

Large System Improvement Strategy from Micro-Meso-Macro-Meta System Design and Cascading Measures

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Tuesday, February 28, 2023

13:35-13:55



RESONANCE

THE MICROSYSTEM FESTIVAL CELEBRATING 20 YEARS

Feb 28 – March 2 Jönköping, Sweden

Institi
EXCELLENCE IN HEALTH
AND SOCIAL SYSTEMS



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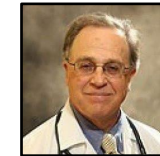
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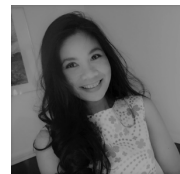


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National Regional Coordinator



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Aim

Share the story of a 5+ year national improvement network focused on people with Advanced Cystic Fibrosis Lung Disease exploring Lung Transplant

- Patient and family driven origin
- Microsystem design: Micro-Meso-Macro-Meta
- Key interventions
- How do we know if change is an improvement?
 - Key challenges to track each person
 - Data collection challenges and tips
- Results to date
- Next steps

High Performing Clinical Microsystems

THE JOINT COMMISSION

The series of articles on microsystems is intended to provide useful ideas and methods that can be used in diverse clinical settings—outpatient, inpatient, skilled care, and home care—to create the conditions for sustained improvement in clinical quality and value in a way that is appreciated by patients and exciting to the front-line staff who serve them.

MICROSYSTEMS IN HEALTH CARE

Microsystems in Health Care: Part 1. Learning from High-Performing Front-Line Clinical Units

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The health care system in the United States can, under certain conditions, deliver magnificent and sensitive state-of-the-art care. It can snatch life from the jaws of death and produce medical miracles. The case of Ken Bladyka (Sidebar, p 475), is one example of the health care system's stellar performance. Yet the system is often severely flawed and dysfunctional. The Institute of Medicine's recent report—*Growing the Quality Chasm: A New Health System for the 21st Century*—makes the point of system failure clear!

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No One Left Behind

CFF “Voice of the Community” surveys and other discussions with the CF Foundation (CFF) revealed that issues important to the ACFLD lung transplant community were not being adequately addressed.

- Frustration with the transplant referral process *broken with wide variability in approaches between transplant programs and between CF referring programs*
- *Questions about what was being done to improve post transplant outcomes*



The community reported that once they pursued lung transplantation they “no longer felt they were part of the CF family.”

They felt disenfranchised and abandoned and perceived it was because transplantation in some way represented CF provider failure.

This wasn't easy for the CFF to hear, but through listening, the CFF identified opportunities where meaningful contributions could be made.

Advanced Lung Disease Mission Statement

- *To improve the care and long-term outcomes of individuals with CF and advanced lung disease by optimizing decision-making and access to lung transplantation and improve outcomes after lung transplantation*
- The CF Lung Transplant Consortium (CFLTC) was initiated in late 2016 and included ten academic transplant centers.
- The CF Learning and Leadership Collaborative was launched in 2017



THE JOURNEY THROUGH LUNG TRANSPLANT

Experiences can vary, but knowing what to expect can help you understand if a lung transplant is a treatment option for you.



TALKING ABOUT TRANSPLANT EARLY

Your cystic fibrosis care team may bring up transplant — even if you don't need one — as part of your regular care center visit, or you can bring it up yourself.

Early discussions give you time to learn about the process, ask questions, and work on your health, finances, and social support, so you're prepared for a successful transplant should you ever need one.



BEING REFERRED

At some point, your CF care team may share your medical records with a transplant team and recommend that you meet with them. This lets the transplant team get to know you as a person. You also get to learn about them as partners in your care and what to expect during an evaluation, surgery, and recovery at their center.



GETTING EVALUATED

At the transplant center, your physical and emotional health, finances, and social support will be assessed through a series of tests. You will also have consultations with the transplant team, which may include a surgeon, pulmonologist, coordinator, dietitian, social worker, and financial coordinator.



HAVING YOUR CASE REVIEWED

After reviewing your test results, the transplant team will recommend that you either:

- Be listed for transplant
- Have additional tests
- Live as usual until your lungs get worse
- Work on your health or social support
- Not pursue a transplant at their center, at which point your care team can help you get opinions from other transplant centers

If a transplant is not for you, your CF team will continue supporting you and your care.



READY TO BE LISTED

If the team recommends that you be listed for a transplant, they will help you decide when to get on the UNOS¹ waiting list. Your CF care and transplant teams will help you manage your health so you have the best chance for a good recovery from surgery.



RECEIVING NEW LUNGS

You may need to move closer to the transplant center. Once donor lungs are available, you'll get a call to come quickly to the hospital to replace your diseased lungs with healthy ones.

LIVING WITH NEW LUNGS

People with CF can enjoy a high quality of life, with median survival after transplant of 9.5 years.² After surgery, keeping lungs healthy means meeting with your care teams and managing a new care plan that includes medications to prevent rejection and infections, and reducing the risk of germs, including germs from others with CF.

SUPPORT IF YOU NEED IT

For help understanding insurance coverage or financial resources for transplant expenses, contact CF Foundation Compass, a personalized service at **844-COMPASS** (844-266-7277).

To find someone who has experienced transplant, consider CF Peer Connect, a one-to-one peer mentoring program. Learn more at cff.org/PeerConnect.

¹United Network for Organ Sharing, the organization that administers the Organ Procurement and Transplantation Network.

²Huahu K, Cheikh WS, Chambers DC, et al. The International Thoracic Organ Transplant Registry of the International Society for Heart and Lung Transplantation. Thoracic Adult Heart Transplantation Report 2015. Focus: Thoracic Multivisceral Transplantation. J Heart Lung Transplant. 2018 Oct;37(10):1155-1168. doi: 10.1016/j.healun.2018.07.022. Epub 2018 Aug 10.

