

What is ACCORDS?

Adult and Child Center for Outcomes Research and Delivery Science

ACCORDS is a 'one-stop shop' for pragmatic research:

- A multi-disciplinary, collaborative research environment to catalyze innovative and impactful research
- Strong methodological cores and programs, led by national experts
- Consultations & team-building for grant proposals
- Mentorship, training & support for junior faculty
- Extensive educational offerings, both locally and nationally



ACCORDS Upcoming Events – mark your calendars!

Annual Conference June 4-5, 2025 9:00-4:00pm MT Don Elliman Conference Center	Colorado Pragmatic Research in Health Conference Future of Pragmatic Research: Team Science to Enhance Innovation and Impact
<i>Save the date for these upcoming workshops!</i>	
August 22 + September 5 9:00-4:00pm MT Fulginiti Pavillion	ACCORDS/CCTSI/CIDA Pragmatic Research Planning Workshop
November 4 + November 6 8:00-4:00pm MT Don Elliman Conference Center	ACCORDS Introduction to Qualitative Research Workshop



Emerging Topics in Digital Health & Clinical Informatics

2024-2025 Seminar Series



Presented by:

Matthew Loscalzo, MSW

Executive Director, Couples Coping
Together Against Cancer

Professor, City of Hope National Medical
Center, Supportive Care Medicine

Real World Tech Augmented Biopsychosocial Screening, Engagement, and Activation: For Patients and Partners Tech to Touch



ACCORDS

UNIVERSITY OF COLORADO
CHILDREN'S HOSPITAL COLORADO

Real World Tech Augmented Biopsychosocial Screening,

Engagement and Activation: for Patients & Partners

Tech to Touch

May 12, 2025

Matthew Loscalzo, LCSW

Executive Director, Couples Coping Together Against Cancer

Emeritus Professor Supportive Care Medicine

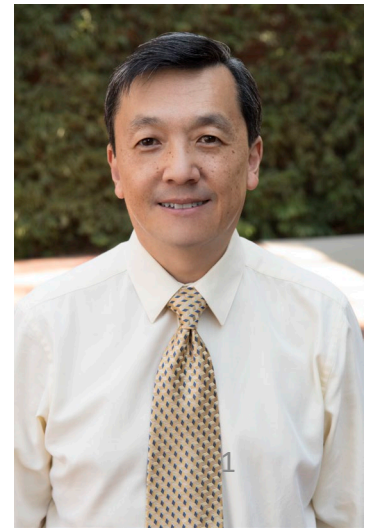
Professor Population Sciences | City of Hope National Medical Center

Dale Mitani

Senior Application Developer

Department of Supportive Care Medicine

City of Hope National Medical Center



The Map Not the Territory

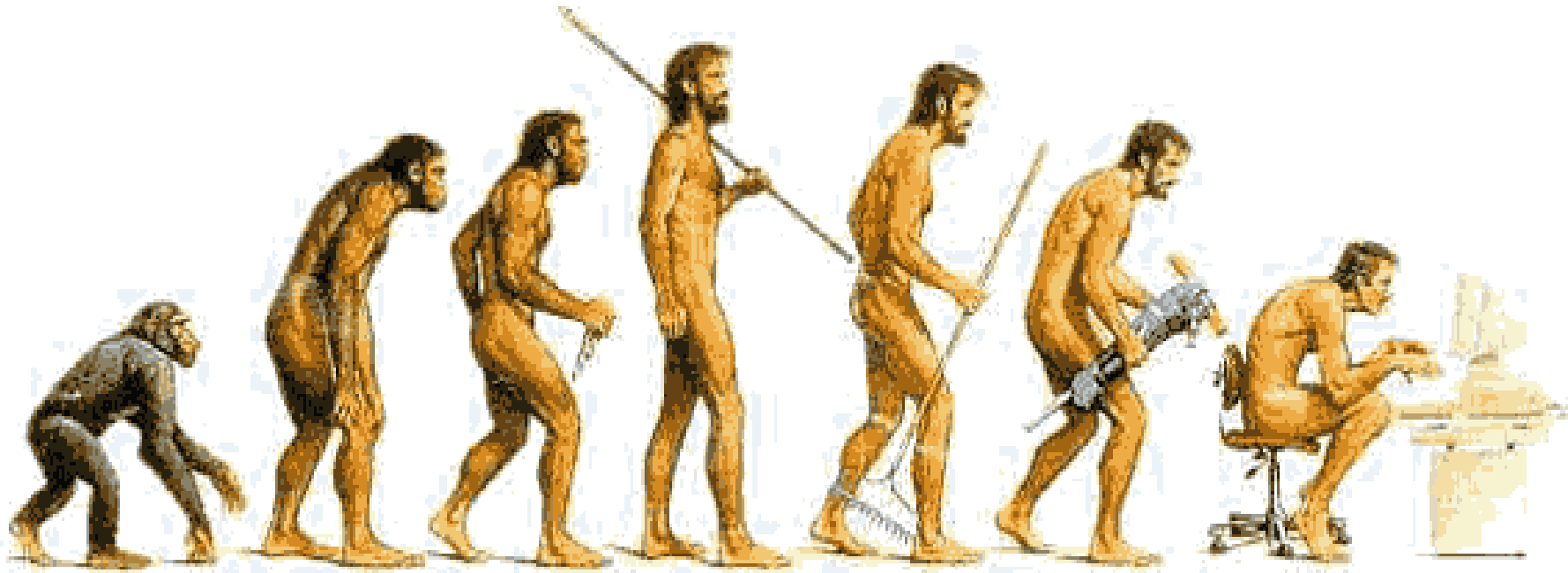
- Technology
- Programmatic examples (Clinical Impact)
- Impact of and on biopsychosocial screening
- Couples Coping Together Against Cancer

