Improving Mobile Telephone Helplines for Effective Emergency Responses in Nigeria

Oyeduntan Adewunmi Enoch

Abstract

Communication technologies have in reality reshaped and redefined how things are done in the contemporary world. On daily basis, technologies are made easier to access and use, especially in times of emergencies. This study examines how mobile phones can be used to quickly obtain assistance for people in times of emergencies like accidents, natural disasters, as well as terrorist attacks. In advance countries where these technologies are in use; they adopt cheaper and easy to operate, special phone numbers are reserved for quick responses by care-givers to address sudden emergency occurrences. This study extensively examined the operations of National Emergency Management Agency (NEMA) and all its subsidiaries, and provide practical suggestions on how these emergency care-givers can adopt the use of mobile phone based technologies for more improved and quicker emergency response time. These include among others, provision of special code number, ensuring lines are accessible anytime for 24 hour and must be toll free access.

Index terms— emergency, mobile, helpline, response, emergency response, GSM.

1 Introduction

igeria is currently witnessing massive transition in its socio-political and economic landscape owing its acquisition and use of technology. Largely, when a society is undergoing this transformation, building strong surveillance structures and measures to guarantee the safety of human and material resources automatically become the top priority of the government.

In the recent past, Nigeria recorded several cases of violent crimes, insurgencies, natural disasters, environmental mishaps and other human induced emergency situations. The result of all these have been colossal loss of lives and valuables. While these are bad enough, cases like flooding, fire incidents, rape, domestic violence, street riots, theft/armed robbery, land-slides, kidnappings, ritual killings and abductions, medical complications, road accidents, terrorist attacks, etc., are some of the emergencies that require quick response time in order to reduce the grave fatalities that come with such occurrences. All these have constantly taxed the efforts of the emergency service providers in the country.

The challenges posed by natural and unnatural occurrences have continued to affect millions of lives at an aggravated level. Flooding, fire incidents, rape, domestic violence, street riots, theft/armed robbery, land-slides, kidnappings, ritual killings and abductions, medical complications, road accidents, terrorist attacks, etc., are some of the emergencies that require quick response time in order to reduce the grave fatalities that come with such occurrences.

Emergency is seen as an unexpected case. A juncture that arises or 'turns up' especially a state of things unexpected arising and urgently demanding immediate action; a situation where relief is sough (Oxford English Dictionary, nd).

Aladegbola and Akinlade (2012, P. 85) claim that emergencies are new national priorities that will undoubtedly but unexpectedly sometimes arise. They pointed out that the current emergency situations in the country present high degrees of challenge and risks to the task of maintaining workable balance among all the diverse force. Hence, it has become paramount for the government as a manager of state resources to deal with these social problems at the level of concrete action ??Newman & Waren, 1997).

Enhanced communications is vital for effective response to disasters. Lack of communications directly contribute to low levels of situation awareness for both high-level commanders and emergency responders in the field. **??**Smith & Simpson, 2005, p. 2). Modern mobile phones have provided a different clime for emergency response in our current society. Because of the exponential usage of mobile phones on daily basis, they have been firmly fused into our social fabrics and are incrementally used by citizens to deal with crucial tasks. It is not uncommon, in fact, that during an emergency, citizens use their mobile phones to share information on the crisis evolution or on their positions **??**Romano, Onorati, Diaz, & Aedo, 2014, p.170).

The relevance of mobile/cellular phone in improving disaster response has also been conceived by various researchers as a means to reducing fatalities. Souley and Edemenang (2013, p.97), for instance, concluded that "the cellular network provides a unique capability to infer the position of people in an affected area and to provide them with specific and relevant instructions".

In view of the foregoing, this work seeks to provide insights that enhance the utilization of mobile gsm helplines in Nigeria to improve emergency services and crisis response time in Nigeria.

