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Evidence-Based Medicine and Patient-Centred Care:

A Patient's Best Interest Analysis

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Abstract

Proponents of Evidence-Based Medicine (EBM) argue that EBM's approach to medicine promotes good clinical decisions while it escapes adverse issues such as implicit bias. However, EBM approaches the causation of diseases from a homogenous standpoint; that is, EBM overgeneralises evidence and the intervention measures it provides. As a result, proponents of Patient-Centred Care (PCC) allude that the strictness of EBM towards evidence impairs it from considering case-by-case treatment of patients but a generalised method of intervention. Given this problem, I argue that EBM cannot be considered a medical approach to practising medicine and conducting medical research that is in the best interest of individual patients, especially patients that prefer alternative interventions other than the methods of EBM. I conclude by drawing from the best features of EBM and PCC to create an alternative that accommodates the interests of both EBM and PCC patients.
Keywords: Medicine; Patient's Interest; Medical Diagnosis; Diseases; Evidence-Based Medicine.

1 Introduction

Evidence-Based Medicine (EBM) can be explained as the explicit use of evidence in clinical cases (Smart 2017:4). Some philosophers of medicine and proponents of EBM[2] argue that EBM escapes issues such as implicit bias, promotes good theory-ladenness, and promotes good clinical decisions (Sacket *et al*. 1996; Cartwright 2007; Howick 2011; Smart 2017). Given that EBM possesses these characteristics, proponents of EBM have an underlying assumption that the EBM approach to conducting medical research should be in the patient's best interest[3].

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[2] I provide a clear definition and explanation of EBM and PCC in the first section of this paper. However, I place more emphasis on EBM approach because of its widespread usage.
[3] I explain the notion of best interest that I use in this paper in the first section of the paper.

Furthermore, EBM practitioners prioritise the health and betterment of the patient; therefore, it aims to ensure that research done through Randomised Control Trials (RCT) are in the best interest of every patient (Smart 2017).

However, theorists like Andrew Miles (2009) and Jonathan Asbridge and Andrew Miles (2013) argue that the overemphasis of EBM on evidence through standardised and scientific processes has made medicine and clinicians de-personalised. De-personalisation here means creating a dichotomy between the patient and their illness. The de-personalisation of the EBM approach comes from its ontological framework, a homogenous Humean causal framework[4]. The EBM favours the above theory of causation on the basis that EBM is based on "empirical evidence over theoretical knowledge and observation data over mechanism" (Anjun 2016:424). However, as Miles (2009), Asbridge and Miles (2013), and Rani Anjun (2016) argue, the EBM-favoured framework does not take into account a personalised, biographic, and holistic approach to healthcare by paying close attention to the values and the somaesthetic of patients. As a result, Anjun (2016) favours the PCC method as the best possible holistic alternative.

PCC is a medical approach that prioritises mechanism over evidence (Anjun 2016). PCC ontological framework is a causal disposition framework which holds that properties have a dispositional character inherent in them (Anjun 2016). In contrast to Humean causation, the causal disposition is primarily concerned with causal mechanism (Anjun 2016:246). A causal disposition does not attempt to link causation to perfect regularities as Humean causation does; instead, dispositionalist causation is concerned with tendencies; that is, a cause tends towards an effect with either weaker or stronger intensity (Anjun 2016:426). A dispositionalist account is more concerned with what is playing the causal role. However, my goal in this paper is not to investigate which framework is the best but to ask which approach to conducting medical research between EBM and PCC is in the best interest of the patients.

