

2012

Pandemic influenza: a global challenge for social marketing marketing

Sandra C. Jones

University of Wollongong, sandraj@uow.edu.au

Donald C. Iverson

University of Wollongong, iverson@uow.edu.au

Follow this and additional works at: <https://ro.uow.edu.au/sspapers>



Part of the [Education Commons](#), and the [Social and Behavioral Sciences Commons](#)

Recommended Citation

Jones, Sandra C. and Iverson, Donald C., "Pandemic influenza: a global challenge for social marketing marketing" (2012). *Faculty of Social Sciences - Papers*. 23.

<https://ro.uow.edu.au/sspapers/23>

Pandemic influenza: a global challenge for social marketing marketing

Abstract

Recent years have seen increased attention and concern regarding the potential for pandemic influenza, following large-scale outbreaks of swine flu and bird flu. Governments and health agencies have time to develop social marketing strategies and specific messages that have the potential to minimize fear, refute or inoculate against misinformation that the public may encounter, and enhance the likelihood of the public taking the recommended preventive and remedial actions should these become necessary. This paper presents an overview of how social marketing can be used to tackle the global challenge of pandemic influenza. The potential pandemic influenza poses a major challenge for social marketers (along with governments, health services, and businesses). There are a number of critical factors about a potential pandemic influenza that make it fundamentally different to the majority of issues to which social marketing has previously been applied. The underlying principles of social marketing are equally applicable to a global infectious disease outbreak (such as pandemic influenza). Even if the current strains do not become pandemic, social marketers should use this impetus to develop the skills and resources to address future communicable disease outbreaks. This paper applies the concepts of social marketing to a unique health issue which has the potential to become one of the largest global public health crises in history, but which can be tackled with effective global social marketing.

Keywords

social, challenge, global, marketing, influenza, pandemic

Disciplines

Education | Social and Behavioral Sciences

Publication Details

Jones, S. C. & Iverson, D. (2012). Pandemic influenza: a global challenge for social marketing marketing. *Health*, 4 (10A), 955-962.

Pandemic influenza: A global challenge for social marketing

Sandra C. Jones*, Don Iverson

Centre for Health Initiatives, University of Wollongong, Wollongong, Australia; *Corresponding Author: sandraj@uow.edu.au

Received 11 September 2012; revised 9 October 2012; accepted 21 October 2012

ABSTRACT

Recent years have seen increased attention and concern regarding the potential for pandemic influenza, following large-scale outbreaks of swine flu and bird flu. Governments and health agencies have time to develop social marketing strategies and specific messages that have the potential to minimize fear, refute or inoculate against misinformation that the public may encounter, and enhance the likelihood of the public taking the recommended preventive and remedial actions should these become necessary. This paper presents an overview of how social marketing can be used to tackle the global challenge of pandemic influenza. The potential pandemic influenza poses a major challenge for social marketers (along with governments, health services, and businesses). There are a number of critical factors about a potential pandemic influenza that make it fundamentally different to the majority of issues to which social marketing has previously been applied. The underlying principles of social marketing are equally applicable to a global infectious disease outbreak (such as pandemic influenza). Even if the current strains do not become pandemic, social marketers should use this impetus to develop the skills and resources to address future communicable disease outbreaks. This paper applies the concepts of social marketing to a unique health issue which has the potential to become one of the largest global public health crises in history, but which can be tackled with effective global social marketing.

Keywords: Pandemic Influenza; Global; Social Marketing; Communication; Planning

1. INTRODUCTION

Avian influenza virus was the focus of the world's

attention in the latter half of the previous decade. While avian influenza viruses do not easily infect humans, from 2005 onwards there was evidence of cases where the H5N1 spread from human to human [1-3]. Concern about a possible pandemic was based on a number of factors including: the potential of the virus to be transmitted from migratory birds to domestic poultry; the absence of demonstrated effective treatment options or an available vaccine; lack of natural immunity; inadequate country-level plans to manage an outbreak; and lack of collaboration in the planning of responses between neighboring countries.

While H5N1 did not spread at the rate that was predicted by many, it was followed by a pandemic of H1N1 in 2009/10 [4-7]. There are wide-ranging estimates of the number of deaths from H1N1; for example it has been stated that the 18,500 laboratory-confirmed deaths for the period April 2009-April 2010 is a gross underestimation given that many deaths would have occurred in countries without routine reporting [4].

