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Management of COVID-19 Pandemic - The Swedish **Perspective**

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Among all countries affected by COVID-19, the Swedish pandemic strategy has polarised the political and global media response, where both condemning and acknowledging voices are heard. The question thus arises whether the Swedish approach is unique, and what reasoning leads to this strategy. This report does not discuss the outcome or validity of this strategy but aims to explain the current Swedish approach to COVID-19 management, which is not medically unique but requires a specific socio-political setting. Irrespective of the approach, the world needs to be ready for the next pandemic or public health emergency through investing in social development, community empowerment, and educational initiatives.



Key Points

- Pandemic affects all nations.
- Social and cultural factors can influence management strategies.
- Current strategies may not be implementable globally, and new ones are needed.

Background

The Coronavirus (COVID-19) was discovered in the Chinese municipality of Wuhan in December 2019 and guickly spread to other regions of China and the world. There were early reports of confirmed exported cases from Thailand, Japan, and South Korea in January 2020. By the end of January

2020, isolated cases appeared in some of the European Union (EU) member states. The number of cases continued to increase, and by March 2020, all EU member states had reported COVID-19 cases, almost all related to persons visiting China or visitors from China. On 30 January 2020, the World Health Organization (WHO) declared the outbreak of novel coronavirus a public health emergency of international concern, and on 11 March 2020, a global pandemic. The WHO has coordinated the global combat against the disease. The EU Council, together with other EU institutions, started monitoring the situation and taking action by adapting relevant EU legislation, coordinating information sharing between member states, assessing needs, and ensuring a coherent EU-wide response (Goniewicz et al. 2020).

The COVID-19 virus spreads primarily through droplets of saliva or discharge from an infected person's cough or



sneezes. Most people infected with the COVID-19 virus experience mild to moderate respiratory illness; they also recover without requiring special treatment. Vulnerable groups such as the elderly and those with underlying medical problems are more likely to develop severe illness. Currently, there are no specific treatments or vaccine for COVID-19 and the best way to prevent and slow down transmission is information and prevention (Cascella et al. 2020). Among countries affected by COVID-19, Sweden seems to make headlines in international news about its strategical approach to COVID-19 management. This strategy differs from other countries, which aggressively initiated their approach by mass testing, and quarantine (Tatem 2020). Political and social comments both in condemning and admiring the Swedish strategy have been published in global news and media. These reactions raise the question of whether the Swedish approach is unique and on what basis it is formed and conducted.

Global Strategy

Due to the lack of specific antiviral treatment or a vaccine, the treatment of identified cases has been symptomatic. In the guideline published by the WHO, based on lessons learned and scientific evidence derived from earlier epidemics, there are recommendations for the prevention and treatment of COVID-19. However, the most crucial action is to prevent the spread of the disease by initiating and implementing preventive measures (Cascella et al. 2020). The focus on prevention concerns two distinct populations:

Healthcare workers and the general population. Healthcare workers caring for infected individuals should utilise contact and airborne precautions to include personal protective equipment. The general population has been recommended by the WHO to frequently wash their hands, use portable hand sanitizer, avoid contact with the face and mouth after interacting with a possibly contaminated environment, and maintain social distancing (Hellewell et al. 2020; Remuzzi et al. 2020).

Factors Influencing the Social Response

To implement the WHO's recommendations, there is a need for firm commitments from many groups of the society. Politicians have to make crucial decisions in favour of public health and not in their socio-political interests. Unanimous and consensus-based decision-making is the best option for a country to cope with all shortcomings and to distribute all available resources in a fair and sound process. Party political stands create distrust among the population, and worsen the trust between the government and public (Lee 2018). Industrial producers can play a vital role by shifting their production towards the needs of society. This behavioural shift is the foundation of solidarity and accountability towards the society they serve (Sakris et al. 2020). There is no limit in healthcare workers' enthusiasm to serve the people and do what they have been trained to do. However, they need the right protection and space to act in confidence (Ran et al. 2019). Finally, one of the essential factors in all emergencies is civilian engagement. As prevention counts, the hygienic measures and recommendations such as social distancing are significant and vital factors to prevent the spread of the infectious cycle. These parameters are influenced by other factors such as cultural background, state of poverty or wellbeing, education, and a functioning infrastructure (Fast 2020; Cohen et al. 2006; Browning et al. 2003).

The cultural backgrounds often determine social engagement and the states of physical and mental health. The custom, habits, and social commitment form the identity of a nation. Consequently, due to the demography of human beings, we have various ways of living and reacting and thus act differently in a given situation. It is then evident that social distancing can be hard to implement in some countries, while it is more comfortable in others. The state of wellbeing is another critical point. A society with no poverty lives in well-served communities, while underserved communities have all reasons to be in search of the vital and crucial necessities in life during a pandemic. The lack of education, especially in underserved communities, is a significant obstacle in information sharing and the promotion of civilian empowerment. The infrastructural functionality of a society depends both on the cultural and historical background and on the government's priority for their citizens and contributes significantly to the ability to maintain social distancing (Fast 2020; Cohen et al. 2006; Browning et al. 2003).