In this paper, I argue that EBM and PCC approaches are not individually in the patient's best interest. Undoubtedly, many people seek medical intervention for curative purposes (see Broadbent 2019). However, patients also implicitly want the

[4] For Anjum, an ontology is a commitment(s) that are fundamental to an entity(s) (2016:424). The commitment of the EBM rests on the Humean theory of causation, which is an empiricist notion of causation.

mechanism approach which includes being heard, cared for, and sympathy from their healthcare provider while receiving a cure for their disease. These two aspects of needs are not present holistically in either EBM or PCC. As a result, I contend that for a medical approach to be holistic and at the same time be in the best interest of patients, the approach has to consider the values of patients during diagnosis and treatment. But at the same time, the approach must have a swift curative decision-making outlook in place, especially in times of crisis. By drawing from methods such as observational studies of EBM and pathophysiological method of PCC[5], I argue that this combined approach to medical research is the best possible alternative rather than the singularity approach of either EBM or PCC.

On the one hand, the methods of EBM that I draw are the RCT method and efficiency in providing medical solutions. On the other hand, the methods of PCC that interest me are the heterogeneity views on the causation of disease and the humane approach toward medical care. It is my contention that combining these methods will work in the best interest of many patients as it will have a single but inclusive approach to medical research.

This paper is divided into three sections. In the first section, I expose the debate between EBM and PCC. In addition, I show the benefits and pitfalls of both EBM and PCC medical methods. I discuss what it means for a medical approach to be in the patient's best interest in the second section. Afterwards, I investigate the role EBM and PCC practitioners play, and I ask whether their role always goes in the best interest of patients by using Covid-19 regulations and forceful vaccination in places like South Africa. In the final section of this paper, I provide an alternative to salvage the problem by combining selected methods of EBM and PCC.

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[5] In the evidence hierarchy, the only method that is close to RCT is observational studies**.** This method of evidence includes studies such as "case-control study and cohort study" (Smart 2017:13). The case-control study has to do with making a comparison between cohort participants from "the population of interest with a suitable control group and an alternative treatment group to infer information about the aetiology of a condition and the effectiveness of an intervention" (Smart 2017:13). Observational studies can minimise implicit bias as well as standardise clinical decisions. As a result, it is considered to be a better option than the clinician intuition or pathophysiological methods.
On the contrary, pathophysiological reasoning kind of evidence is based on the information provided by the patient about their wellbeing/pathology, the clinician, in turn uses their expert understanding of human physiology to determine the cause of the patient's pathology (Smart 2017:12). However, pathophysiological reasoning allows for implicit bias to creep into the treatment since this method of evidence involves "no good strategic theory-ladeness" (Smart 2017:13).

2 An Exposition of the Debate Between EBM and PCC

The debate between proponents of EBM and PCC regarding which intervention is better has been ongoing in the literature (See Anjun 2016; Smart 2017). EBM should be understood here as the explicit use of evidence in clinical cases. EBM prizes the use of RCT and observation more than approaches such as pathophysiological reasoning and intuition[6]. Evidence-based observation in clinical settings minimises the role a practitioner's intuition plays in medical practices, given the harms intuition may cause (Smart 2017:4). Clinical decisions for EBM ultimately rely on the clinical guidelines formed in light of RCT and observational studies, which goes in accordance with measurements and epidemiologist interpretation (Sacket *et al*. 1997; Cartwright 2007; Smart 2017:4).

EBM's primary concern is identifying the cause of diseases and providing preventive measures (Smart 2017:5). As a result, EBM practitioners tend to treat their patients based on the effectiveness, relative alternatives and benefits of the clinical trials which have been carried out (Sacket *et al*. 1997; Cartwright 2007). For Benjamin Smart (2017), EBM limits the risk of patients receiving harmful prescriptions, reduces mortality and morbidity rates, and improves the quality of life by carefully using the available evidence.

The evidence used by EBM practitioners is mostly statistics and studies from RCT and observational studies (Hickey 2012). Evidence-based observation in clinical settings minimises the role a practitioner's intuition plays in medical practices, given the harms intuition may cause (Smart 2017:4). Clinical decisions for EBM ultimately rely on the clinical guidelines formed in light of RCT and observational studies, which goes in accordance with measurements and an epidemiologist's interpretation. EBM's method of measurement is strongly influenced by its ontological causal framework.

