

# Disseminating Health Disparities Education Through Tele-learning

LaSonya KNOWLES, Anissa LEWIS, Denaë KING, Lovell JONES  
Dept of Health Disparities Research, The University of Texas M. D. Anderson Cancer Center  
Houston, Texas 77030, USA

## ABSTRACT

Twenty years of research demonstrate that there are wide disparities in health throughout America. Health disparities are differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist when specific population subgroups are compared. Health Disparities in America: *Working Toward Social Justice* is a course instructed every fall by Dr. Lovell Jones, director of The Center for Research on Minority Health (CRMH) at UT M.D. Anderson Cancer Center. The CRMH has created a course that examines the social and societal factors that are fundamental in creating disparities in health. Students from 10 different academic programs and institutions participate in this course. The course is unique in the aspect that various, diverse speakers whom are experts in their field of study instruct each class. This health disparities course is conducted at one of three different academic institutions in the Houston area and broadcast via satellite to various academic institutions by means of tele-education. Tele-education is defined as a mode of instruction utilizing different forms of media such as video, audio technology tools and computers. Video and audio technologies involve the transmission of interface between learners and instructors, either interactive or non-interactive. Tele-education technologies have an important role to play in addressing the dissemination of health disparities education. The purpose of this program is to determine the feasibility of tele-education as a mode of instruction to introduce the multi-disciplinary

components of health disparities. Our findings suggest that tele-education is a useful tool in imparting health disparities education.

## INTRODUCTION

Over twenty years of research demonstrate that there are wide disparities in health throughout America. Health disparities are differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist when specific population subgroups are compared [1]. The 2002 report by the Institute of Medicine, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare* discerned that there is overwhelming evidence that racial and ethnic disparities in healthcare exist regardless of socioeconomic status [2]. A subsequent report and state report cards have also demonstrated the need to ameliorate disparities related to various aspects of health, race/ethnicity, and socioeconomic status [3]. In 2000, Lovell A. Jones, PhD, Professor of Health Disparities Research at The University of M. D. Anderson Cancer Center in Houston, Texas founded the Center for Research on Minority Health (CRMH). One of the primary goals of the CRMH is to seek to address disparities in cancer patient care, research, education and prevention. It is the first congressionally mandated center on minority health disparities outside of the federal government. The CRMH is comprised of a research, clinical, and education core. The goal of the CRMH's Educational Core is to increase the number of individuals in health disparities

research by creating unique educational programs and linking them to existing programs [4]. The CRMH's Education Core is solely responsible for creating and administering the CRMH educational programs. The programs are sponsored solely by the CRMH or in conjunction with other academic centers. In addition to the health disparities course, a CRMH sponsored course discussing health disparities and human genomics has also been offered annually.

## **BACKGROUND**

In an effort to increase the awareness of health disparities research as an area of academic interest, the CRMH created an annual academic course entitled *Health Disparities in America: Working Toward Social Justice*. Dr. Lovell Jones, director of the CRMH, instructs this course each fall semester. This course examines the social and societal factors that are fundamental in creating disparities in health. The course is officially offered at the University of Houston, Rice University, and a historically minority serving institution, Texas Southern University. While the course is officially held at each fall semester at one of these 3 institutions, undergraduate and graduate students from 10 different academic programs and institutions actually participate in the health disparities course. These institutions include Rice University, University of Houston, Texas Southern University, The University of Texas Health Science Center, Graduate School of Biomedical Sciences, The University of Texas School of Nursing, The University of Texas Health Science Center-Tyler, Florida A&M University (FAMU), The University of Texas Health Science Center-San Antonio, and Texas A&M University-Corpus Christi.

The development of this course has also lead to the creation of the Health Disparities Education, Awareness, Research and Training (HDEART) Consortium. This consortium is an entity of

more than 28 major institutions and hospitals located in and near the Texas Medical Center.

The course is unique in the aspect that various, diverse speakers whom are authorities in their field of study instruct each class. As the consortium and the number of participating institutions grew there was a need to find a way to disseminate this course on a broader scale. The course is conducted at one of the three collaborating academic institutions in the Houston area and broadcast via satellite to various academic institutions by means of tele-education. The purpose of this project is to determine the feasibility of tele-education as a mode of instruction to present the multi-disciplinary components of health disparities.

## **INTERGRATION OF TECHNOLOGY**

Tele-education has been defined as a mode of instruction through different forms of media such as video, audio technology tools and computers [5]. Video and audio technologies involve the transmission of interface between learners and instructors, either interactive or non-interactive. Tele-education technologies have an important role to play in addressing the dissemination of health disparities education. Through the integration of this technology we are able to broadcast this class to other universities real-time. The most recent course was broadcasted from University of Houston-Main Campus. During this telecast four other universities are displayed on the screen simultaneously and the schools can interact with each other through audio and visual technology. Rice University also has 11 screens simultaneously displaying classrooms at other universities to other schools with interaction abilities. Students in person and via telecast attend the course. The course is also available via a live internet broadcast on Rice University's web site.

A multidisciplinary team is required to get all facets in place. This team should consist of technical personnel, facilities management,

equipment personnel and a coordinator for the course at each site. The institutions must have an experienced and dedicated technical person that is available to ensure that each site has the capabilities to participate in the course. Technical problems are always present; therefore it is imperative that each site coordinator is available during the entire duration of the broadcast.

