



UNIVERSITY OF CENTRAL FLORIDA  
College of Medicine

# Electronic Health Record Integration in an Interdisciplinary Short Term Medical Service Trip to the Dominican Republic



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## Program Purpose

**2011:** Medical Students Providing Across Continents (MedPACT) at the University of Central Florida College of Medicine (UCF COM) initiated development of a medical service trip to the Dominican Republic.

**2012-2013:** MedPACT utilized the open-source Electronic Health Record (EHR) program OpenMRS in partnership with UCF Undergraduate IT for service trip-specific customization.

**Project Goals:** To implement a portable, self-contained EHR for the purpose of:

1. Delivering a transportable, customizable, long-term patient record for sustainable healthcare and the assessment of community needs in local Dominican communities
2. Familiarizing future clinicians

## Structure / Method / Design

Participants included:

- UCF Medical Students
- UCF Nursing Students
- UF Pharmacy Students
- UCF Engineers Without Borders
- UCF Information Technology Students

Selection criteria:

- International medical service trip experience
- Involvement with MedPACT and community service projects

Primary goals were improvement of:

- EHR utility
- Clinic accessibility
- Overall efficiency

New improvements in 2014 included:

- EHR interface training workshops
- Spanish-speaking standardized patient EHR simulation sessions
- Wi-Fi extenders for increased signal
- Triage patient routing system

Data was recorded using iPads with portable keyboards and delivered over a secure wireless network to a server laptop powered by a portable gasoline generator.

