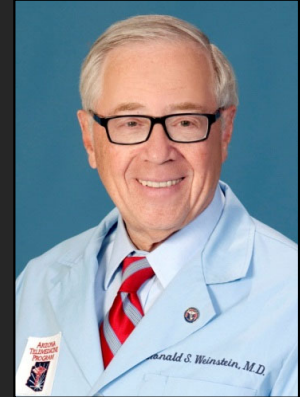




Building a Successful Telemedicine Program

Ronald S. Weinstein, MD, FCAP, FATA



Founding Director, Arizona Telemedicine Program

Executive Director, T-Health Institute

Co-Director, Southwest Telehealth Resource Center

Professor, Colleges of Medicine, Pharmacy, and Public Health

The University of Arizona

Tucson and Phoenix, AZ



Tucson, AZ

**The University
Of
Arizona
(1996)**

**Arizona
Telemedicine
Program
(1996)**



**Arizona
Telemedicine
Council
(1996)**



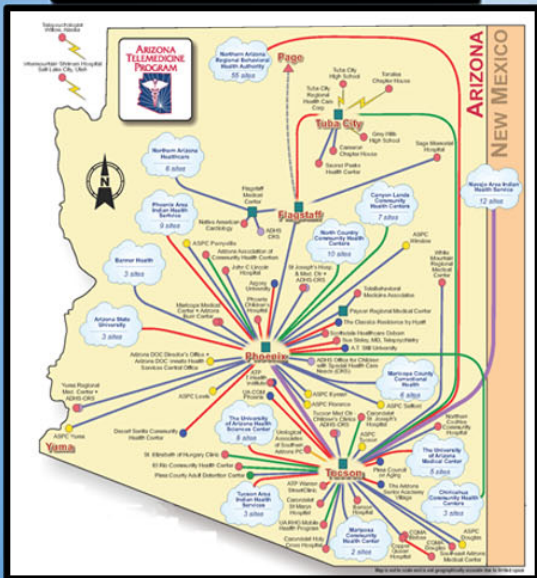
Phoenix, AZ

**"Arizona Rural
Telemedicine Network"
(1996)**

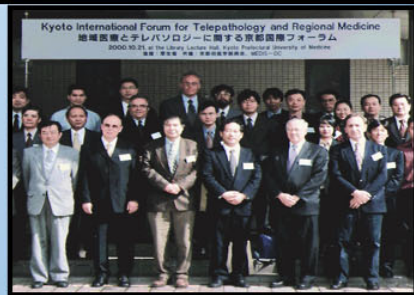
**Institute for Advanced
Telemedicine & Telehealth
"T-Health Institute"
(2004)**

**Southwest
Telehealth Resource
Center
(2010)**

**International
Telemedicine Division
(Japan, China, Panama)
(2000)**



#2



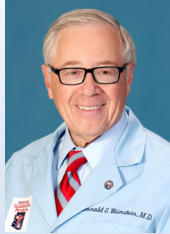
T-HEALTH INSTITUTE (PHOENIX, AZ) -- VIDEO CONFERENCING CENTER



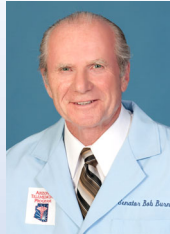
“e-Classroom-of-the-Future”