[6] In EBM, RCT is at the top of the evidence hierarchy. RCT produces evidence by comparing the outcomes of two groups of individuals when attempting to identify the aetiology of disease and the preventive method (Smart 2017:14). For a RCT to take place, groups are randomly chosen from the population of interest and one of the groups is exposed to the intervention. After a while, the intervention between the control group and the exposed group is measured and compared to have a precise calculation. One of the advantages of RCT is that it is made to bypass problems such as confounders through randomisation. On the contrary, clinical experience and intuition of the EBM practitioner is considered to be the weakest form of evidence in the evidence hierarchy. The clinician's intuition is guesswork on the part of the EBM practitioner.

The EBM ontological framework is based on empirical scientific theories embedded in philosophical assumptions. One of such philosophical assumptions is the empiricism of David Hume (1748), with a particular focus on his theory of causation. The Humean analysis of causation is that which is observable. For Hume, causation is a matter of habit given one's experience; in other words, causation is a matter of constant conjunction. As the philosopher argues "as a general proposition, which admits of no exception, that the knowledge of this relation is not, in any instance, attained by reasoning a priori; but arises entirely from experience, when we find, that any particular objects are constantly conjoined with each other" (Hume 1748: E 4.6, SBN 27). What the philosopher is trying to demonstrate here is that cause and effect is not a matter of pure reasoning but that which arises from experiences through the senses.

For example, from a Humean standpoint, when we see two events happening, event A and B, and event A is followed by event B repeatedly, we will always assume that the next time event A happens, it must be followed by event B. Hume's understanding of causation is a matter of regularity. For example, when I throw a stone up in a space where gravity applies, and the stone falls on the ground, it follows that in every instance where there is gravity, and I throw a stone up, it must surely fall on the ground.

The central feature of Humean regularity is that the same cause gives the same effect; it is a matter of homogeneity. This homogeneity is what EBM uses as its method and framework for medical interventions. In this sense, the starting point of EBM is the homogeneity of causation (Anjun 2016:425). EBM is more concerned with disease, its cause, and its preventive intervention. One could argue that in EBM, patients are most likely to respond to treatment in the same way, given the assumption that the cause of their diseases is the same in every instance. In this sense, response to treatment is based on what an average person will respond to, so too is the basis of treatment. Given this approach, EBM does not consider different exposures other than testing the average efficacy. However, the average person does not exist; people have different exposures that must be considered during diagnosis and treatment. It is this difference in exposure that the causal disposition framework of PCC, which I will discuss shortly, focuses on.

EBM is different from PCC. While EBM places more emphasis on evidence regarding the causes and preventive measures of diseases (Smart 2017:5), PCC

primarily focuses on exploring other avenues, including the patient's background, experiences, and values (Anjun 2016). This claim does not imply that EBM does not care for the patient's values, and PCC ignores the evidence entirely. PCC recognises evidence, but it is not primarily concerned with evidence. Also, EBM recognises patients' values and cannot force treatment on the patient, but the patient's values are not EBM's primary concern.

One of the advantages of EBM is that it focuses on the causes, and preventive methods of pathologies, thereby avoiding implicit bias in medicine. An implicit bias here means "the unconscious prejudices that affect behaviours such that one (unconsciously) discriminates against members of a socially stigmatised group" (Smart 2017:5). Implicit bias can affect the outcome of doctors' intuition which PCC relies on. For example, in a deeply racialised country like the US, race plays a part in medical interventions. Racially stigmatised people, especially people of colour, may not get the same medical treatments as their white peers.

EBM's methodology, however, avoids such bias by focusing on the disease rather than the patient. In EBM, a patient's race does not play a role in the treatment the patient is bound to receive. By avoiding implicit bias, EBM is considered as that which promotes good theory-ladeness and measurements in medicine. This is because EBM's theory is truthful, promotes measurement accuracy, provides higher quality evidence, and makes good clinical decisions (Smart 2017:7).