2   II. The State of Emergency Management and Operations in Nigeria

Emergency management is an important area of governance which aids in the protection of the citizens from consequences of any form of disasters, damages, threats and acts of terrorism **??**Lamidi & Benson, 2014, p.2). This involves the established plans, structures and arrangements to bring together the activities of government, voluntary and private agencies in a comprehensive and coordinated way to deal with emergency needs, including prevention, response and recovery (Hyatt, 2007, Emergencies resulting from natural disasters and conflict present a challenge too great for a single sector to solve **??**Reid, 2015, p.6). To support this assertion, the growing cases of emergencies and the magnitude of events resulting in high risk factors in various zones of the country, NEMA is structurally and administratively incapacitated to adequately tackle the various emergency situations in Nigeria **??**Olorunfemi & Raheem, nd). The administrative, technical and technological expertise required for sustainable emergency management and reduction are grossly inadequate and, where they exist, dismally uncoordinated **??**Njar, 2015, p.4). Atilola, (2005), in Njar (2015), pointed out lucidly that:

The prospect for emergency response, disaster reduction and management is very poor as the basic infrastructure are lacking: topographical maps are tragically obsolete, funding of geo-information production is dismally low, there are no policy direction for geo-data production; the National Spatial Data Infrastructure (NSDI) is still on paper; while the UN's recommendation on reduction and management of disasters in the last three decades are largely not domesticated.

With all these administrative limitations that beset NEMA and its entire agencies, Nigeria can rely on a much efficient and all-inclusive emergency management and response system which can guarantee adequate response mechanism and drastically reduce disaster costs and fatalities or damages.

3   III. Mobile Helplines and Emergency Operations

Emergencies will always happen. Distress situations call for immediate action or response which, to a large extent, will determine the level of fatalities and damages. In emergency situations, every second counts. At times victims of emergency are overwhelmed and find it difficult to maintain their psychological balance during the time of emergency, hence, the need for quicker emergency platform to establish two-way contact with disoriented victims.

It is very important to deploy emergency communication call centres all-around the different states and local governments in Nigeria, bearing in mind the logistic challenges that stymie the efforts of Emergency Response Units (ERU). Trained specialists should be on ground to transfer emergency calls to concerned emergency units within the reach of the victim.

The emergency call centres (ECC) allows individuals to report emergency situations to the call centres. Studies have shown how mobile phones have transformed emergency response in developing countries like Afghanistan, Indonesia, Iraq, Nepal, the Philippines, India and some parts of the West Africa. The effect is that, mobile networks and connectivity provide a lifeline for those affected by natural disasters and other humanitarian emergencies. The number of these crises and their impact is growing (Connected citizen, 2015).

It has been found that an average smartphone user is always within three feet of their phone, and checks it about 150 times per day (Bell, 2015). This evidence shows that mobile phones might be the only companion any victim of emergency situation may have. In Nigeria, majority of the population reside in the rural areas, the ubiquity of gsm networks can guarantee speedy emergency response for the people in the rural areas and other places where emergency services are not readily available.

IV. The Need for Mobile Helplines to Improve the Effectiveness of Emergency Responses in Nigeria Nigeria prides herself as the most populous country in Africa, with an estimated population of 180 million. On the average, more than 70% of this population reside in the rural areas where many social infrastructures, sophisticated security and emergency services are not within close proximity.

Fortunately, Nigeria has the highest number of mobile phone users in Africa; about 150 million GSM subscribers, a population which covers a reasonable percentage of the Nigerian population. The tremendous

growth of gsm connection across Nigeria offers greater chance for effective utilization of mobile networks to extend and expand emergency services to urban and rural areas.

Mobile helplines can help reduce damages and fatalities that result from unattended emergencies. Both cities and rural areas in Nigeria are currently bereft of formidable emergency services. Fire incidents destroy commercial centres, offices and private residents every year, kidnapping and acts of terrorism are on the rise on daily basis. Several other emergency occurrences have consistently mocked the mainstream emergency structures in Nigeria with horrendous consequences. Hence, the need for a more responsive and robust emergency approach that will enhance direct access (user-to-operator response) and improve real-time emergency situation becomes indispensable.

For a fact, a study published by Journal of Emergency shows that mobile phone emergency alert brings about several advantages; immediacy of access to help services, quick response and reduction of fatalities.

In truth, Nigeria can also benefit from the vast opportunity provided by mobile phone network to improve local and national emergency services. This platform on the other hand, can also be used to render assistance to people who do not really need the intervention of direct emergency personnel by providing on-the-spot safety assistance to people who may need such safety tips.

