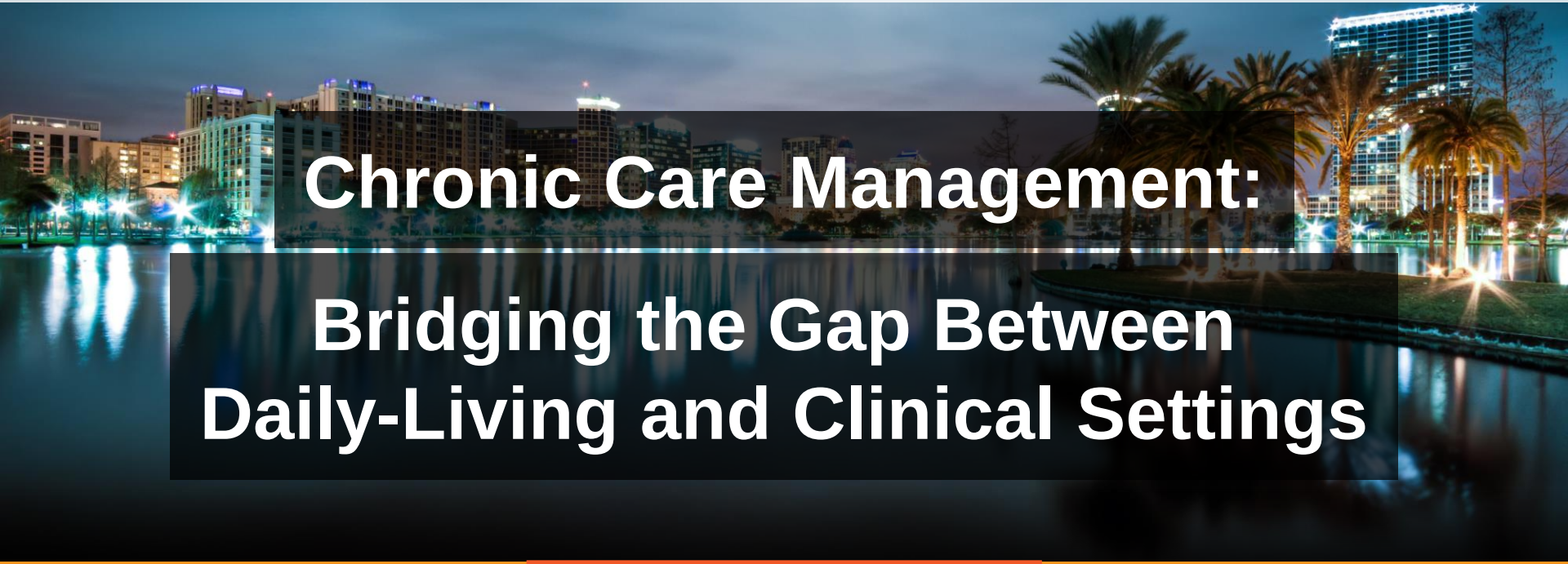
PRECISION MEDICINE SUMMIT
A HIMSS EVENT

FEBRUARY 11, 2019
ORLANDO, FL



Chronic Care Management:

Bridging the Gap Between Daily-Living and Clinical Settings

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PRECISION MEDICINE

- “An emerging approach for disease treatment and prevention that takes into account individual variability in genes, environment, and lifestyle for each person”

- Can be fully accomplished only if treatment plans for chronic conditions are congruent with the daily-living routines and daily-living contexts of patients

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SOCIAL DETERMINANTS OF HEALTH

- The social determinants of health are the economic and social conditions that influence individual and group differences in health status (Braveman & Gottlieb, 2014)
- “Causes of causes”
- “Create social and physical environments that promote good health for all” as one of the four overarching goals for the decade (Healthy People 2020)

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SOCIAL DETERMINANTS OF HEALTH

- Availability of resources to meet daily needs (e.g., safe housing and local food markets)
- Access to educational, economic, and job opportunities
- Community living resources & opportunities for leisure-time activities
- Transportation options
- Social support
- Social norms and attitudes (e.g., discrimination, racism, and distrust of government)
- Exposure to crime, violence, and social disorder
- Socioeconomic conditions (e.g., concentrated poverty & accompanying stressful conditions)
- Language/Literacy
- Culture