Communication regarding a (potential) influenza pandemic can serve to accurately and effectively inform the public OR misinform and contribute to unnecessary public panic and subsequent undesirable responses. Governments and health agencies have time to develop social marketing strategies and specific messages that can effectively convey desired information at different stages of future anticipated pandemics. Such strategies have the potential to minimize fear, refute misinformation that the public may encounter (e.g., from co-workers or media sources) and enhance the likelihood of the public taking the recommended preventive and remedial actions should these become necessary.

The purpose of the current paper is to present a case for global social marketing as the most effective response to a (potential) influenza pandemic.

1.1. The Challenge for Social Marketing

Since the term social marketing was coined by Kotler and Zaltman in 1971 [8], there have been numerous excellent text books, articles, and case studies published in

the field demonstrating the effectiveness of—and explicating the tools for—social marketing. Thus, it is widely accepted that social marketing is a powerful and effective tool which, if utilised correctly, can bring about behaviour change for the benefit of individuals, groups, and societies.

While it is clear that the outcomes needed to address a potential influenza pandemic are the outcomes that can be achieved by effective social marketing (*i.e.*, voluntary behaviour change), the disease itself is fundamentally different to the majority of conditions to which social marketing has been applied. For example, Kotler's list of 50 major issues that social marketing can benefit includes 22 issues for improved health, 20 of which relate to chronic conditions such as tobacco use, physical inactivity, and dietary intake), but only two relate to communicable diseases and both of these have simple and proven preventive strategies (*i.e.*, immunisation and the use of condoms) [9].

There are a number of critical factors about a potential influenza pandemic that make it fundamentally different to the majority of issues to which social marketing has previously been applied.

- The production of a vaccine to protect people from a particular strain takes time as a vaccine cannot be developed until the ultimate form of the virus has been determined. Thus, for example, while the H1N1 vaccine was shown to be effective its ability to prevent deaths and reduce severity of infections was hampered by its late availability and subsequent limited coverage [5]. Further, there is often a reluctance to undertake vaccination due to concerns about lack of effectiveness or potential side effects, even among health care workers [6].
- Related to the barriers to adequate vaccination levels, and the virulent nature of the disease, effective prevention strategies require a combination of medical approaches (such as vaccination and anti-virals) and environmental/policy approaches (such as school closures) [7].
- While pandemic influenza would have a disproportionate impact on developing countries, the developed countries would also be affected with low income persons within these countries being at highest risk [10].

1.2. Would Pandemic Influenza Need Social Marketing?

We are selling a behavior: The most effective tools currently available for reducing mortality and morbidity from an influenza pandemic are basic hygiene and self-protection behaviours. It is generally agreed that “change agents typically want target audiences to do one of four things” [9]; however, in this case the required changes

include all four of the categories of behaviour change that social marketers address:

- a) Accept a new behaviour—encourage individuals to wear a face mask if they have symptoms or are exposed to others who have symptoms;
- b) Reject a potential behaviour—discourage individuals from engaging in a range of behaviours that could increase the spread of influenza such as frequenting places where large crowds gather;
- c) Modify a current behaviour—encourage individuals to wash their hands more frequently and thoroughly, and reduce unnecessary physical contact with other people; and
- d) Abandon an old behaviour—encourage individuals to stop using handkerchiefs and instead use disposable tissues.

The behaviour change is voluntary: The nature of these behaviours is such that the decision to engage, or not engage, in the behaviour is entirely voluntary. While there are some measures that could require policy changes or legal sanctions (such as closure of schools or increased quarantine procedures), most of the effective measures currently available are those for which it would not be possible to impose, or apply, the force of law—such as hand washing and the use of disposable tissues.

The beneficiary is the individual, group, or society: In the case of pandemic influenza, the beneficiaries of an individual's behaviour change include the individuals themselves (engaging in personal protection reduces their risk of contracting the disease), their families and social groups, and the population as a whole (by reducing potential sources of transmission).

We engage in an exchange with the consumer: In order to persuade individuals to engage in this voluntary behaviour change—particularly as many of the behaviours are effortful or are socially or psychologically challenging—we need to persuade consumers that the benefits of engaging in these behaviours exceed the perceived costs.

We need a consumer orientation: As with any social marketing program, the application of a consumer orientation is fundamental to the success of the behaviour change effort. In order to develop appropriate communication strategies, we need to fully understand the target audiences' knowledge, beliefs, attitudes, concerns and current behaviours. This can only be achieved by extensive and appropriate market research with the different target audiences.

