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# Rheumatoid Arthritis Self-Management through a Smartphone App

Rapid Communication Presentation

**Sponsored by CENTRIC** www.unmc.edu/centric | centric@unmc.edu

**C**enter for Patient Family and Community **En**gagemen**t** in Ch**r**on**ic** **C**are Management: Chronic Interest Group

## Research Goals

- Improve self-management in patients with rheumatoid arthritis (RA) using a smartphone app

- Gather data on RA symptom trigger flares

- Improve communication between providers and patients with RA

## Current Funding

- 2017: CENTRIC Pilot, "Rheumatoid Arthritis Self-Management through a Smartphone App", $40,000

- Dr. Michaud has a long standing history of funding in RA research

## CENTRIC Pilot Study

This pilot study will identify whether a smartphone application can help patients self-manage their RA and improve their health outcomes determining:

1. **Is the application usable and valid?**
2. **Will the app improve self efficacy and patient activation?**

- Smartphone app allows patients with RA to collect patient-reported outcomes (PROs) and to take objective measurements of the impact of RA on their finger joints.

- Collected over time, analysis of these PROs and finger joint deformations can be shared with health care providers, aide in treatment decisions, and improve daily self-management behaviors.

- 80 individuals (40 in experiment group (EG) and 40 in control group (CG)) from the Rheumatology and Arthritis Investigational Network Data Base (RAIN-DB).

- EG participants will collect data weekly for 6 months. Before and after study participation, the EG will complete the Patient Activation Measure (PAM) and the PROMIS Self efficacy of managing symptoms.

- The age- and gender-matched CG not using the smartphone application will complete the same metric questionnaires as the EG.
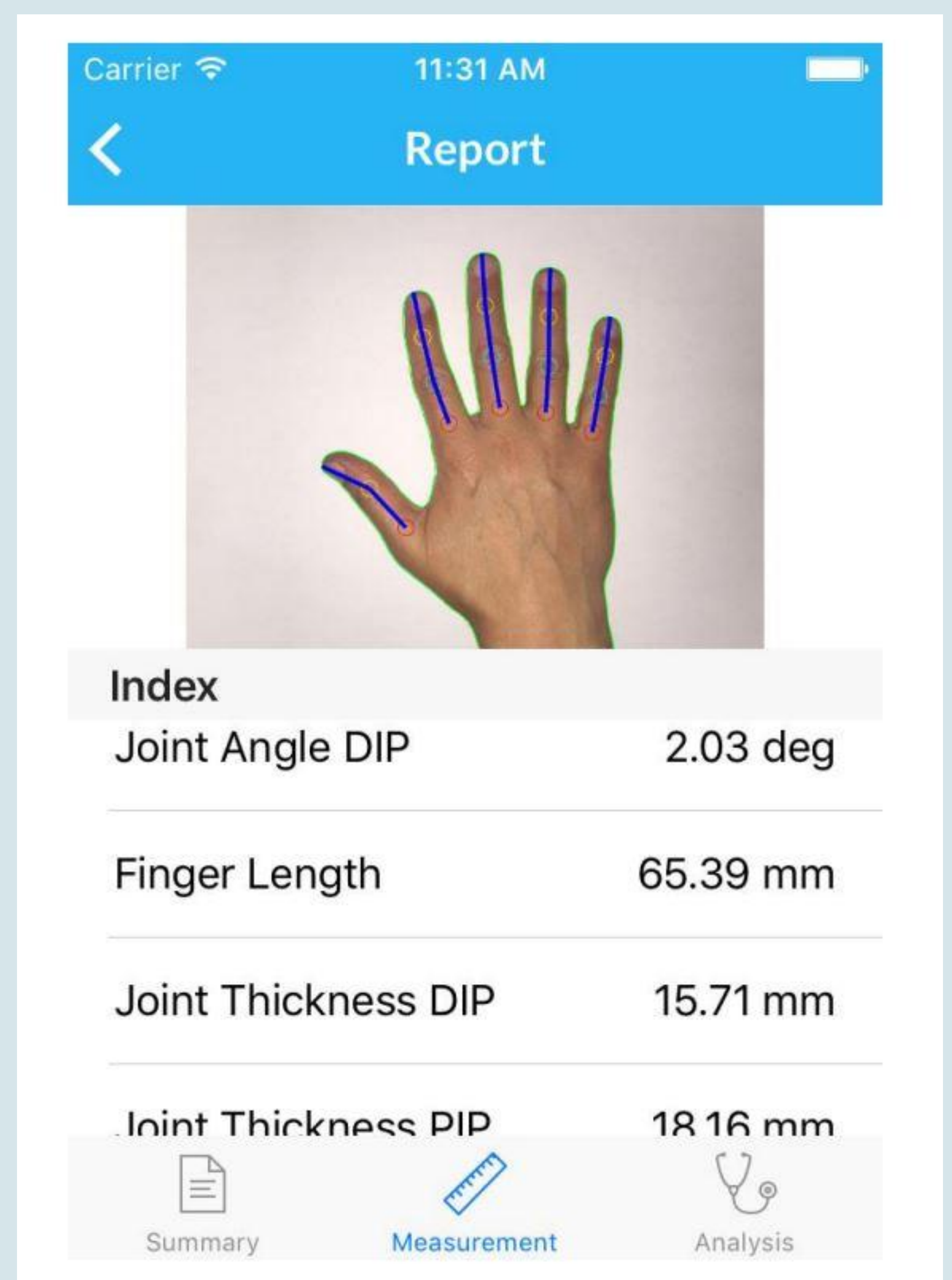
## Collaboration

Dr. Michaud welcomes collaboration working on the large data banks of which he is Primary Investigator.

**National Data Bank for Rheumatic Diseases (NDB.org)**

The world's largest long-term observational data bank in rheumatology with over 36,000 patients completing semiannual questionnaires since 1998.

**Rheumatoid Arthritis Investigator's Network (RAIN) Data Base**

Data from a consortium of 40 rheumatologists throughout the Midwest, who design and enroll patients in clinical protocols.



| Index | |
|---|---|
| Joint Angle DIP | 2.03 deg |
| Finger Length | 65.39 mm |
| Joint Thickness DIP | 15.71 mm |
| Joint Thickness PIP | 18.16 mm |



Users can use time plots to look at trends over time such as for weather and treatments

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