



# The Use of Personal Protective Equipment (PPE) during the Covid 19 Pandemic: Developed and Developing Country Review

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## Abstract

This is a short review paper examining the use of the Personal Protective Equipment (PPE) and Personal Protective Processes (PPP) during this Covid 19 pandemic and looking at the differences and similarities between developing and developed countries in relationship to very high Covid 19 levels in most developed countries visa vee relatively low levels in most African countries.

The review also raises several questions leading to need for further study, examination, discussion and review and these include: why there is low Covid 19 cases and incidences in African countries, the role of environmental factors on the life of the Corona Virus causing COVID 19 and the impact of both PPE and PPP on the levels of transmission and capacity to control COVID 19 in both developed and developing countries.

**Keywords:** COVID 19; PPE; Hospitals; Temperature

## Introduction

For the first time in a very longtime the issue of availability and use of PPE has taken center stage in everything and more especially because of the coronavirus diseases (COVID 19) [1]. Its availability and use has affected both the patients and the care givers and it has also affected both developed and developing countries [2-4].

This is quite an amazing situation which has created a very surprising but not unexpected in situations where PPE are commonly taken for granted especially in both building and Health facilities situations. Directly related to the PPE is the Personal Protective Processes (PPP) which is not commonly written about by researchers unless indirectly when referring to PPE and the Procedures [5]. This is now evident due to the current COVID 19 avoidance regulations which include both PPE like masks and PPP like washing

hands and maintaining social distances between individuals [6].

## Availability and Use of Ppes During Covid 19 Pandemic

In developed countries PPEs are commonly available and used but only in circumstances related to accident or police sites and in hospitals in theaters and operating rooms [7]. They are generally ignored in other situations despite existence of regulations [8].

In most developing countries the PPE are commonly unavailable and or only used in extra ordinary circumstances [9].

Levison ME, et al. [9] in his commentary argues that due to both social, economic and some cultural practices

including leaving conditions and availability of relatively poor health facilities including PPEs there is bound to be a very large pressure on the health services arising from Covid 19 and hence more deaths [10].

However, despite the escalation of COVID 19 and the existence of poor facilities like not enough PPEs including poor management of PPPs, the spread of COVID 19 has been extremely low in most African developing countries. Even when some countries closed down in the initial stages of the pandemic and are now only reopening in phases (like Ghana, Uganda and Kenya) the numbers of cases and deaths have remained relatively low compared to the rest of the world [11].

### Conclusion and Discussion Issues

The above observations clearly show that despite the low availability of PPEs and low use of PPPs in developing countries in Africa the COVID 19 spread has not been as high as in developed countries like the US and Europe. This may be due to the viral nature of the corona which is heavily affected by environmental factors like temperature and humidity [11].

Therefore there is a need for a more detailed research and examination of why low COVID 19 cases in most of the poor countries in Africa and whether the long time existence of the common cold (a Corona viral disease) Intermountain HealthCare [12], may have a role to play in this regard causing some type or level of immunity to the populace in Africa which have for a very long time and even now continue to suffer from it.

There is also need to examine the role of environmental factors on the life of the Corona Virus causing COVID 19. Finally, it is important to evaluate the impact of both PPE and PPP on the levels of transmission and capacity to control COVID 19 in both developed and developing countries.

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