

USE OF PATIENT-GENERATED MHEALTH DATA FOR PATIENT CARE: A COMPARISON OF FOUR MODELS

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RAPID GROWTH OF MHEALTH



UNDERUTILISATION

- ▶ high volume of produced data,
- ▶ lack of connectivity and interoperability with electronic health records (EHR) as well as
- ▶ concerns about the validity of the apps content and tracking devices
- ▶ Concerns about the use of data

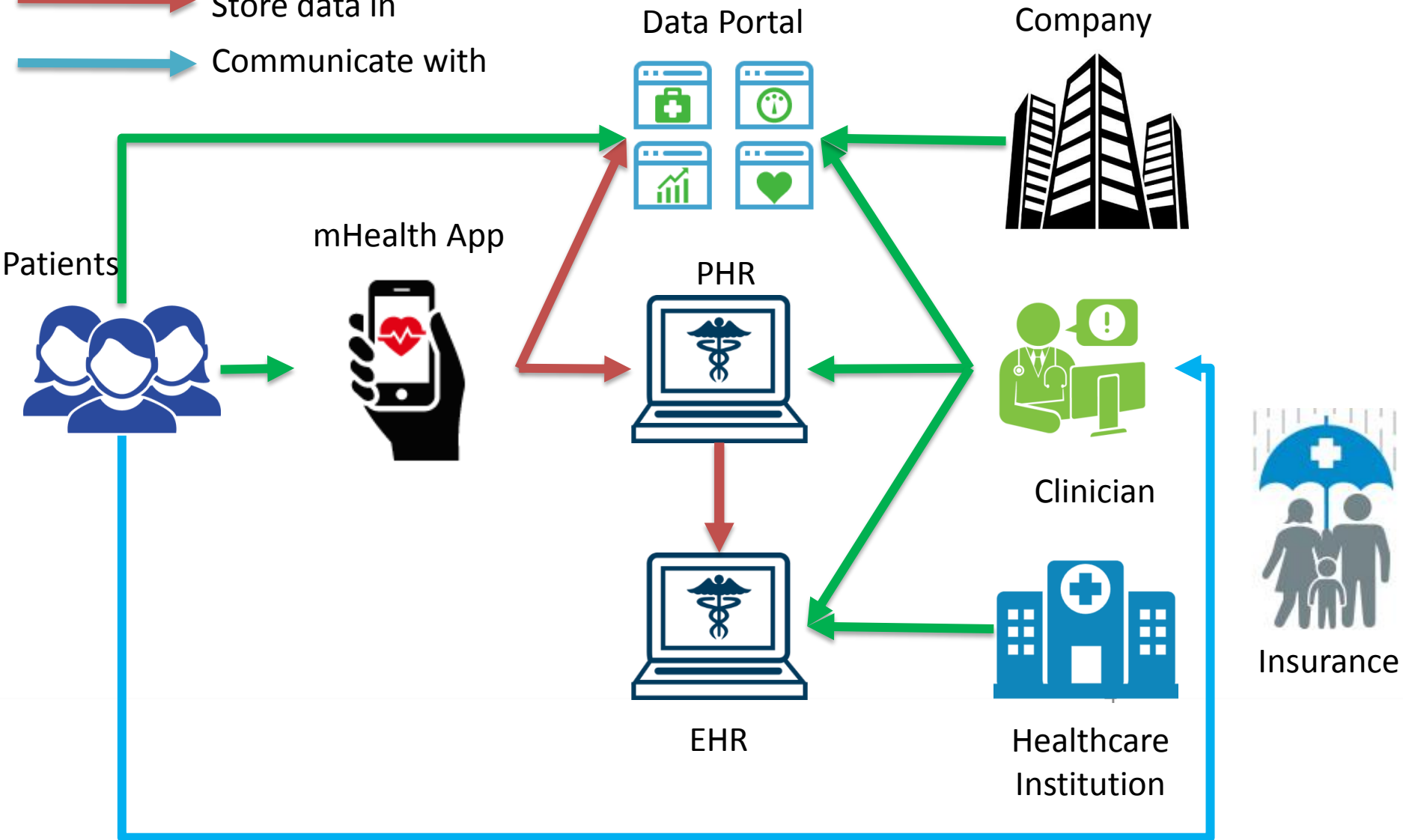
- ▶ low regulation standards by the federal authorities

