What is the most important medical advancement in the last 100 years and why?

The advancement I propose is neither technological nor scientific- it is merely a concept. Often, the greatest achievements have been innovative ideas. My proposition is the concept of Universal Health Coverage, a notion that has only existed within the past 100 years (although predominantly in the latter half) and is still being implemented and improved in the developing and developed world today. Universal healthcare aims to ensure that all people have access to health services which are of sufficient quality and effectiveness and do not induce financial hardship on the patient. Although there are many different models, the principle is the same. Patient care is integrated and person-centred.

Initially the brainchild of New Zealand, Universal Healthcare inspired Aneurin Bevan to establish the NHS. This institution (perhaps the most obvious example) is hailed as one of the prides of the UK, as displayed in the 2012 Olympic Games. The ideals for which it stood for- compassion, egalitarianism and dedicated service- inspired the rest of the world to create universal medical provision worthy of these lofty principles.

Considering the 20th century was a veritable scientific and technological renaissance, it is difficult to examine the success of universal health coverage. However, a study in the Lancet showed how broader health provision generally leads to better access to care and improved population health, with largest gains to the poor. This emphasises how the pooling of spending and redistribution of services helps the most vulnerable in society who are more likely to be prone to ill health. There is an average reduction of 7.9 deaths per 1000 children (under 5 years) and 1.3 deaths per 1000 adults as a result of 10% increased government expenditure.[1] Thus we can see how strong governance can lead to a healthier population- a key cog in the wheel. One particular model of implementing Universal healthcare is the insurance mechanism. Evidence portrays how in both high-income and low-income, insurance coverage vastly improves access to care and financial risk protection. In the USA, the expansion of Medicare and Medicaid has increased preventative, outpatient and inpatient services without causing financial hardship.[2] In Thailand, the 30 Baht programme increased inpatient care in the poorer sector of society by between 8% and 12% from 2001 and 2005.[3] Many may argue that it is only the wealth of the government that has resulted in such great health improvements. Yet on lower-income countries, it is proven that inpatient services have expanded to primary and preventative services as a result of national health schemes. In Ghana, Indonesia, Rwanda and Vietnam (where reform is in the intermediate stage), out-of-pocket spending as a percentage of total health expenditure has decreased by 3-6%. [4] Although there are key barriers to Universal Health Coverage, it is notable to see how these initial steps can transform population health.

A remarkable outcome of the birth of Universal Health Coverage was its institutionalisation in 1948. The World Health Organisation (WHO) was founded on the principles that "the highest attainable standard of health is one of the fundamental rights of every human being without

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[1] Moreno-Serra, R. & Smith, P.C. (2012). Does progress towards universal health coverage improve population health? *The Lancet, 380*(9845), 917-923.

[2] Levy, H and Meltzer, D. What do we really know about whether health insurance affects health?. in: C McLaughlin (Ed.) Health policy and the uninsured. The Urban Institute Press, Washington, DC; 2004: 179–204

[3] Gruber, J, Hendren, N, and Townsend, R. Demand and reimbursement effects of healthcare reform: health care utilization and infant mortality in Thailand. NBER Working Paper 17739. National Bureau of Economic Research, Cambridge, MA; 2012

[4] Moving towards universal health coverage: health insurance reforms in nine developing countries in Africa and Asia, Lagomarsino, Gina et al. The Lancet , Volume 380 , Issue 9845 , 933 - 943

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distinction of race, religion, political belief, economic or social condition".[5] The UN organisation was inspired by these ideals, that it fostered international collaboration towards this goal. The strong leadership it provided allowed policy-makers and global health partners develop national health plans, systems and new technologies. In 2011, the WHO formed a partnership with Luxembourg and the EU to help the advancement of universal health coverage. For instance, in Togo, WHO representatives coached district health management teams to decentralise decision-making in the health sector. This aided organisation of services and performance-monitoring in both the district and national level which improved coordination of care.[6]

Perhaps one may argue that a technological advancement (such as vaccination or keyhole surgery) was the greatest within these last 100 years. But would these be as successful without the access and affordability that universal health coverage provides? Indeed it would not- it is the critical component that aids development. When people are healthy, children can learn and adults can earn (as the WHO says).[7] Not only is it a great medical advancement, but a great social one.

It would be highly simplistic and factually incorrect to state this advancement is complete. For many countries, access to care is simple not has high quality to nations with universal health coverage. As well as that, countries that are in the process of implementing this form of healthcare services face great limitations in their journey. There are many models of funding and different demographics to consider. Nevertheless, this idea has put to the forefront the notion that good health is no longer a privilege, a commodity to be owned by the rich and powerful- it is a right, available to all. If, as Mahatma Gandhi says, "It is health that is wealth, not pieces of gold or silver" then this concept truly has fostered the noble and humane principle of equality. It is not just the greatest achievement of medicine, but the future of it.

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[5] *WHO | Constitution of the WHO: principles,* 2015 [Online] Available from: <http://www.who.int/about/mission/en/>

[6] *How to achieve value for money through proximity coaching – a UHC partnership success story in Togo,* 2015 [Online] Available from: <http://www.uhcpartnership.net/how-to-achieve-value-for-money-through-proximity-coaching-a-uhc-partnership-success-story-in-togo/>

[7] *WHO | Universal Health Coverage (Factsheet),* 2014 [Online] Available from: <http://www.who.int/mediacentre/factsheets/fs395/en/>