The post COVID-19 acceleration of citizen science leads to an increase in society's ability to meet health challenges.

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Regulation of the Innate Immune System

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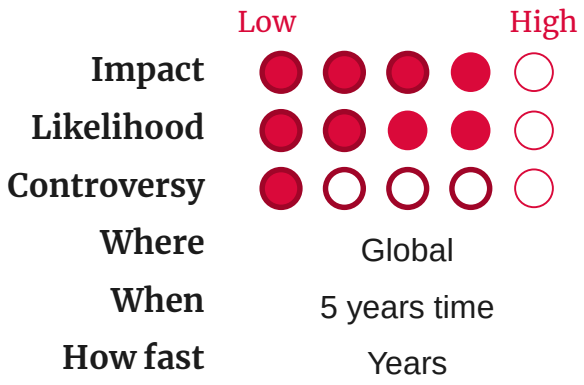

Citizen Science

- Contribution of the general public to scientific work often in collaboration with or under the direction of professional scientists and scientific institutions.
- Citizen science fills a niche missed by traditional science in rapid large data collection during crisis events, ongoing data collection in remote and underrepresented communities and providing diverse perspectives on health issues. p

Citizen Science and Covid-19

- The rise and success of citizen science projects during COVID-19 has legitimised and accelerated the use of citizen science to improve the health of society.

Future of Citizen Science

- Governments, Non-government organisations, traditional scientific and medical institutions as well as industry are beginning to see the value of health-related citizen science in research and evidence based informed policy. They are increasing their investment and support of citizen science projects.
- Citizen science has the potential to help society address the health challenges of the 21st century including; emerging diseases, environmental contaminant exposures and health inequality.
- Citizen science empowers the general public to articulate their health needs, increasing the diversity of perspectives in health discussions. This increases understanding, trust and engagement in science overall improving societal health.
- Citizen Science creates diverse international collaborative networks while also empowering small local communities.

Summary

Detail

- Citizen science has been growing over the last three decades as part of the trend in the democratisation of knowledge; enabled by technological advances such as smart phones. Citizen science was often criticised for its inferior data compared traditional scientific data. During the COVID-19 pandemic citizen science movements proliferated (such as the Zoe Covid Study in the UK) they produced high quality new data faster than traditional methods. Long Covid was first researched and defined by citizen scientists providing data were none existed in an area unknown to traditional science. Citizen science enabled faster and better health policy and increased public trust in science. Health related Citizen Science has been validated as a unique and powerful tool to address future societal health issues.

Societal Health Implications

- Emerging diseases and population health surveillance. e.g collecting large data sets to rapidly measure the health of populations, detection emerging diseases and enabling rapid informed policy making.
- Environmental Contaminant Exposures e.g Measuring the levels and effect of Urban Pollution. Making simple measurements in remote and underserviced communities empowers communities that in many cases are beyond the reach of traditional scientific institutions.
- Health inequality and neglected diseases e.g Citizen scientists often come from communities with health deficits, citizen science empowers underserviced communities to obtain empirical evidence of their health needs creating visibility and impetus for action.

Broader Implications

- Citizen science diversifies the scientific community, changes priorities and research trajectories to better meet societies health needs.
- Socioeconomic disadvantages are compound by health inequalities, citizen science makes inequality more visible and encourages further action.

Early indicators

- The increased funding and integration of citizen science projects into mainstream health institutions such as academia and health services such as the NHS.
- The UK and EU are the forefront of citizen science, traditional institutions are beginning and furthering there embrace of citizen science. The Zoe Health Study has expanded to include millions of citizens measuring many societal health markers beyond COVID-19.

Drivers & Inhibitors

- Citizen science relies on large numbers of amateurs to volunteer their time and usually have access to a smartphone. Declining economic trends may hamper the ability of those in marginalised groups to participate in citizen science. Funding and support from governments and non-government organisations can help maintain and increase the diversity of citizen science.

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