

Guidelines to Fight COVID-19 Pandemic in Libya - Learned Lessons

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Abstract

Establishment of guidelines is essential for effective and efficient management of diseases. It's very challenging to establish guidelines in cases where much is unknown as for such an epidemic disease that became pandemic in a relatively short period of time.

Sharing the experiences between heavily and/or first affected countries with other recently affected countries could help to speed up establishment of suitable local guidelines and would allow for high quality needed effective and efficient management. In this letter, I tried to list the “do” and “do not” actions as learned mainly from early affected countries, and to summarize strategy for containment and management of pandemic using both the *Seven Questions* approach (5W2H) which i propose to include (*what to do, who will do, when to do, why i do, where to do, how to be done and for how long*) and the four *Early DIRT* Model which include early (detection, Reporting, Isolation and Treatment).

The threat of highly contagious COVID-19 is recognized worldwide. China experience as being the first country endured the epidemic, provided knowledge, practice and time to other countries to prepare their national plans. However, tackling the epidemic was variable in countries with good resources in many aspects regarding adopted policies and measures and impact of the pandemic.

Different national Centers of disease control (CDC), epidemiologists, and scientist work hard to identify pattern and epidemiological factors of the COVID-19 pandemic. During pandemic many, or almost all, sectors are affected, and need to contribute to fight and control of the epidemic. However, there is variable capacity of response according to cultural and financial

resources [1, 2]. All starts by declaration of the Epidemic and issuing decree naming a central executive committee to act as a hub for organization, synchronization and coordination of all efforts and actions of various needed sub-committees. The later could include health, media and communication, civil defense and national security forces, economic and financial bodies, environments agencies and non-governmental organization (NGOs), etc.

Health committee should work on different phases; before, during and after epidemic by conducting self-assessment, establishment of plan, starting community education and health prevention, and handling of diseases during and after recovery. Plan should ensure proper formal strategic communication channels to alleviate fears but also to sensitize and educate the population about the ways of epidemic transmission and to correct many false information that circulate in the media and social networks.

Epidemiological containment plan composed of several strategies (Table 1). Containment should deal with districts where epidemic appear, prevent spread to adjacent areas, inhibit spread to surrounding regions, and prohibit the spread of the epidemic nationwide respectively.

Table.1: Strategy and goals of containment of an epidemic.

Strategy	Goal
Social mobilization	Providing hot lines for raising awareness (risk communication), health education and patient's orientation. Provide continuous educational flashes, breaking news, up-dates on Epidemic.
Personal protection	For public and medical staff by promoting Hand washing, wearing face mask, disinfection of goods and belongs and use of PPE or medical staff. Use of other possible preventive measures such as vaccine.
Social distancing	Inhibition of crowding danger in retail shops, banks, hospitals, work, family and friends visits

Strategy	Goal
Screening	Isolation of infected, quarantine of contacts.
Transport and travel	Checking of travelers at portals of entry, isolation, testing of voyagers, other measures. Complete Suspension of travel and transportation
Nosocomial infection control	Ensure triage or infected and non-infected stream. Preventive hygienic measures, education and control.
Environmental measures	Provide appropriate preventive measures such as cleaning, ventilation, etc.

During preparation of plan action, specify clearly the 5W2H questions approach; “what to do, who will do, when to do, why to do, where to do, how to be done and for how long” (Table-2). These questions are needed to be evaluated on daily basis according to various local and global inputs and update from national and regional plan. To reduce transmission, several proposed measures such as movement restriction, Lockdown, work closure and curfew could cause, anger and frustration and increased stress on families with possibility of anxiety and violence. This negative side effect could be enhanced by closure of private business of parents. So a careful assessment of **5W2H questions**, could alleviate unnecessary side effects [3]. Economic impact increased where work from home is not an option, in many different nature of work in different countries [4-6].

Table 2: Guidelines for Setting of Plan to fight epidemic within 5W2H questions and answers model.

Topic	Action
What to do	Assessment of current status, setting priorities according to urgency and feasibility, then implementation of coherent set of action after careful assessment of continuously updated do and do not list.
Who will do	Specify all stakeholders in different sectors
When to do	Preferably before epidemic or at very early time
Why i do	All actions benefits, feasibility and coherence should be questioned and justified within whole plan actions.
Where to do	Need to determine zones, regions, places and at portal of entry of epidemic. Then determine call centers, places of screening, testing, referral, admission, intensive care unit, etc.
How to be done	Essential acquisition of know-how from World Health Organization, CDCs ministry of Health and all available local and international means.
How long to be done.	Knowing the appropriate (effective and efficient) time of starting and ending interventions, policies, measures, testing, isolation, quarantine, treatment , etc

Next important things to consider during preparation of action plan to control epidemic are to answer the revision of Do and Do not list prepared by analysis of outcomes and critique of handling epidemic by different countries. (Table 3 & Table 4).

Table 3: To Do list. Actions and measures that should be done during handling of an epidemics.

