

### PERSPECTIVES ON HEALTH INFORMATION TECHNOLOGY

Connected Digital Health For Patients, Clinicians, And Health Systems

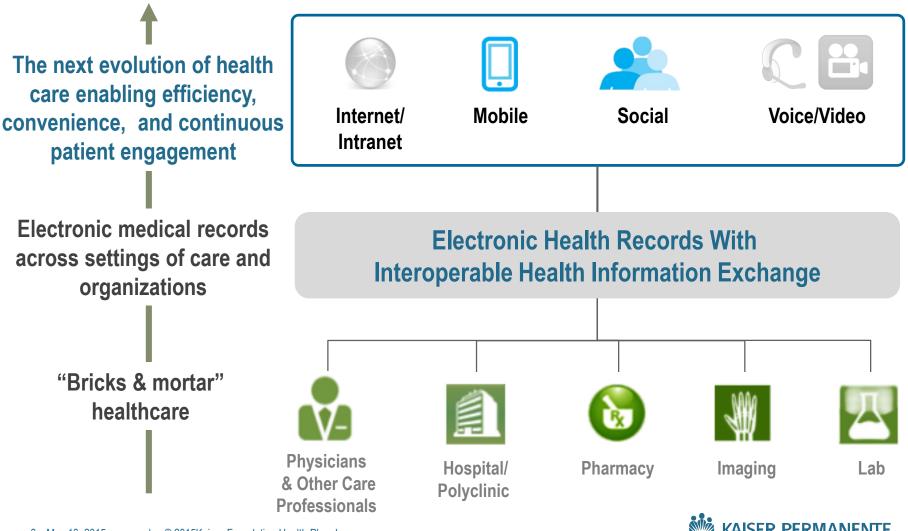




- USA's largest non-profit health plan and hospitals
- Integrated health care delivery system
- Over 10 million members
- Over 17,000 physicians and over 45,000 nurses
- Over 180,000 employees
- 38 hospitals
- Over 650 outpatient surgery centers and other medical offices
- KP HealthConnect<sup>©</sup> is the world's largest private electronic medical records system
- Our personal health record, My Health Manager on kp.org, is a shared record for the patient, their family, and all members of their care team

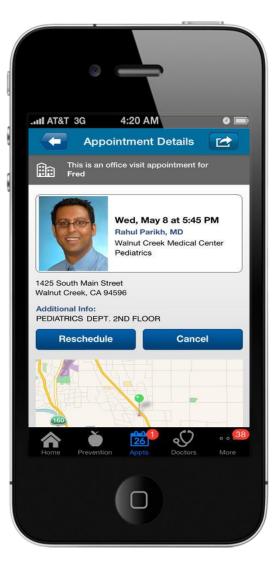
# The Connected Digital Health Agenda

Connected digital health represents a convergence of capabilities that empowers individuals to manage their health on their own terms, further redefining the patient / care giver relationship



## **Anytime, Anywhere Access**





58% of U.S. adult cell phone owners have smartphones (as of January 2014).

37% of online visits on kp.org use the mobile device application.

With the KP app, members can:

- locate facilities
- access medical records
- refill prescriptions
- make appointments
- email caregivers
- view test results



# Digital Is Meeting The Needs Of Individuals Today



In 2014:

- 43 million visits through kp.org
- 16 million visits through mobile app
- 38 million test results viewed
- 20 million secure emails to doctors
- 18 million prescription e-refills
- 4 million office visits scheduled