On the contrary, PCC also provides some important medical intervention insights. For Anjum (2016), PCC is opposed to EBM. Unlike the EBM, which focuses on homogeneity by using an ideal average person's response to treatment, PCC focuses on heterogeneity. The argument here is that different exposures could cause a particular pathology; thus, the average person's response to treatment cannot apply to everyone. PCC places emphasis on the values and the needs of individual patients rather than using a one size fits all approach. In this way, the PCC is open to the epistemic contribution of the patient and their unique context while providing a suitable intervention. Such an approach allows patients to participate in their treatments collaboratively with their clinicians (Anjun 2016). PCC does this because patients all have unique exposures that differ from others, and because human beings are different, homogeneity of treatment is not ideal. People have different experiences, and these experiences could be responsible for their pathology. PCC suggests that treatment should be agreed upon between the doctor and the patient,

given the patient's preference and unique circumstances. Furthermore, the PCC urge that patient stories should be heard by doctors, and, in turn, these stories should be used to understand where their illness is coming from (Anjun 2016:427). In the section that follows, I discuss the benefits and shortcomings of the methods of both medical approaches. In what follows, I begin with EBM.

3 How EBM Satisfies the pharmaceutical/RCT-Testable Intervention Needs of a Patient

Alex Broadbent (2019), while explaining David Wootton's historical nihilism, points out that contemporary medicine has developed in three ways. First, Western medicine in the past was harmful concerning how cures were being administered (Broadbent 2019:163). Second, contemporary mainstream medicine has improved cure administration and is now successful in administering cures (Broadbent 2019:163). Last, contemporary medicine is now successful and has safeguarded itself against errors in the future (Broadbent 2019:163). In addition, one way the success of contemporary mainstream medicine can be judged is through Evidence-Based Medicine (EBM).

First, EBM has improved in such a way as to ensure that patients are cured successfully through RCT-testable interventions. Through the introduction of RCT-testable interventions, the errors that clinicians faced in the past, such as causing more harm while curing patients, have been tremendously rectified. Given that getting cured of a disease is one of a patient's goals going to a doctor, the provision of curative ways through pharmaceuticals interventions by EBM ought to be considered as an intervention that is in the best interest of patients. EBM has improved to fulfil the curative interventions of patients by enabling them to get better cures when diseased. Given these developments of EBM, it follows that EBM, through RCTs, acts in the patient's best interest.[7]

For example, at the beginning of the HIV/AIDs global epidemic outbreak, people died in great numbers yearly. This was because there was no cure for HIV/AIDs patients. However, even though the pharmaceuticals industries have not provided a cure for the epidemic, they have provided other ways of making patients

[7] I explain what I mean by best interest in the next section.

stay alive longer than before. To HIV/AIDs patients, the current pharmaceutical/RCT-testable interventions provided to deal with the HIV/AIDs epidemic are in their best interest as their lives are being saved.

Second, as previously pointed out, EBM avoids implicit bias. EBM's clinical guideline tends to focus on the disease rather than the patient. In deeply racialised places, racially stigmatised people like black people in the United States can be treated through pharmaceutical/RCT-testable intervention without their race playing a part. The current Covid-19 vaccines are perfect examples. Vaccines that are used to treat white people with Covid-19 are also used to treat people of colour. Avoiding such implicit bias can be argued as being in the best interest of racially stigmatised people; they can get medical interventions without worrying about the role their race may play in getting interventions. I now look at ways in which EBM fails to satisfy the best interest of some patients.

3.1 The Pitfalls of EBM

I have previously shown that Asbridge and Miles (2013) and Anjum (2016) argue that EBM's ontological framework depends on empirical scientific theories. One of such theories is David Hume's theory of causation. EBM favours Hume's theory of causation because it values "empirical evidence over theoretical knowledge and observation data over mechanism" (Anjun 2016:424).