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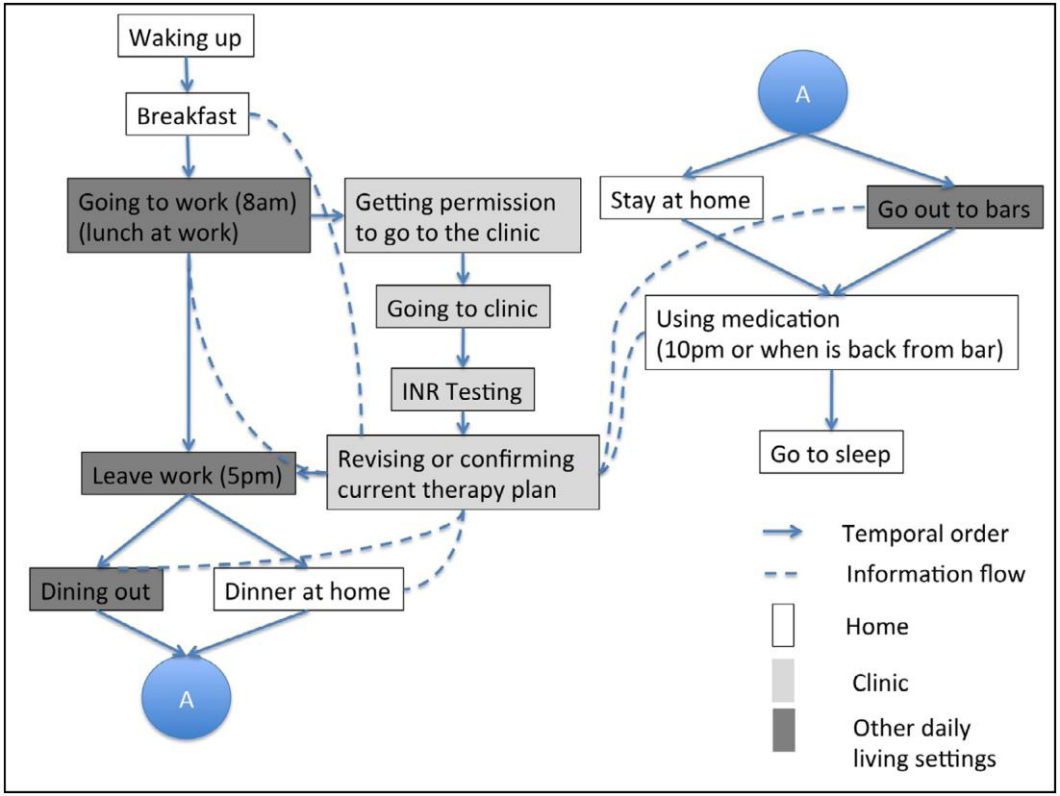
WHAT IS THE PROBLEM?

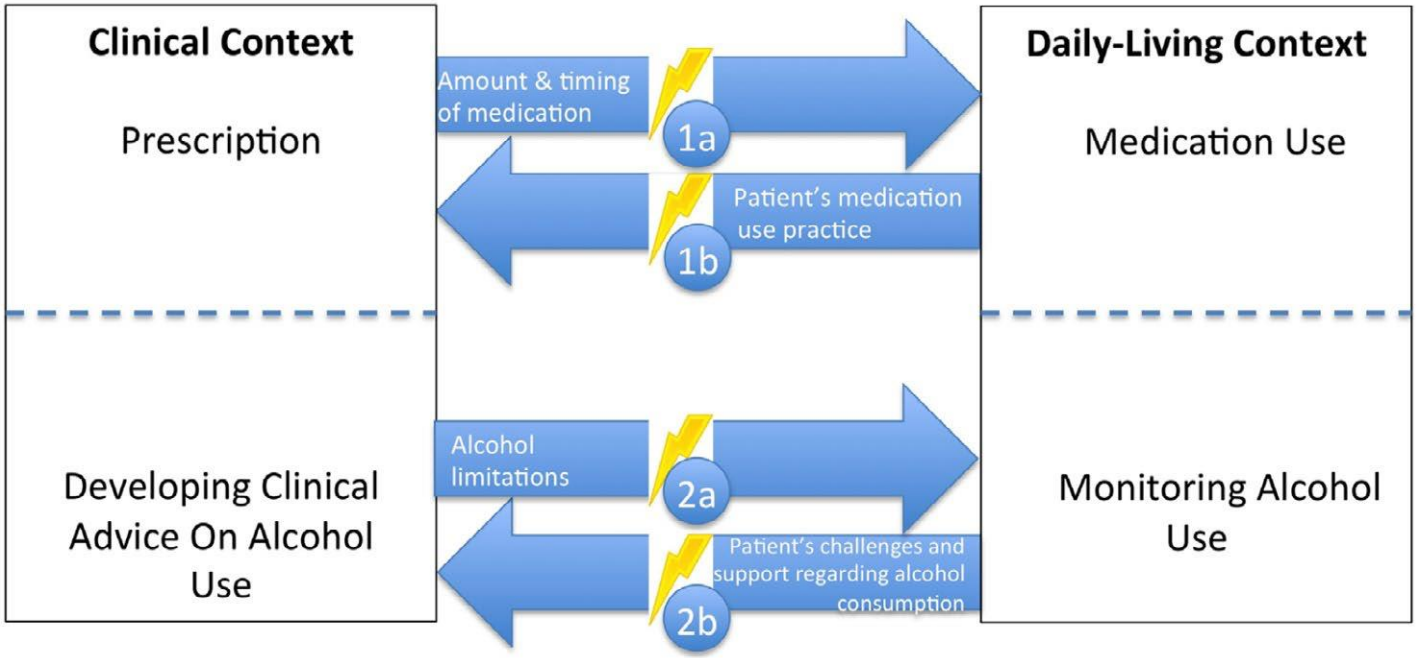
- How to incorporate social determinants of health in health care delivery?
- How can technology support utilization social determinants of health?

