

JANUARY 2017

**HEALTH
MONITORING**

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DEBATING MATTERS
**TOPIC
GUIDES**

MOTION:

**“THE CONSTANT
MONITORING OF
OUR HEALTH DOES
MORE HARM THAN
GOOD”**

ABOUT DEBATING MATTERS

Debating Matters because ideas matter. This is the premise of the Institute of Ideas Debating Matters Competition for sixth form students which emphasises substance, not just style, and the importance of taking ideas seriously. Debating Matters presents schools with an innovative and engaging approach to debating, where the real-world debates and a challenging format, including panel judges who engage with the students, appeal to students from a wide range of backgrounds, including schools with a long tradition of debating and those with none.

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KEY TERMS

[Asthma](#)

[Diabetes](#)

[Hypertention](#)

[Wearable Technology](#)

[Worried Well](#)

INTRODUCTION

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Over the last few years, fitness bands such as Fitbit and Jawbones, have seen an explosion in popularity [Ref: [Apple Insider](#)]. These wearables, which monitor activity levels, heart rate and sleep patterns, account for three out of four of the sales of wearable technology in the United States and boast celebrity fans such as Andy Murray, George Osborne and Britney Spears [Ref: [Wareable](#)]. The popularity of fitness bands ties into a wider trend of using technology to monitor our individual health. Thousands of health apps for smart phones are now available which communicate wirelessly with your wearable and PC or tablet, providing 24-hour health monitoring, with some of these apps even endorsed by the NHS [Ref: [Telegraph](#)]. Many are so excited by the improvements that technology has made to healthcare that they deem it the next medical “revolution” [Ref: [Telegraph](#)]. A future where technology knows we are ill before we do and informs a doctor or provides medication, may sound like something from a Huxley novel, but it could be just around the corner [Ref: [Guardian](#)]. Technology and greater monitoring of our health could save the NHS money, transform how we care for the elderly, and usher in a new age of personalised care some argue [Ref: [Guardian](#)]. However, critics are less sure, suggesting that the use of fitness bands and health apps is “untested” and “unscientific”, while constant health monitoring could generate anxiety and a new generation of “worried well” [Ref: [Independent](#)]. Does the constant monitoring of our health do more harm than good?



Is perpetual monitoring good for us?

Proponents of a medical technological revolution cite how a greater use of technology could transform medicine. For example, people suffering from chronic conditions like asthma, diabetes and high blood pressure could be fitted with sensors or use smartphone apps which upload data directly to medical records, spotting problems immediately [Ref: [Telegraph](#)]. Domestic care robots can monitor elderly patients' eating habits, heart rate and whether they have taken their medication, and notify local nurses if they detect problems; in future they may even be able to treat acute episodes such as heart attacks or strokes [Ref: [Guardian](#)]. And tablets and smart phones give patients more options over how they interact with healthcare professionals - booking appointments or seeing medical records online or even Skyping with GPs [Ref: [Telegraph](#)]. It's estimated that these technological advancements could save the NHS up to £5 billion over the next decade, and make it easier for nurses and doctors to treat hard to reach patients [Ref: [Telegraph](#)]. Yet despite this, some are not convinced of the benefits. Glasgow GP Dr Des Spence describes the use of wearables and smartphones in health care as, "untested and unscientific", and risks the "over-diagnosis" of health problems, with people unable to distinguish between harmless variation, faulty readings or genuine ill-health [Ref: [BMJ](#)]. Critically, there is no scientific evidence that wearables or apps improve health [Ref: [Independent](#)], and doctors are reporting huge rises in the "worried well"- healthy patients who, fuelled by Google and WebMD searches, are diagnosing themselves with everything from food allergies to brain tumours [Ref: [Telegraph](#)]. This not only costs the NHS millions, but evidence suggests that extreme anxiety can actually be a cause for illness [Ref: [Channel 4](#)].

A healthcare revolution?