We will need to select and influence a target audience: Market segmentation is a key component of effective social marketing, as we know that different market segments and different needs and will respond to different appeals. In the case of pandemic influenza, it is obviously important to target the entire population; however, some segments will be seen to be of higher priority (e.g.,

health care workers, international travellers, persons in low income housing units) and different strategies will need to be used to ensure we reach, and persuade, all groups within the population.

We will need to incorporate all 4 Ps of the marketing mix: As will be discussed in the following section, an effective strategy to engage the population in the appropriate responses to reduce the impact of pandemic influenza requires a careful consideration of the 4 Ps. In brief:

- **Product**—What we are “selling” is a set of behaviours that individuals can engage in to reduce their risk of contracting, and transmitting, pandemic influenza—it is likely these behaviours will change as the pandemic progresses and other control measures become available or are deemed necessary;
- **Price**—In order to persuade people to engage in these behaviours, we will need to reduce the perceived costs of engaging in them (financial, social, psychological etc.) and increase the perceived benefits (increased protection from the disease);
- **Place**—Given the need to provide information, services and products to the entire population, we will need to use a range of channels to disseminate information and facilitate the behaviour change (for example, medical practitioners, schools, workplaces); and
- **Promotion**—Given the potential for the disease to spread rapidly once it achieves effective human-to-human transmission, we will need to develop effective messages and a clear and comprehensive plan for the media channels for their dissemination.

2. KEY ELEMENTS OF SUCCESSFUL CAMPAIGNS

In their 2002 social marketing textbook, Philip Kotler and colleagues set out 12 elements of a successful campaign [9], which provide a useful framework for considering the issues involved in the development and implementation of a social marketing campaign in the event of pandemic influenza.

2.1. Take Advantage of What Is Known and Has Been Done before

Kotler and colleagues suggest that an important first step in developing a social marketing campaign is to review past and similar campaign efforts, as this provides “learning from the successes and failures of others, having access to existing detailed information on market segmentation and ideal targets, finding innovative and cost-effective strategies, and discovering ideas and materials for creative executions” (p. 52).

A key problem in developing social marketing strategies to target a potential pandemic influenza is the lack of knowledge (about the disease itself and about the tar-

get audiences’ likely responses) combined with limited potential to learn from what has been done before. The world has not experienced a pandemic influenza of significant severity since the Spanish flu in 1918, in which an estimated 20 to 50 million people died. While there were a large number of deaths from the H1N1 pandemic, this was not on the same scale as the 1918 pandemic; using data from the 1918 pandemic researchers estimated that an outbreak today would result in the deaths of between 51 - 81 million people, the vast majority being from developing countries [10]. It has also been suggested that incidence and mortality would be particularly high among young people; for example, a study of influenza-like illness among youth camp participants found that of the 136 contacts in the 41 households with an index case the odds ratio for secondary infection among children compared to adults was 3.1 [11].

It is also essential to note that the 1918 pandemic occurred in a fundamentally different social, political and technological world to that which we live in today. For example, with international travel the virus could literally be spread throughout the world within days or at the most weeks. For example, a study of infection rates among passengers seated near symptomatic passengers during the 2009 H1N1 pandemic found a small but definite risk of transmission during commercial air travel, with two of the 57 passengers seated within two rows of the infected individuals developing confirmed infections [12].

In addition, communication regarding the 1918 pandemic was extremely limited during the early phase of the pandemic, in part, because there was an attempt to protect the existing tourist trade. A pandemic occurring today would be known throughout the world in a matter of hours via the traditional electronic media channels. Uncontrolled communication via the internet would almost certainly exasperate any attempts to control what is being said about an outbreak. And, since 1918 the percent of the population residing in cities in both developing and developed countries has increased significantly making social distancing strategies much less likely to be effective (these strategies appear to have been quite effective during the 1918 epidemic).

However, tackling this global challenge can be facilitated by international collaboration and learning from the prior experiences of social marketers worldwide in tackling smaller-scale epidemics, such as severe acute respiratory syndrome (SARS). During, and immediately following, the SARS epidemic a number of studies were conducted in both Asia [13-16] and Canada [17]. Across the studies, adoption of precautionary measures was generally found to be associated with: having the outbreak occur in an area geographically close to where the person lived or worked; having moderate to high levels of anxi-

ety; having a higher perceived likelihood of contracting SARS; having previous contact with a SARS case; being female; being older; having a higher level of education; having high self-efficacy for performing protective behaviours; and having favorable attitudes towards SARS prevention measures.