cff.org/LungTransplant

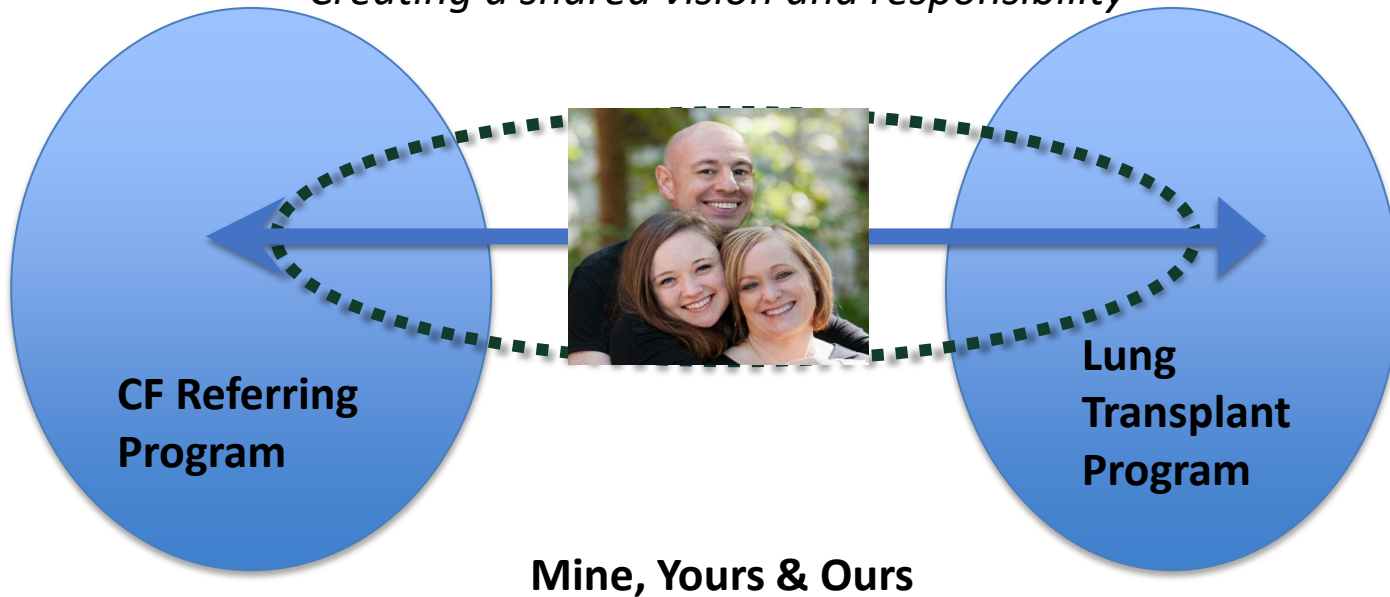
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www.cff.org

CF Lung Transplant Transition LLC

Lung Transplant Transition Pathway "Shared Purpose"