Dr Eric Topol, a Californian cardiologist, predicts a future where smartphones will easily analyse, explain and transmit all relevant physiological data to the doctor, without the patient having to visit the surgery itself [Ref: [New York Times](#)]. In this vision of the future, hospitals may be unnecessary, with services "performed in the comfort of our own home. Seeing our own data on our devices. In charge" [Ref: [New York Times](#)]. Healthcare may change so rapidly some argue, that an individual may not need to see a human doctor throughout the whole treatment process: the patient will diagnose themselves with the help of monitoring data; undergo surgery by an automated robot; and receive aftercare from C3PO in scrubs [Ref: [Telegraph](#)]. However, the role of a doctor is multi-faceted, and critics argue that it is not just clinical knowledge or analysis of data which is important, "it's communication, it's diplomacy, it's tact, it's pattern recognition" [Ref: [Telegraph](#)]. A doctor must make complex ethical decisions within an established regulatory framework, and deliver a message in a way that suits the individual patient. In this sense, the diagnostic process is a profoundly human one – after all, would you rather receive the news that you or a loved one had cancer from a text message or a sentient, understanding human?



THE HEALTH MONITORING DEBATE IN CONTEXT CONTINUED...

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Is the data always useful?

Supporters of health monitoring note that the healthcare service is notoriously slow to adapt to new technology. And the testing process which a piece of technology must go through in order to be deemed safe for medical application, is deemed arduous and long-winded, so many private companies choose to skip it all together and sell their products directly to consumers [Ref: [Modern Medicine](#)]. But for opponents, such regulation is vital to ensure patient safety [Ref: [Guardian](#)]. And they argue that it takes time to show that new technology is beneficial, and so it should not be introduced widely until it is clear that the data can be interpreted accurately. That said, in the future, health monitoring could be utilised by using electronic prescribing systems, which have been shown to make prescription errors 50% less likely, and can be checked to conform to sensible drug quantities, interactions with other medication, and even clinical conditions [Ref: [Guardian](#)]. Monitoring technology can also help in the diagnostic process, as some evidence suggests that first diagnoses by a GP are frequently inaccurate [Ref: [Guardian](#)]. In these scenarios, the objective nature of monitoring technologies may allow us to mitigate the risk of human error in healthcare. However, others are cautious about such claims, and note that technology may sometimes end up doing more harm than good. For example, some doctors are querying the value of breast screening programmes, suggesting that women risk false positives and over treatment, including unnecessary breast removal and surgery on harmless cancers [Ref: [Daily Mail](#)]. Furthermore, companies such as 23andme will now screen any individual's DNA for genes associated with inheritable conditions for a fee of £125 [Ref: [Guardian](#)]. In light

of this, Dr Ewan Birney queries the usefulness of this sort of data gathering, with much of the information based on “very small shifts of risk, which are better served by simply living healthier and getting more exercise”. He goes on to conclude that there is “an understandable concern that this type of genetic testing could cause inappropriate harm, simply through people worrying excessively or becoming neurotic over these small increases in risk” [Ref: [Guardian](#)]. So how should we view health monitoring technology - do we really understand what all the data means? Are patients in danger of being deluged with data that they do not fully understand? Is having constant information about our health a good thing, or does it just add one more thing for us to worry about?



ESSENTIAL READING

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[Can healthy people benefit from health apps?](#)

BMJ 14 April 2015

FOR

[Will wearables and healthcare ever sync?](#)

Donna Marbury *Modern Medicine* 3 May 2016

[Are fitness trackers bad for your health?](#)

Guardian 15 April 2015

[Fitness apps don't improve health – and could be harmful](#)

Chris Cooper *Independent* 14 April 2015

[Are you one of the rising numbers of the worried well?](#)

Maxine Frith *Telegraph* 20 July 2014

AGAINST

[Technology will never replace doctors – but they must embrace it](#)

Professor Maureen Baker *Telegraph* 26 January 2016

[NHS patients to be monitored remotely in digital healthcare revolution](#)

Sarah Knapton *Telegraph* 17 June 2015

[NHS and internet of things: The future of care is about the patient taking control](#)

SA Mathieson *Guardian* 8 June 2015

[We stand on the brink of a healthcare revolution](#)

Dr Dan Poulter *Telegraph* 2 November 2014



BACKGROUNDERS

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[Doctors to co-create bottom-up healthcare technology](#)

Adrian Bridgwater *Forbes* 24 May 2016

[First, there were wearables. Now, there are swallowables](#)

Zach Guzman *CNBC* 3 May 2016

[Hospital cybersecurity: It takes practice](#)