The Swedish Healthcare and Perspective vs. COVID-19

The Swedish healthcare system is decentralised, and its responsibility lies with the regional councils and, in some cases, local councils or municipal governments, according to the Health and Medical Service Act (Hjortsberg and Ghatnekar 2001). The role of the central government is to establish principles and guidelines and to set the political agenda for health and medical care. Regional councils are political bodies whose representatives are elected by region residents every four years. The connection between central and local politicians, who are regular citizens, brings decision-making in health issues closer to the public. The Public Health Agency provides the national government, government agencies, municipalities, and county/regional council evidence-based knowledge regarding infectious disease control and public health, including health technology assessment. The

welfare attitudes, political institutions' responsiveness, government performances, and policy issue are significant determinants of political trust, which is among the highest in the EU (Statista 2019).

With the outbreak of COVID-19, initial steps were taken to analyse and recommend appropriate measures for the potential spreading of the virus. The main foundation in the Swedish strategy is the shared responsibility of individuals and authorities, mutual respect of individual rights and needs. Each regional public health office was alerted to identify possible cases, and information was delivered to all medical facilities, primary healthcare centres, and the public by using direct contacts and media conferences. Daily report on the outcome and planned strategies based on actual data has been delivered to all involved agencies and the public, along with recommendations regarding needed precautions, hygienic measures, and social distancing. Hospitals and other

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agency reviews and evaluates new treatments from medical, economic, ethical, and social points of view. Information from the reviews is disseminated to central and local governments and medical staff for decision-making purposes.

Three basic principles apply to all health care in Sweden: firstly, human dignity, i.e., all human beings have an equal entitlement to dignity and have the same rights regardless of their status in the community. Secondly, need and solidarity, i.e., those in the greatest need take precedence in being treated. Finally, cost-effectiveness, i.e., when a choice has to be made, there should be a reasonable balance between costs and benefits, with cost measured in relation to improvement in health and quality of life (Hogstedt et al. 2004). Political decisions and individual choices can influence many health determinants. For several reasons, it is therefore essential to be able to describe and analyse the evolution of the population's health, lifestyles, and living conditions. The national public health survey is a national study on health, lifestyle and living conditions, which has been conducted annually since 2004 and comprised a random sample of individuals aged 16-84 years. The survey aims to show the population's state of health and to monitor changes in health over time as a part of a follow-up of public health policy. The Swedish legislation clarifies and expands providers' responsibility in conveying information to patients, guarantees patients the right to a second opinion, and ensures the choice of provider in outpatient specialist care. In Sweden,

medical facilities have been prepared, and pandemic plans have been activated. Collaboration with all agencies has been established.

Being aware of the shortcomings and resource scarcity, Sweden decided to protect vulnerable groups in the society actively. Information, instructions and recommendations was communicated on a regular basis to the rest of population. In the cultural and behavioural setting of the Swedish society, no restrictive measures were applied and people were asked to follow the Public Health Agency's recommendations. The unity and consensus in the strategic decisions made was enhanced by frequent and informative media conferences in which government officials and institutions participated (Public Health Agency of Sweden 2020). Currently the infection fatality rate for Sweden, on this first week of June 2020, is comparable with other countries utilising other measures (U.K. 9%, Sweden 11%, Netherlands 13%, and Italy 14%). One interesting observation is that many prosperous countries are at the top of the list of COVID-19 affected countries with high infection fatality rate (Khorram-Manesh et al. 2020). These countries are supposed to manage emergencies and protect their citizens.

Conclusions

Besides organisational shortcomings and medical resource scarcity, including the lack of vaccines, the most challenging part of the COVID-19 pandemic is the socio-cultural and

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socio-political strategies. This may explain the differences in management approaches between countries (Remuzzi et al, 2020; Fast, 2020). Irrespective of the strategy, following conditions must be fulfilled before a society can address, accept and implement the authorities' recommendations for pandemic management. First, there must be a collaborative culture among agencies and the public. Secondly, there must be a culture of consensus, which allows free discussions, but acceptance of the final decision based on the majority votes. The latter can be expressed through democratically chosen representatives based on the reigning constitution (Saltman 2005). Furthermore, people can only stay at home and maintain social distancing if they live in a society, which offers welfare, with minimal poverty, appropriate educational level, and a well-functioning infrastructure. These all contribute to build a community that follows recommendations, fights the pandemic together, and creates a trustful relationship between the government and the public (Cohen et al. 2006; Browning et al. 2003; Khorram-Manesh 2020).

