

Benefits of Increased Collaboration between External Stakeholders and Federal Health Care Institutions: an Evidence-Based Approach

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Abstract

This research project addresses the benefits of collaboration in public health between United States' (U.S.) federal health care institutions and external stakeholders (E.S.). Employees, various heads of department from The University of Iowa Hospital & Clinics (UIHC), and residents of both Iowa and Coralville Cities in Iowa were interviewed from April to May 2015.

Keywords: collaboration; external stakeholders (E.S.); funding

1. Introduction

Public health is a field of science that mainly addresses prevention of diseases within a population. Public health consists of organized efforts to improve the health of populations [1]. The task of accomplishing disease prevention in a population requires a collaborative approach between health care and public health professionals respectively. Modern research methods have not adequately proven that collaboration between U.S. federal health care institutions and E.S. is sufficient in some underserved regions of the U.S. Increased funding (U.S. dollars) leads to better compensation of health care professionals, more funds for research-driven projects such as development of modern treatment for cancer and other diseases, and subsequently better delivery of health care services.

However there seems to be a form of resistance or lack of knowledge by some public health leaders with some health care officials in adopting newer concepts of collaboration in some U.S federal health care institutions. Instead, some heads of department in U.S. health federal institutions still rely on single or lone-leader type of management principles that results in immense expectations and pressure on such leaders in performing their duties.

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New networks must be created, older ones coopted or neutralized – these networks range from highly informal, in which the main activity is information sharing, to more organized shared-power arrangements [2]. In some remote parts of the U.S. such as Iowa, Wyoming, Montana, Alaska, North and South Dakota, public health management at federal level is hindered by inadequate staff, few or limited E.S., lack of funds, disease outbreaks resulting from lack of uneducated persons on benefits of vaccination, and failure to embrace modern public health management principles. Both European and U.S. public health systems face an array of structural challenges in responding public health threats such as pandemic flu [3].

One reason for such drawbacks in public health spheres as previously mentioned is poor organizational structure and management where they may exist. Multiple parallels between European and U.S. public health systems being that both systems are federalist in nature with existing tensions between centralized and decentralized authorities that has resulted in budget constraints at all government levels limiting available resources in public health structures [4].

2. Materials and Methods

2.1 Description of Study Algorithm

Well-structured and concise questionnaires were used to collect responses from a total of 101 interviewees. The dependent variable (y) was labeled - importance of funding from envisioned collaborative benefits. The independent variables (x) were labeled - aware of collaboration benefits (b_1x), unaware of collaboration benefits (b_2x), collaboration with stakeholders (b_3x), and do not collaborate with stakeholders (b_4x). A scoring algorithm was developed to score responses from all interviewees. A score of 0-3 translated to insufficient knowledge in reference to the research topic, 4-7 translated to average knowledge where as 8-10 translated to excellent knowledge of the research topic with associated collaborative health care benefits.

2.2 Study Design

A cross sectional observational study that comprised of questionnaires was conducted in two cities namely Coralville and Iowa that are both located in eastern Iowa. The proposed null hypothesis (H_0) states that there is no need for increased collaboration between federal health care institutions and private investors or external stakeholders. The alternative hypothesis states that there is a need for increased collaboration between federal health care institutions and private investors or external stakeholders. Sample size was calculated using the formula, sample size = $[Z_{1-\alpha/2} P(1-P)]/d^2$ where $Z_{1-\alpha/2}$ is = standard normal variate at 5% type 1 error ($P < 0.05$) is at 1.96 and 1% type 1 error ($P < 0.01$) is 2.58. As in the majority of studies P values are considered significant below 0.05 hence 1.96 is used in this formula [5]. Sample size (n) of 101 persons constituted the total number of persons interviewed. The sample size (n) was large enough and resulted in attaining significant statistical significance on completion of data analysis. Any test for statistical significance is very sensitive to sample size [6]. A p value was set at 0.05 i.e. $p < 0.05$. Marginal statistical significance was set at $P < 0.05-0.102$. Descriptive statistics and multivariate regression analysis were both used to analyze all data that was collected.

3. Results

As previously mentioned, a total of 101 persons were interviewed and constituted the total sample size (n) of the study. The dependent variable (y) was importance of funding from envisioned collaborative benefits. The independent variables (x) were aware of collaboration benefits (b_1x), unaware of collaboration benefits (b_2x), collaboration with stakeholders (b_3x), and do not collaborate with stakeholders (b_4x). The regression equation was as follows: $y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4$, where b_0 refers to the y-intercept and slope. [7]. Estimates of the coefficients of the multiple regression equation are as follows: $b_0 = 3.766$, $b_1x_1 = 0.033$, $b_2x_2 = 0.154$, $b_3x_3 = 0.264$, $b_4x_4 = 0.0631$. The regression equation relating awareness of collaboration benefits, unaware of collaboration benefits, collaboration with stakeholders, does not collaborate with stakeholders to importance of funding is therefore $y = 3.766 + 0.033 (b_1x_1) + 0.154(b_2x_2) + 0.264 (b_3x_3) + 0.0631 (b_4x_4)$ where y is the estimated importance of funding. The p -values for the tests of significance associated with being unaware of collaboration benefits and collaboration with stakeholders are $p = 0.174$ (marginally significant) and $p = 0.0103$ respectively. The p -values indicate that there is a statistically association between the importance of funding and collaboration with stakeholders accounting for unawareness of collaboration benefits. The proposed null hypothesis (H_0) states that there is no need for increased collaboration between federal health care institutions and private investors or external stakeholders was rejected based on results from the regression analysis. The 95% Confidence interval (CI) for importance of funding, collaboration with stakeholders, unawareness of collaboration benefits was 0.36, 0.35, and 0.35 respectively. Means (a measure of central tendency) of 7.188, 6.75, and 6.61 represented the importance of funding, collaboration with stakeholders and unawareness of collaboration benefits respectively. Closeness of figures from calculations of the latter three means and CIs, suggests that responses from interviewees in these sections tended to be representative of the entire population. Significance of p -values with tight CIs illustrates ample statistical evidence that is necessary for both extrapolation and inference the latter research findings to the entire population as previously cited in medically underserved regions in the U.S.

5. Conclusion and Recommendations

This research project has proven via evidence-based methods that more public health collaboration in federal health care institutions in medically underserved areas in U.S. require immediate attention. Making informed financially based decisions and strategic planning of federal healthcare institutions by administrators in such jurisdictions can be made easier from conceptualizing and comprehending results from this research project. Collaboration strategies are used to produce policy change and to make improvements in the local delivery of programs and services [8]. Better delivery of health care services via health management and policy-making processes may be improved via incorporating external partnerships with federal health care institutions. Health management and policy is the discipline that is most concerned with issues of health care access and the policies at various levels of an organization or government, as well as how these policies impact health outcomes [9]. Additional major implications of this project include accountability, better crisis management, and improvement in leadership-development programs. Collaboration and its leadership aspects can best be seen at a local level where there seems to be greater accountability [8,10].

A better public health comprehension by public health leaders and E.S. is essential. Prepared public health leaders need to be flexible and adaptable to change circumstance [8].

Acknowledgements

Special appreciation to Gretchen Cress RN, MPH., who is a licensed registered and research nurse at The University of Iowa Hospital and Clinics (UIOWA). Her outstanding mentorship and guidance through out the research project from start was very instrumental leading to the successful completion of this research project

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