## Post-Trip Survey and Questionnaire

**Total Patients:**  
**573**

Male: 217  
Female: 356

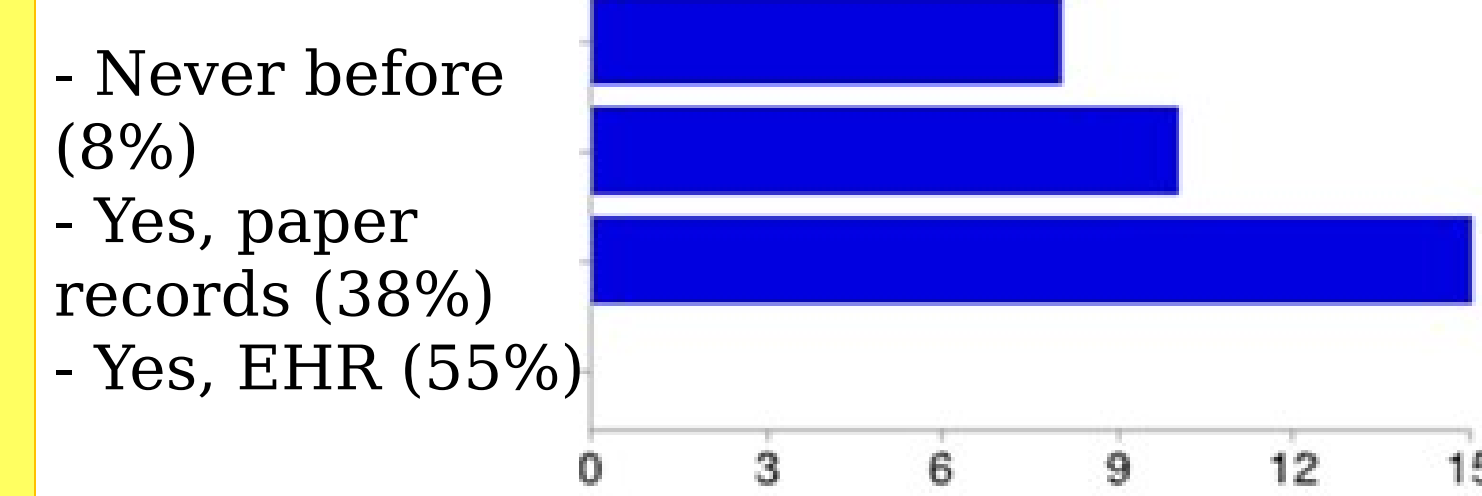
