Editorial note

Indonesians in particular and the world in general were still in the state of shock over the disappearance of flight KI 574 in Makassar Strait on 1 January 2007. This accident investigation will be the most challenging effort ever by Indonesian investigators because it will take the investigators into the new dimension of deep-water experiences. The accident in Makassar Strait shall be investigated no matter how difficult it is. The only big question is who is going to pay for the most expensive investigation that Indonesia has ever had? Without proper investigation the question of what, how and why it happens will be the burden for airline industry in Indonesia particular and the world in general. We are hoping that this investigation will be solved scientifically rather than politically. In the last ten year, there have been several aircraft accidents and incidents that colored our earth become "gray zone". However, flying activity in scheduled and non-scheduled operations is expected to double over the next two decades. Unless there is a reduction in current accident rates, this increase in air traffic will result in a significant increase in the number of major accidents globally.

The aviation industry is remarkable for the giant technological leaps it has made over the last century. This progress would not have been possible without parallel achievements in reducing aviation's safety hazards. Given the many ways that aviation can result in injury or harm, since the earliest days of flying those involved with aviation have been pre-occupied with preventing accidents. Through the discipline of "flight safety," the frequency and severity of aviation occurrences accidents have declined significantly due to the effort of risk management in flight safety.

From the medical perspective, especially from neuropsychiatry point of view, to pilot an aircraft requires the utilization of a complex set of physical and cognitive skills. Interference with any aspect of these skills and their coordination may lead to serious personal and public safety consequences. The assessment of mental fitness shall therefore be made with regard to the privileges of the licence and the rating applied for or held, and to the condition in which the applicants will have to carry out their duties. The period of validity of the Medical Assessment (between 1 and 5 years) shall also be taken into consideration.

Psychological testing of aircrew members is rarely of value as a screening tool. Personality tests alone ha*ve* not been proven reliable tools to predict mental disorders or to assess with any degree of certainty an applicant's suitability for an aviation career. In general, the ability to pass the pilot ground school course is proof of adequate intelligence. Personality inventory testing, e.g Minnesota Multiphasic Personality Inventory (MMPI), is usually only of value in the hands of a psychiatric consultant. Specific testing may be conducted for research and treatment purposes. (ICAO – 15 August 2006).

To keep aircrew members fit to fly the aircraft, sophisticated neuropsychological tests can be of benefit to determine the degree of cognitive, volitional and behavioural effects caused by the illness or injury. These tests can be used to monitor the progress of neuropsychiatric disorders and may be conducted at intervals for this purpose.

In order to properly control an aircraft, aircrew members need: (1) to know their position in space, which requires adequate sensory input (sight, hearing, balance, proprioception, etc); (2) to evaluate flight conditions and to choose the safest way to get the aircraft to its destination, which requires the capacity to acquire information, process the information and make relevant decisions; (3) the physical capacity and the mental desire to carry out the chosen course of action.

Psychiatric conditions triggered by many stressors in life (like, marriage conflict, financial, death of spouse,

or commercial pressure from the operator etc) can cause an aircrew member to become incapacitated, either acutely or subtly, with its consequences and the task of the aviation medical examiner is to detect this or the likelihood thereof on the basis of the regulatory examination to comply the need for accident prevention.

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