Poll

OVERALL, how helpful do you see emerging technologies beyond billing/documentation?

1. Extremely helpful
2. Very helpful
3. Somewhat helpful
4. Minimally helpful
5. A hindrance to my work
6. No impact
7. Other, put in Chat now please

Using Technology to Bring People Closer Together



Take Home Messages

- Tech is not futuristic, health care is just so far behind, it feels that way
- Tech has the ability to tailor and more humanize medical care
- Tech can do a lot more than document and bill
- Tech also has the potential to increase inequities between populations based largely on
 - Social Determinants of Health
 - ‘the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life’ *
- **
- Tech also has great potential give voice to the most vulnerable and to prime for, and deliver, clinical interventions

*World Health Organization. About social determinants of health, 2020. Available: https://www.who.int/social_determinants/sdh_definition/en/

**United States Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Social determinants of health, 2020. Available: [https://www. Healthy people. gov/ 2020/ topics objectives/topic/ social- determinants- of- health](https://www.Healthy people.gov/2020/topics/objectives/topic/social-determinants-of-health)

Why Supportive Care Professionals Care Should Care About Innovative Technologies



- If you are not in the kitchen, you are more likely to be on the menu
- Offer unique comprehensive real-world biopsychosocial perspectives
- **Social Determinants of Health** non-clinical factors and cancer
 - **Education:** lower levels of education are more likely to develop cancer.
 - **Housing:** Unstable housing to poor health and reduced access to healthcare.
 - **Food security:** Access to healthy food is an important SDH.
 - **Access to healthcare:** Poverty is associated with poor access to healthcare.
 - **Discrimination:** Discrimination can impact cancer incidence and survival.
 - Oh yes, “technology deserts”, added burdens of lack of access to **technology!**

CANCER CARE FOR THE WHOLE PATIENT

MEETING PSYCHOSOCIAL HEALTH NEEDS



INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

Addressing psychosocial needs should be an integral part of quality cancer care.

All components of the health care system involved in cancer care should explicitly incorporate attention to psychosocial needs into their policies, practices, and standards addressing clinical care.

These should ensure the provision of psychosocial health services to all patients who need them.

A New Standard of Care

IOM Calls for Focus on the Whole Patient



2007

Recommendation #1: The Standard of Care

"All cancer care should ensure the provision of appropriate psychosocial health services by:

- Facilitating effective communication between patients and care providers.
- Identifying each patient's psychosocial health needs.
- Designing and implementing a plan that:
 - Links the patient with needed psychosocial care.
 - Coordinates biomedical and psychosocial care.
 - Engages and supports patients in managing their illness and health.
- Systematically following up on, reevaluating, and adjusting plans."

