

## **Teledermatology in the Delta**

Mississippi Dermatological Society  
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Mission: Provide teledermatology care for the underinsured and underserved people of the Mississippi Delta, one of the poorest areas in the nation.

## **Abstract**

The University of Mississippi Medical Center (UMMC) Department of Dermatology will partner with the Mercy Delta Express Project's (MDEP) two clinics, in Rolling Fork and Anguilla, Mississippi, to deliver teledermatology care to underserved patients in the Mississippi Delta, which is the economically poorest region of Mississippi. In addition, a UMMC medical student with an interest in dermatology will receive a summer fellowship grant in 2016 to provide technical support to primary care physicians, emergency room physicians, nurses and nursing students as they learn to send store-and-forward teledermatology images and information to our faculty dermatologists. A survey will be administered to the physicians in the Delta before and after contact with the medical student to assess barriers to teledermatology referrals and our ability to overcome those barriers. The number of teledermatology consultations that emerge from this region will serve as a primary measure of success for this project. Our dermatologists will provide full service medical, pediatric, and surgical dermatology, with the exception of Patch Testing, Mohs surgery and cosmetic services, when patients need triage to the UMMC MDEP clinics for face to face visits at our monthly volunteer dermatology clinics which are currently being established.

## **Goals and Objectives**

Goal 1.

Provide dermatologic care to everyone, even those who live in the poorest region of Mississippi.

Objective 1.

Provide technical support to allow health care providers in the Mississippi Delta to easily and seamlessly send teledermatology consultations to UMMC dermatologists using a store-and-forward system.

Goal 2.

Develop technologic partnerships with health care providers in the Mississippi Delta through a teledermatology platform to increase opportunities to provide dermatologic care to those most in need.

Objective 2.

Determine the barriers to adoption of teledermatology in the Mississippi Delta and devise systems to overcome these barriers.

Write a manuscript of publishable quality describing barriers to adoption of teledermatology in poor regions of the country and solutions to overcome these barriers.

## **Project Design, Methods and Evaluation**

### Timeline

The grant funds would support UMMC's Department of Dermatology in providing dermatologic care through teledermatology for one year using an iPad and two cameras funded by the Department of Dermatology.

### Project design

Mississippi's population is the sickest and most obese in the nation, while also having the second-highest rate of diabetes, lowest education level and shortest life expectancy. A quarter of the nearly three million residents live at or below the poverty line, and about 17 percent of residents lack health insurance, as Mississippi does not participate in the Affordable Care Act. The state also has the least per capita dermatologists of any state, with only 48 physicians for the above-mentioned three million citizens, and 20 of these dermatologists are over the age of 65. The economic impact of untreated and under-treated skin disease in a Southern state with skin disease potentiated by heat and UV light is very great and can be measured in increased mortality from melanoma, lost work and decreased productivity rooted in poor quality life because of itching, cutaneous infections and cutaneous malignancies.

UMMC is recognized as a leader in telehealth across the nation. The clinical services incorporated into this network are based on existing gaps in clinical services in Mississippi. UMMC reaches patients in rural and underserved areas every day through telemedicine services in community hospitals, corporate settings, schools and prisons. This program will build off of an established network with the required strategic partners and telehealth network to make this a success. UMMC Dermatology would partner with the Mercy Delta Express Project's two clinics, in Rolling Fork and Anguilla, Mississippi, to provide teledermatology care to patients. With this grant, a UMMC student in the summer following his first year of medical school (2016) will provide technical support to primary care physicians, Nurse Practitioners, Physician Assistants, nurses and nursing students as they send store-and-forward teledermatology images and information to our dermatologists. The student also will administer a survey with a before-and-after component to gain an understanding of the barriers to utilizing teledermatology and determine whether the "hands-on" technology education in the field can help to break down these barriers. IRB approval will be obtained.

All information shared will be secure and protected according to HIPAA regulations.

### Participants

Mississippi Dermatological Society

University of Mississippi Medical Center

- Department of Dermatology

- Robert Brodell, MD, chair
  - Jasmine Hollinger, MD, assistant professor
- School of Nursing
  - Lisa Haynie, PhD, professor
- Center for Telehealth
  - Kristi Henderson, DNP, Director

### Delivered Product

Full service medical, pediatric, and surgical dermatology services will be provided with the exception of Patch Testing, Mohs surgery and cosmetic services to residents in the Mississippi Delta.

### Outcome measures

1. Number of consults by location
2. Travel miles saved
3. Diagnoses
4. Disposition by categories – discharge with local treatment, referral for in-person visit, referral to UMMC
5. Number of skin cancers diagnosed
6. Number of participants in cancer prevention educational offerings
7. Satisfaction – patient, referring provider, teledermatologist

## **Project Timeline/Budget Timeline**

January 2016

- Begin recruiting an interested student for the teledermatology summer fellowship

February 2016

- Interview students for the position

March 2016

- Purchase two cameras and one iPad
- Finalize student hiring

April 2016

- Teach student how to operate the equipment for its teledermatology purpose
- Transport equipment to the locations in the Delta

May 2016

- Begin teledermatology with the clinic sites in Rolling Fork and Anguilla.
- Student works with physicians, nurses and nursing students on how to operate the equipment