Creating a shared vision and responsibility

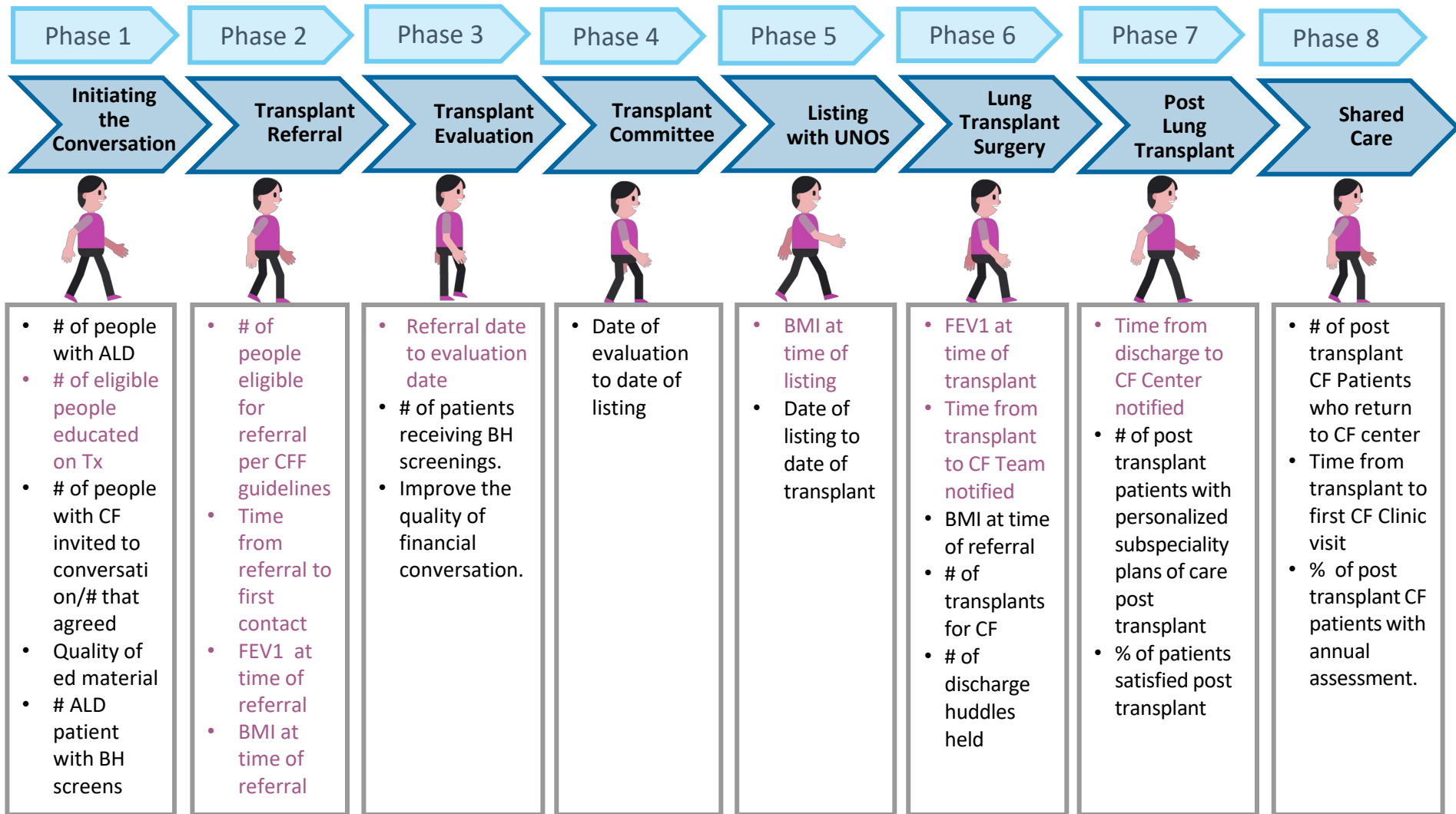


Learning to work together

Accepting mutual necessity by recognizing the value of others

Cystic Fibrosis Lung Transplant Eight Phase Measures

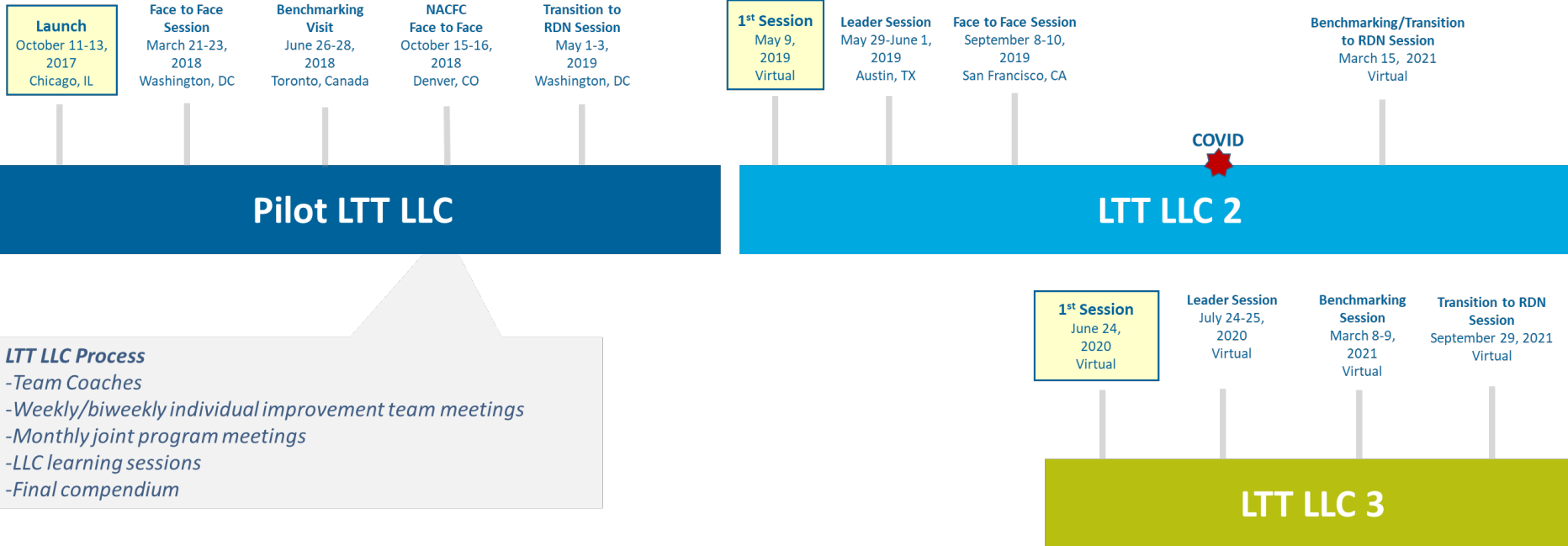
Purple Font Indicates Core Measures



Palliative Care

Shared, Co-Designed & Coproduced care

CF Lung Transplant Transition (CF LTT) Learning and Leadership Collaborative (LLC) Timeline