Arizona Telemedicine Program Staff



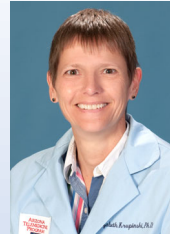
Ronald Weinstein, MD



Robert "Bob" Burns



Stephen Klotz, MD



Elizabeth Krupinski, PhD



ARIZONA
TELEMEDICINE
PROGRAM



Kris Erps



Mike Holcomb



Bob Kerr



Janet Major



Nancy Rowe



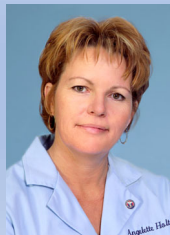
Kim Shea, PhD



Ellen Dudzik



Melanie Esher-Blair



Angelette Holtrust



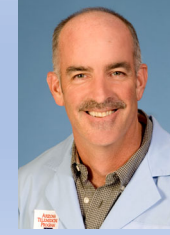
Chris Martin



Karen Miller

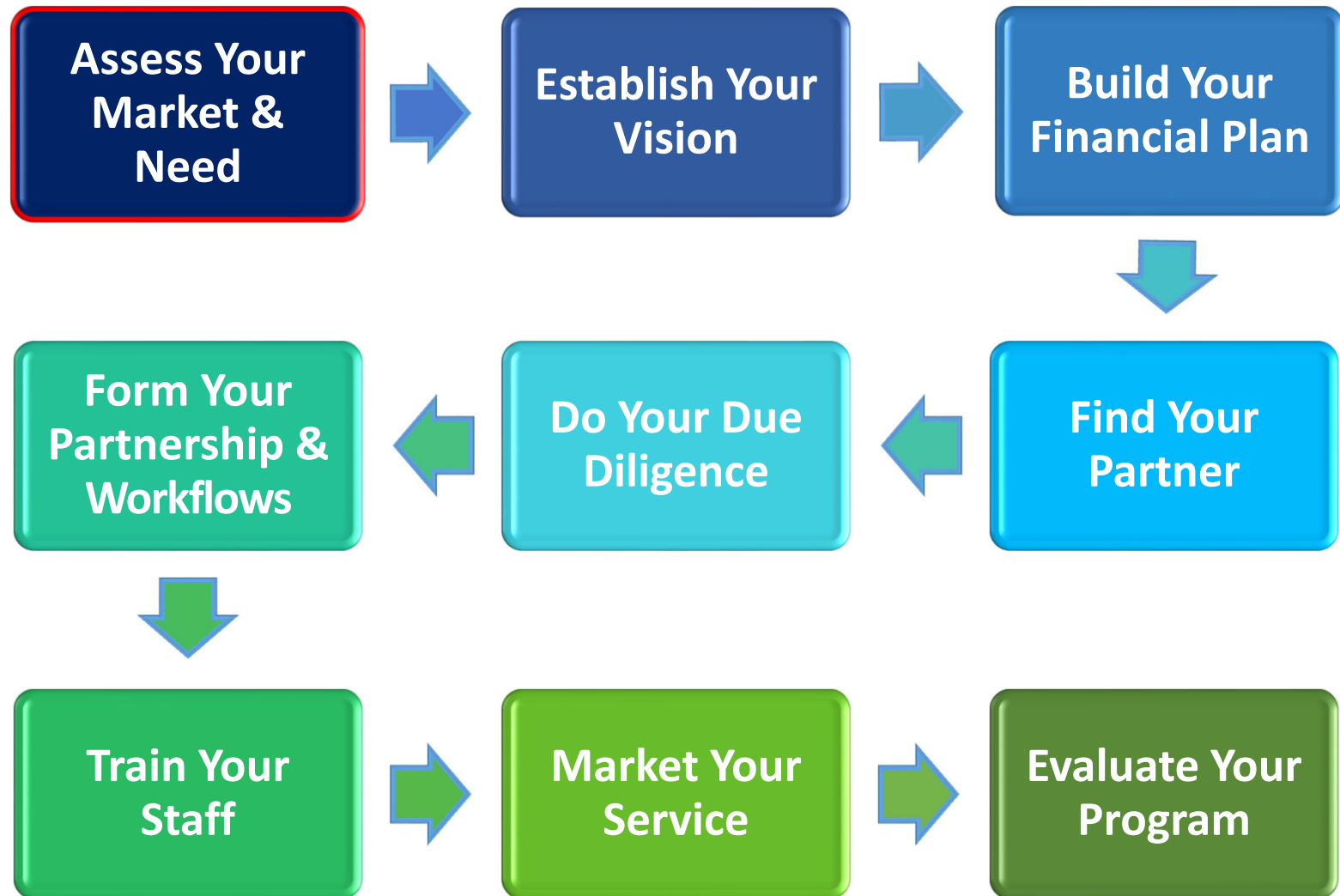


Bruce Wildermuth



Pete Yonsetto

Where to start?



