Big Data and Artificial Intelligence for Achieving Universal Health Coverage: An International Consultation on Ethics

Meeting report

12–13 October 2017, Miami, Florida, USA

World Health Organization

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MILLER SCHOOL OF MEDICINE
INSTITUTE FOR BIOETHICS

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ORGANIZING PARTNERS

GLOBAL HEALTH ETHICS TEAM, WORLD HEALTH ORGANIZATION

WHO has had a longstanding interest in health data and information, notably through its department of Information, Evidence and Research. The aim of the department is to strengthen the availability, accessibility, quality, reliability and use of health information in WHO Member States and development partners. Within the department, the Global Ethics Team addresses ethical questions that arise in technical programmes, in support of Member States and in consultation with its collaborating centres and experts.

INSTITUTE FOR BIOETHICS AND HEALTH POLICY, MILLER SCHOOL OF MEDICINE, UNIVERSITY OF MIAMI

As the WHO Collaborating Centre in Ethics and Global Health Policy, the Miami centre has long been a partner with WHO in addressing challenges related to health information technology. A leader in the field of ethics and biomedical informatics, the Miami centre conducts research on ethical issues in research, public health and clinical practice and on issues of health information technology arising in international contexts.

Links to most of the presentations summarized below are available at https://bioethics.miami.edu/who-collaborating-centre/bigdata/index.html.

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BACKGROUND TO AND PURPOSE OF THE CONSULTATION

WHO and the University of Miami Miller School of Medicine Institute for Bioethics and Health Policy have long collaborated in identifying and addressing ethical issues in global public health. Over the years, they have engaged stakeholders and encouraged debate, with the goal of providing guidance and standards in key topical areas. Topics of critical concern to WHO Member States in achieving universal health coverage are the acquisition, protection, governance and sharing of data and information on health. Countries, agencies and development partners face important challenges in this area, in part because of the rapid improvement in and availability of computing and information technologies, tools and methods as well as the size, scope and sources of data sets.

In health and medicine, expanding public and private sources of data (including non-traditional sources) and the ever-increasing capability to analyse, visualize and model data reveal patterns, problems and evidence for action for use by researchers and policy-makers. The tools, methods and technologies used in "Big Data" and artificial intelligence (AI) are already being used to improve health services and systems, and the policies, practices and capabilities to support them must keep pace. This is a major challenge, given that more human lives will be touched by health information technology than any other technology, ever.

Among the policy challenges are those of ethical collection, analysis and sharing of health data. Framed as ethical, legal and social issues, these include: the requirement for and scope of valid consent regarding data; protection of privacy, confidentiality and security; challenges of governance (ownership, use, publication, sharing); appropriate use of WHO-stewarded data and information; appropriate uses and users of public health and clinical decision support systems; and ethical difficulties in making decisions and policy recommendations on the basis of probabilistic, imperfect and even flawed data.