Digital Health @ Carolina

Carolina Health Informatics Program (CHIP)
CHIP.UNC.EDU

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Opportunities are Immense: 
**Macro-Scale of Digital Health Care Delivery**

**DIGITAL HEALTH**

- **Consumer Engagement**
  - Access + Experience
  - Content Marketing

- **Connected Health**
  - Telehealth
    - Tele-education
    - Tele-medicine
    - Patient Portal

- **Personal Wellness**
  - Exercise
  - Nutrition
  - Sleep
  - Relaxation

- **Health IT (eHealth)**
  - EHRs
  - Clinical decision support
  - Clinical information systems
  - Health information management
  - Enterprise image management

- **Health data analytics**
  - Environmental
  - Clinical
  - Socio-determinants
  - Behavioral
  - Financial

**Applications for Research + Clinical Care + Commercialization**

Source: Ingenium Tealth, modified to add additional data sources

UNC Carolina Health Informatics Program
Critical Health Data

- Laboratory Results (Genomic and Imaging)
- Medical Devices
- Fitness Devices
- Managed Care-focused behavior data
- Provider-focused Electronic Health Record
- Medication and Pharmacy Data
- Environmental Data

Complete Health Record Needed for “complete care”

Leading to “Big” data problems ...
To Address Big Data Challenges:

We need a wide set of skills and knowledge both at the “Macro” level and at the “Micro” level... Point-of-Care
Micro-level: Care Workflow

Typical Workflow Path for Mental Health / Med-check ➔

Clinical workflow
- Diagnosis
- Current Treatment
- Patient condition?
- Unstable
- Treatment Decision
- Schedule Return Appt.

UI / AI features
- Patient Information
- Timeline View
- Medication Recommendations (cohort analysis)
- Treatment Guideline View

UI offers ➔
CHIP & HSL is in a “Sweet Spot”: Core Services and Education

CHIP & HSL

Data Management & Analytics

Health Care
R&D and Translation

Usability (safety & efficacy)
How do we grow?

• We remember that we are all working for UNC (“One University”)

• We collaborate
  – Across schools, departments, and units … and, when needed …
    – Across campuses (UNC, Duke, NCSU, NC Central…)
    – Across university and other external organizations: for-profit and non-profit businesses

• We remain laser-focused on solving problems and expanding educational opportunities
Thank you!

• Questions?

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