

Health impacts of aircraft noise

NACF Project Update

20 Mar 2024

Introduction and overview

Who are we?

Frontier Economics is one of Europe's largest economic consultancy firms.

- Frontier provides independent and objective advice to clients across a range of sectors and issues.
- We have a strong track record in public policy and healthcare analysis. We work with government departments and agencies, local government, the NHS, charities and the private sector.

What have we been asked to do?

We have been asked to develop a short scoping study for the Independent Chair of the NACF, which assesses the case for considering a wider set of harms from aviation noise.

- We will consider the harms already included in the government's Transport Analysis Guidance (TAG).
- We will consider whether any additional harms should be included in the TAG guidance.

So far, we have reviewed a range of evidence on various health effects, but we are interested in **hearing your views on our initial findings and whether there are additional harms and sources we should be considering.**

Potential harms

We have considered the following 12 harms in our review so far...

Psychological Harms

Sleep
Disturbance*

Mental Health

Dementia*

Children and
Cognitive
Impairment

Cardiovascular Harms

Hypertension*

Coronary/
Ischaemic Heart
Disease*

Acute
Myocardial
Infarction (AMI)*

Strokes*

Atrial Fibrillation

Other Harms

Cancer

Diabetes

Birth outcomes

What we have found (so far)

Early findings

Harms already included in Transport Analysis Guidance:

- Sleep disturbance, AMI and stroke – **may** be appropriate to refine current modelling due to new evidence.
- Hypertension, IHD and Dementia – **may** be insufficient evidence to refine current modelling.

Harms not already included in Transport Analysis Guidance:

- Mental health, cognitive effects on children, atrial fibrillation and birth outcomes – **could potentially** be considered in future modelling.
- Cancer and diabetes – **may** be insufficient evidence to include in future modelling.

Sources

We have reviewed a variety of public sources including:

- [The 2018 WHO Environmental Noise Guidelines paper](#)
- [CAA updates on recent work and findings \(2019-2023\)](#)
- Examples of recent academic papers:
 - Waye & Van Kempen (2021)
 - Baudin et al (2021)
 - Evrard et al (2021)
 - Kim et al (2022)
 - Van Kamp et al (2019)
 - Clark et al (2021)
 - Raess et al (2022)
 - Thompsen et al (2022)
 - Hegewald et al (2017)
 - Argys et al (2020)



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