Adult: 357  
Child: 216



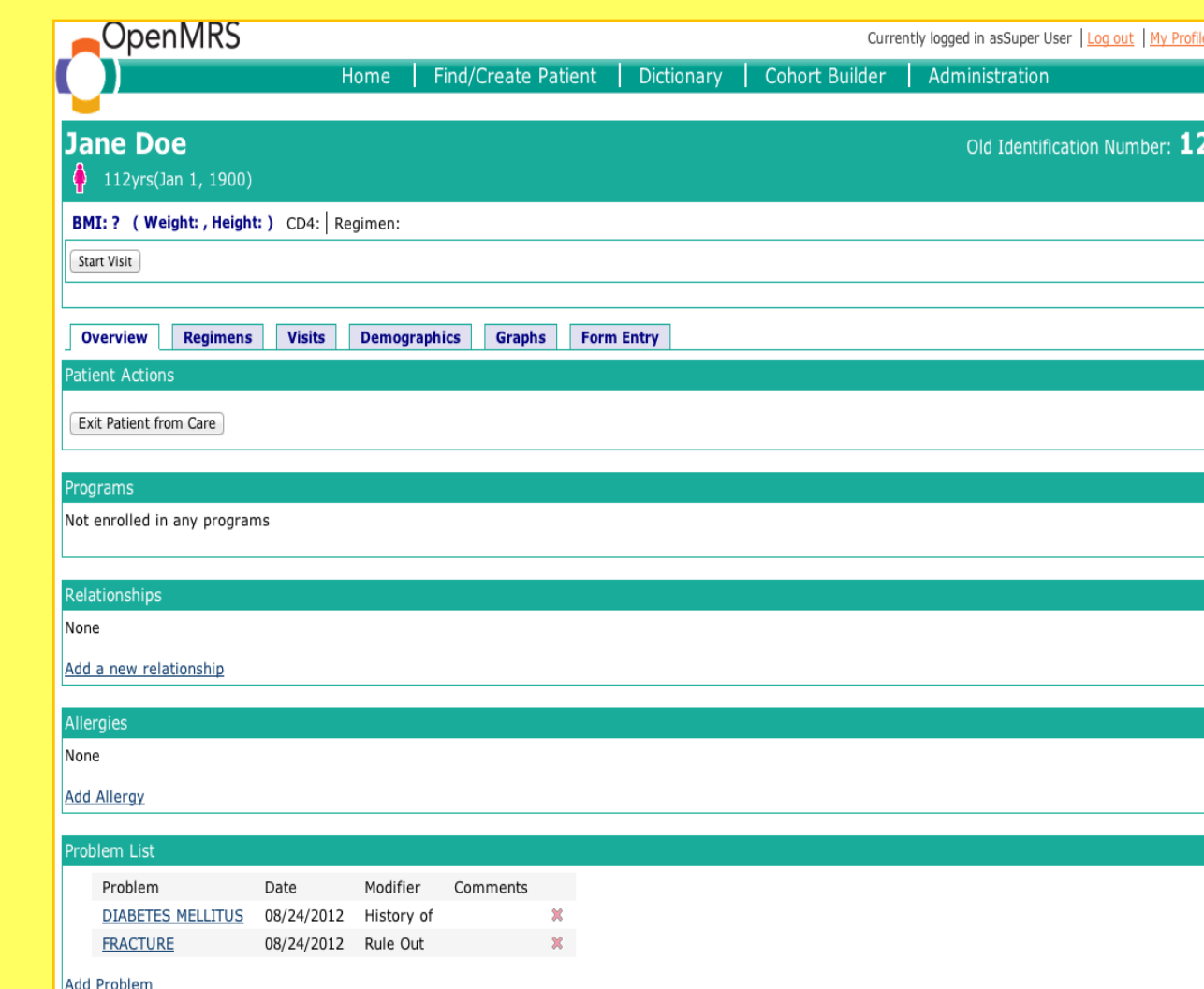
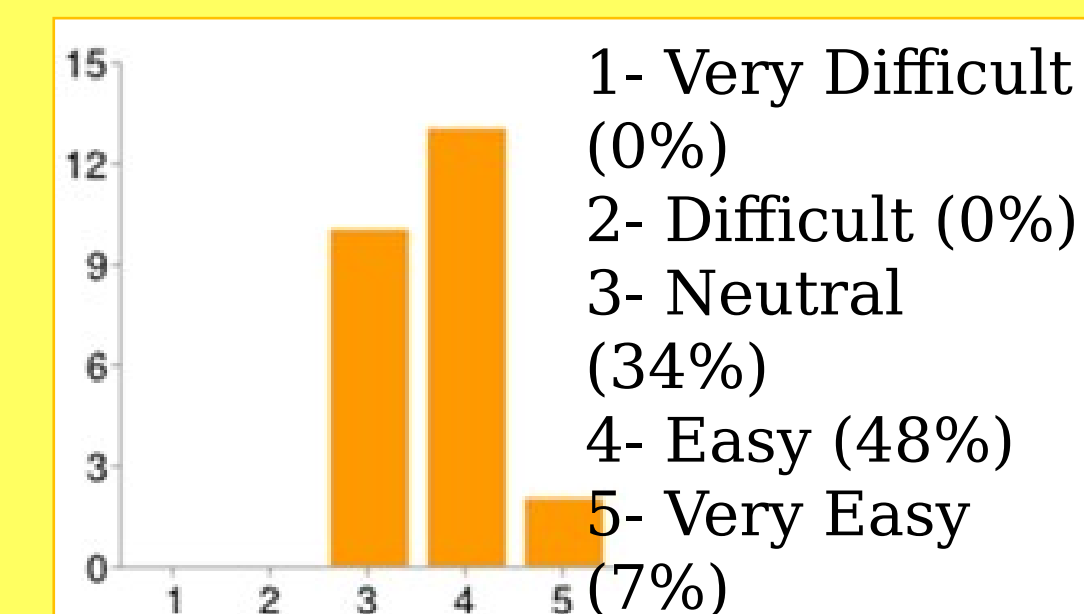
### Five Clinics