Although these prerequisites are prevalent in many countries, Sweden is harvesting the results of its previous efforts during this pandemic (Hjortsberg et al. 2001). It has essential

constitutional support for the government, necessary trust in the public-government relationship, developed infrastructure, cooperative industry, and well-educated and safeminded citizens. The current development of the Swedish civilian defence healthcare system has also contributed to improved civilian-military collaboration. Civilian-military initiatives have resulted in the rapid set-up of field hospital intensive care units supporting the healthcare system during the pandemic. The outcome of this pandemic is yet to be told, and its evaluation may indicate a change of strategy for upcoming pandemics. The Swedish approach to COVID-19 is not unique from the medical perspective, but undoubtedly unique in the socio-political regard. Independent of its outcome, the COVID-19 pandemic has shown that all countries suffer from a pandemic and one nation can neither be immune to, nor fight alone against the disease. The world should get prepared for the next pandemic by increasing its resiliency through investing in social capabilities, community empowerment, and educational initiatives.

Conflict of Interests

Authors declare no conflict of interest.

REFERENCES

Browning CR, Cagney KA (2003) Moving beyond Poverty: Neighborhood structure, social processes, and health. J Health Soc behave, 44(4): 552-571

Cascella M, Rajnik M, Cuomo A, et al. [2020]. Features, Evaluation and Treatment Coronavirus (COVID-19). In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing. Available from ncbi.nlm.nih.gov/books/NBK554776/

Cohen GD, Perlstein S, Chapline J et al. (2006). The impact of professionally conducted cultural programs on the physical health, mental health, and social functioning of older adults. The Gerontologist. 46(6): 726-734

Fast SM (2014) Pandemic panic: A network-based approach to predicting social response during a disease outbreak. Master Thesis of Science in Operations Research. Massachusetts Institute of Technology. Available from dspace.mit.edu/handle/1721.1/91406.

Folkhälsomyndigheten (2020) The Public Health Agency of Sweden. Available from folkhalsomyndigheten.se/the-public-health-agency-of-sweden/

Goniewicz K, Khorram-Manesh A, Hertelendy A et al. (2020) Current response and management decisions of the European Union to the COVID-19 outbreak: A review. Sustainability, 12 (9): 3838.

Hellewell J, Abbott S, Gimma A et al. [2020]. Feasibility of controlling COVID-19 outbreaks by isolation of cases and contacts. The Lancet Global Health, 8(4):e488-e496. doi: 10.1016/S2214-109X[20]30074-7.

Hogstedt C, Lundgren B, Moberg H et al. (2004) The Swedish Public Health and the National Institute of Public Health. Scan J Public Health, 32 (Suppl 64):1

Hjortsberg C, Ghatnekar O (2001) Health Care System in Transition, Sweden. European Observatory on Health care System 2001. Available from euro.who.int/ data/assets/odf file/0008/164096/e96455.pdf

Khorram-Manesh A (2020). Flexible surge capacity – public health, public education, and disaster management. Health Prom Perso. 10 (3)

Khorram-Manesh A, Carlström E, Hertelendy A et al. (2020) Does the prosperity of a country play a role in COVID-19 outcomes. Disaster Med Public Health Prep. doi.org/10.1017/dmp.2020.304

Lee SH (2018) Welfare Attitudes, Political Trust and its Determinants in Sweden. Department of Sociology, Lund University. Master's thesis. 2018. Available from lup.lub.lu.se/luur/download?fun c=downloadFile&recordOId=8943984&fileOId=8944009

Ran L, Chen X., Wang Y et al. (2020) Risk Factors of Healthcare Workers with Corona Virus Disease 2019: A retrospective Cohort Study in a Designated Hospital of Wuhan in China. Clinical Infectious Diseases. doi.org/10.1093/cid/ciaa287

Remuzzi A, Remuzzi G (2020) COVID-19 and Italy: what next? The Lancet, 395 (10231):1225-1228.

Sakris J, Cohen MJ, Dewick P et al. (2020) A brave new world: Lessons from the COVID-19 pandemic for transitioning to sustainable supply and production. Resour Conserv Recycl. 159; 104894. doi: 10.1016/j.resconrec.2020.104894

Saltman RB, Bergman SE (2005) Renovating the Commons: Swedish Health Care Reforms in Perspectives. J Health Polit Policy Law, 30(1-2): 253-276.

Statista Research Department. Trust in institutions in selected European countries in 2017. [2019] Available fromstatista.com/statistics/896151/trust-in-institutions-europe/

Tatem A (2020) COVID-19: Data uncertainty and effectiveness of interventions. HealthManagement.org The Journal, 20(3).