IOM Report 2007

Our Touch-screen as a model for the Country

Examples

The Rebecca and John Moores Cancer Center, University of California, San Diego The Moores Cancer Center's Science of Caring Program provides comprehensive psychosocial health care integrated with biomedical treatment for all patients with cancer seen in its outpatient clinic. At each outpatient's initial visit, patient and family meet with a social worker who provides printed information about the psychosocial health services offered on site and an orientation to these services. At this first visit (and at regular intervals thereafter), every patient also uses a laptop computer to complete a simple touch-screen questionnaire—"How Can We Help You and Your Family?"—developed by the center. The questionnaire consists of a list of problems faced by patients with cancer. Patients are asked to identify the extent to which each problem affects them and whether they would like any help in dealing with it. Patients' responses (encrypted for privacy) are quickly disseminated by e-mail to their health care team of physicians, nurses, psychologists, and social workers. The data are also transmitted automatically to a software program that allows for their analysis.

Patients are linked to needed psychosocial health services in multiple ways. First, the computer-based screening program provides an automatic link. For some problems, such as those involving transportation, the program generates a printout of resources that is presented to patients by administrative staff³ at the end of their appointment. For problems requiring a more complex intervention, the automated screening tool generates an e-mail to the team member with the expertise to address the problem. Full-time, on-site social workers also provide case management and refer patients to a wide variety of psychosocial health services available on site (e.g., support groups, educational seminars, psychotherapy, stress management) and from providers in the community.

CANCER CARE FOR THE WHOLE PATIENT

MEETING PSYCHOSOCIAL HEALTH NEEDS



INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

the big picture

Prior to City of Hope



1993 – Johns Hopkins
(first in country)

2007 – USCD
(first automated)

2007 – Institute of Medicine
(model for country)

City of Hope



International recognition
as model program



Patient data used to drive clinical care,
research and education.



Why use Problem-Based Screening?

- Reliably identifies patients who may require intervention
- Anticipates challenges and prevents crises
- Alerts the team to high-risk situations
- Communicates to patients and families in “their” own language
- Identifies problems as they enter the cancer center
- Teaches which problems are most distressing
- Creates new knowledge by related to specific cancer groups by age, race, gender, staging, cancer diagnosis, etc
- Develops prospective clinical and educational programs
- **Why else?**

what is SupportScreen?

On the surface, SupportScreen is a patient-friendly, easy to use screening tool to capture biopsychosocial measures.

Behind the scenes, however, is a powerful automated system that identifies, triages and provides tailored educational information in real-time.

This combination allows for health care teams to quickly orient to common problems experienced by cancer patients and their families and provides data-driven motivation for providers to take action to increase quality of care.

Improved patient outcomes at your fingertips!



Identifies biopsychosocial distress and triage responses to the proper health care teams in realtime.



Tailor and modify screenings specific to different clinics or settings to address different patient needs.



Facilitates patient, physician and multi-specialist communication and coordination.



Save money by identifying high risk patients for unnecessary admissions, extended stays, emergency room visits.

tailored materials



Educational and informational materials can be attached to each question and sent to patients if they request it.

These materials are easily modifiable and can be changed at any time via the administration dashboard.



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Duarte, CA 91010-3000
Phone 800-826-HOPE (4673)
www.cityofhope.org

Understanding and Managing Fatigue

What is Fatigue?

- Physical or mental exhaustion
- Having less energy to do things you normally do or want to
- Feeling heaviness in arms and legs
- Unable to sleep or sleep too much
- A common symptom with cancer or cancer treatment
- Lasts for long periods of time, affecting daily activities
- Not relieved by sleep or rest
- Can vary in unpleasantness and intensity

Common Causes of Cancer-Related Fatigue

- Side effects of medications
- Anxiety
- Poor nutrition
- Lack of exercise
- Trouble sleeping
- Pain
- Anemia
- Difficulty of breathing
- Emotional distress
- Other illnesses in addition to cancer

Signs to Watch For

- Too tired to perform your normal activities
- Have no energy to eat properly
- Trouble thinking or concentrating
- Feeling isolated and depressed
- Being with friends and family is becoming difficult
- Difficulty in following your treatment plan

What to Tell Your Doctor

- There are different ways to describe fatigue to your doctor or nurse
- Describe your level of fatigue as mild, moderate, or severe
- Use a scale from 1 to 10 to rate your level of fatigue:

(0 means no fatigue at all, and 10 means, the worst fatigue you can imagine)

no problem	0	1	2	3	4	5	6	7	8	9	10	severe problem
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- Keep a diary or a log of its progress over the course of your treatment, include: When did the fatigue start? What makes your fatigue worse or better? How has fatigue affected your daily routine or activities?

summary report



Summary reports are sent to health care teams immediately after a patient completes a screening.