To DO List
Listen to a scientific and professional committee and organize your plan accordingly.
Take efficient measures before appearance of first caser where threat is still very small.
Listen to expert and scientist to figure out solutions in fatal urgent situation.
Work hard to understand what is happening with causative agent of pandemic (Currently it's COVID-19). Adoption of systematic learning by policy maker in order to apply successful measures and avoid ineffective ones.
Take effective orchestral response with simultaneous and coherent set of actions.
Take immediate action, mobilization and allocation of resources. Adopt four (Es) or early measures; early DRIT (Detection, Reporting, Isolation & Treatment).
Standardized scenario of spread, effect, progression, containment, and measures should be prepared and taken at macro and micro level.
Be a role model in taking preventive measures as a decision making and stakeholders (7).
Boost diagnostic capacity & diffuse new knowledge and technology.
Prioritize laboratory testing upon selected criteria
Communicate continuously with people, assure and warn them.
Shift from patient centered to community based approaches to control pandemic is a vital decision.
Create COVID-19 and non COVID-19 stream of care.
Set up separate structures exclusively for people sick with coronavirus (8).
Learn from others practice and models such as decentralization, policies of cities with different economy , neighborhood practice, etc
Learn from success and failure, such as early containment. Understand what does work and what does not work.
Adopt a mindset, to promote learning from experience. Know difference between individual & systemic failure.
Coordinate your action with neighboring countries to have unified action plan if possible.
Collect good data at right level of analysis and select right 5W2H approach.

Table.4: Do not list. Actions and measures that should be not be done during handling of an epidemics.

DO NOT LIST
Do not rely on surroundings assurance or inner mind.
Do not minimize the importance of science and assign specialists to handle the matter .
Do not underestimate the fatality of the virus.
Do not attempt to censor any news, even the most alarming (9).
Do not lag between action/inaction and outcome. Do not waste time.
Do not copy others policies or measures without understanding purpose or testing feasibility in home country.
Do not forget to be role model as a decision making, as example do not shake hands, etc.
Do not forget different policy result in different outcome.
Do not adapt policy with <u>single</u> element such as: only extensive testing or 12-hour quarantine only actions. Do not forget “COHERENT SET OF ACTIONS”.

DO NOT LIST
Do not insist upon information that confirms our preferred position or initial hypothesis (Confirmation bias).
Do not use conservative approach of testing. As testing the population is one of the most important steps in curtailing the spread of the virus in Italy (10).
Do not ignore validation of used diagnostic or any other techniques.
Do not resist discovery of existing and new means to control the epidemic.
Do not follow selective approaches which facilitate spread of COVID-19 such as partial locking of some and not all habitant or providing short time for shopping which lead to overcrowding.
Do not refer suspected cases to hospitals that could accelerate contagious (8).
Do not think that hospitals are equipped for community focusing.
Do not consider policy as personal or political battles.
Do not ignore collection and dissemination of knowledge.
Do not publish data <u>only</u> officially, you have to comments regarding hypothesis or different patterns in other countries.
Do not communicate epidemic fear and impact to the public without providing preventive solutions and measures to handle it.
Do not waste your resource

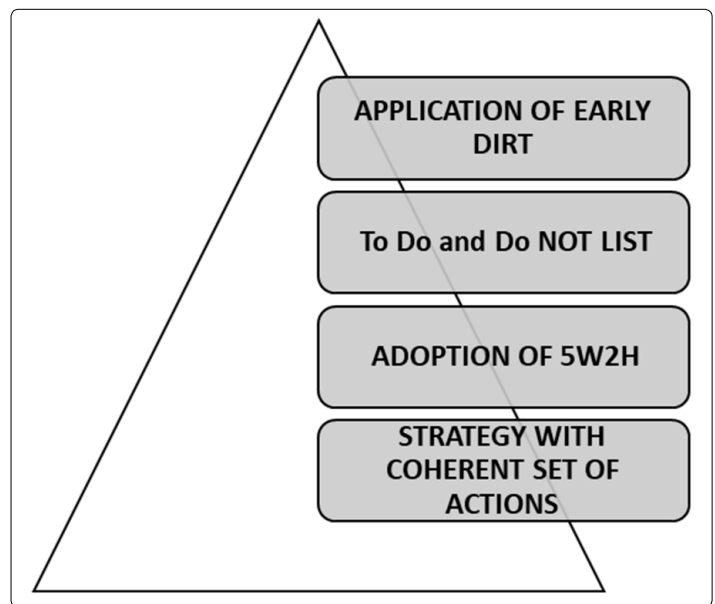


Figure 1: Required Steps to Control Pandemic

National plans are continuously challenged by non-feasibility of proposed measures or their relevance to what should be done as various and sometimes confusing input are coming from different sources locally and internationally. Examples of these challenges are summarized in Text Box 1.

Text Box 1: Factors challenging a Plan to Fight COVID-19

1. Daily rapidly changing inputs regarding epidemiological, clinical and therapeutic factors and possibility of huge explosion of pandemic worldwide. Daily inputs could change the existing prevention recommendation.
2. Decreasing bed capacity of hospitals due to large number of infected cases.
3. Uncoordinated or conflicting efforts.
4. Interruption of information flow from the center to the peripheries.
5. Limited or inefficient exchange of information between experts because of the several reasons such as political conflict.
6. Non availability of proven hazard management plan.

Recommendation:

During epidemic practices and procedures are continuously questioned, and answer changes quickly. National guidance could assist with a particular issue, however, different facilities; centers could make their individual decisions.

Pandemics require global, regional and national cooperation. It's essential to prepare, revise and check of do and do not list regularly, then to set a strategy with coherent set of actions. A comprehensive plan requires a concert adoption of 5W2H model and providing a clear answer, then application of 4 early “DIRT” model along with community engagement (Figure 1).

It's time for all stakeholders to consider planning for First International Consensus for Pandemic Containment Guidelines, to adopt a universal plan to fight future pandemics by different contiguous with variable mode of transmission, in order to prevent comparable global health and economic conditions.

This plan should specify general preventive policies and measures along with recommendation for modification of current global dietary, hygienic, social and other possible implicated habits [7-10].

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