Each participating institution has to be technologically up-to-date in regard to their media's audio and visual capabilities. The media should be previously tested to guarantee the best outcome for the site. Each classroom must also have accommodations for students at each satellite locations. Each satellite location should be equipped with audiovisual means that allow participants to not only see and hear the guest speaker/lecture but also ask questions and orally participate during class.

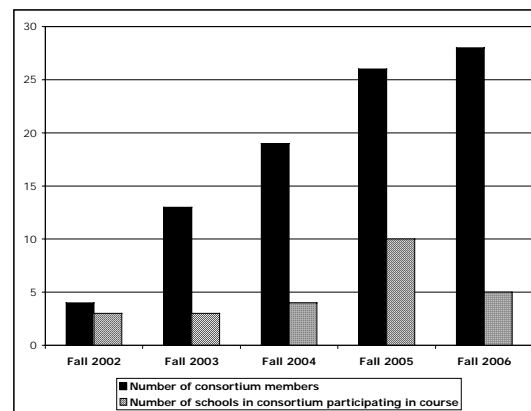
## RESULTS (OUTCOMES) AND CHALLENGES

The purpose of this project is to determine the feasibility of tele-education as a mode of instruction to introduce the multi-disciplinary components of health disparities. Through the use of tele-education we found that it is feasible for academic institutions to participate in this course via telecast. In order for academic institutions to participate in the course consideration has to be given to personnel, technology, equipment and an accommodating location. Extensive planning and preparation prior to taking on this educational endeavor will allow the planning team to arrange and execute a successful outcome.

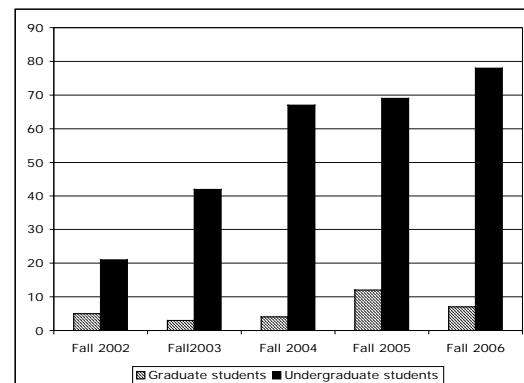
Since inception of the course there has been a steady increase in the number of consortium members. Figure 1 illustrates a decrease in the number of participating schools from 2005 to 2006. The number of participating schools increased from 19 in 2004 to 26 in 2005. From 2005 to 2006 there was a decrease in the

number of participating schools by 50%. There was a steady increase in the interest in participation of the course due to the subject matter of health disparities. The number of participating schools decreased due to technical difficulties. Therefore, the need for a dedicated technical person to manage the modes of media of each participating institution in the course via tele-education was not foreseen.

**Figure 1: Comparison of number of increase in consortium members to number of schools in consortium participating in the course from 2005 to 2006.**



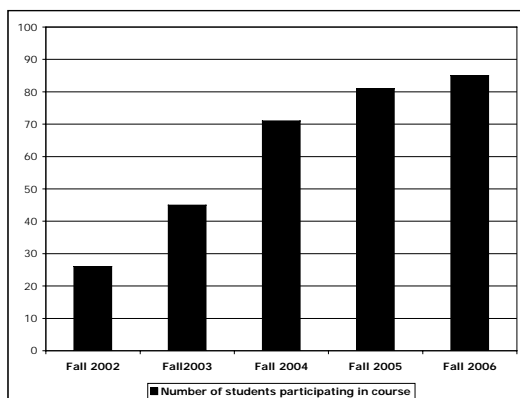
**Figure 2: Comparison in the number of graduate to undergraduate students participating in the course from 2002 to 2006.**



The initial year of the course was 2002. At that time, the number of consortium members was four. The number of schools that were members of the consortium and were participating in the course was three. There is a gradual increase from 2002 to 2005 in the

number of consortium members and participating schools. From the 2005 to 2006 there is a drop in participating schools from 10 to 5, although the consortium continued to increase. There is also a drop in graduate student participation from 12 to 7. In comparing Figure 1 to Figure 2, a possible explanation for the drop in graduate students may be a decrease in the number of schools participating in the course. Two of the schools participating lacked a dedicated technical person to administrate the course. The course is offered in the evening, and is three hours long, which requires technical personnel to be available for the entire course.

**Figure 3: Increase in overall number of students participating in the course from 2002 to 2006.**



A steady increase in the number of students participating in the course from 2002 to 2006 is shown in Figure 3. The popularity of the course is growing because of its uniqueness and continues to be appealing to other institutions.

## CONCLUSIONS AND FUTURE WORK

Our findings suggest that tele-education is a useful tool in imparting health disparities education. If accessibility issues are resolved early in the initial stages of preparing to participate in the course via telecast or web cast the course can be successfully broadcast. Preparation for the Fall 2007 course has already begun. Thus far we have two additional schools that will participate in the course, three potential schools have expressed interest in the course and one more possible consortium member. For the Fall 2008, a fourth academic institution will be added to the rotation as a host school for the health disparities course. Our goal is to continue to increase the number of participating institutions and use tele-education on a much broader scale as a tool to disseminate health disparities.

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