The summary report is color coded to highlight the items that each healthcare professional is responsible for following up.

The report also lists which educational materials were provided to the patient.

Lastly, these reports can be sent back to the EHR for inclusion in the patient file.

Attention Dr. MARIANNA SMITH,

Your patient, **JIM SANFORD** [MRN: 333333], seen on 1/17/2020 12:58:13 PM, is requesting help from you or a member of your team.

MD:

- Understanding my treatment options - VERY SEVERE PROBLEM (EDU materials provided)
- Your patient has requested to talk with you about problems with - UNDERSTANDING MY TREATMENT OPTIONS (EDU materials provided)
- Your patient has requested to talk with you about problems with - ABILITY TO HAVE CHILDREN

PE/RN:

- Your patient has requested to talk with you about problems with - RECENTLY LOSING WEIGHT WITHOUT TRYING (Consider referral to clinical nutrition)
- Sleeping - VERY SEVERE PROBLEM (EDU materials provided)
- Your patient has requested to talk with you about problems with - SLEEPING

MSW:

- Transportation - MODERATE (MSW info provided)
- Your patient has requested to talk with you about problems with - TRANSPORTATION
- Health Insurance - VERY SEVERE PROBLEM (EDU materials provided)
- Finances - SEVERE PROBLEM (EDU materials provided)
- Your patient has requested to talk with you about problems with - FINANCES
- Managing my emotions - SEVERE PROBLEM (EDU materials provided)
- Your patient has requested to talk with you about problems with - MANAGING MY EMOTIONS

Other:

N/A

Survey Title: You, Your Family and City of Hope are a Team - English

Survey Language: English

If you have any questions or concerns about this screening process please contact Matthew Loscalzo at mloscalzo@coh.org

The Medium Really Matters



City of Hope

English - 8 / 59

You, Your Family and City of Hope are a Team

How Much Of A Problem Is This For You?

Sleeping

Not a Problem

Mild Problem

Moderate Problem

Severe Problem

Very Severe Problem

Prefer not to answer

Do not know

How Can We Best Work With You On This Problem?

Provide Written Information

Talk with a Member of the Team

Written Information & Talk with Team Member

Nothing Needed at this Time

Back

Most Frequent Problems of High Distress Only (N=20,689)

Biopsychosocial Distress Items	<u>% High Distress</u> (Moderate to Very Severe)
Sleeping	36.6%
Fatigue	34.0%
Side effects of treatments	32.6%
Talking with doctor	31.6%
Finances	30.9%
Worry about the future	30.7%
Pain	30.6%
Feeling anxious or fearful	26.5%
Walking, climbing stairs	22.4%
Losing control	21.8%

Total Screened= 43,980

Tailored Screenings	# Screened
Biopsychosocial Distress	20,689
Anesthesia	9,689
Geriatric Assessment	4,815
Couples/Partners	3,915
Helford - ICU	1,589
Psychiatry	711
Pediatrics	466
Cutaneous T cell Lymphoma	316
Endocrine Depression Assessments	311
Survivorship	304
Patient Satisfaction	258
Caregiver Preparedness Pathway	198
Family Meeting Summary	197
Community Practice	140
Clinical Research Unit	111
Inpatient Screening	108
Metabolic Bone Clinic	76
Pre - BMT Screening	57
Pre - HCT Screening	30

Did you find any of the questions or topics upsetting? (N=821)

- 93% patients/partners responded *No*
- 7% positive responses (free text)
 - Chemotherapy (12)
 - End of Life (10)
 - Treatment/Side Effects (7)
 - Miscellaneous
 - Finances, Insurance, Spouse, Emotions
- Help this group!