ACADEMIC SOLUTION

- Observations of Daily-Living
- Workflow
- Gaps


Waking up
Breakfast
Going to work (8am)
(lunch at work)
Getting permission
to go to the clinic
Going to clinic
INR Testing
Revising or confirming
current therapy plan
Leave work (5pm)
Dining out
Dinner at home
A
A
Stay at home
Go out to bars
Using medication
(10pm or when is back from bar)
Go to sleep
Temporal order
Information flow
Home
Clinic
Other daily
living settings

GAPS IN CLINICAL AND DAILY-LIVING SETTINGS



Ozkaynak et al., 2018

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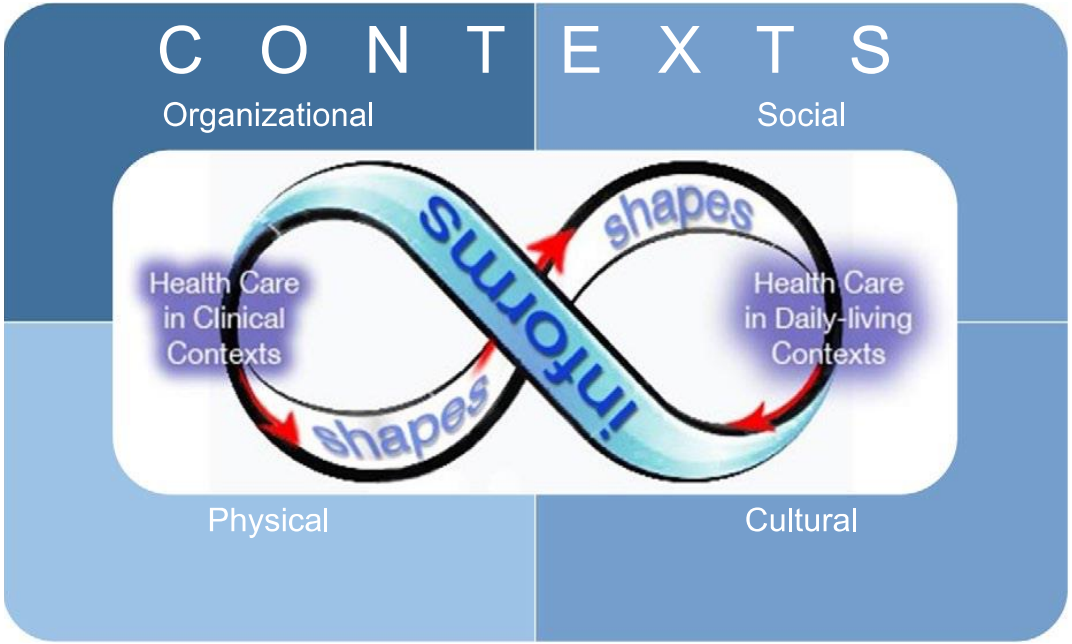
INFINICARE



Ozkaynak et al., 2018

DIMENSIONS OF CONTEXT

Table 1. Dimensions of context.

Dimensions of context	Examples
Physical	• Availability of physical space at home • Noise, light • Distance between home and clinic and other resources • Layout of the patient room in clinics
Organisational	• Policies, rules in clinics • Availability of tools and technologies in clinics and homes • Business hours of community resources (e.g., pool, gym) • Transportation opportunities
Social	• Availability of informal caregiver • Friends and relatives • Social network
Cultural	• Food consumption habits

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HIT SOLUTION: COLLABORATIVE HEALTH IT

- Combination of Clinical and Consumer Health Information Technologies
- Current Situation
  - Specific patient-generated data is included in EHR
- Challenges
  - Many other important patient-generated data is not included
  - Included data is not incorporated

FUTURE DIRECTIONS

- Being innovative in capturing daily-living observations
- Developing the following:
  - Machine-readable representations of daily-living observations
  - Human-readable representations of daily-living observations
- IT should not merely provide more information—it should facilitate action (e.g., making a decision, initiating a service, or a coordination).

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