The starting point of EBM is a homogeneity of causation (Anjun 2016:425). The homogeneity of EBM is based on the conception that EBM practitioners primarily treat the cause and prevention of disease the same in every instance. EBM practitioners conceive that all patients respond to treatment the same way since the same thing must play a causal role in their disease. This then follows that the response to treatment and the basis of treatment depends on how an average person suffering from a medical condition ought to respond. In this way, EBM practitioners do not consider different exposures other than testing the average efficacy (I expand on this when I speak of the granularity problems of EBM). However, it must be understood that people have different exposures that must be considered during treatment. I deal with the problem of exposure in the next section.

3.2 Other Problems of EBM

First, one of the problems EBM faces is the lack of openness to predictions. EBM does not focus on the exact causal mechanism of diseases but on which interventions generally work. As a result, it does not allow us to predict cases where the mechanism of the intervention would not work. I show this in the second section of this paper.

The second problem is that EBM suffers from a granularity problem. The granularity problem is where there is no relevant grain for population analysis (Kalewold 2020:7). For example, when we say an intervention is made for black people (for example, the beta-blockers medications used for treating heart disease in the US), do we mean all black people, black East Africans, or black West Africans since they all share a common ancestry? (Kalewold 2020:7). The so-called black race is heterogeneous in different medically relevant ways; as a result, a homogenous kind of treatment cannot be in the best interest of the entire population. This point is similar to the abovementioned point.

Third, EBM suffers from a reification problem. Kalewold (2020:8) claims that reification is when other explanations for a disease are more robust than a single cause of the disease (Kalewold 2020:8). For example, let us consider that a trial was conducted in a population of lung cancer patients. According to the statistics of the trial, the majority of the population contracted lung cancer due to smoking and drinking. An assumption from EBM practitioners may be that smoking and drinking are the best explanation for the cause of lung cancer, and the treatment may be based on the above assumption. However, it might not be the case as there could be other causes of lung cancer in that population, such as genes. Treating a group of patients based on a homogenous causal explanation of disease is not in everyone's best interest.

Fourth, EBM also faces problems such as funding bias, pill bias, and publication bias. Broadbent (2019:167) argues that RCT-testable drugs are expected to be effective because of certain biases such as publication bias, financial interest, and pill bias. All these issues affect the result of a RCT. On the one hand, currently, pharmaceutical interventions are approved based on clinical trials. On the other hand, these trials are affected by the above biases. This implies that we should not have much trust in the results of these trials. From these biases, we can expect that

these trials will give us statistically significant results even when the intervention fails. This entails that there is a possibility that the RCT-testable interventions that even pro-EBM patients receive are not in their best interest but in the best interest of those funding the interventions. However, can PCC be an alternative to EBM? In the next section, I briefly argue that PCC is also not a sufficient medical intervention alternative.

4 The Medical Benefits of PCC

Given the ontological framework of PCC, a dispositionalist framework, it seems prima facie that PCC is the best alternative to EBM. Dispositionalist causation, as previously highlighted, is concerned with tendencies; that is, a cause tends towards an effect with either weaker or stronger intensity (Anjun 2016:426). A dispositionalist account is more concerned with what is playing a particular causal role rather than an overdependence on results from statistics. As I have already shown, statistics do not always give us results that are applicable to all.

Using this framework, PCC approaches medical intervention by closing the gap of EBM because of its heterogenous approach to identifying the causal role of every disease before providing medical interventions. PCC achieves this by doing the following: First, PCC practitioners eliminate the homogeneity problem by arguing for the need to consider different possible exposures that could cause a particular pathology before providing any intervention. Second, PCC practitioners allow for the epistemic contribution of patients while providing interventions for them. To achieve the aforementioned practice of PCC, practitioners of PCC consider the unique context of patients, their experiences, values, and histories. Using this information, PCC practitioners tend to make better decisions for patients. However, there are some pitfalls to PCC.