Patients Who Receive Certain SC Services Have Lower LOS Than Non-DSCM Patients

SupportScreen Impact on LOS

Metric	Received SupportScreen	Did Not Receive Any SC
MRN Count	3,157	8,167
Avg LOS	6.9	12.4
Obs / Exp LOS Ratio	1.17	1.33

SupportScreen patients are typically screened within first 15-20% of their time at COH

Couples Program Impact on LOS

Metric	Received Couples Program	Did Not Receive Any SC
MRN Count	378	10,976
Avg LOS	3.1	11.2
Obs / Exp LOS Ratio	0.74	1.3

Couples Program patients begin program almost immediately after arriving at COH

Receiving Supportive Care Early Reduces Length Of Stay

1. "Early" considered to be within first 25% of patient's tenure

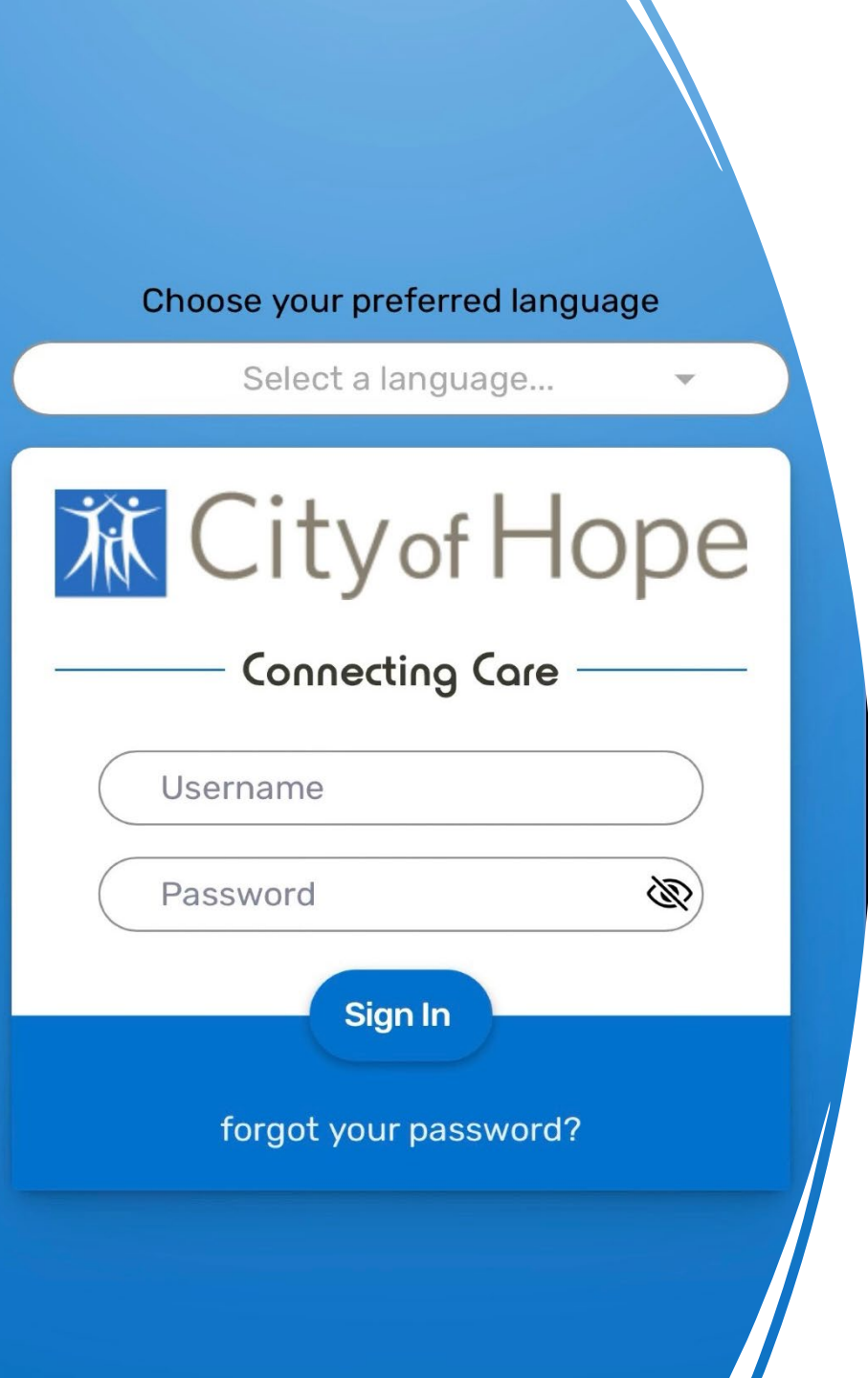
Key ■ SC higher than non-SC ■ SC lower than non-SC ■ No significant difference

Poll

Thinking about YOUR OWN SITUATION which of these potential (LEVERAGE) resources are accessible to you for **Innovation**?

