



Fatigue Risk Management Update

April 8th, 2016

Presented By Captain Kevin O'Brien



AIR CANADA HISTORY

- **Air Canada is a legacy carrier**
 - **80 years old next year**
 - **4 Pilot crew bases**
 - **225,000 flights/year**
 - **We operate multiple A/C types**
 - **Long haul flights over 9 hrs augmented with 3 or 4 pilots**
 - **Max duty period for long haul 18 hrs**



CANADA'S REGULATORY ENVIRONMENT

- **Canada's FTL's unchanged**
- **No mandatory FRMS**
- **Currently a proposal to change FTL's**
- **Proposed changes will align Canada with the rest of the world's FTL's**
- **FRMS is recommended by Regulator**



AIR CANADA FATIGUE RELATED HISTORY

- **The challenge has always been how much are we willing to increase our costs to protect a risk that was difficult to quantify without data**
- **Air Canada has a mature SMS – fatigue is recognized as a hazard**
- **The Air Canada Pilots Association instrumental in bargaining flight and duty restrictions which mitigate risks**
- **1980's joint union/company group created to address fatigue**



AIR CANADA FATIGUE RELATED HISTORY

- **2012 implementation of Fatigue Risk Management and created Fatigue Safety Action Group**
- **Alertness management guidance in FOM**
- **2013 electronic fatigue reporting**
- **Pairing production/block building using modeling to identify/mitigate fatigue hazards**



AIR CANADA TODAY

- **Air Canada's Fatigue Risk Management program is managed within prescriptive limits**
- **We utilize "soft rules" in pairing production to mitigate fatigue based on:**
 - **pilot experience**
 - **modeling and**
 - **data collection**
- **Fatigue Risk Management training is included in our air crew annual recurrent training**



AIR CANADA TODAY

■ **FRMS/FSAG:**

- **Changes to Augmentation**
- **Extensive use of modeling after optimization**
- **All domestic pairings built based on home base time**
- **More restrictions for pilots holding reserve blocks**
- **Restricted duty periods based on WOCL exposure informed crew basing decisions**
- **Implementing fatigue rules for PBS and day of flight**



AIR CANADA TODAY

- **Participating in Field study with McGill University, Cegep de Jonquiere and Université du Québec and the University of British Columbia**
- **Funded by the College-University Idea to Innovation Grants of the *NSERC***
- **Field study aims to characterize the influence of circadian process, homeostatic process, and work constraints on pilots' fatigue**
- **Development and validation of a “scientifically based” software that predicts work-related fatigue in the aeronautical industry**



WHAT WE HAVE LEARNED

- **Regulator support and guidance is important for Fatigue Risk Management Programs**
- **Collaboration with the Pilot Association – building trust on both sides**
- **Operational experience**
- **Fatigue reporting: promotion / access**
- **Data collection / continuous monitoring is essential**