2.2. Start with Target Markets That Are (Most) Ready for Action

Kotler and colleagues suggest that campaigns are more likely to be successful if they start with market segments most ready for action, that is those that: have a desire or need to adopt the behavior; have adequate knowledge of the benefits of the behavior; believe they can perform the behavior and will benefit from it; and are currently engaged in the behavior even if at an insufficient level.

This creates an interesting dilemma for a social marketing campaign targeting a potential pandemic influenza. The little research that has been done in relation to avian influenza, for example, suggests that a large proportion of the population will discount the potential risk as they perceive avian influenza to be either a nonexistent threat (that is, media hype) or a problem of “others” (that is, people in other countries dissimilar to their own). This is particularly the case in countries such as Australia, where the population perceives itself to be protected from such diseases due to the country’s geographic isolation.

Experience from SARS supports this proposition. For example while persons in Toronto Canada recognized and reacted to the threat of SARS, persons in Western Canada and the northeastern states in the US (with reasonably close geographical proximity) exhibited significantly less concern. However, waiting for the pandemic to occur within a country or a segment of a large geographical country such as the US is equally problematic as this would then involve attempting to raise awareness of, and engage people in, the necessary protective behaviors (some of which are quite complex) at the same time that people are experiencing high levels of fear and potential panic.

Thus, an effective social marketing campaign within countries would need an initial phase, prior to a pandemic occurring utilizing a “what if” approach in order to communicate the appropriate actions and engage people’s cooperation while they are in a relatively unconcerned frame of mind (*i.e.*, “if a pandemic influenza outbreak occurs in Australia, we will need to do x”). It is important that people come to understand that any recommended precautionary regimes represent effective—indeed, the best available defense against a pandemic. Such a message should be in place—and the nascent habits established—before any focused concerns arise.

More importantly, however, this demonstrates the need

for international collaboration in the development and dissemination of global social marketing campaigns which emphasize the interconnectedness of the world’s population and the need to act collectively to reduce the risk of a pandemic.

2.3. Promote a Single, Doable Behavior, Explained in Simple, Clear Terms

Kotler and colleagues emphasized the need of ensuring that we provide a simple, clear, action-oriented message; that is, our message needs to communicate in such a way that the target audience knows exactly what it is they should do and how they should do it.

The actions likely to be most effective in reducing the transmission of, and thus the morbidity and mortality from, pandemic influenza during the early phases of a pandemic are simple, doable behaviors. Primary among these are: more frequent and thorough hand washing; the use of disposable tissues rather than handkerchiefs; and the wearing of a face mask if experiencing symptoms or exposed to others with symptoms. In an Australian survey conducted in relation to avian influenza, the majority of respondents expressed a willingness to comply with the first two of these behaviors; there was reluctance to engage in the third [18,19]. However, while these behaviors appear to be simple and doable, the research has identified some problems with both the communication and the acceptance of these behaviors (such as “washing their hands” as thoroughly and frequently as needed). Thus, all communication materials would need to use clear terminology (such as “surgically washing” or “scrubbing” hands) and include visual guides to demonstrate the recommended behavior. Further, a coordinated international social marketing approach would need to take into account cultural and economic differences that may influence people’s willingness, and capacity, to engage in the recommended behaviors.

Thus, key objectives of the global social marketing strategy would be to a) raise awareness of the protective actions which are not top-of-mind but are likely to be readily engaged in by the audience (e.g., surgical washing of hands) and b) elicit the necessary attitude changes as a precursor to stimulate people to engage in less-accepted behaviors or not engage in inappropriate or ineffective behaviors.

It is important to note, however, that additional target behaviors are likely to be required as the pandemic progresses and this will necessitate the modification of the social marketing strategy. For example, when pandemic influenza cases occur within a specific geographical area it will likely be necessary to implement quarantine and social distancing strategies (e.g., staying away from public places, staying in your own neighborhood, closure of

schools). Ideally, a “what if” phase would precede the actual need for these measures to be implemented. Even when an effective vaccine becomes available there are likely to be significant challenges for developing the social marketing strategy based around such factors as availability of the vaccine, providing the vaccine to “priority persons/groups” first and expected concerns regarding the safety of the vaccine (such concerns quickly arose during the swine flu vaccination program in the US with some lawsuits still pending).

2.4. Consider Incorporating and Promoting a Tangible Object or Service to Support the Target Behavior

Kotler and colleagues suggest that the provision of tangible objects and services can assist in bringing about, and sustaining, behaviour change as well as providing opportunities for “branding” the campaign messages and measuring the impact of our social marketing program.