A critic might argue that, besides being prone to implicit bias, the PCC approach for conducting medical research is not feasible in times of crisis like EBM is. In testing for the efficacy of drugs, EBM through RCT can be the most efficient method. The experiences we have with the Covid-19 pandemic are a good example to use. I am not sure we could have gotten a vaccine currently in Africa if we had used the PCC framework. Africans were reluctant to participate in clinical trials given their history of clinical trials from the Syphilis studies in America in the 1940s

and others (see Ugar 2022). If we had followed the framework of the PCC, it follows that there would have been no vaccines in Africa. However, using RCTs, the result is that Covid-19 vaccines currently work for everyone regardless of our story. We were able to get to where we are through EBM. In addition, even though enough data was not collected for all of the population, the intervention worked. This implies that we cannot always get data from every group to make the intervention work. Thus, because of situations like this, the PCC approach cannot solve practical problems in a short time frame.

Another significant objection, if not the most significant objection to PCC, is that basing interventions on the predicted mechanisms of clinicians is very prone to errors because scientists often get mechanisms wrong. As earlier explained in one of the footnotes, we cannot trust clinicians in intuitions when it comes to diagnosis, they might get it wrong because everyone is bound to make errors here and there. As a result, using such an approach is prone to having more erroneous results. In the third section, I discuss which aspects of PCC and EBM I am interested in combining to form an alternative approach. In what follows, I show what I mean by best interest in the next section.

5 What Does Best Interest Mean?

The 19th-century Russian novelist, Fyodor Dostoyevsky (1864:14), claims that the human best interest is intrinsically dependent on the choices of individuals. For Dostoyevsky, "we all know that not one man can consciously act against his own interest" (1864:14). The loophole in Dostoyevsky's argument is that a lot of people do not consciously act according to their best interest. For example, I consciously act against my best interest by procrastinating going to the gym, even though I am aware that going to the gym keeps me healthy. Whereas, what could be taken from Dostoyevsky's view is that the notion of best interest varies, such that an action can be in the best interest of an individual and may not be in the best interest of another. For example, it may be in the best interest of couples who need children to engage in sexual activities without a condom. However, for someone who already has enough children and is not ready to take medications such as the "morning after pills," it would not be in their best interest to engage in unprotected sex. Numerous

and different qualities are used to identify a person's best interest. And so, the qualities an individual uses to define their best interest are different from another.

According to section four of the Mental Capacity Act-2005 (an act based on the rights of those who cannot make decisions for themselves), the notion of best interest is a statutory principle that states that for an act or a decision to be made on behalf of a person who cannot make the decision, the decision must be made while considering the specific circumstance, the needs of the person, and the urgency of the decision that needs to be made (National Health Service 2021). The Mental Capacity Act-2005 (MCA) only tells us about the factors to consider when making decisions that are in the best interest of others, it does not say how to weigh these factors. Thus, in what follows, I provide my robust account of best interest.

I take the notion of best interest to mean acting solely in the interest that improves the quality of life of another. This means exhibiting a certain kind of care for them. However, exhibiting a sense of care for the other does not mean making decisions for them without their consent, especially in cases where they can make a good judgment for themselves. For example, it can be argued that the government is acting in their citizens' best interest when they nudge them to do certain things, such as reducing the sale of cigarettes and banning alcohol in some places for the purpose of preserving their health. While this may be in the best interest of citizens due to the health impact of smoking and drinking, it does not capture my account of best interest. This is because government regulations, in some cases, are paternalistic. My account of best interest should be understood as caring for the other for their sake and in the way that they would want to care for themselves.