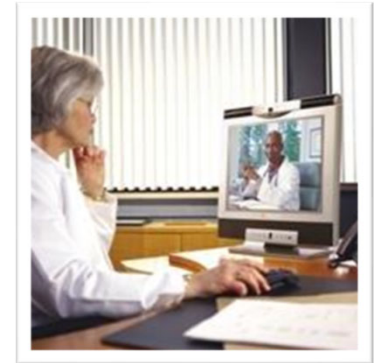
Assess Your Market & Need

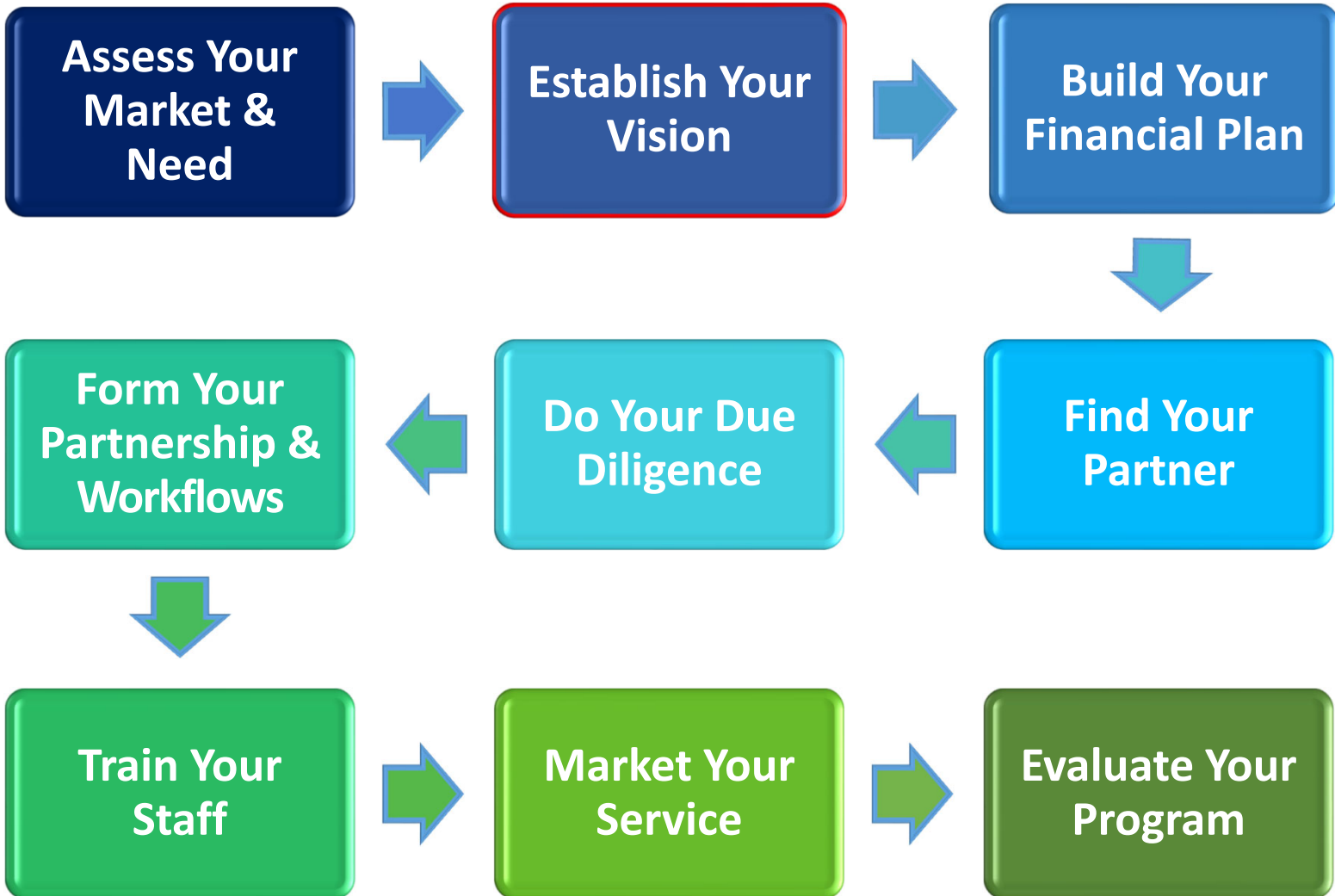
What Is Needed in Your Community?