AIR CANADA TOMORROW

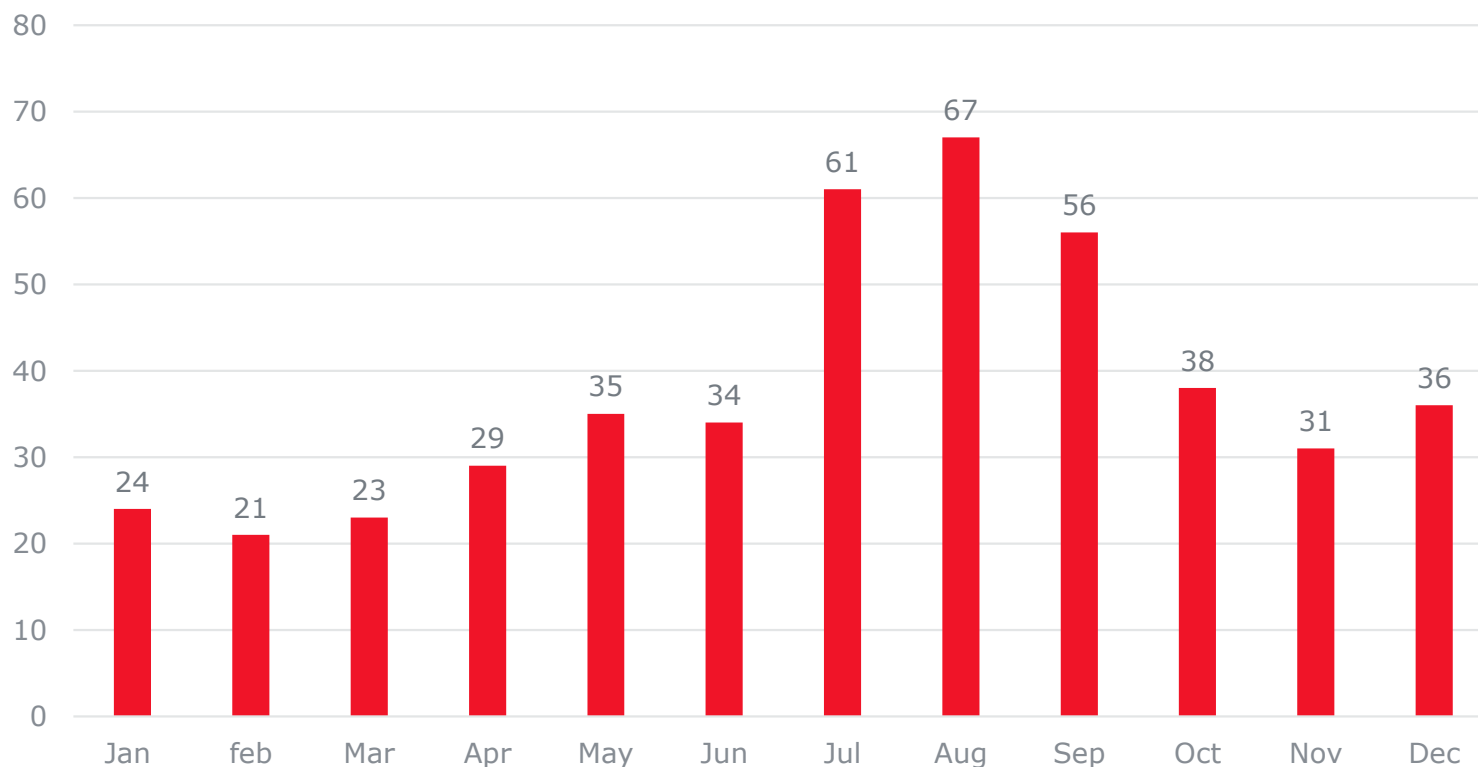
- **Continue to promote fatigue reporting and education**
- **Inform ourselves with more extensive data collection**
- **Develop new tools & training programs to effectively manage and continuously improve FRM processes**
- **Support data sharing within the industry**



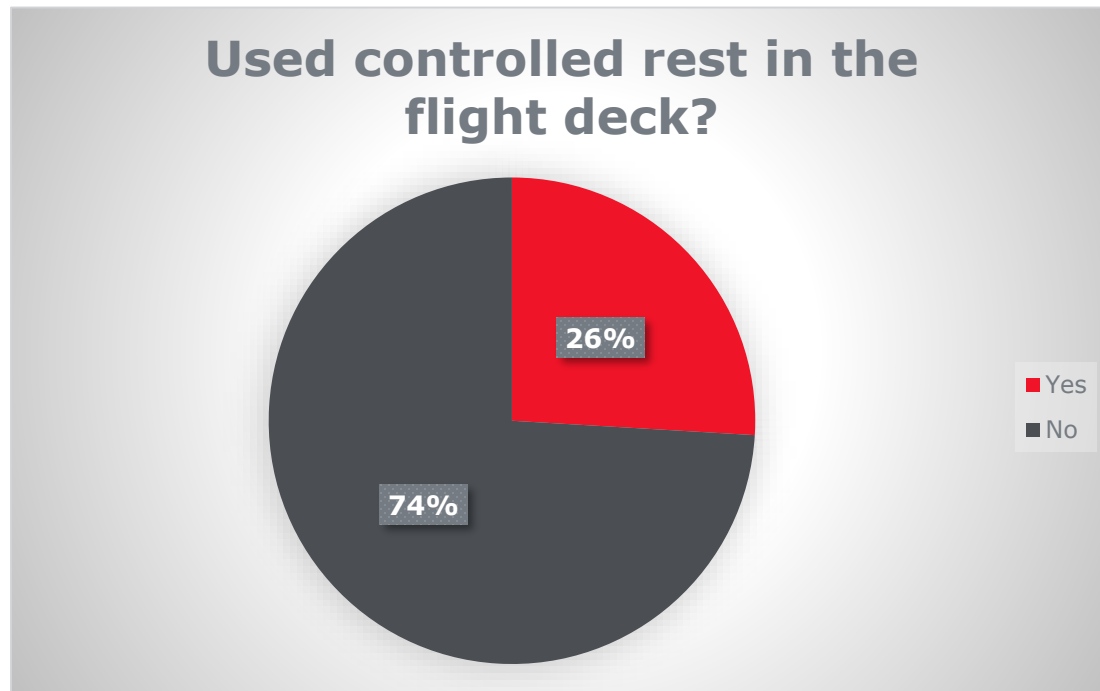
FATIGUE REPORT STATISTICS AT AIR CANADA

- In 2015 AC reporting rate was 1.8 reports per 1000 flts

Fatigue Reports Submitted in 2015



FATIGUE REPORT STATISTICS



THANK YOU