1. Legal and/or Regulatory requirements
2. Institutional serious problem to be solved
3. Donors and/or Foundations
4. Highly supportive administrative and clinical leader-advocates
5. External funding (for clinical/research/operational purposes)
6. None, nothing to be done, it is hopeless

Other, put it in the Chat now please




Quo Vadis?

Ecological Momentary Assessment

*City of Hope Connecting Care-
Education, Resources and Psychosocial Support*

Choose your preferred language

Select a language...

 **City of Hope**

Connecting Care

Username

Password

Sign In

forgot your password?

Connecting Care

Pain Update

0%

Let's get started!

Next assessment on:
8/12/2024 8:00:00 AM

View Details / History

13:47

Stop

How much of what your health care team recommended for the pain are you doing now?

Nothing

Almost Nothing

Some

Almost All

All

Connecting Care: Be Sure to See
Video by Dale Mitani!!!

Why the Evolution to EMA Connecting Care?

- Ability to pre-schedule interactions 24/7
- Availability, ease of use, of cell phones and tablets
- Can send reminders when screenings are available using emails, text messages and/or push notifications
- Allows for personalization of motivational messages/pictures to encourage subjects to complete screenings
- Uses login credentials to enhance security

Priming* Script to Connect Benefits of Program

From Tech to Touch

- *...to tell someone something that will prepare them for a particular situation...**exposing learners to relevant concepts or information prior to a learning task**, associated cognitive networks are activated
- Prompts
- How we describe each other
- Consistent key phrases
- Titles of virtual programs
- *Especially emotionally-charged content*, Prognosis Question as crucial to our *City of Hope Connecting Care-Education, Resources and Psychosocial Support (EMA+)*

Ecological Momentary Assessment (Connecting Care)

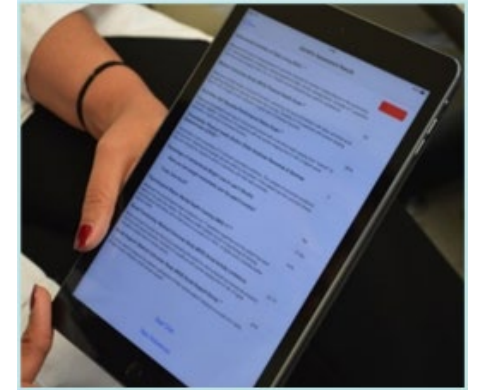
Summary to Team: Patient & Partner

MD:

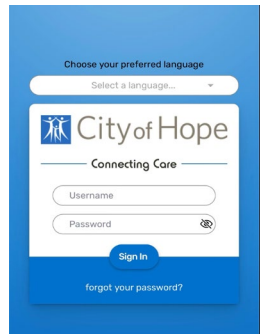
- SUPPORTSCREEN - PATIENT
- Sleeping - MODERATE PROBLEM (EDU materials provided)
- Fatigue (feeling tired) - VERY SEVERE PROBLEM (EDU materials provided)
- Understanding my treatment options - MODERATE PROBLEM (EDU materials provided)
- Your patient has requested to talk with you about problems with - UNDERSTANDING MY TREATMENT OPTIONS
- NPRS - Current pain level - MODERATE - 4
- Pain level is currently - ACCEPTABLE
- Please choose the statement that best describes your current situation. - I AM ABLE TO BE FULLY ACTIVE AND CARRY ON ALL PRE-ILLNESS PERFORMANCE WITHOUT RESTRICTION
- What are your goals for your meeting today? - LEARN ABOUT NEW RESEARCH TREATMENTS AVAILABLE AT CITY OF HOPE INCLUDING CLINICAL TRIALS
- Please choose the most important topic for you to discuss with your physician today? - BE ABLE TO ASK QUESTIONS
- Which statement is closest to your understanding of your present medical situation? - CURE IS NOT AT ALL LIKELY AND IS IN THE RANGE OF 0-25% FOR ME. THE GOAL OF TREATMENT IS TO CONTROL THE DISEASE FOR AS LONG AS POSSIBLE
- Do you have a Living Will, Healthcare Power of Attorney, or Advance Directive - YES

