

BMM Warning
October 2017

Contents

Warning – know your biomathematical model and use it appropriately!	3
FAID	3
FAID Quantum	4
Evaluating intermittent work periods or work after long breaks	4
Evaluating multiple shifts and high work hours within a week	4
Recommended Reading	5
Contact InterDynamics	5

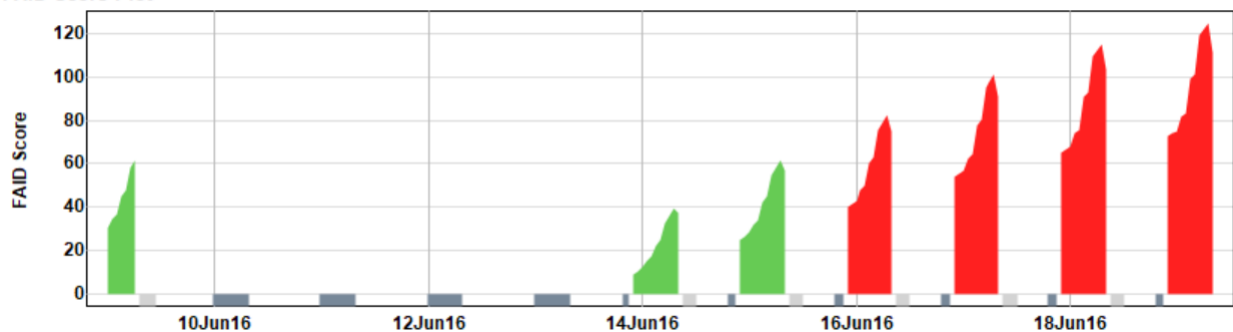
Warning – know your biomathematical model and use it appropriately!

Not all biomathematical models are the same and will differ in their sensitivity to different work patterns and other parameters. The user of a biomathematical model should be familiar with how it works, what it is sensitive to, its strengths and weaknesses and suitability for evaluating the work context in question.

FAID

One of the strengths of the FAID biomathematical model is the inclusion of the accumulated contribution of work hours for the past 7 days. This component of the model is particularly helpful in highlighting the increasing fatigue exposure over consecutive work periods, particularly night work, as shown below.

FAID Score Plot



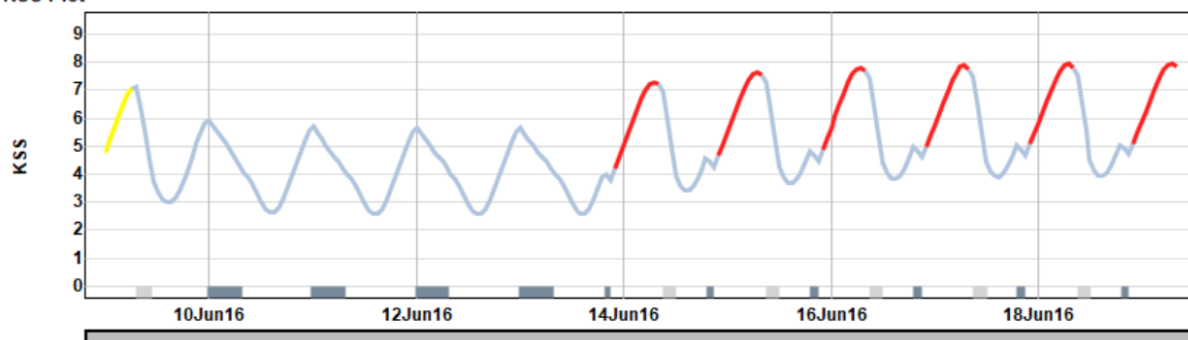
However, this is also a weakness when evaluating very intermittent work periods or work periods immediately after a long break. As shown above the first night shift after multiple days break has a low score.

FAID Quantum

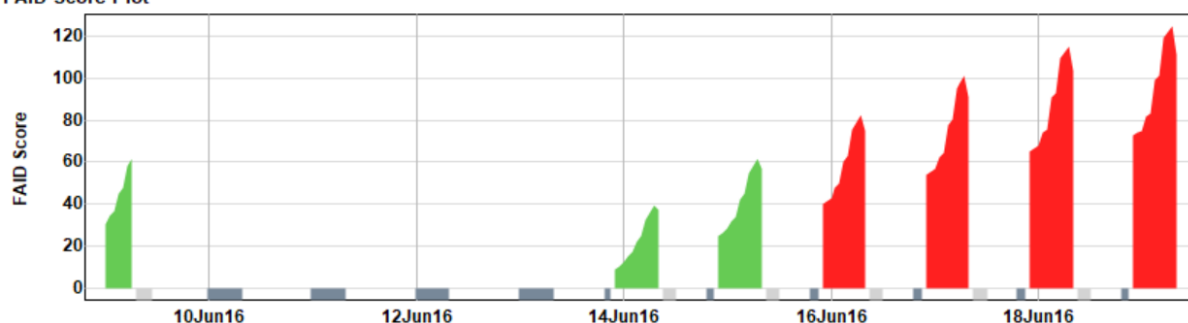
A strength of the FAID Quantum biomathematical model is its sleep prediction and responsiveness to disruption of sleep patterns and loss of night sleep opportunity.

By contrast, the FAID Quantum KSS results for the same pattern of work highlight the significant fatigue exposure for the first night shift after multiple days break due to the significant sleep disruption.

KSS Plot



FAID Score Plot



FAID Quantum KSS score does not however portray the significance of cumulative work hours in the manner of FAID.

Evaluating intermittent work periods or work after long breaks

The FAID Quantum model is particularly useful for evaluating intermittent work or work after long breaks.

Evaluating multiple shifts and high work hours within a week

The FAID model is particularly useful for identifying the increasing fatigue exposure for multiple night or long shifts.

Recommended Reading

For additional information on the use of BMMs, particularly FAID Quantum or FAID, we strongly recommend the following documents:

- [What you need to know about FAID Quantum](#)
- [What you need to know about FAID](#)
- [Getting Real About Biomathematical Fatigue Models](#)

Contact InterDynamics

Please contact InterDynamics for further advice if you are unsure about the suitability of FAID or FAID Quantum for your situation.

InterDynamics
320 Adelaide St
Brisbane, Qld 4000
Australia

Ph: +61 7 3229 8300
Email: enquire@interdynamics.com
Web: www.interdynamics.com