THE INFORMATION CHANNELS

 Access to

 Store data in

 Communicate with

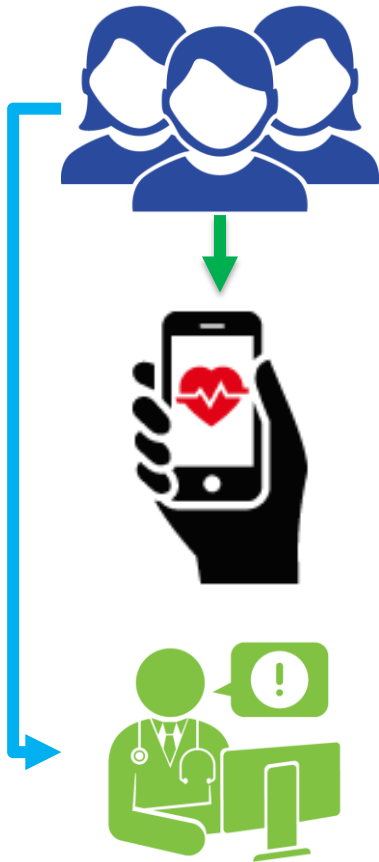


MODEL 1. PATIENT ENGAGEMENT (PATIENT-DRIVEN)



**"I already diagnosed myself on the Internet.
I'm only here for a second opinion."**

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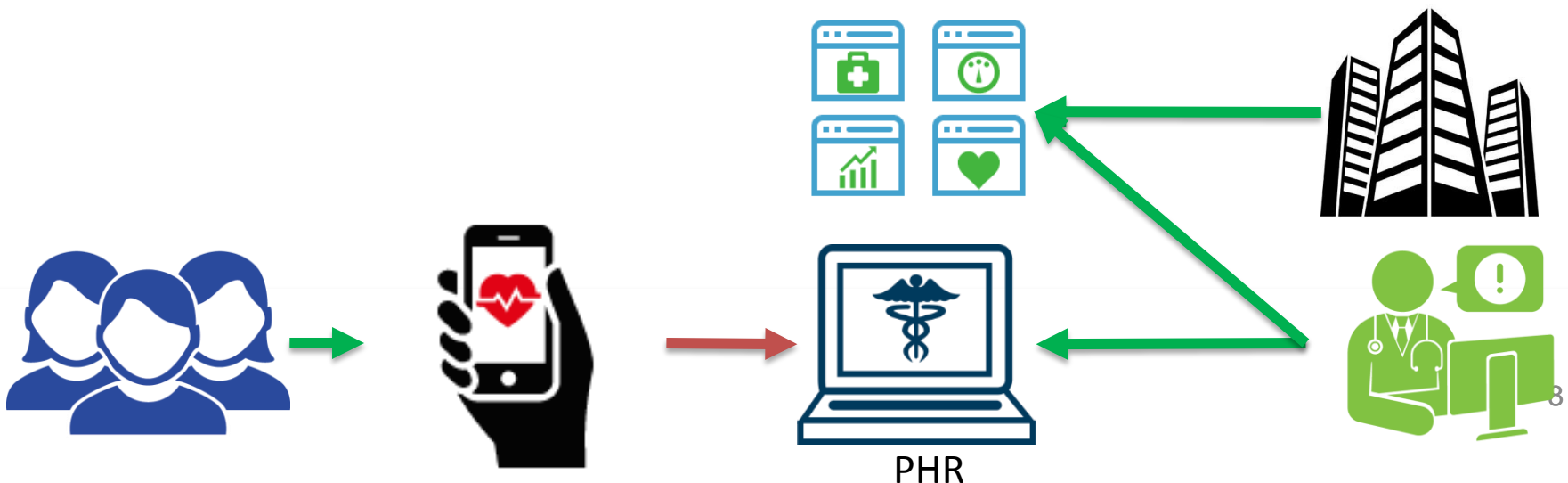
- ▶ Patients are empowered by mobile devices to collect self-reported data.
- ▶ Free apps choices
- ▶ manage their own data
- ▶ decide what and whom they share their data with.
- ▶ This model engages patients to manage their own health, and relies on prior knowledge, health literacy and validity of existing apps.