MSW:

- Sexual function - SEVERE PROBLEM (EDU materials provided)
- Feeling anxious or fearful - SEVERE PROBLEM (EDU materials provided)
- Your patient has requested to talk with you about problems with - FEELING ANXIOUS OR FEARFUL



Enhancements to Extend City of Hope Connecting Care App



- **Ability to pre-schedule interactions 24/7**
- Availability, ease of use, of cell phones and tablet
- Allow app users to take photos or videos of their environment to identify treatment barriers, which will be shared with the healthcare team.
- Use the device's camera to get an overall view of the state of the patient and any wounds or conditions
- Show videos in the app for patients/caregivers on topics like meditation, relaxation, and how to use medical devices.
- Receive biometric information from connected devices to pass patient information to healthcare staff.
- Add a messaging feature to allow patients/caregivers to contact their healthcare liaison.
- Add a journal/diary feature so the patient/caregiver can track events in their daily life such as problems or successes.



Couple's Program Real World Applications



We Are All Leaders In It Together: *Our COH Team*



Dr. Pal



Dr. Waisman



Dr. Portnow



Dr. Badie



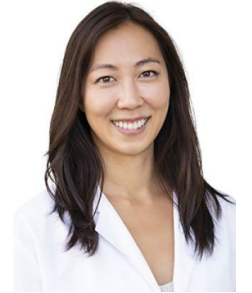
Dr. Feldman



Dr. Mortimer



Dr. Dale



Dr. Yoon



Dr. Aquati



Kim Romig



**Nicole
Peeke**



Lynne Thomas



**Claudia
Cuevas**



**Terry
Hernandez**



**Jonathan
Stoner**



**Alejandro
Fernandez**



Dr. Kelly



**Amal
Mohammadi**



Brett Evans



Dale Mitani



**Dr. Janet
Mokhnatkin**



Karen Clark



Lori McGee



Prof. Loscalzo

Couples Coping Together Against Cancer

- Comprehensive program launched in 2006
- Over >3,000 couples have participated
- Services provided to couples from first visit through bereavement
- Successfully implemented breast, gynecological, colon, pancreatic, lung
- Extremely high evaluations from patients, partners and faculty (100% recommend program to other physicians)
- ~\$3million funding philanthropy and foundations
- Dramatic cost savings to the institution (*even you will be impressed*)
- **February 2023 launched neuro-oncology for high grade primary brain tumor patients**



Couples Coping Together Against Cancer

Program Goals

- 1.Proactively identify and address couple's biopsychosocial distress so they can best engage in the benefits of medical care
- 2.Enhance a couple's ability to openly and honestly communicate, emotionally support, and solve problems together during times of stress
- 3.Provide couples with skills needed to start living the relationship they have always wanted.
- 4.Prepare couples to focus on medical aspects of care during physician encounters.

Couples Coping Together Against Cancer : The Care Model

All new patients and partners in designated groups receive the following couples-based interventions as the standard of medical care

- Comprehensive biopsychosocial screening
 - SupportScreen/Connecting Care
- Psychoeducational session with couple counselor
 - Strategic framing of the experience
 - All relationships end one day
 - Opportunity to have the most desired relationship from this moment on
 - Commitment to being proud of how you react
- Initial medical consultation with physician
- Active through continua of care to survivorship-bereavement

What Providers Say...

“The Couples Program provides the needed skills to empower the patient living with breast cancer and their partners at a critical time.”

- Joanne Mortimer, MD, FACP, FASCO, Director, Women’s Cancers Program, Vice Chair, Medical Oncology, Professor, Division of Medical Oncology & Experimental Therapeutics, Associate Director for Education and Training, Baum Family Professor of Women's Cancers, City of Hope Comprehensive Cancer Center

“I treat genitourinary cancers, which are male-dominant diseases that afflict patients in their older age (for example, prostate, bladder and kidney cancer). Partners play an essential role in the management of these older male patients who often have challenges asking questions or communicating emotions regarding their diagnosis. The Couples Coping Together program has been instrumental in ensuring that partners’ voices are heard and empowers them to communicate effectively with the care team.”