Mobile emergency service in Nigeria has the potential to thrive in Nigeria with the deployment of Emergency Communication Centres (ECC) in all state capitals and FCT. Additionally, it is important to establish strong emergency networks at the local levels with the help of local subsidiaries of NEMA in each local government. Deployment of 24 hours emergency surveillance, dispatch units and emergency services personnel in strategic places will go a long way.

In Nigeria, few state governments have actually institutionalize mobile helplines/mobile emergency centres. For instance, Lagos state introduced its dedicated lines, 767 and 112 in 2009 amidst staunch scepticism; the centre is said to attend to nearly 5 million calls per month. Ogun state adopted 211 code for its own local emergency response in 2012. Meanwhile, Nigeria as a country is yet to come through with its plan for a nation-wide toll free emergency code(s) that will assist in improving emergency responses in Nigeria (Majekodunmi, 2015). Nigeria as a country still operates on multiple emergency helplines at this age when countries around the world are maintaining a single emergency platforms. Some of these lines are: 149 787, 120, 199, 997,112, 080022556362, 08132222105, etc.

There is nothing wrong with the multiple emergency hotlines in a sense, but in combating sophisticated emergency situations and addressing the safety needs of the bulk of Nigeria's population who are widely dispersed in various rural and sub-urban communities, a single national emergency helpline could help improve Nigeria's emergence needs. As a matter of fact, on the official Facebook account of NEMA, several comments have been made regarding a single emergency code.

4 V. Customizing Emergency Helplines for Effective Emergency Responses

Nigerians have longed for a single national emergency number that will serve as the national emergency code number for the entire country. Majekodunmi (2015), states that 112 or 199 numbers are said to be at various stages of completion across the nation. He elaborates that:

The project entails sitting Emergency Communication Centres (ECCs) in each state of the federation and the FCT to enable members of the public alert security agencies on emergency situations, threat to life, or volunteer useful security information to authorities.

The use of a single emergency code number has be found to be more useful than multiple mobile emergency helplines. The fact that emergency situation comes abruptly, and mostly unexpected, victims of such terrible situations are sometimes overwhelmed or too distraught to select from multiple emergency codes in order to get the right platforms that would provide the needed help. Anybody that finds himself in such distressing circumstance might find it very impossible to get help. Therefore, gsm operators and government can work on a more user friendly platform that will address daring emergency situations in Nigeria.

Advance countries and multi-diverse region like Europe appreciate the use of a single national emergency code-the popular 911 in the USA has being in operation as the national emergency number since 1968 and 112 adopted by the European countries to serve the entire European nations.

In Europe for instance, the 112 calls are answered on the average time of 5 seconds; calls are answered in 172 other languages aside from English with the help of interpreters. (culled from: ec.Europa. eu/digital-agenda/en/112-united-kingdom). The flexibility and the standardized type of emergency operation offered in Europe shows to a great length how countries seek to achieve high efficiency and effectiveness in emergency operations to safeguard the lives and material resources of their citizens.

Harmonizing all the emergency codes in operation in Nigeria (fusing all the emergency codes in different states of the federation into one central national code) will help converge all emergency operatives into a single platform; that is, the police, fire service, civil defence corps, NEMA, military, red cross and other para-military outfits can all be reach with just a single dial during an emergency outbreak.

Studies have shown that chances of survival and reduction of fatalities or damages can be guaranteed to some

extent when victims call for emergency services on their mobile phone. This measure is also associated with improved mortality rate and assured rescue services in many lands.

5 VI. Taking A Cue from 911 Operations

The 911 emergency code is largely being used in many countries in South and North America. Because of its wider use, it has been commonly called the universal emergency number in so many lands. The special feature of this number is the adoption of a memorable 3 digits number (911). Any call placed to this number can either be answered by a call operator or a dispatcher, who then determines the nature of the call and then get the necessary unit to provide assistance to the caller; all these are done within seconds.

It is noteworthy that 911 operation maintains a special circuit that ensures that most drop calls are held until such calls are treated (Wikipedia.org). Other special needs like providing emergency services for the deaf are addressed through an enhanced system that is called Telecommunication Device for the Deaf (TDD) or Text Telephone (TTY) for people who have impaired speech (culled from superiorambulance.com).