In the case of pandemic influenza this could include actions such as developing and distributing a clear visual guide on correct hand washing which could be taped above sinks in public and private bathrooms and would act to remind people of the importance of hand washing and provide them with clear guidance on the correct procedure. Given adequate time and resources, more comprehensive services or resources could be provided to key target audiences—for example, the provision of free liquid soap to low income families could be a key strategy for ensuring adequate hand washing in groups whose non-compliance with this behaviour may be due to lack of local resources rather than lack of willingness. Other options that could be pursued include the distribution of face masks and the establishment of health units throughout a geographical area to ensure access to vaccines once they are available for distribution.

2.5. Understand and Address Perceived Benefits and Costs

As discussed above in relation to the concept of “price”, Kotler and colleagues emphasise the need to decrease the perceived costs of (or barriers to) the recommended behaviours and increase their perceived benefits.

In the case of a pandemic influenza outbreak, there are the obvious direct financial costs of engaging in some of the recommended behaviours (such as the cost of soap, disposable tissues, and face masks) which will need to be addressed, particularly for disadvantaged or low-income groups. However, there are a number of indirect financial costs as well as non-financial costs which need to be understood and addressed.

One of the recommended behaviours in the event of a pandemic is to reduce exposure to potentially infected

individuals; thus, an important part of the pandemic strategy will be to encourage people to work from home and to keep their children home from school. It is likely that for significant proportions of the population in many countries, this will not be a feasible target. That is, even in developed countries, for those in casual, part-time, or non-salaried positions to remain home from work will likely mean not receiving an income while for working parents keeping their children home from school further restricts their capacity to attend work and earn an income. For those in less developed countries, or those on subsistence incomes, not working would result in being unable to purchase food or other essentials.

This need to reduce the level of physical contact between individuals and groups also carries with it considerable social cost, as does engaging in some of the more visible protective behaviours. Thus, it was not surprising that Australian research in the context of avian influenza found that many people are willing to engage in some personal protective behaviour (such as using disposable tissues) but are resistant to changing public or social behaviours (such as wearing face masks and not shaking hands) [18,19]. It is interesting to note that acceptance of these strategies in the event of an outbreak was higher in US-based surveys [20,21]; those living in the US would have more recent and direct experience of pandemic/epidemic infections (such as SARS), further demonstrating the need for social marketing strategies to understand the knowledge and attitudes of specific target audiences.

2.6. Make Access Easy

Kotler and colleagues make the point that, given the many demands on people’s time and resources, providing easy and convenient access to products, services, and information increases the likelihood that people will engage in the recommended behaviours.

The effectiveness of any social marketing strategy to combat pandemic influenza will be influenced by the extent to which the population can efficiently and effectively access information, services, and tangible objects which are needed to engage in the recommended protective behaviours.

In terms of tangible objects, while the world has not experienced a pandemic of any significant magnitude in many decades, we can learn from what has occurred in recent smaller-scale epidemics (such as SARS) as well as in natural and man-made disasters. One likely response is that people will attempt to stockpile items such as face masks, medications, and other protective and preventive materials. We have already seen this occurring in relation to the purchasing of antivirals (such as Tamiflu and Relenza) in the US, Europe and Australia when concerns of a pandemic were raised. As expected, those with the financial resources to do so obtain supplies of these medi-

cations “just in case” they are required. In addition, governments are currently stockpiling supplies of antiviral medications and developing protocols for the distribution of these to high-risk groups and essential medical personnel. One result of these actions is that the stocks of these antivirals become depleted to the level that people are likely to find it difficult to obtain them to treat current infections.

It will be essential to ensure that people have ready access to items such as tissues and face masks in public places as many are likely to be unprepared when they experience symptoms, or are exposed to others who appear to have symptoms, particularly at the onset of an infection. Strategies such as those used to increase use of condoms by having condom vending machines strategically placed where members of the target audience can easily access them (e.g., vending machines in public toilets, high schools and the placement of sunscreen lotions in lifeguard stands and beach-front convenience restaurants) should be considered to ensure public access to hand washing soap and face masks. It is equally important to ensure that the public can access these and other relevant products, services and information for use in their homes. The two primary factors that probably need to be addressed are the cost of purchasing the required products and services, and ease at which the public can access outlets where they can be purchased.

2.7. Develop Attention-Getting and Motivational Messages

The messages developed for any successful social marketing campaign need to be capable of attracting and retaining the attention of the target audience as well as providing them with sufficient motivation to change their current attitudes, beliefs and behaviours.