- Sumanta K. Pal, MD, FASCO, Professor & Vice Chair of Academic Affairs, Department of Medical Oncology & Experimental Therapeutics, City of Hope Comprehensive Cancer Center

Which statement is closest to your understanding of the present medical situation?

Both patient and partner.

- A. Cure is very likely and is in the range of 76-100% for me.
- B. Cure is likely and is in the range of 51-75% for me.
- C. Cure is possible but not likely and is in the range of 26-50% for me.
- D. Cure is not at all likely and is in the range of 0-25% for me. The goal of treatment is to control the disease for as long as possible.
- E. Cure is not at all likely and is in the range of 0-25% for me. The goal of treatment is to focus on comfort, time with family and quality of life.

A

B

C

D

E

Why Care About Patient/Partner Perception of Medical Situation?



- Perceptions are powerful drivers of biopsychosocial responses
- Sharing perceptions among patients and clinicians are often emotionally charged and confusing (Jackson, Emmanuel 2023)
- Unrealistic expectations can be frustrating distort the healing relationship (“What matters” to older adults? 2019)
- Misalignments lead to poor quality of care (Care, F. O., & Planning, A. C. 2015)
 - Not know what matters most to patient/partner/family
 - Higher financial, resource, psychological, spiritual, social costs
 - Poor use of institutional resources
 - Traumatized partner and family survivors
- Deprive patient/partner/family/healthcare team of healing experience
- **Essential for realistic decision making!**

“Discordance in prognosis perceptions may

...induce anxiety, depression, and caregiver burden; impede patient-caregiver communication, **adaptive dyadic coping and relational satisfaction**; and complicate clinical interactions, goal-concordant medical decision-making, and (planning of) patients’ care.”

van der Velden NCA, et al. Patient-Caregiver Dyads' Prognostic Information Preferences and Perceptions in Advanced Cancer. J Pain Symptom Manage. 2023 May;65(5):442-455.e2. (see cites 2,5-7,10, 11, 14, 19, 22)

Benefits of Shared Perception of Medical Situation

- Use of **time and relationship** as strengths-based foundation
 - Therapeutically titrated doses to promote sense of mastery
- Treating physicians alerted to (mis)alignments
- Ability to cognitively **and** emotionally integrate illness trajectory in real-time*
- Create an environment of factual and emotional honesty
- Recognition of patient/partner (mis)understanding for alignment
- Greater likelihood of the benefits from a mutually shared plan of action
- Less stress and time commitment on treatment-focused providers
- Documentation of PT/PNTR understanding, coping, priorities within “their” realities** ***

*Jackson VA, et al, , The cultivation of prognostic awareness through the provision of early palliative care in the ambulatory setting: a communication guide. J Palliat Med 2013;16:894-900.

** Emanuel L. Know your patient: psychological drivers of decision making. Isr J Health Policy Res 2012;1:37-37.

***Scandrett KG, et al. Intervention thresholds: a conceptual frame for advance care planning choices. BMC Palliat Care 2014;13:21-21.



Illness as Opportunity

“Illness as an opportunity, though a dangerous one...Illness takes away part of your life, but in doing so gives you the opportunity to choose the life you will lead, as opposed to living out the one you have simply accumulated over the years.”

Frank A. (1991). *At The Will of the Body*. New York: Houghlin Mifflin

Endemic Challenges to Engaging Tech Services in Health Care Settings

Wealth Care \$ over Health Care

- High cost of specialized Tech services
- Chronic Understaffing and Overworking
- High turnover
- Complex & ever-changing compatibility with other solutions
- No support for dreaming what could be
 - Documentation driven by finances
 - Problem focused
 - Just get it done
- Lack of outcome recognition
 - It doesn't just happen!

Strategies to Access and Engage Tech \$ervices

- Link to finances, legal requirements, institutional culture
 - Values-Benefits-Outcomes
- Administrative and Clinical Leader
 - Advocates who have both currency and courage
- Engage highest level institutional leaders to **what they care** about
 - Avoid mid-level managers whenever possible
 - Good people focused on daily operations but are seldom innovators
- Have funding for such services
 - Part of funded programs
 - Research
 - Training
 - Innovation
 - Industry (Profit and Non-profit)
 - Community partnerships
- *What is missing? Put in Chat now please...*



If you want to
avoid the crash

have TECH
Support there

from the launch!



"That was fast."