Cystic Fibrosis LTT Timeline October 2017-September 2021

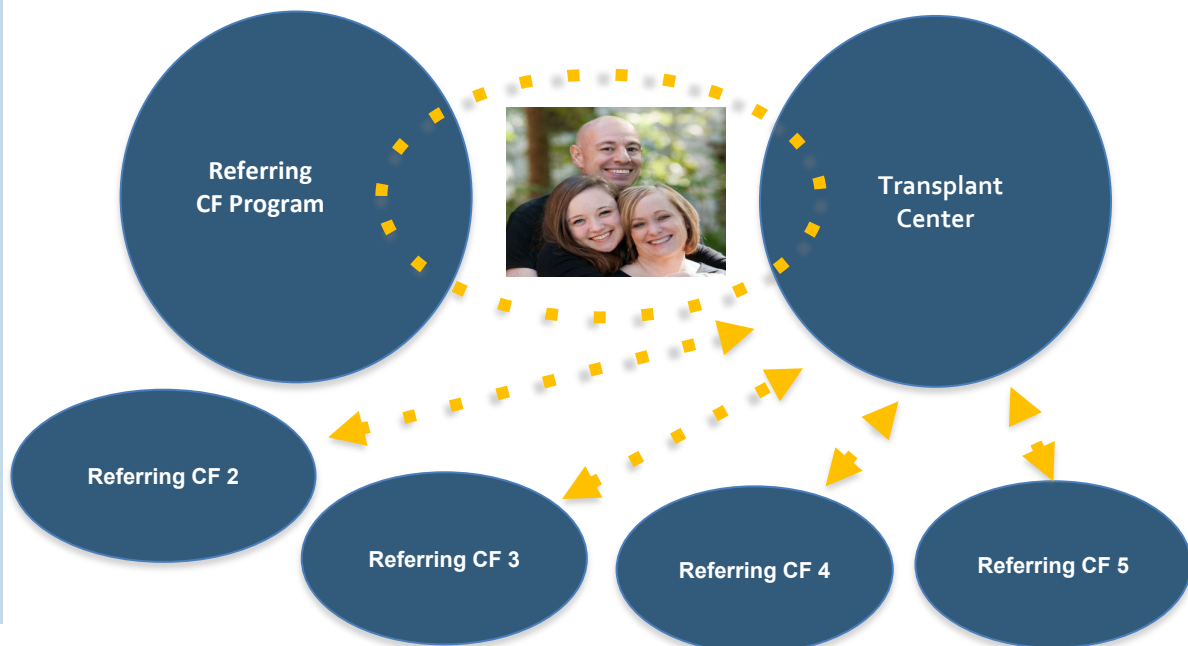
LTT LLC Participating Centers



The "secret" ingredient:
Team Coaches

CF LTT RDN Program Aim

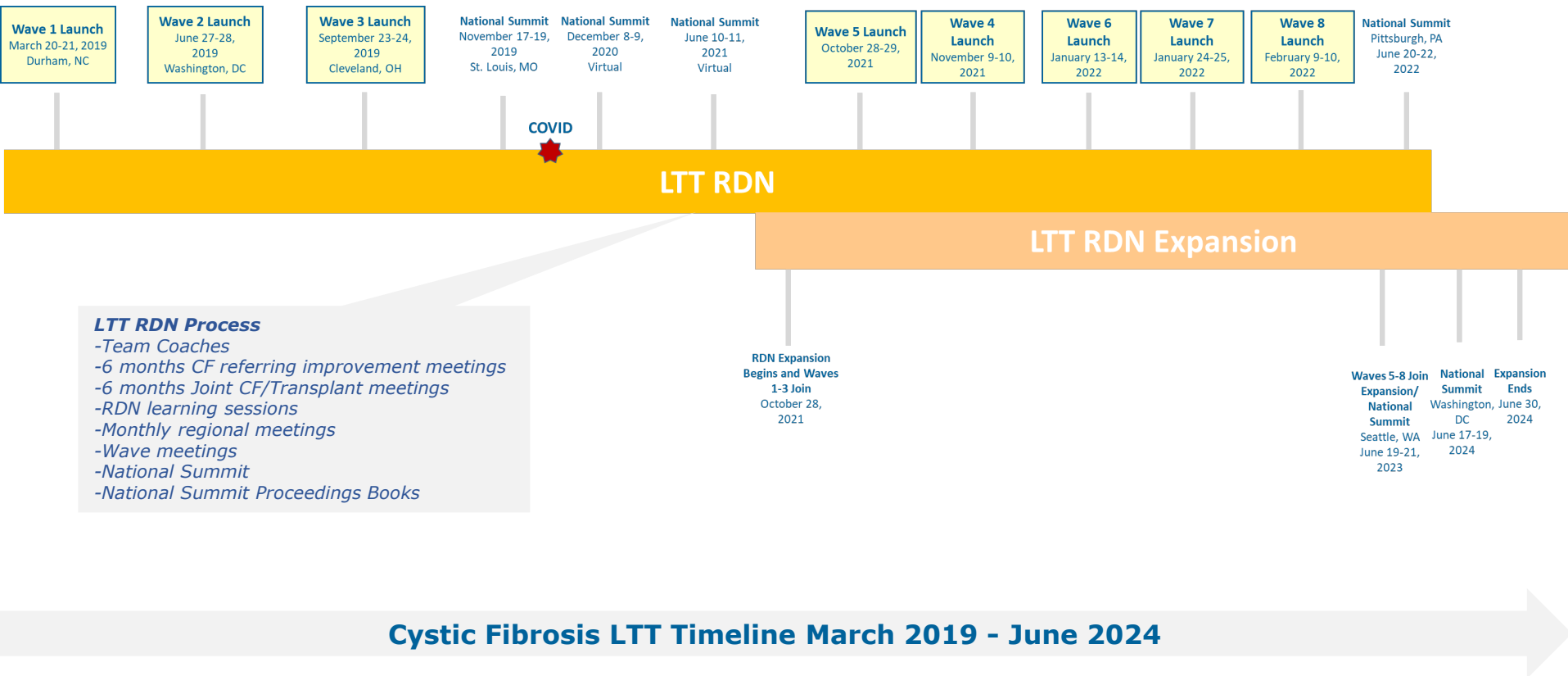
Aim: Using the CF LTT LLC experience, improvements and results, produce actionable messages and best practice recommendations to disseminate to new CF referring to Lung Transplant programs to ensure CF Lung Transplant findings benefit patient/families and staff.






Mine, Yours & Ours

Referring CF Center + Lung Transplant Center = CF Lung Transplant Transition Team

CF LTT Regional Dissemination Network (RDN) Timeline and Core Processes



Core Information and Sharing

CF Lung Transplant Transition (LTT) LLC

Within the context of a learning community, explore, improve and decrease practice variation in the systems and processes of CF Lung Transplant referrals and transitions from CF programs to Transplant programs and then to a care model of shared responsibility for the person with CF post Transplant.

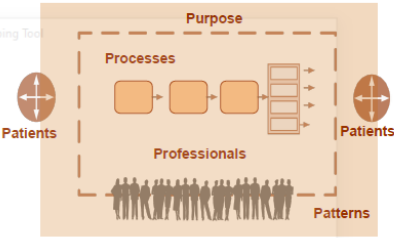
The CF LTT LLC will provide fundamental improvement knowledge, skills, practice and team coaching to increase improvement capability of everyone at the front line of care including people with CF and their families to improve lung transplant processes and clinical outcomes. Leadership development to lead quality improvement and create conditions for successful improvement is included.

One-Year Summary Compendium
 October 15-16, 2018

Pre-NACFC 2018
 Denver, Colorado

Microsystems At A Glance



A Quick-Look Guide
 Developed by Microsystem Members
 for Microsystem Members



The diagram illustrates a microsystem with a central box containing 'Purpose' at the top, 'Processes' in the middle, and 'Professionals' at the bottom. 'Patients' are shown on the left and right sides, and 'Patterns' are at the bottom. Arrows indicate the flow of information and processes within the system.

clinicalmicrosystem.org

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CF Lung Transplant Transition Regional Dissemination Network (CF LTT RDN)

Virtual National Summit III Proceedings
 June 10-11, 2021

CF Lung Transplant Transition Regional Dissemination Network

Wave 1

- Advisory Team: Regional Coordinator, Regional Quality Coach, Dube/JCO
- Long Transplant: CF Referring
- CF Referring

Wave 2

- Advisory Team: Regional Coordinator, Regional Quality Coach, Logsdale/Flah
- Long Transplant: CF Referring
- CF Referring

Wave 3

- Advisory Team: Regional Coordinator, Regional Quality Coach, Olin/DeW/Orlando
- Long Transplant: CF Referring
- CF Referring

CF Lung Transplant Transition LLC, Phase 1

- University of Nebraska: CF Referring
- University of Washington, Seattle: Long Transplant

Relational Coordination

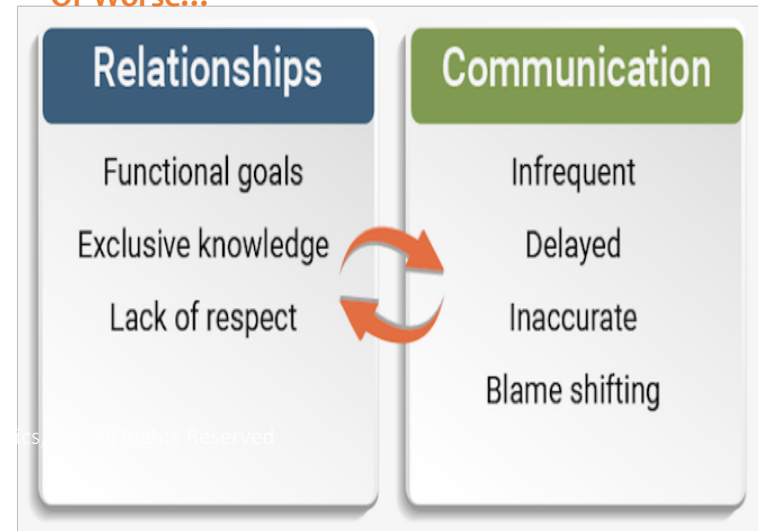
Communicating and relating for the purpose of task integration

Relationships shape the communication through which coordination occurs

For Better...



Or Worse...



Seven Dimensions of RC

Relationships

Shared Goals

The extent to which other workgroups are seen as having shared goals for the work process.

Shared Knowledge

The extent to which other workgroups are seen as understanding the role of others in the work process.

Mutual Respect

The extent to which other workgroups are seen as valuing and respecting the role of others in the work process.

Communication

Frequent Communication

The extent to which communication from other workgroups is seen as sufficiently frequent.

Timely Communication

The extent to which communication from other workgroups is seen as on time, received when needed.