To ensure the public is aware, informed and capable of taking recommended actions, the public’s level of concern regarding an outbreak needs to be addressed throughout a public communication campaign. For example, Australian research indicates that once the media coverage of avian influenza declined the public’s level of awareness of, and concern about, bird flu dropped dramatically (when this occurred in Australia the media focus on meningococcal disease resulted in this becoming a key issue of concern for the general population) [22]. Thus, the overall communication plan needs to include strategies for ensuring that pandemic influenza remains foremost amongst the public’s concerns (*i.e.*, it is on “top of the public’s mind”).

Using a high-fear message is most likely to elicit behavior change when people have a high level of self-efficacy and response efficacy regarding simple and effective actions that people will be asked to take. For example, in the event of pandemic influenza, if people be-

lieve pandemic influenza is very serious (as data suggest they do) and they believe that they are at significant risk of getting pandemic influenza, the concern is that they will become psychologically paralyzed and do nothing, OR panic and take inappropriate actions. The latter undesirable outcomes are much less likely to occur IF they are told about simple actions that they believe they have the ability to take and will produce the desired result. This can be achieved with an ongoing, sequential mass media campaign.

2.8. Use Appropriate Media and Watch for and Exploit Opportunities for Audience Participation

Whilst there is a need to target the entire population, the highest risk groups are likely to be those with limited access to, or engagement with, media channels. For example, it is generally the better-educated, higher income (and thus less at risk) groups that read newspapers and have access to the Internet. What is required is to identify media channels that are most likely to reach a significant segment of the target audience. While television has a broad reach to all segments of the population in developed countries, a major problem is the proliferation of channel options (sometimes numbering over 100 when cable systems are involved). Thus it may be that other channels such as billboards, neighborhood newspapers and posters in carefully selected retail outlets (e.g., food stores, chemist shops) will be more effective than television for some of the selected target audiences. Another effective approach is likely to be dissemination via word-of-mouth. With this approach it is necessary to carefully identify the opinion leaders within each of the target audiences and then inform them of the pandemic influenza messages that require transmission. An obvious limitation of this strategy is the inability to assure that the desired pandemic influenza message is being completely and accurately transmitted to members of the target audience.

2.9. Provide Response Mechanisms That Make It Easy and Convenient for Inspired Audiences to Act on Recommended Behaviors

Australian research in relation to avian influenza suggests that the intermediaries the public are most likely to seek information and guidance from in the event of a pandemic influenza outbreak is their own general practitioners [18,19]. Systems and procedures are required to enable general practitioners (GPs) to effectively respond as default intermediaries for the public. GPs need to be active partners in communicating with the general public about pandemic influenza as they are the preferred pri-

mary point of contact. To function effectively as partners they need to be provided with the information and resources to deal with the expected influx of concerned and infected patients. Given the current nebulous nature of the risk, and the many competing priorities that GPs have, engaging them in advance of a pandemic is likely to be problematic.

It is important that all communication intended for intermediaries be developed, pre-tested and disseminated well in advance of any communications directed at the public. This communication needs to provide clear advice on what the intermediaries need to know about a pandemic influenza outbreak and why, as well as what actions they should take to minimize public panic and increase the public's likelihood of complying with recommended control measures. These intermediaries will be a key distribution point for resources as well as information thus need to be equipped with the resources to fulfill this role—for example, “pandemic preparation kits” containing tissues, facemasks, gloves, posters for household bathrooms and kitchens, and other information materials.

2.10. Implementation and Evaluation

Kotler and colleagues' final three elements of success relate to the provision of adequate resources for *media and outreach*, for *research* and to *track results and make adjustments*. Clearly, in the event of pandemic influenza, the governments of those countries who can afford to do so will need to provide adequate financial resources for the development and dissemination of information campaigns and protective equipment. They will also need to be prepared to commit adequate resources to research and to campaign tracking and evaluation—although their capacity to make needed changes in media messages and produce and distribute protective items such as face masks will likely be limited due to the expected speed with which the pandemic will spread.

On the other hand, governments of countries in the developing world, who will be the hardest hit by pandemic influenza, will not have the resources (financial, physical, or personnel) to commit and thus will be dependent on the largesse of their wealthier neighbors if they are to develop any capacity to conduct research, implement social marketing campaigns, and evaluate the outcomes of their social marketing strategies. Assisting these countries develop and implement social marketing campaigns is in the best interests of the developing and developed countries as successful containment efforts in the developing countries that are initially effected by pandemic influenza would be expected to reduce the spread of the diseases or at the very least increase the time required for it to spread to other developing and developed countries.