Mata Larga  
Loma de Jaya  
Cuaba Arriba  
La Joya  
Genimo

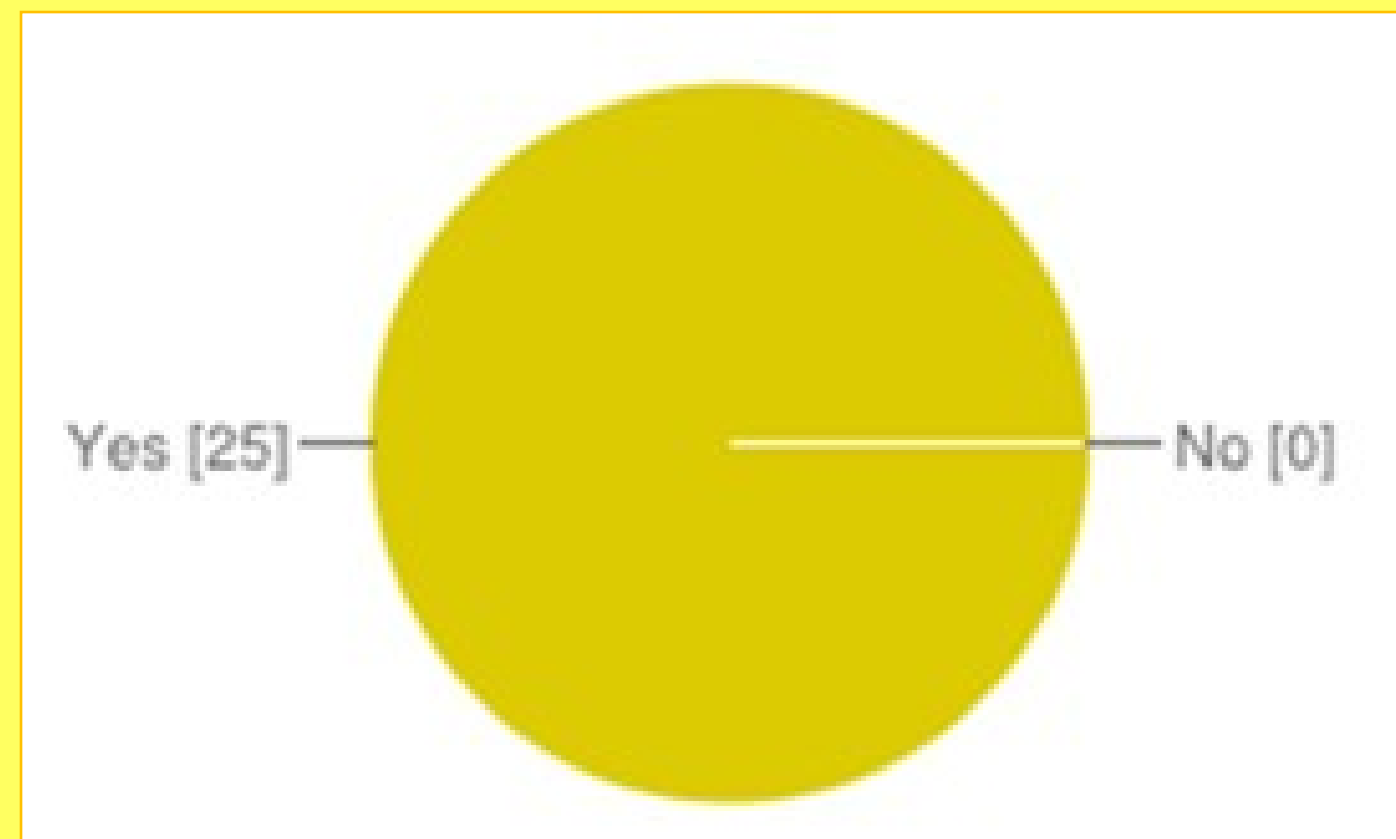
"Did you have experience with documenting medical information prior to this trip?"