Accurate Communication

The extent to which communication from other workgroups is seen as accurate.

Problem-Solving Communication

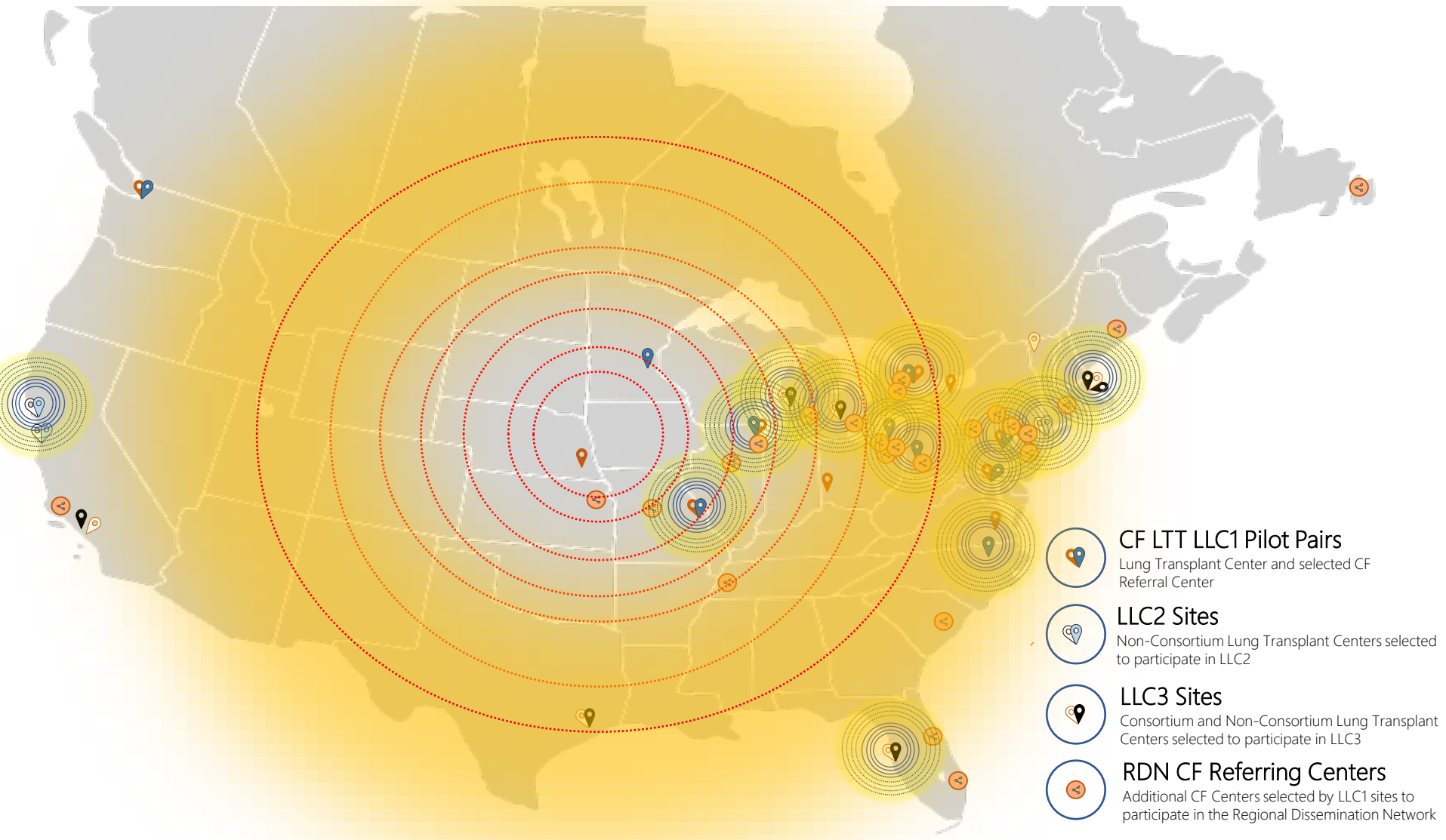
When problems arise, the extent to which other workgroups are seen as seeking solutions more so than placing blame.

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Cystic Fibrosis Lung Transplant Transition Regional Dissemination Network Best Practices

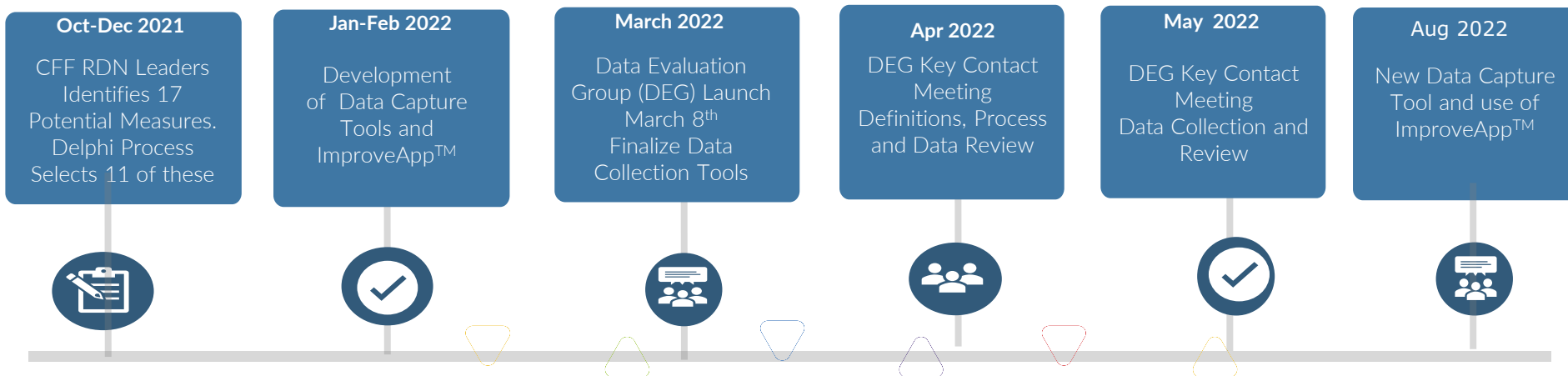
Phase 1		Phase 2		Phase 3		Phase 4		Phase 5		Phase 6		Phase 7		Phase 8	
Identify patients and initiate transplant discussions		Transplant Referral		Transplant Evaluation		Transplant Committee		Listing with UNOS		Lung Transplant Surgery		Post Transplant		Shared Care	
Site	Tools/Processes	Site	Tools/Processes	Site	Tools/Processes	Site	Tools/Processes	Site	Tools/Processes	Site	Tools/Processes	Site	Tools/Processes	Site	Tools/Processes
University of Cincinnati	Adult CF Transplant Playbook - Initiating the Conversation (PDF)	St. Louis University	Lung Transplant Medical Record Transfer Checklist (PDF)	Johns Hopkins University	Get to Know Me Tool (PDF)	Johns Hopkins University	Pt. Comm. Regarding Wait List for Transplant (PDF)			Johns Hopkins University	Lung Transplant Owners Manual (PDF)	Toronto General Hospital	Transition from Transplant Form PDF WORD		
Johns Hopkins University	EPIC Smart Phrases Lung Transplant Discussion (PDF)	University of Cincinnati	Adult CF Transplant Playbook - Staff Communication (PDF)	Toronto General Hospital	Patient Journey Annotated Map (PDF)	Toronto General Hospital	CF Team Participation with Transplant Discussion (PDF)			Toronto General Hospital	Intro of Post-TX Coord to Patient (PDF)	University of Miami	Telehealth Options PDF WORD		
Johns Hopkins University	Importance of Staff Education (PDF)	Johns Hopkins University	EPIC Smart Phrases Lung Transplant Discussion PDF WORD	Cleveland	CF Referral - Eval Process (PDF)					Cleveland	Virtual Visit for LT Education (PDF)	Cleveland	Virtual Visit for LT Education (PDF)		
University of Miami	Telehealth Options PDF WORD	Johns Hopkins University	Patient Handoff Sheet PDF WORD	Cleveland	Virtual Visit for LT Education (PDF)										
		Johns Hopkins University	Transplant Education Book (PDF)												
		St. Michael's University	Transplant Master Checklist (EXCEL)												
CF LTT SURVEYS BY PHASE - Reviewed and Recommended															
Phase 1 Identify patients and initiate transplant discussions		Phase 2 Transplant Referral		Phase 3 Transplant Evaluation		Phase 4 Transplant Committee		Phase 5 Listing with UNOS		Phase 6 Lung Transplant Surgery		Phase 7 Post Transplant		Phase 8 Shared Care	
Johns Hopkins University	Staff Survey Lung Transplant Education of Staff PDF WORD														
North-Western University	Staff Survey Lung Transplant Comfort PDF WORD														
Johns Hopkins University	Patient Survey First Conversation re Transplant PDF WORD														
Shared, Co-Designed and Coproduced Care, Relational Coordination, Palliative Care															