Having the best interest of the other means having a certain awareness of the other. This awareness is being attentive to the peripherical features, details, and expressions of the other and one that reflects the innermost part of the other (Metz 2022). My account of best interest means exhibiting solidarity with the other by being empathetic towards the other in the "we" sense, knowing what it feels like to be the other, and being sympathetic towards the other. Exhibiting this form of interest with the other means striving to work together with the other to improve their life, meeting the social, biological, or psychological needs of the other. It means "not merely striving to make people better off or to advance their self-interest, but also to make others better people or to advance their self-realisation" (Metz 2022:152).

For example, it may be argued that the hard lockdown and Covid-19 regulations were in people's best interest as the regulations and rules were set up to "flatten the curve" and "reduce the spread of the virus." For an EBM practitioner, the rules and regulations were needed to stop the spread of the virus. This is because, using the EBM framework, the virus moves as people move. As a result, the movement of people is the movement and transmission of the virus. In addition, EBM interventions to deal with the virus came from the vaccines produced. Undoubtedly, the EBM solutions effectively stopped the virus's spread. The EBM measures were in the best interest of the general society. However, the method of carrying out their intervention is problematic. The hard regulations and forceful vaccines in-take were inhumane.

PCC practitioners may argue that these regulations and forceful vaccinations were not completely in the best interest of every patient. For example, it may have been in the best interest of affluent people to be placed on hard lockdown during the peak of the Covid-19 pandemic because their lives were saved, and their affluence was maintained to some degree. On the contrary, hard lockdown could not have been in the best interest of the less affluent or those who live on the margin of society (Broadbent 2022). Less affluent people in the slums did not have means of sustenance during the hard covid-19 lockdown compared to the affluent people in the suburban areas. As a result, it becomes counter-intuitive and paradoxical for less affluent people to stay at home to save their lives from the Covid-19 virus while they die of starvation. On the contrary, being confined at home was in the best interest of the affluent, especially regarding saving their lives. I do not think the government understood what it felt like being the other in the slums. As a result, the Covid-19 regulations made were for their benefit, not in their best interest.

In addition, places of higher education and workplace in South Africa forced their student to receive the Covid-19 vaccines before gaining access to their different campuses of learning and workplace. The future of workers and students was dependent on their vaccine reception. However, the interest, fears, medical histories, values, and worldviews of these students and workers were given little consideration even though these worries and fears came from the failures of these vaccines on some early receivers of the vaccines. Given such compulsion for vaccination, it cannot be plausible to claim that the vaccination and lockdown measures were in the best interest of everyone. Even though these measures were

needed, they were forced on people, which makes it a coercive form of paternalism and not my take on what it means to act in the best interest of others.

However, a critic may argue that the measures taken during the peak of the Covid-19 pandemic, which was in line with the EBM framework, were the only possible alternative given the situation at the time. Given the socioeconomic situation the world was experiencing, a swift decision was needed. EBM methods were the only alternative to stop the spread of the virus in terms of lockdown measures and vaccinations. Considering the values, medical histories, and socioeconomic situation of people may not have led to the swift response to provide a cure and stop the spread of the virus.

While I concede this to be true, I contend that not all patients believe that the only goal of medicine is the provision of cures through pharmaceutical/RCT-testable intervention. For example, thinkers like Amid Saad (2008) argue that the art of medicine is the use of different intervention methods. For Saad (2008), some of the interventions in medicine are the application of reassurance, compassion, consolation, listening, and understanding a patient's fears, anxieties, and hopes. As Saad (2008) argues, these aspects are neglected in the clinical practices of EBM but provided by PCC. Some patients also believe that medical interventions should include being cared for by the practitioner, being listened to, and being respected, rather than shoving clinically tested medications into their bodies. In the next section, I show what an ideal medical approach ought to be like.