Bertha Coombs *CNBC* 25 April 2016

[Strike all you like, doctors – technology will soon take away your power](#)

James Kirkup *Telegraph* 12 January 2016

[Beware a future where health monitoring by wearables is the norm](#)

Emmanuel Tseklevs *Guardian* 4 June 2015

[Worried well](#)

Charlie Kurth *Aeon* 12 February 2015

[Patient heal thyself](#)

Abigail Zuger *New York Times* 5 January 2015

[Medical robotics](#)

Mark Piesing *Guardian* 10 October 2014

[Can technology improve patient safety](#)

Mark Ryan *Guardian* 20 May 2014

[2015 could be the year of the hospital hack](#)

Mike Orcutt *MIT Technology Review* 23 December 2013

AUDIO/VISUAL

[Dispatches, are you addicted to your doctor?](#)

Channel 4 18 August 2014



IN THE NEWS

[The global market for IoT healthcare tech will top \\$400 billion in 2022](#)

Business Insider UK 26 May 2016

[Just how accurate are fitbits? The jury is out](#)

Financial Review 26 May 2016

[First flexible wearable device can monitor biochemical, electric signals in human body](#)

News Medical 23 May 2016

[‘Real challenges on the practical level’ to wearables in medicine](#)

MedCity News 23 May 2016

[Statins glitch means thousands may have been incorrectly prescribed](#)

Telegraph 11 May 2016

[Fitness bands outselling all other wearables, including Apple Watch](#)

Apple Insider 4 May 2016

[Are medical grade devices the next generation of wearables?](#)

Forbes 20 April 2016

[“I set up breast cancer screening – now I’m it’s biggest critic”](#)

Daily Mail 3 March 2016

[One in four self-diagnose on the internet instead of visiting the doctor](#)

Telegraph 24 July 2015

[Celebrity wearables: the who’s wearing what of the stars](#)

Wearable 11 February 2015

[DNA-screening test 23andMe launches in UK after US ban](#)

Guardian 2 December 2014

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ORGANISATIONS

[23andme](#)

[NHS](#)



ADVICE FOR DEBATING MATTERS

DEBATING MATTERS
**TOPIC
GUIDES**

www.debatingmatters.com

FOR STUDENTS

READ EVERYTHING

In the Topic Guide and in the news - not just your side of the argument either.

STATISTICS ARE GOOD BUT.....

Your opponents will have their own too. They'll support your points but they aren't a substitute for them.

BE BOLD

Get straight to the point but don't rush into things: make sure you aren't falling back on earlier assertions because interpreting a debate too narrowly might show a lack of understanding or confidence.

DON'T BACK DOWN

Try to take your case to its logical conclusion before trying to seem 'balanced' - your ability to challenge fundamental principles will be rewarded - even if you personally disagree with your arguments.

DON'T PANIC

Never assume you've lost because every question is an opportunity to explain what you know. Don't try to answer every question but don't avoid the tough ones either.

FOR TEACHERS

Hoping to start a debating club? Looking for ways to give your debaters more experience? Debating Matters have a wide range of resources to help develop a culture of debate in your school and many more Topic Guides like this one to bring out the best in your students. For these and details of how to enter a team for the Debating Matters Competition visit our website, www.debatingmatters.com

FOR JUDGES

Judges are asked to consider whether students have been brave enough to address the difficult questions asked of them. Clever semantics might demonstrate an acrobatic mind but are also likely to hinder a serious discussion by changing the terms and parameters of the debate itself.

Whilst a team might demonstrate considerable knowledge and familiarity with the topic, evading difficult issues and failing to address the main substance of the debate misses the point of the competition. Judges are therefore encouraged to consider how far students have gone in defending their side of the motion, to what extent students have taken up the more challenging parts of the debate and how far the teams were able to respond to and challenge their opponents.

As one judge remarked *'These are not debates won simply by the rather technical rules of schools competitive debating. The challenge is to dig in to the real issues.'* This assessment seems to grasp the point and is worth bearing in mind when sitting on a judging panel.



**“A COMPLEX
WORLD REQUIRES
THE CAPACITY
TO MARSHALL
CHALLENGING IDEAS
AND ARGUMENTS”**

**LORD BOATENG, FORMER BRITISH HIGH
COMMISSIONER TO SOUTH AFRICA**