LTT LLC & RDN Participating Centers



How Do We Know?

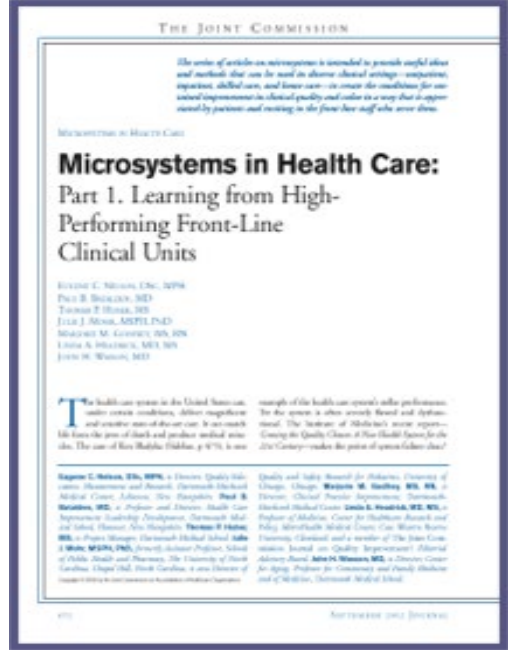
RDN Core Measure Development Process



Aim: Design a local, regional and national data collection system that collects core CF LTT measures to track outcomes over time that are accurate, valid and reliable.

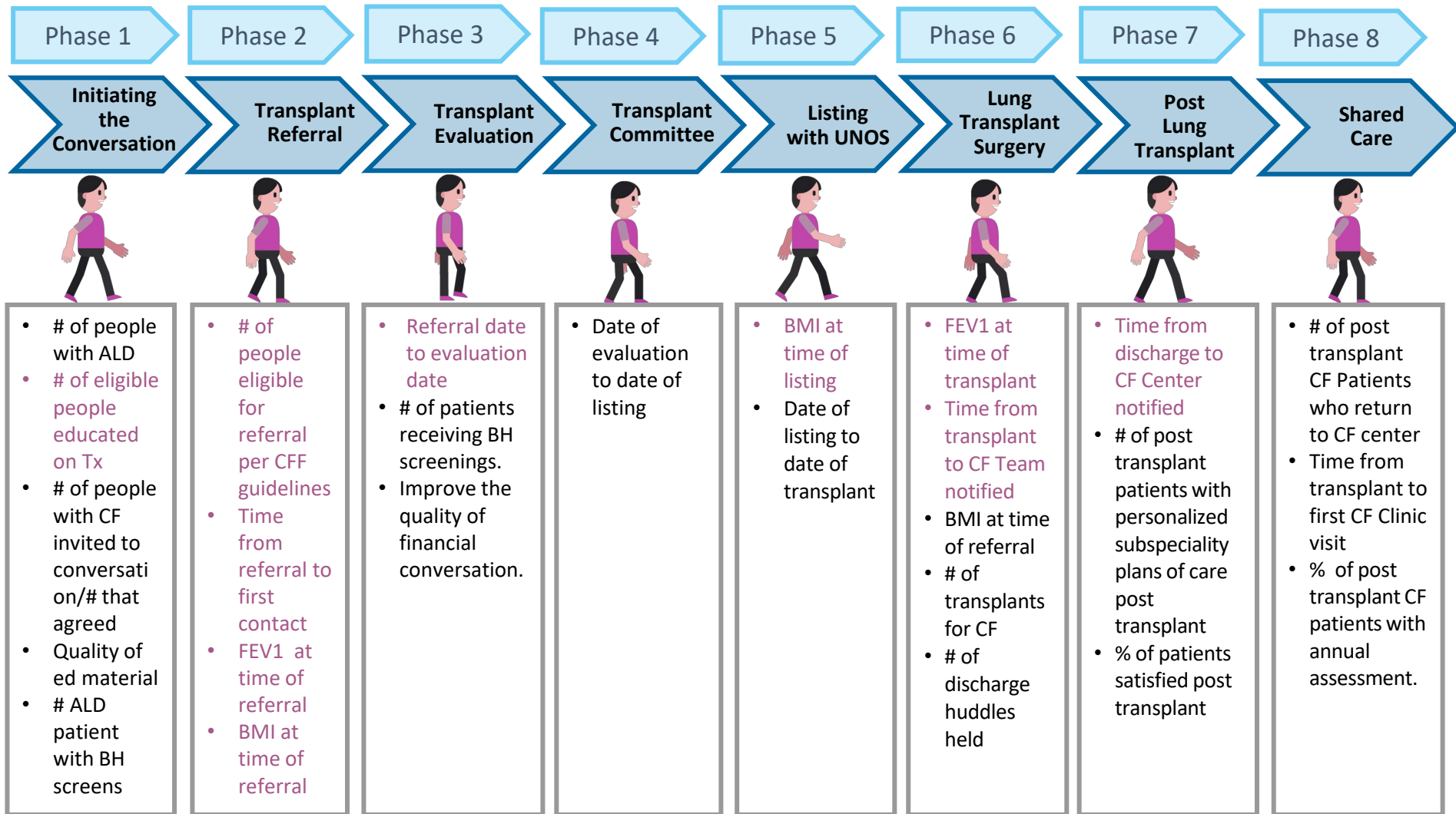
The challenge: CF referring and transplant centers “track” individual CF patients referred for lung transplant and collect core measures to produce a CF LTT RDN cascading measurement dashboard.