MODEL 2. PARTIALLY INTEGRATED PATIENT-GENERATED DATA MODEL



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- ▶ Patient collect data from a subset of apps, chosen for exportability of results.
- ▶ Results are centralized in a patient portal for easy retrieval, and can be shared with chosen healthcare providers from an organization.
- ▶ Providers can visualize the data, but the data are not integrated with the rest of the medical record.

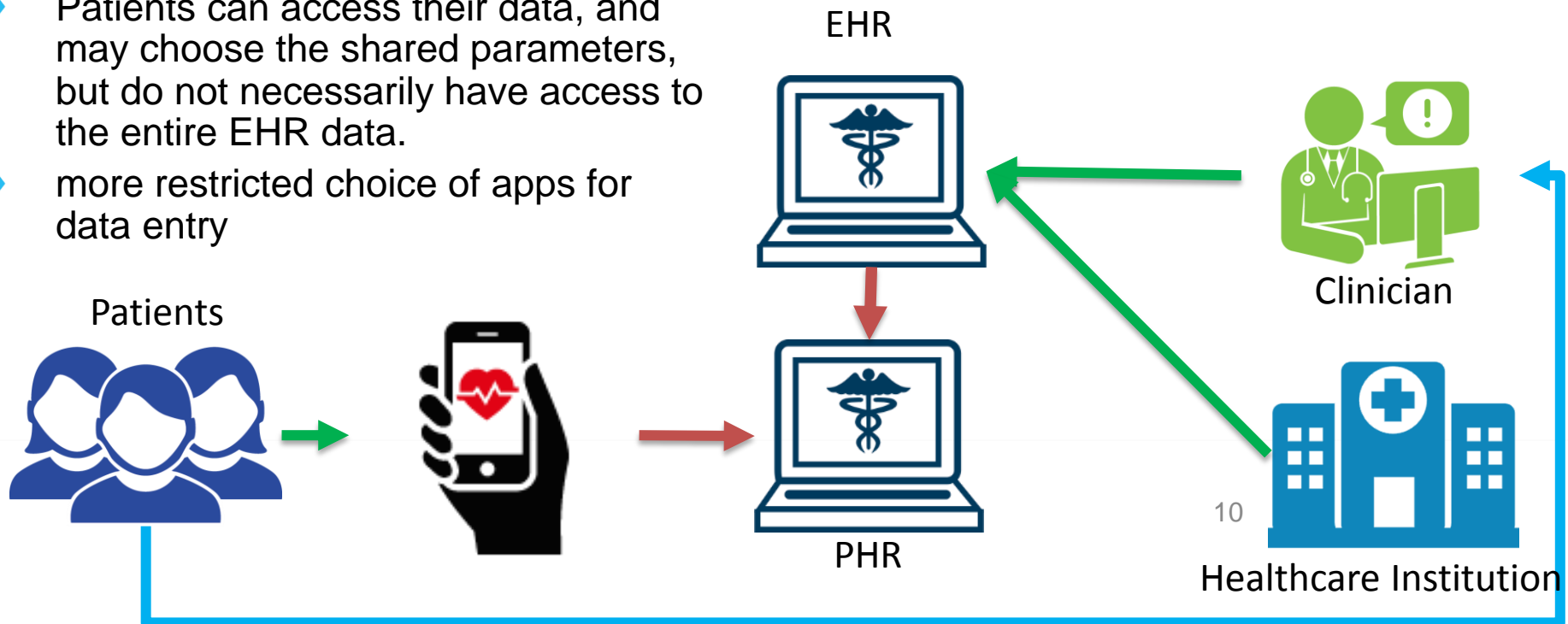


MODEL 3. FULLY INTEGRATED PATIENT-GENERATED DATA MODEL



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- ▶ allows all collected data to be imported and integrated into the electronic health record.
- ▶ Healthcare providers can see outpatient results integrated longitudinally with the inpatient results
- ▶ Patients can access their data, and may choose the shared parameters, but do not necessarily have access to the entire EHR data.
- ▶ more restricted choice of apps for data entry