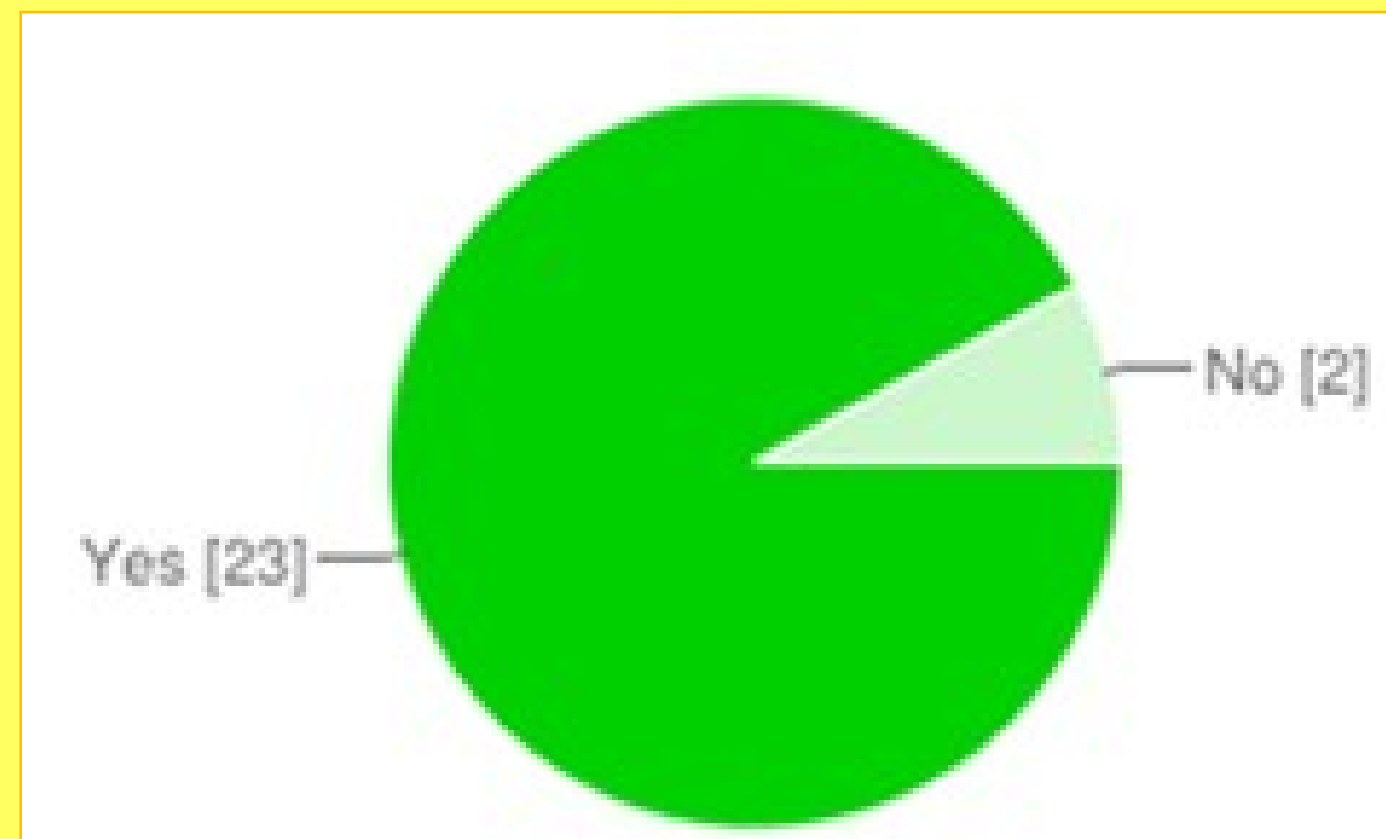
"How easy was it for you to enter information in the trip's electronic health record (EHR) system?"



