because you can point out not only do they not operate their facilities properly the way they operated the aircraft, but they didn't even care enough to have a safety program. And that's devastating.

Schedule a day for education and training as part of the monthly line bidding. Somebody pointed out that one of the complications was that it was hard to schedule things, it was hard to get people to know when they could expect the education and training thing. So they incorporated the idea that every time they bid a line, that line had one day for

the whole month that was going to be education and training. The management people and the safety office knew that that was when that person was going to show up, that person knew when he or she was supposed to be there, and they just simply worked it out, it was fixed, well identified ahead of time.

Jack Enders made available to this group a reprint of a publication dealing with the design initiation of flight operations safety programs. And he made the offer to the committee, and I'm sure he will make it available to anybody else who might want to get a reprint of that publication dealing with how to start the safety program. And finally, to reemphasize, don't forget the importance of closing the loop. It's always important, no matter what you're doing, to keep both management and the flight crew informed as to what the overall activities and the impact and the effect of the safety program is. It's essentially a PR job. Let them know what you're doing and let them know that you're doing good. That's it. Thank you.

DR. LAUBER: Thank you, Bill and Marty for an outstanding report. Very good report.

Any questions or discussions? Jack Enders.

MR. ENDERS: The offer I made on this reprint is that two papers that were given at our Regional Aviation and Operations Safety Seminar in Rio last June. One is by Captain Homer Maudin on How to Organize for Safety, and the other one is by Hortencio Morsch, Safety Director of Varig Airlines, who described the way his operation evolved from a very, very inauspicious beginning 17 years before to the office he has now. I might point out very briefly that his safety organization is not a big organization. It consists of Hortencio and one secretary and a couple of part- time operational captains that help him out. So no matter how big or small your operation is, you can have a very effective safety function on very limited resources.

Just to make things easy, perhaps I'll get together with Dick Collie and for all those who have registered here for the seminar, we'll just put reprints of this in the mail to everybody so you'll have the benefit of it if that's all right.

DR. LAUBER: Thank you, Jack. Other comments, questions? It was a very thorough report that could almost be a stand-alone publication from this conference.

CAPT. SHEARER: Let me make one comment that I observed in our committee. Of course I'm always harping on costs because my management harps on costs, and two things come to

mind. We don't want to spend much money, but we're a young up-and-coming airline as most of the regionals are, and we haven't got a lot of history. We don't have a built-in safety program. United and US Air, any of the major carriers, they've been around for a long time, and they had to start somewhere just like we do now. And it's easier, they already have the structure experience and they can carry on and expand their programs. And that's -- we're just starting this. And so I find two things. The cost is one factor, and two, you need to dedicate some time and a little bit of research and somebody's got to get the ball rolling in the company and the corporation.

So in our committee and in the presentations here, one, we have satisfied to a degree that there is outside help to give you some hints, some expertise that you can go to. You can call up John or Bill, and we all have business cards, and they've all expressed a willingness to help us all. So you have to, either yourself, or have an individual that's willing to dedicate the time, not a 40-hour week or even a 60-hour week, someone who's willing to put a little extra effort into this. The same thing you used to hear in the Air Force all the time.

As far as cost, you can go a long way with a very little amount of money. I was surprised that when I got here I could call up the ASRS out here and get printouts. That amazed me. I knew we were spending our tax dollars, but not actually on something we could use.

So now we have a lot of sources of low cost information which are readily available to all of us. And I think this is probably the two things that were brought up that were really good in this seminar: Yes, we haven't got much money to spend, but there are things out there that you can get that don't cost a lot. Couple that with the time and a little dedication and a lot of effort, you can go a long way in starting a program. You don't have to go home tomorrow on any of these things we've talked about and say I've got to have a whole full-blown program. It's got to start somewhere. And if you start off on the right foot and continue to put effort into it, it will grow and expand and will get better. This idea that you have to have something now I think it's just an idea that we shouldn't foster. We've got to begin somewhere, and in most cases, starting with something is better than nothing that we have now.

DR. LAUBER: Let's move on to Working Group V. You know, one of the thoughts that we had when putting together this conference was the recognition that simulation is in very short supply within your industry, and that has some implications for the use of aircraft for training. Clearly, almost all, if not all, of your training is currently done

in the aircraft. It seemed to me that it might be interesting and fruitful to see what could happen if we put a group to work on the issue of developing some innovative uses of aircraft for flight crew training, questions like can some of the concepts used in line-oriented flight training be built into the aircraft training curriculum, and similar considerations? That was the principal impetus for including Working Group V.

Mike Sele from Air Wisconsin is the industry chairman, Mike Baetge from NASA is his co-chairman, and why don't you gentlemen come on down and present your report.