National Statistician’s Data Ethics Advisory Committee: Providing assurance that the use of data for research and statistical purposes is ethical

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# Introduction

The UK Statistics Authority (UKSA) has the statutory objective of promoting and safeguarding the production and publication of official statistics that serve the public good, including producing official statistics that inform the public about social and economic matters, and assisting in the evaluation of public policy. The UKSA’s Better Statistics Better Decisions Strategy[1] aims to mobilise the power of data to meet the greater demand from policy makers and users for more timely, frequent, accurate and relevant statistics to help Britain make better decisions. This involves making better use of pre-existing administrative, real time and big data using innovative methods, to produce more frequent, timely and accurate statistics accounting for a wide variety of user needs. As we do this it is essential that we deliver a professional service, not only in the statistics and analysis we produce but also by considering the ethical issues associated with our use of data.

To ensure that this work is completed to the highest ethical standards, the UKSA has established a robust ethical governance structure to provide transparent and timely ethical advice to the National Statistician that the access, use and sharing of public data for research and statistical purposes is ethical and for the public good. This work has included developing ethical principles and establishing a variety of transparent governance processes to assess proposed uses of data for research and statistical purposes against these ethical principles. This paper will present these principles and governance processes.

# Methods

The first part of this work involved establishing the National Statistician’s Data Ethics Advisory Committee (NSDEC). This was set up in 2015 to provide independent advice to the National Statistician that the access, use and sharing of data, for research and statistical purposes, across the Government Statistical Service (GSS), which the National Statistician leads, is ethical and for the public good. Expert members in statistical research, data law, big data and data protection were appointed to NSDEC to provide credible ethical advice about the GSS’s use of data. To ensure that NSDEC provides external perspectives and challenges to the uses of data for research and statistical purposes, the majority of NSDEC’s members are independent members who come from a variety of backgrounds including academia, the commercial sector and legal backgrounds. A lay member is also on the Committee to provide a non-expert perspective and representatives from government departments represent the views of their departments.

To enable NSDEC to perform this important advisory role to the National Statistician, the UKSA has developed a number of ethical principles, which are summarised below. These have been developed to help NSDEC assess the ethics of proposals to access, share and use data for research and statistical purposes from across the GSS. They provide a consistent ethical framework to govern the uses of data related to official statistics.

* The use of data has clear benefits for users and serves the public good. Producing research and statistics to serve the public good is central to the UKSA’s use of data as set in the Statistics and Registration Service Act 2007. To clearly demonstrate the public good of their research, researchers should go beyond the statistics that the research will produce to clearly communicate the better decisions that the statistics will potentially inform.
* The data subject’s identity (whether person or organisation) is protected, information is kept confidential and secure.
* The risks and limits of new technologies are considered and there is sufficient human oversight so that methods employed are consistent with recognised standards of integrity and quality.
* Data used and methods employed are consistent with legal requirements.
* The views of the public are considered in light of the data used and the perceived benefits of the research.
* The access, use and sharing of data is transparent, and is communicated clearly and accessibly to the public. NSDEC is an important enabler in this regard as all research proposals considered by NSDEC, and the minutes of each NSDEC meeting, are published on the UKSA’s website.

NSDEC meets quarterly to assess proposals to access, share and use data for research and statistical purposes against these principles. However, in a fast-paced research environment which is aiming to produce high quality research and statistics that informs timely policy decisions, quicker ethical guidance is required than can sometimes be provided by a committee which meets quarterly. Therefore, the UKSA has developed robust ethical governance processes to consider the ethics of the uses of data for research and statistical purposes outside of the quarterly NSDEC meetings. This includes the following processes:

* Reviewing uses of data via precedent. When NSDEC has made a previous decision on a similar project then the Chair of NSDEC can use the precedent of that decisions to approve future projects. All precedent decisions are shared with NSDEC and are transparently reported on the UKSA’s website.
* Reviewing uses of data via a self-assessment process. A consistent framework has been developed to enable researchers to self-assess their research based on NSDEC’s ethical principles. This asks researchers to score their research against NSDEC’s principles on a Likert type scale which provides the necessary granularity in the ethical assessment to reflect that ethical decisions are not binary. This process is supported by ethics training for researchers and the UKSA provide expert support to guide the researcher through the self-assessment process. This helps to encourage researchers to think about research ethics at an early stage of the research process (ethics by design) and identifies the research projects that are ethically most challenging which are then considered by the independent experts who sit on NSDEC. All projects that are approved by self-assessment are shared with NSDEC and are transparently reported on the UKSA’s website.

# Results

Since the development of the ethical principles in 2015 over 60 research projects have been considered against NSDEC’s ethical principles. This has included a wide range of innovative uses of data for research and statistical purposes, including policy relevant research and methodological research, for the public good from across the GSS. A selection of these projects are presented below:

* Quantifying the extent and variety of suicides;
* Producing population estimates from administrative data;
* Assessing the representativeness of the Labour Force Survey;
* Estimating income from admin data;
* Linking mortality and prescription data; and
* Exploring difference is the reporting of Welsh Language ability.

NSDEC has also led on the development of policies to provide ethical guidance to researchers undertaking research for statistical purposes involving certain new forms of data collection. This has included the development of a web scraping policy which sets out the UKSA’s approach to web-scraping in order to ensure that it is carried out transparently, consistently, ethically and legally. Similarly, NSDEC has led the production of a policy which presents the UKSA’s approach to using social media data in statistical research to ensure that it is carried out transparently, consistently, ethically and legally. The creation of these policies has helped to encourage researchers to think about the ethics of their uses of data at the outset of their research and therefore has helped to foster a culture of ethics by design within the GSS.

This work has played an important role in achieving public support for the access, use and sharing of data for research and statistical purposes. Researchers can use the independent ethical approval of NSDEC in support of their work when discussing the ethics of their work with the public. In addition, the fact that all uses of data considered by NSDEC are published on the UKSA’s website provides the public with a central place to visit to see how data is being used for research and statistical purposes across the GSS.

# Conclusions

The establishment of NSDEC and its associated processes of ethical governance has provided the UKSA with an independent governance structure which provides the National Statistician with credible, consistent, transparent and timely assurance that the access, use and sharing of data across the GSS for research and statistical purposes is ethical and in the public good. This work has played an important role in gaining the trust of the public that the GSS access, use and share data for research and statistical purposes in ethically appropriate ways.

The Digital Economy Act, which is designed to provide the UKSA with improved access to data for research and statistical purposes for the public good, presents new opportunities to mobilise the power of data to help Britain make better decisions. The ethical governance structures and processes discussed in this paper will play an important role in ensuring that the UKSA maintain the highest possible ethical standards when looking to take advantage of these significant and exciting statistical opportunities.

# References

1. UK Statistics Authority, Better Statistics, Better Decisions Strategy for UK Statistics 2015 to 220, https://www.statisticsauthority.gov.uk/archive/news/uk-statistics-authority-statement-of-strategy-2015-2020-better-statistics-better-decisions.pdf
1. UK Statistics Authority [↑](#footnote-ref-1)
2. [↑](#footnote-ref-2)