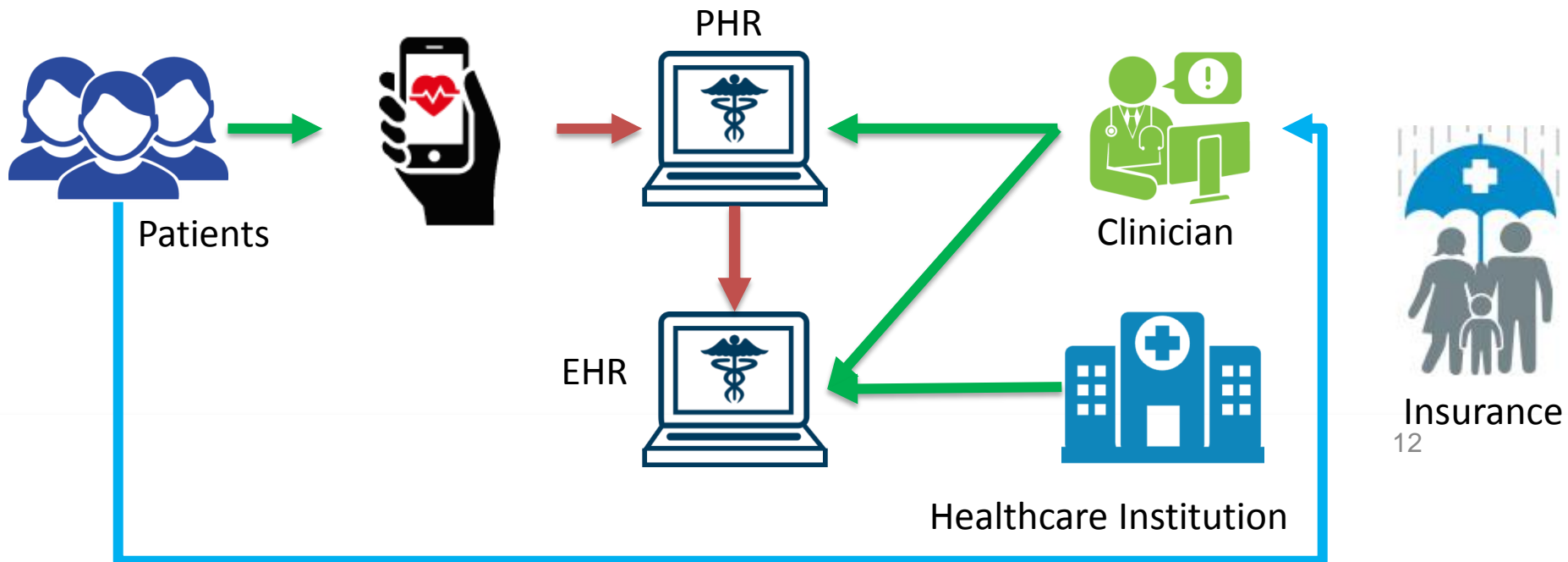
MODEL 4. INTEGRATED HEALTHCARE DELIVERY AND PAYMENT MODEL



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MODEL 4. INTEGRATED HEALTHCARE DELIVERY AND PAYMENT MODEL

- ▶ The notion of cost-effectiveness is added to the previous model. By taking into consideration healthcare costs, integrated healthcare institutions (insurance and care delivery by the same entity) can promote patient engagement and population health.



SUMMARY

Model	Structured data	App choice	App validity	Data Quality	Data management	Integration in care
1	None	Free	Low	Low	Patient	Low
2	Low	Free	Low	Low	Patient	Low
3	High	Restricted	High	High	Institution	Medium
4	High	Very restricted	High	High	Insurance	High

DISCUSSION



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