3. CONCLUSIONS

The potential pandemic influenza poses a major challenge for global social marketing. In the event that a pandemic does occur, social marketers throughout the world (along with governments, health services, and businesses) will face a task on a scale which has not previously been experienced—in terms of both the potential for widespread mortality and the speed with which high-quality comprehensive social marketing campaigns will need to be mounted. This would perhaps provide the ultimate test of the efficacy of social marketing as a tool for bringing about behavior change for the benefit of the individual, group and society.

Developers of social marketing campaigns will face a number of challenges, including: the need to raise awareness and concern about pandemic influenza to a level that motivates consumers to respond but not to a level that causes public panic; the need to ensure that there are clearly identified control measures that the public can take prior to and during a pandemic influenza outbreak, and that there is a strategy for communicating these measures in an effective manner to the public; and the need to convince persons that they need to comply with all of the recommended control measures, not just those that they personally believe are important. Further, they will need to have an associated strategy for their social marketing campaigns targeting intermediaries—such as general practitioners and other medical personnel, schools, business owners, and commercial and public organizations which could be utilized to disseminate information and resources.

Perhaps the most significant challenge for social marketing is apathy—both from consumers and from those who could potentially communicate with them. There is general consensus within the scientific community that pandemic influenza will occur but there is no consensus on when it will occur. The estimates regarding how widespread or virulent it will be vary significantly but even the most conservative estimates involve millions of deaths. Given these uncertainties, social marketers (like consumers) may be tempted to take a “wait and see” approach, reasoning that we should not waste financial and academic resources on researching and developing campaigns for a problem that may not eventuate. Taking such an approach is socially irresponsible given the consequences of an actual outbreak—presumptive planning and action is the only socially responsible approach.

4. ACKNOWLEDGEMENTS

The study reported in this paper was part of a program of research funded by the Australian National Health and Medical Research Council under the Council's urgent research funding scheme.