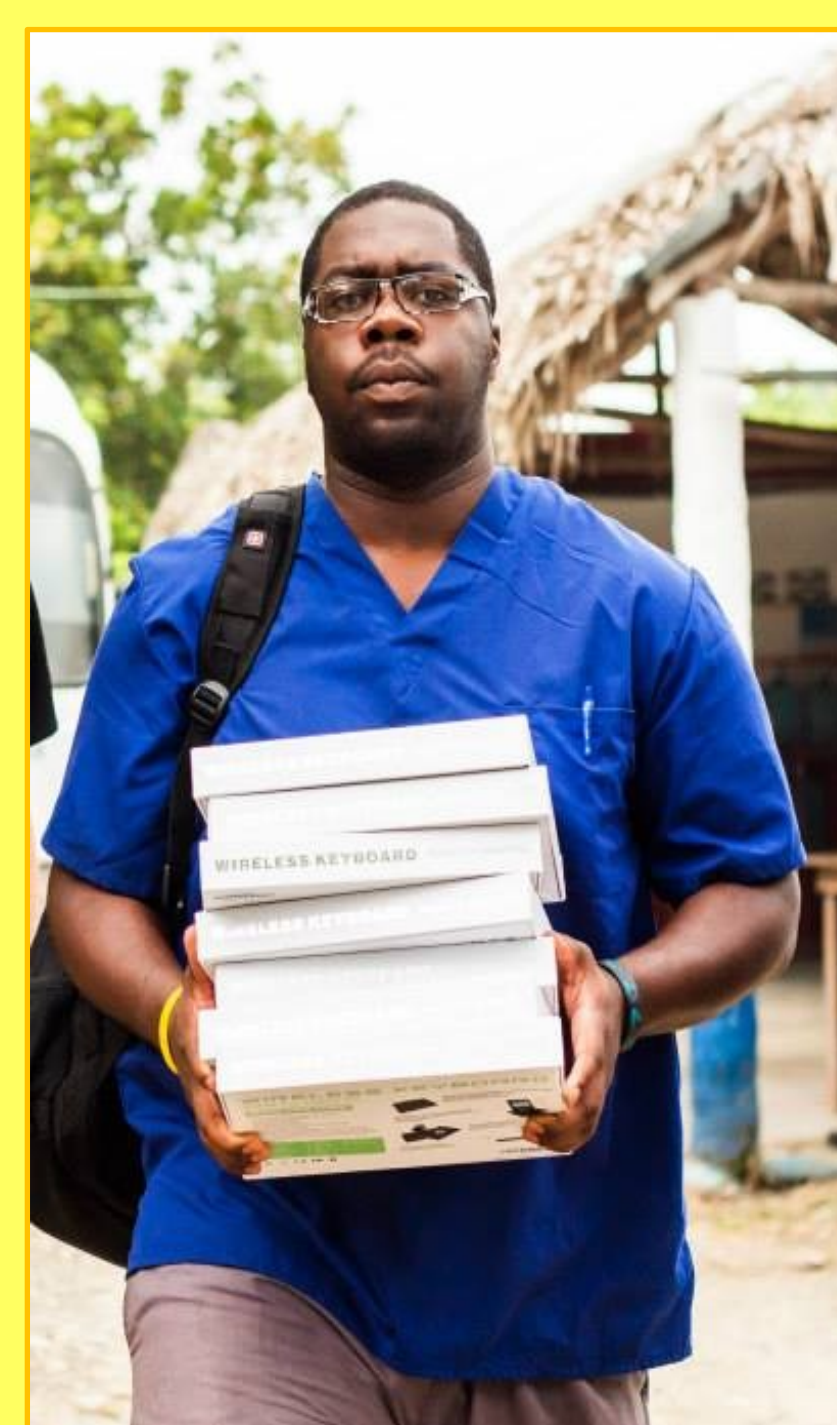
"Do you feel that the EHR improved the effectiveness of this trip?"