4,900,000

1,570,000

100,000,000

**Registered Users** 

**Mobile Application Downloads** 

**Mobile Interactions** 



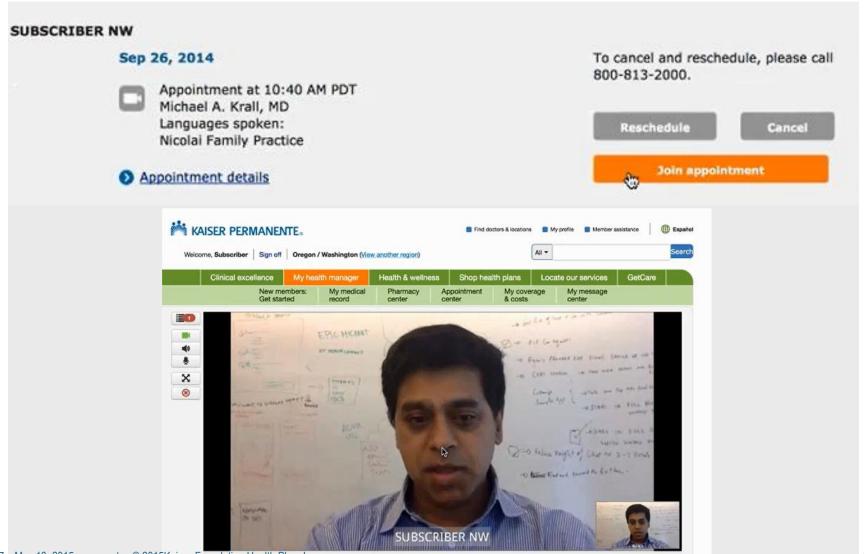
# Consumers and care teams decide together when to visit live or virtually







### The New Normal ... Virtual Care







# **Clinician Role Changes**



### **Industrial Age Model of Care**

- One patient at a time
- Only know about patients who appear in your office
- No use of IT
- Limited use of "physician extenders"



### **Information Age Model of Care**

- Safety and efficiency in an evolving environment
- Accountability for panel/population
- Transparency
- Use of EMR, registries, internet
- Team care (including patient)
- Moving care out of doctor's office



### **Clinician Considerations**

- Virtual care tools must strengthen the relationship between the patient and the health care team, not replace it
- Virtual care should not be just moving the same care into a different channel
- We need to use virtual care tools to provide care in entirely new ways that leverage appropriate technologies
- We need to use virtual care tools to enable self care and self confidence for individuals



### What Do Clinicians AND Patients Need?

- More complete data, analyzed and transformed into visual, easily understood and actionable information
- Connect with individuals according to their goals, preferences and needs
- Engage the patient and their community
- Less clerical work automate the routine



# **Personal Information Is Increasingly Complex**

#### **Behavioral Data**

(Life Style Choices, Preferences, Activities, QoL)





#### Social Data

(Friends, Family, Affiliations, Communication, Activities)



#### **Demographics & Firmographics**

(Age, Address, Employer, Industry)









#### **Medical Records**

(encounter, labs, Rx, medical devices, etc.)



#### Personal "-omics"

(Genomics, Proteomics, Transcriptomes, Metabolomics)

#### Contextual



(Temperature, Humidity, Pollen Count,...)









### Geographic

(Closest Hospital, Pharmacy, Care Clinic,...)







# Key Policies for Health IT and Information Exchange

### **Pillars of Health Information Policy**

### **Trust**

- Data use agreements and privacy adherence, including security
- Prohibit unanticipated use and commercial gain from aggregated patient records
- Use national and international accredited standards

### **Transparency**

- Sunshine for policy development, decisionmaking
- Fair fees and costs that do not change financing arrangements
- Qualified parties free to choose technical and organizational solutions



# Interoperability Is A Means To An End, Not A Goal In Its Own Right

- Goal: Comprehensive person-centered information available when and where it is needed to inform patient and clinician decision-making
- Multiple means to this end different tech best fits different models:
  - Copies of data extracts transactionally exchanged between entities
    (Trillium Bridge is a good example of this means to the end)
  - Access to data which resides in authoritative systems e.g. via APIs
  - Multiple models of data aggregation with shared access to data
  - Single systems and databases shared among multiple entities
- All these means of achieving the end should be enabled equally





## **THANK YOU**



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