

InterConnect

Global data for diabetes and obesity research



InterConnect is changing the way that data are used in population research into the causes of diabetes and obesity. It is creating the foundations for cross-cohort analyses to enable research to move from explaining the differences in risk within populations to being able to explain differences between populations.

Discovering data resources

Researchers need to know what studies are being conducted.

To help with this discovery of data, InterConnect is creating an online registry of studies relevant to gene-environment interaction in diabetes and obesity which will include study meta-data.

Meta-data is information that describes the data: a list and description of the variables and how the data was collected. Good quality meta-data means that the data can be understood by others who are considering using it for their research.

The InterConnect registry will provide a comprehensive, standardised and searchable description of studies. Current information includes:

- Study name, contact, reference paper, website
- Study design, timeline, number of participants
- Broad categories of ethnic and racial groups recruited
- Health information and key exposures
- Participant selection criteria and recruitment process



Optimising data for re-use

Across the many studies of diabetes and obesity there is variation in the methods used to assess exposures and outcomes. InterConnect is creating a forum for harmonising data and methods.

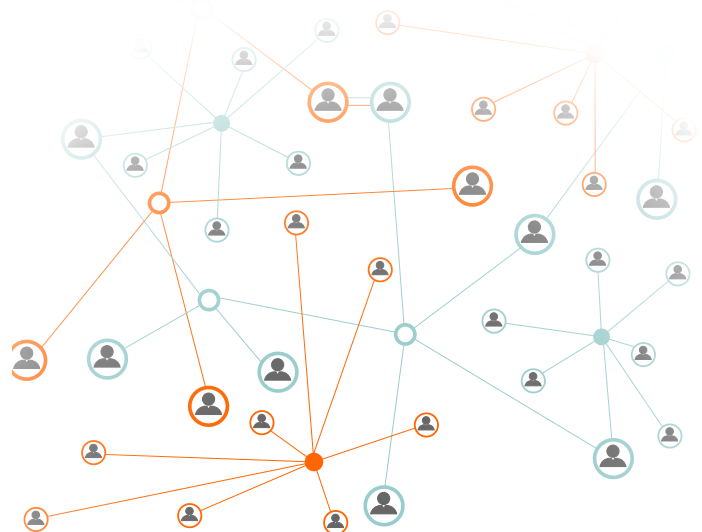
Making the most of existing data requires harmonisation of related variables within different data sets.

High quality meta-data is required to assess the degree to which this is possible. Specific algorithms can then be developed to transform the data into a common format.

Future-proofing

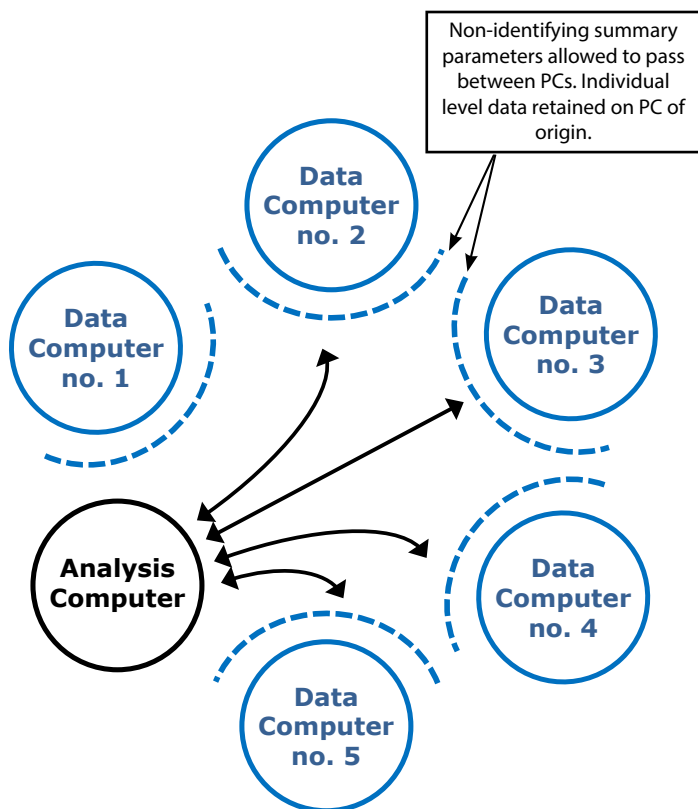
InterConnect is also developing approaches to allow greater comparability of future studies. It will provide toolkits to enable researchers to understand the purpose and characteristics of different measurement tools, their suitability for different contexts and their comparability.

This will enable informed choice from a range of measurement instruments for specific circumstances.



Networked data analyses

Data sharing - physically bringing data together - presents governance, ethical and legal challenges. To address this, InterConnect is developing a global collaborative 'data access and results sharing' network, providing a new approach that is secure, scalable and sustainable. A federated process means that participant data from contributing studies is held securely on geographically-dispersed, study-based computers. Analyses are requested remotely and performed locally, so all data stays at source and only results are shared.



All those with responsibility for studies can play a central role, not just provide data for others.

Benefits for all

For scientists, InterConnect enables the secure use of individual participant data to address novel research questions through meta-analysis.

The InterConnect approach has benefits for funders of research who wish to maximise the value of their investment, as well as the wide range of stakeholder organisations with interest in the policy, social and economic benefits enabled by more effective re-use of data.



Get involved

Engagement of a broad range of groups - scientists, research funders and stakeholders - is key to the success of the InterConnect initiative.

InterConnect is engaging scientists by developing exemplar projects that illustrate how the approach can make otherwise challenging research questions tractable.

Research funders and stakeholders can play an important role in encouraging re-use of data, by promoting:

- quality and standardisation of study meta-data
- use of comparable measurement tools for future studies
- incentives and recognition for data re-use.

InterConnect aims to develop a shared vision with all groups. Together, we can create the foundations for a sustainable, global network for diabetes and obesity population research.

Connect with us

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