The enhanced 911 is also equipped with a special system called Automatic Number Identification which generates the physical address and location of the caller within few seconds of the call. This system work in simultaneously with another system that gives the exact location of the call, the Automatic Location Information (ALI); this system does not only generate the location of the caller, it also displays the exact unit that can handle the emergency situation at the location through another system called Public Safety Answering Point-PSAP (culled from cassmosheriff.org).

The 911 service is in every American home, as of 2006, 99 percent of the U.S. populations has 911 service. The call operators handle mindboggling array of emergencies. For instance, in 2006, two children in Texas helped stopped a four-man-invasion on their home. In the same month, another four year old boy helped save his mother's life when she had epileptic seizure, all these safety were delivered by dialling 911. Agents can assist inexperience people to carry out CPR and other medical and safety assistance (howstuffworks.com). 911 operatives handle hundreds of millions calls every year, they are one-stop-shop is providing assistance for all kinds of emergencies; even when the call is dialled wrongly.

6 VII.

7 A Roadmap for an Improved Emergency System in Nigeria

Even though Nigeria has not fully embraced a centralized emergency system, much can be achieved in the task to reduce emergency complications in different zones of the country, including local areas. For Nigeria to operate a smooth mobile emergency platform, these modalities should be considered: VIII.

8 Conclusion

Timely access to desired information can make a lot of difference during emergency period. Getting the right information to persons or rescue agencies is vital for successful emergency management operations. Therefore, for effective operation of mobile emergency helplines, the mobile technologies need to be widely adopted and used properly.

Mobile helplines provide a platform for immediacy of information which has been considered to be one of the greatest contributions to emergency response mechanisms-and thus saving lives. It allows people access to immediate emergency relief and provide the needed help at the appropriate time which allows concerned emergency managers deliver effective rescue services swiftly.

Hopefully, emergency management in Nigeria can get better with the adoption of mobile technologies and putting the right measures in place for the adoption of a single national emergency helpline. This can benefit the country in many countless ways; cost maximization, a trusted platform for emergency response, a nationwide customized emergency delivery system, and above all, millions of Nigerians can then be 'just a call away' from getting rescue/response during emergency situations. [1] [2]

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[1] (H)

p.2).

For several decades, Nigeria has maintained
organized structures for emergency responses. Mainly,
in the 70s, after the devastating drought that struck the
country, the need for a central agency for disaster
control and emergency management became very
necessary. From the National Emergency Relief Agency
(NERA) in 1976, to National Emergency Management
Agency (NEMA) that came into operation since 1999;
the central mandate of the respective agencies is to
improve emergency responses.

One vital role of the coordinating agency of
emergency responses (NEMA) is to work with other
established agencies, volunteers, military/paramilitary
outfits, police, NGOs, media and local community
members to reduce fatalities and damages during
emergency occurrences in Nigeria.

NEMA is saddled with responsibility of liaising,
collating, collecting, monitoring and coordinating
emergency rescue agencies across Nigeria. NEMA
supports all other at the federal, state, local and
community level to save lives, protect public health and
safety; protect property and aid victims.

For smoother operation and flexibility, NEMA
has its state arms (State Emergency Management
Agency-

Figure 1:

8 CONCLUSION

The use of single emergency code throughout the country.

? Need for dispatch centres/local operation centres. ? Calls should be answered in local dialects (including

English language and pidgin).
? Answering time is a key factor (in emergency, every second counts).
? Local network operators should develop emergency application that allows one push of a button to connect with emergency centre -to develop a user friendly application aided with personal emergency response system (PERS); a technology that allows users to establish communication with designated authorities with a push of a button. An example of this is "eResponder" designed by Securus incorporated (911.com, 2015).
? Calls should be totally free-mobile emergency helplines functions better when there is no service charge to initiate distress call. This means that the line should be toll-free.
Other things to consider for effective delivery of emergency services to compliment the mobile emergency service, are;
a. Nigeria should put in place highly trained and competent manpower (which will include medical officers, safety officer and security agents, that will form the dispatch team on the ground).

[Note: b]

Figure 2:

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