Welcome!

New Frontiers
A VIRTUAL CONFERENCE TO EXPLORE INNOVATING FOR SYSTEMNESS AND WELL BEING
MISSION CONTROL

WHAT IS ‘MISSION CONTROL’ LIKE AT NASA?

First set up for Gemini 4 in 1965
Initially we focused on a single mission at a time...

Today we have many smaller nodes around the world...
We collaborate on a central mission

WHAT IS ‘MISSION CONTROL’ LIKE AT UH HOSPITALS?

We knew right away that we needed a team...
We call it the systems operation center

A mechanism to bridge gaps in a healthcare journey...

A ripped solar array... We had to solve it immediately...

A massive cuff-link

Even during COVID - we had to plan a launch - with safety top of mind!

MISSION CONTROL IS THE LAST LINE OF DEFENSE FOR THE CREW

Training is the key to trust

KEEP AN OPEN MIND AND RELY ON EXPERTISE

MOONSHOT: Predicting disease spread
Community health

MOONSHOT: Command center becomes a central workflow

COMMUNITY SPREAD DATA

WHERE IS THE HIGH-RISK?

Keep an open mind and rely on expertise

TRAINING IS THE KEY TO TRUST

We were becoming proactive instead of reactive

We needed real-time insights

Community spread data

We were becoming proactive instead of reactive

A patient itinerary gives an overall view

User-centered design is central!

Healthcare can be a holistic experience instead of transactional

We know more about our Amazon packages than what to expect as a patient!

At Agility we enable and empower real-time decisions

“Return the joy of practicing medicine”

ARE THERE OTHER EXAMPLES OF A ‘MISSION CONTROL’ IN HEALTHCARE?

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 Systemnautics

Astronaut means “space sailor” – creating strategy during COVID feels like sailing...

What makes a great system?

A collection of entities greater than the sum of its parts.

A good system has an adaptive capacity.

That benefits society as a whole!

Information from the CDC was coming fast – we had to adapt quickly.

Purpose | Capabilities

Mission

Since we had to scale manufacturing quickly – we compressed the prototyping process.

It had to be “good enough” – not perfect.

We used 3D printed injection molding tools...

From months compressed to just weeks!

Healthy restart guide: UH

We had to stay open – so we had knowledge to share!

Fans were not an option for warehouses – but surgeon’s cooling vests were interesting...

We can’t always move that fast – but we know the new pathways...

Seamless partnerships are a key part of the future.

What’s next?

Hugs! Travel! See real people!

We needed to scale up the lab infrastructure quickly.

We had to shift the parts & processes – and get into the details deep!

Brandon Cornue, MAGNET

Sharon Miller, NASA

Melissa Brasskie, University Hospitals

Developing PPE with UH – we accomplished a lot!

Listening and using each other’s experiences to build on each other.

A lot of leadership and support during early COVID.

Understanding people’s motivations is key to systems of people.

People were willing to learn and help!

We had to come up with a strategy to fit testing the entire organization.

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New Frontiers

Gravitational pressure puts a lot of pressure on healthcare.

**Healthcare, We Have a Problem**

- Data Monitoring
- Screening
- Inter-Personal Check-Ins
- Confinement Psychology
- Space Radiation

Dr. Goutham Rao
University Hospitals

- Astronauts: Train under simulated stress
- Staying Busy
- Meal Time
- Personal Items
- Journaling
- Exercise
- Nature

“Flight Surgeons” monitor astronauts.

- Monitoring
- Relationship
- As we travel further into space, tele-medicine will shift.

Kelly Gilkey
NASA

- Are there parallels to the current lock-down?
- Sleep Disruption
- Social Isolation
- Depression

- Deferring necessary care
- Weight gain & lack of exercise
- Obesity

Dr. Margaret Larkins-Pettigrew
University Hospitals

- And even employees of hospitals are experiencing isolation health issues... systems approach
- Individual approach

- Provider experience
- Start with root causes
  - E.M.R. is a driver
  - Growth & leadership paths

- How do we build trust?
- In remote times?

- Video calling
- Pajama time
- Making time for fun
- Gardening, a connection to nature

- We are surveying physicians...
- Overall we are coping...

Trust has been a real challenge in the U.S.!

- Take the time to listen...

- Docs want to feel positive impact
- Feel valued
- Be home with family.

- It’s our responsibility to concentrate on the patients and build trust!

- If we are our best selves – we can help others be their best selves.

Craighton Berman
ALL SYSTEMS GO!

NEIL ARMSTRONG TOLD ME HE HAD A REFLECTION ON HIS LIFE & DREAMS WHILE ON THE MOON...

ONGOING EDUCATION & PERPETUAL LEARNING...

PREPARATION IS THE KEY TO REACTING TO SPORTS INJURY... YOU HAVE TO STAY FOCUSED ON THE PLAYER!

I GROW UP WITH SPORTS AND MEDICINE...

DISSEMINATION OF INFORMATION IS SO IMPORTANT

THEY ARE JUST PEOPLE TOO!

TRAINING + TECHNOLOGY + SIMULATION

LEARNING THE POSSIBLE MISTAKES

I LOST POWER DURING A SURGERY—WE HAD TO REACT QUICKLY AND GO MANUAL!

EITHER YOU WRITE YOUR STORY—OR SOMEONE WRITES IT FOR YOU... OR YOU CAN BE A HERO IN SOMEONE ELSE’S STORY

PERFECT PRACTICE MAKES PERFECT.

WE PRACTICE WHAT FAILURE LOOKS LIKE!

I’VE FELT THIS FEELING BEFORE...

WE ALSO FOCUS ON SPIRITUAL HEALTH—A SENSE OF PURPOSE...

ITEROATIONS & MODIFICATIONS HAVE TO HAPPEN ON THE FLY!

WHAT'S THE PROCESS FOR GETTING A PLAYER BACK ON THE FIELD?

THE RISK IS CONSIDERED, THEIR HISTORY — THE DECISION COMES DOWN TO THE PLAYER!

I HAD TO FIX A SOLAR ARRAY IN FROZEN SPACE... I WARMED MY HANDS IN A BEAM OF SUNSHINE!

MY 4TH GRADE TEACHER TOLD ME THAT I COULD SOME DAY GO TO SPACE...

ORDINARY KIDS CAN DO AMAZING THINGS!

ASTRONAUTS MUST PREPARE PHYSICALLY, MENTALLY AND EMOTIONALLY...

HEART MIND BODY SOUL

"CHANCE FAVORS THE PREPARED MIND!"—PASTEUR

COLONEL DOUGLAS WHEELOCK—NASA

DR. JAMES VOOS—HEAD PHYSICIAN CLEVELAND BROWNS

CRAIGHTON BERMAN
Thank You!