Characteristics of High Performing Clinical Microsystems



Cystic Fibrosis Lung Transplant Eight Phase Measures

Purple Font Indicates Core Measures



Palliative Care

Shared, Co-Designed & Coproduced care

M4

Micro-Meso-Macro-Meta System

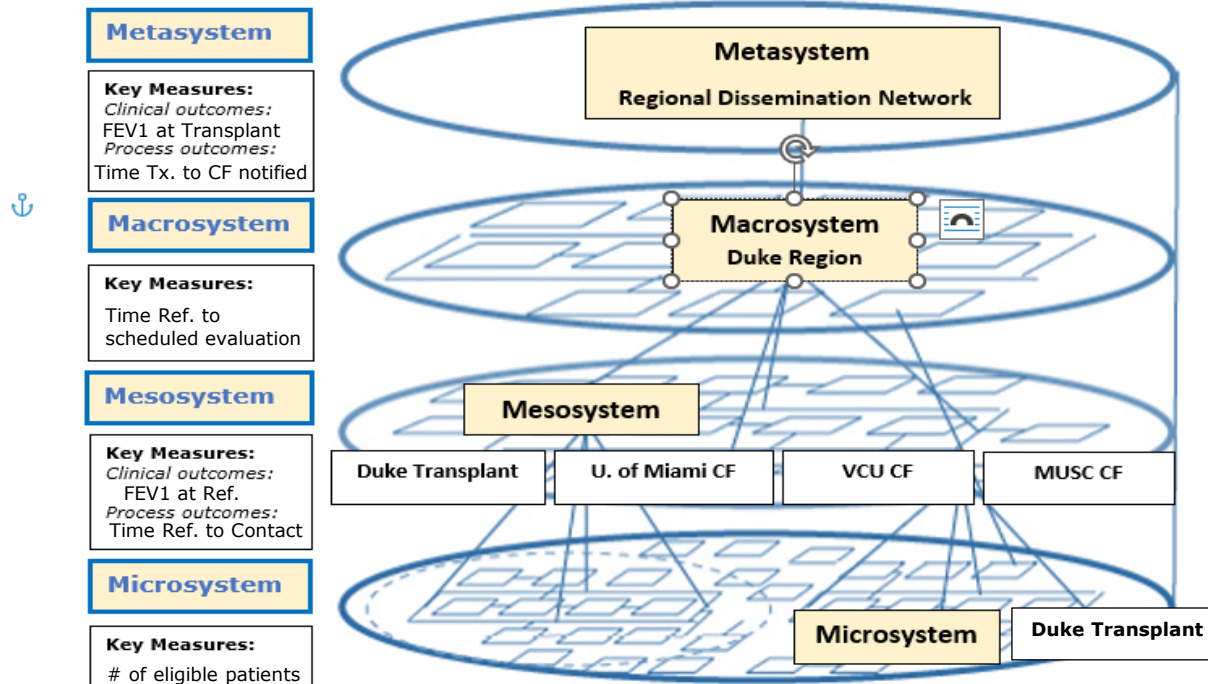


Micro-Meso-Macro-Meta System Worksheet

Please fill in the worksheet below and provide examples of process and outcome measures at each level and reflect on below.

A VIEW OF THE MULTILAYERED HEALTH SYSTEM

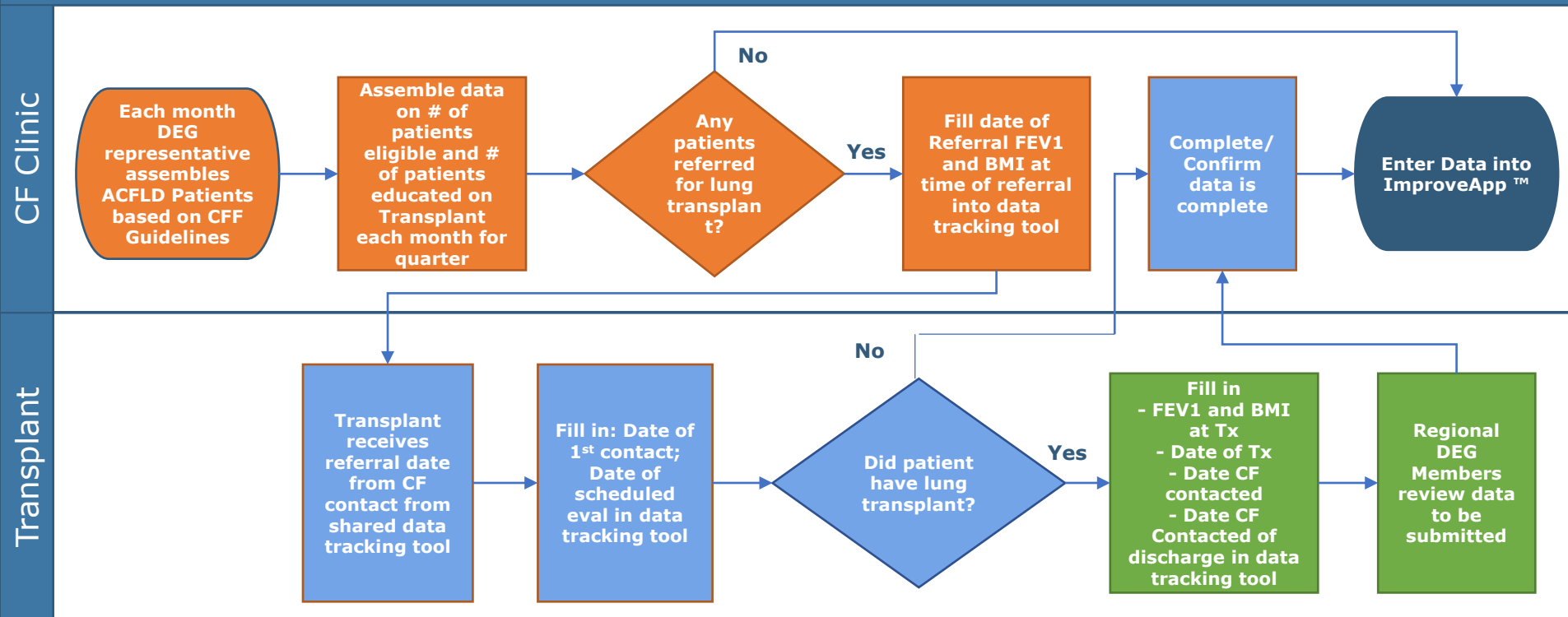
Figure 3.1 from Johnson, J.K., Nelson, Batalden, E.C., Godfrey, M.M., Foster, T.C. (Forthcoming 2022). *Quality by Design: A Clinical Microsystems Approach* (2nd ed.). Jossey-Bass.