REFERENCES

- [1] Butler, D. (2006) Pandemic “dry run” is cause for concern. *Nature*, **441**, 554-555. doi:10.1038/441554a
- [2] Ungchusak, K., Auewarakul, P., Dowell, S.F., Kitphati, R., Auwanit, W., Puthavathana, P., Uiprasertkul, M., Boonak, K., Pittayawonganon, C., Cox, N.J., Zaki, S.R., Thawatsupha, P., Chittaganpitch, M., Khontong, R., Simmerman, J.M. and Chunsutthiwat, S. (2005) Probable person-to-person transmission of avian flu influenza A (H5N1). *New England Journal of Medicine*, **352**, 333-340. doi:10.1056/NEJMoa044021
- [3] Wulandari, F. and Lyn, T.E. (2006) Indonesia struggles to track H5N1 source, two more die. <http://www.medscape.com/viewarticle/532937>
- [4] Viboud, C. and Simonsen, L. (2012) Global mortality of 2009 pandemic influenza A H1N1. *The Lancet Infectious Diseases*, **12**, 651-653. doi:10.1016/S1473-3099(12)70152-4
- [5] Valenciano, M., Kissling, E., Cohen, J.-M., Oroszi, B., Barret, A.-S., Rizzo, C., Nunes, B., Pitigoi, D., Camara, A.L., Mosnier, A., Horvath, J.K., O'Donnell, J., Bella, A., Guiomar, R., Lupulescu, E., Savulescu, C., Ciancio, B.C., Kramarz, P. and Moren, A. (2011) Estimates of pandemic influenza vaccine effectiveness in Europe, 2009-2010: Results of influenza monitoring vaccine effectiveness in Europe (I-MOVE) multicentre case-control study. *PLOS Medicine*, **8**, e1000388.
- [6] Brandt, C., Rabenau, H.F., Bornmann, S., Gottschalk, R. and Wicker, S. (2011) The impact of the 2009 influenza A(H1N1) pandemic on attitudes of healthcare workers toward seasonal influenza vaccination 2010/11. *Euro Surveillance*, **16**, 19854. <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19854>
- [7] Andradottir, S., Chiu, W., Goldsman, D., Lee, M.L., Tsui, K.-L., Sander, B., Fisman, D.N. and Nizam, A. (2011) Reactive strategies for containing developing outbreaks of pandemic influenza. *BMC Public Health*, **11**, S1-S15. doi:10.1186/1471-2458-11-S1-S1
- [8] Kotler, P. and Zaltman, G. (1971) Social marketing: An approach to planned social change. *Journal of Marketing*, **35**, 3-12. doi:10.2307/1249783
- [9] Kotler, P., Roberto, N. and Lee, N. (2002) Social marketing: Improving the quality of life. 2nd Edition, Sage Publications Inc., Thousand Oaks.
- [10] Murray, C., Lopez, A.D., Chin, B., Feehan, D. and Hill, K.H. (2006) Estimation of potential global pandemic influenza mortality on the basis of vital registry data from the 1918-1920 pandemic: A quantitative analysis. *Lancet*, **368**, 2211-2218. doi:10.1016/S0140-6736(06)69895-4
- [11] Sugimoto, J.D., Borse, N.N., Ta, M.L., Stockman, L.J., Fischer, G.E., Yang, Y., Halloran, M.E., Longini, I.M. and Duchin, J.S. (2011) The effect of age on transmission of 2009 pandemic influenza A (H1N1) in a camp and associated households. *Epidemiology*, **22**, 180-187. doi:10.1097/EDE.0b013e3182060ca5
- [12] Baker, M., Thornley, C., Mills, C., Roberts, S., Perera, S., Peters, J., Kelso, A., Barr, I. and Wilson, N. (2011) Transmission of pandemic influenza a (H1N1) on a passenger aircraft. *Journal of Epidemiology and Community Health*, **65**, A174. doi:10.1136/jech.2011.142976f.79
- [13] Leung, G.M., Ho, L.M., Chan, S.K., Ho, S.Y., Bacon-Shone, J., Choy, R.Y., Hedley, A.J., Lam, T.H. and Fielding, R. (2005) Longitudinal assessment of community psychobehavioural responses during and after the 2003 outbreak of severe acute respiratory syndrome in Hong Kong. *Clinical Infectious Diseases*, **40**, 1713-1720. doi:10.1086/429923
- [14] Leung, G.M., Lam, T.H., Ho, L.M., Ho, S.Y., Chan, S.K., Wong, I.O. and Hedley, A.J. (2003) The impact of community psychological responses on outbreak control for severe acute respiratory syndrome in Hong Kong. *Journal of Epidemiology and Community Health*, **57**, 857-863. doi:10.1136/jech.57.11.857
- [15] Liu, J.-T., Hammit, J.K., Wang, J.D. and Tsou, M.W. (2005) Valuation of the risk of SARS in Taiwan. *Health Economics*, **14**, 83-91. doi:10.1002/hec.911
- [16] Tang, C.S.K. and Wong, C.-Y. (2003) An outbreak of the severe acute respiratory syndrome: Predictors of health behaviours and effect of community prevention measures in Hong Kong, China. *American Journal of Public Health*, **93**, 1887-1888. doi:10.2105/AJPH.93.11.1887
- [17] Blendon, R.J., Benson, J.M., DesRoches, C.M., Raleigh, E. and Taylor-Clark, K. (2004) The public's response to severe acute respiratory syndrome in Toronto and the United States. *Clinical Infectious Diseases*, **38**, 925-931. doi:10.1086/382355
- [18] Jones, S.C., Iverson, D. and Waters, L. (2009) Just don't eat chicken: The challenge of engaging Australian adults in appropriate preventive behaviours for bird flu. *International Journal of Nonprofit & Voluntary Sector Marketing*, **15**, 78-90.
- [19] Jones, S.C. and Iverson, D. (2008) What Australians know and believe about bird flu: Results of a population telephone survey. *Health Promotion Practice*, **9**, 73S-82S. doi:10.1177/1524839908322112
- [20] Blendon, R., Benson, J.M., Weldon, K.J. and Herrmann, M.J. (2006) Pandemic influenza survey. 28 September- 5 October. http://www.hsph.harvard.edu/panflu/panflu_release_topline.doc
- [21] Blendon, R.J., Benson, J.M., Fleischfresser, C., Weldon, K.J. and Herrmann, M.J. (2006) Avian flu survey. 17-25 January. www.hsph.harvard.edu/disasters/articles/Loree-Blendon.pdf
- [22] Jones, S.C., Iverson, D., Gold, J. and Puplick, C. (2007) Potential avian influenza-induced pandemic: Minimising public panic. Report to the NHMRC, Centre for Health Initiatives, University of Wollongong, Wollongong.