"If the EMR were more developed, do you feel that it would improve the effectiveness of short-term medical trips in general?"



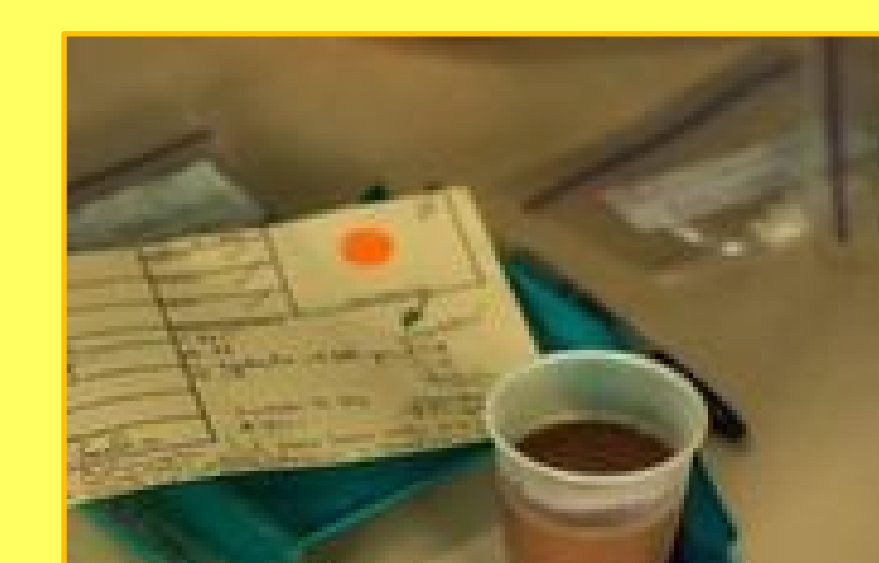
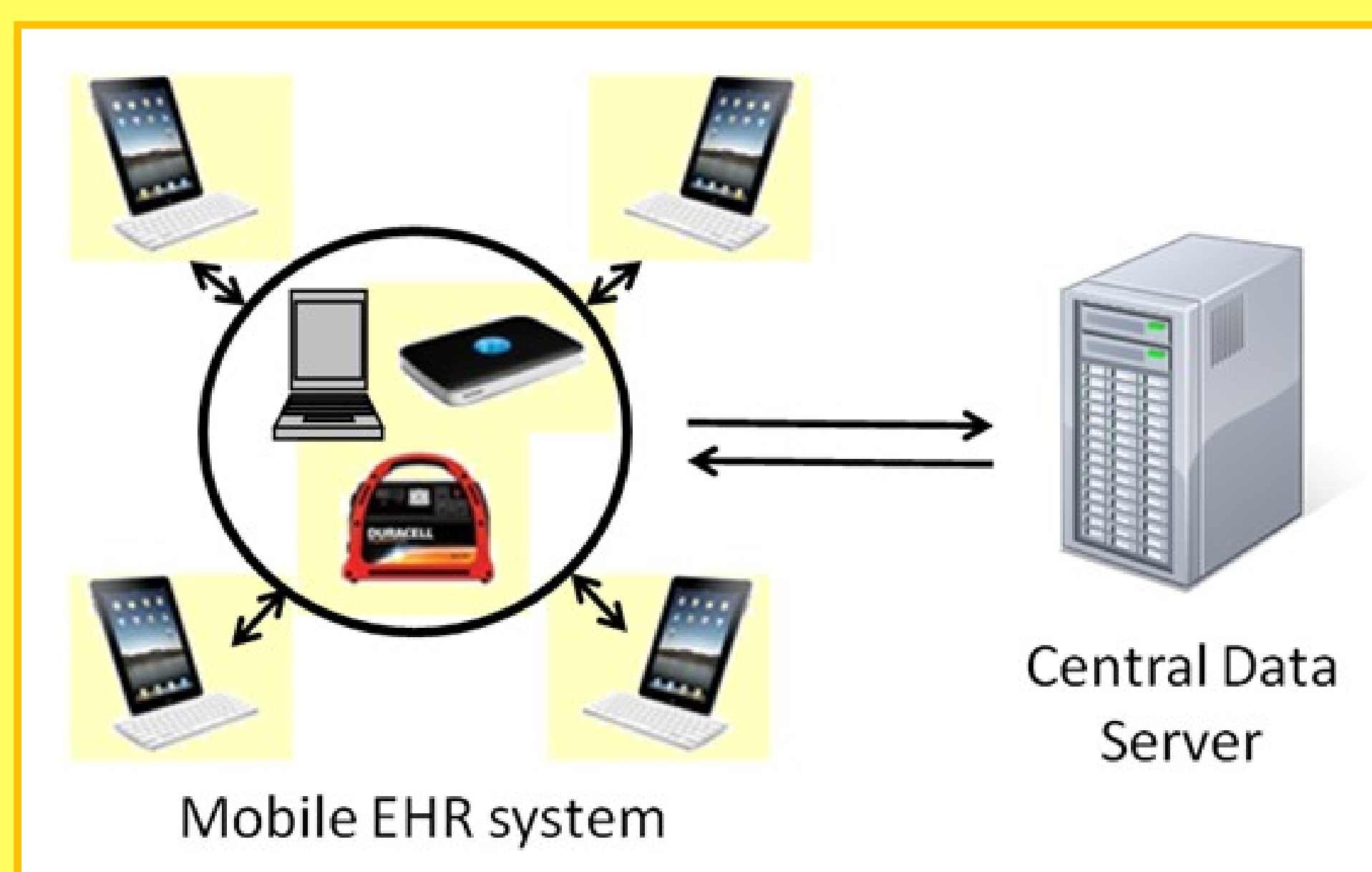
"The EHR was much more efficient this time! It was more time consuming entering info on EHR vs paper, but it's also a tool for asking the appropriate questions and to help guide the physical exam for those less experienced."



**Figure:** A data migration model that displays the interconnectivity between a central server and mobile EHR system, which consist of multiple tablet computers with keyboards, laptop, router, and generator/battery pack.



"My experience with it is that it gives us much more accurate information on our patient demographics and allowed good communication between Triage and the specialties that were provided on the trip. It wasn't perfect, and we still have a long way to go, however I still think it is better than paper."



## Outcomes & Evaluation

Improved server function:

- Two manageable outages (<10 minutes)
- No permanent data loss secondary to outages

Increased patient enrollment:

- Total of 573 patients seen
- Five days of clinic
- All patient files captured into EHR

Post-trip survey:

- Indicated improvement of user interface compared to prior years
- Indicated a need for increased EHR efficiency to decrease wait times pre- and post-intake

## Going Forward

Further interface customization is needed in order to:

- Create an equally effective yet more concise and student-friendly version
- Continue to improve the efficiency of patient routing during triage
- Implement a patient photo identification system for improved documentation and patient privacy

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