6 A Combination of PCC and EBM Methods as a Best Possible Alternative

I previously argued that the ontological framework of EBM is based on the Humean conception of causation, which is homogenous. This homogeneity in terms of EBM shows that EBM looks at disease and its preventive methods from a homogenous lens, which is problematic in some sense, as I have shown in the previous sections. However, the ontological framework of PCC is different. The ontological framework of PCC is based on causal disposition [8]. The causal

[8] As previously highlighted and argued, the causal disposition framework is the view that properties have dispositional characteristics intrinsic in them. In this sense, a dispositionalist causation takes what is playing the causal role to be foundational (Anjum 2016:426).

disposition is the view that properties have a dispositional character inherent in them. EBM works based on homogeneity using an ideal patient response to treatment. On the contrary, PCC focuses on the heterogeneity of the cause and preventive methods of disease. In this sense, PCC does not assume a single causal factor of diseases and prevention.

For instance, some people's conception of medical intervention is not only based on pharmaceutical curative intervention but on natural means such as eating healthy, exercising, and resting. Suppose person X visits doctor Y, an EBM practitioner, and gets treated based on doctor Y's views of medicine, or like the Covid-19 intervention method where everyone was forced to be vaccinated; in that case, one can argue that doctor Y's medical intervention was not in the best interest of person X.

Given the shortcomings of EBM and PCC that I have identified earlier, I argue that the best alternative approach is drawing from some of the methods of EBM and PCC to create a singularity that works for everyone. We can achieve this by borrowing from two methods of EBM that intersect with PCC, observational studies and pathophysiological reasoning, to replace RCTs due to the biases that come with RCTs.

Observational studies are a method of evidence that includes studies such as "case-control study and cohort study" (Smart 2017:13). The case-control study has to do with making a comparison between cohort participants from "the population of interest with a suitable control group and an alternative treatment group to infer information about the aetiology of a condition and the effectiveness of an intervention" (Smart 2017:13). For example, suppose that a study of over twenty years shows that cigarette causes lung cancer in a population and addicted smokers get lung cancer. One can infer that smoking cigarette causes lung cancer.

However, in order to get to the treatment of those inferred to have lung cancer through smoking, we should employ pathophysiological reasoning. Pathophysiological reasoning is based on the information provided by the patient about their wellbeing/pathology, and the clinician using their expert understanding of human physiology to determine the cause of the patient's pathology (Smart 2017:12). By so doing, patients will be able to contribute to their treatments by providing information about how they feel, their experiences, and their fears. In addition, new evidence may arise from the initial control studies that may suppose

that not everyone with lung cancer who smokes in that population may have contracted lung cancer through smoking. Furthermore, combining observational studies and pathophysiological reasoning can minimise implicit bias as well as standardise clinical decisions on the one hand. On the other hand, this combination can also bring the mechanistic approach of PCC into purview by providing an environment for the application of reassurance, compassion, consolation, listening, and understanding of a patient's fears, anxieties, and hopes. This approach will solve one of the pitfalls of EBM, which is, providing general interventions and less openness to predictions and other possible mechanisms of intervention.

Conclusion

In this paper, I have argued that both EBM and PCC interventions do not individually act holistically in the best interest of patients. I argued that the curative interest of patients based on pharmaceutical interventions is somehow met for patients interested in such interventions, but most especially, this intervention is suitable in times of crisis. However, despite the importance of EBM in the above regard, it negates the interest of patients who may not be open to clinically-tested interventions. In addition, EBM generalises interventions, and the approach is less open to other intervention mechanisms that may be more robust than the RCT method. Furthermore, RCT methods cannot be trusted all the time due to certain challenges such as funding bias, research bias, and publication bias which RCT faces. On the contrary, PCC fills up this lacuna, but PCC methods are also problematic because they leave room for implicit bias and cannot be relied on in times of crisis. In addition, basing interventions only on mechanisms may lead to erroneous results. Given these problems in EBM and PCC, I proposed that the best alternative approach will be to combine methods of EBM that intersects with PCC, such as observational studies and pathophysiological reasoning, to conduct research as well as diagnose and treat patients. Doing so will act for the best of patients because such an approach gives room for robust research as well as allow other mechanisms of intervention to play an active role in medical interventions.

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