Source: Adapted from Nelson and others, 2011. P. 10. Used with permission.

Core Measure Process Cystic Fibrosis Referral Program to Transplant

RDN Cascading Core Data Evaluation Regional Representative Data Coordination Process



Each individual referral is tracked from time of referral to post transplant care. This can be months to years until the “data element” is completed when the person with CF receives their lung transplant

- CF Program
- Transplant Program and CF Program
- Transplant Program

Data Evaluation Group (DEG) Accurate, Valid and Reliable

Process/Action/Group	Accurate	Valid	Reliable
Clear Aim and Shared Goals		X	
Clear Operational Definitions		X	
Consistent Data Capture Process	X		X
Consistent and Simple Date Entry Process	X		X
Date Evaluation Group Regional Key Contacts	X		X

How is this Achieved?

- Key Contacts in each Region meet monthly. (Building relationships)
- DEG meets every 2 months. (46 members) Data Definitions, process and data reviewed. (Safe place to ask questions and learn)
- Best practices and processes shared

Question	Reliability	Validity
What does it tell you?	Results are reproducible	Measures what it is supposed to measure.
How is it assessed?	Consistency of results across time, observations and context.	The results match what was expected based on context and theory.

CF LTT RDN Dashboard Example

CF LTT RDN

Core Measures

FEVI At Time of Referral

QIAs

-- Select a QIA --

RDN Regions

○ UPMC Region median
 ○ UCSF Region median
 ○ Columbia Region median
 ○ Boston Region median
 ○ Michigan Region median
 ○ Tampa Region median
○ Duke Region median
○ Toronto Region median
○ Wash U Region median
○ Loyola Region median
○ Johns Hopkins Region median
○ Cleveland Region median
○ UPenn Region median



Quarterly Median Values

Standard Data Review Questions

- Does the data look accurate?
- Is there variation in the data?
- Is the variation expected/acceptable?
- How does the data compare against known benchmarks?
- What is the story behind the data?

Looking To The Future

- *Focus on Shared Care post transplant/Social determinants of Health for this population*
- *Sustaining and dissemination the CF LTT Regional Dissemination National Network as a Learning Health System*
- *Supporting and connecting the PEOPLE within the network with monthly regional meetings, dedicated website with ACFLD knowledge, asynchronous learning modules, experience of the network and result documents*
- *Annual National CF LTT RDN Summit to reconvene the community and reflect on results and*
- *Be responsive to new emerging findings for care delivery and improvement*
- *Maintain close relationship with the CF Lung Consortium group*
- *Partnership and relationship with the CF research community to continue to learn about Trikafta and other CF related topics*

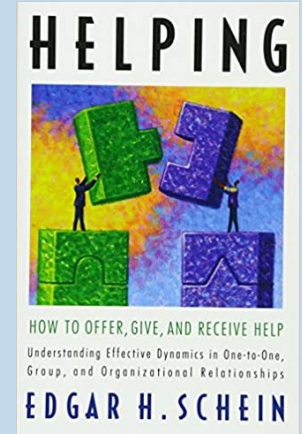
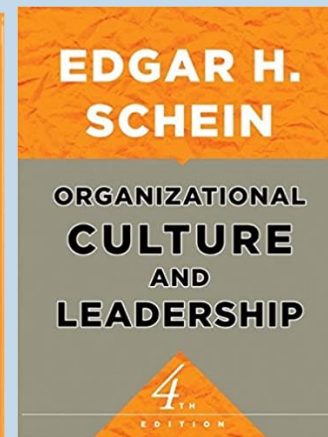
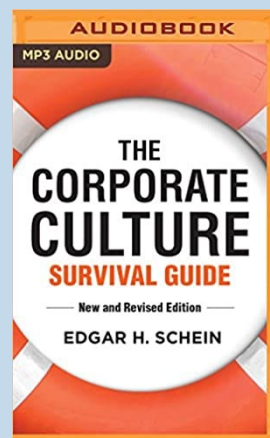
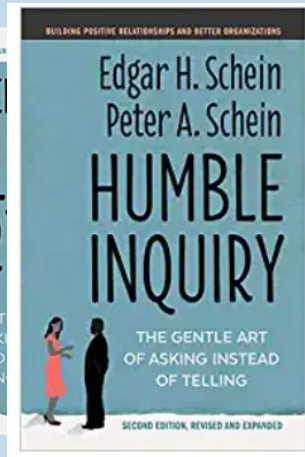
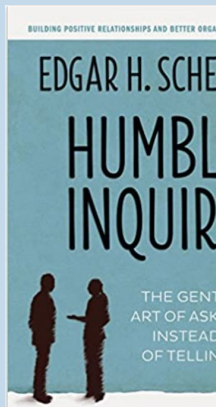
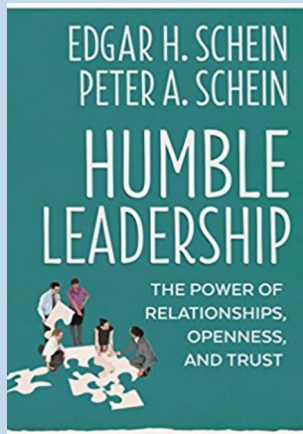
Edgar Schein



Professor Emeritus of MIT

Field of organizational behavior, including organizational development and organizational consultation

“Health care improvement often risks being too “technocratic” and losing sight of the *people* who provide care and services and *people* who receive the care and services.”





Live a Good Life in a Good Place

With Excellence In Health And Social Systems

[Watch Video](#)

Acknowledgements

**Cystic Fibrosis Foundation, Interprofessional improvement teams,
Patients and Families, Jim Papp, Julie Reed**