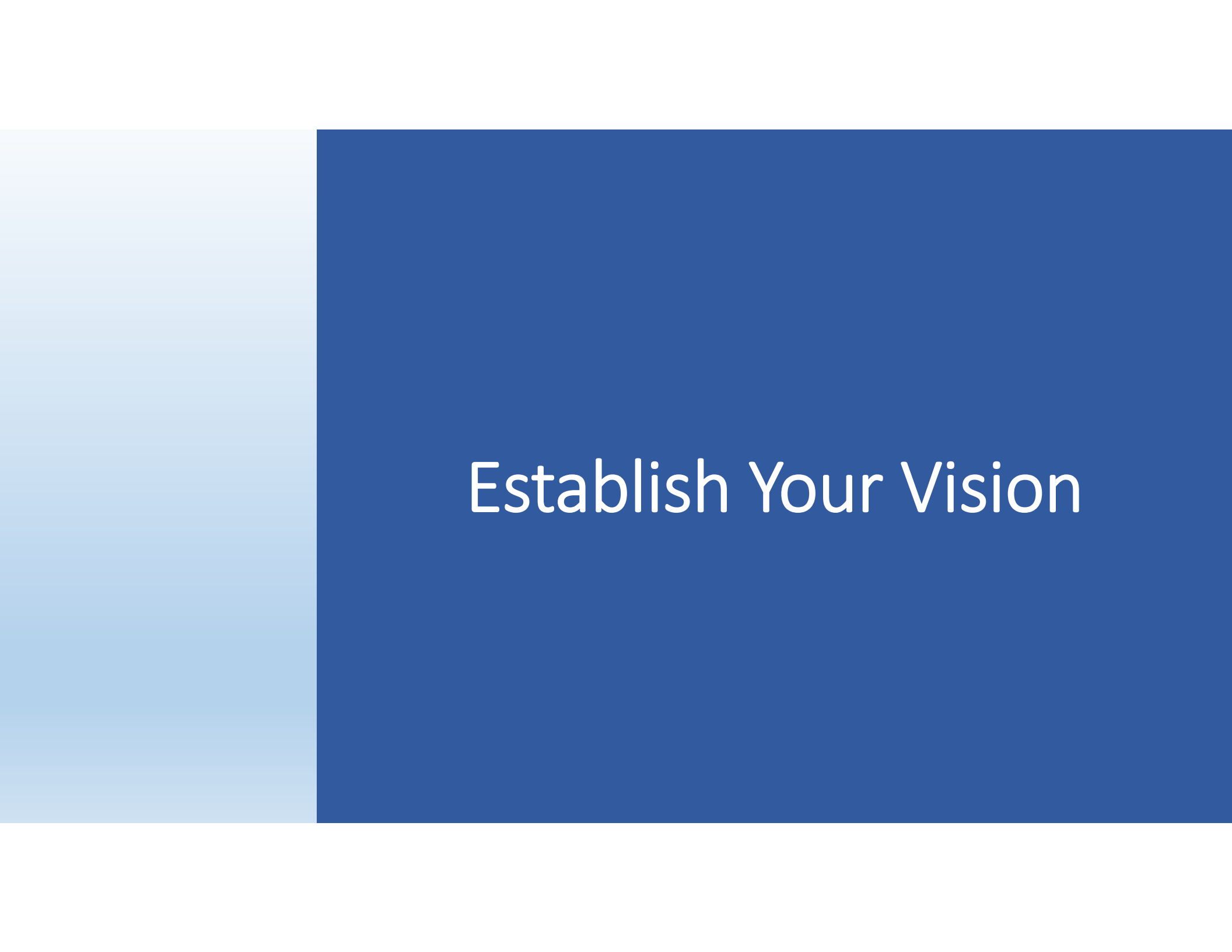
- **Look at patient data & outcomes (e.g., # diabetics, # diagnosed with late stage diabetic retinopathy)**
 - **For your community**
 - **For your hospital/system**
- **Look at local physician coverage gaps (e.g., ? no neurologists)**
- **What healthcare services are patients having to travel or be transported for?**

How Will Telemedicine Tie into Your Practice?

- **Complement/expand your clinical offerings or substitute when your providers are unavailable?**
- **What specialty services?**
- **What hours will telemedicine be offered?**
- **Personnel requirements?**
- **What are service goals? Provider-patient? Provider-provider?**
- **Where are you connecting? Provider office? Telemedicine clinic? Patient home?**







Establish Your Vision

**Establish Your
Vision**

Establish a Vision Aligned with Your Mission

Establish a Vision of the Delivery Model

Establish a Vision Aligned with Your Mission

Establish Your
Vision

- Vision statement: Define the optimal desired future state; provide guidance & inspiration

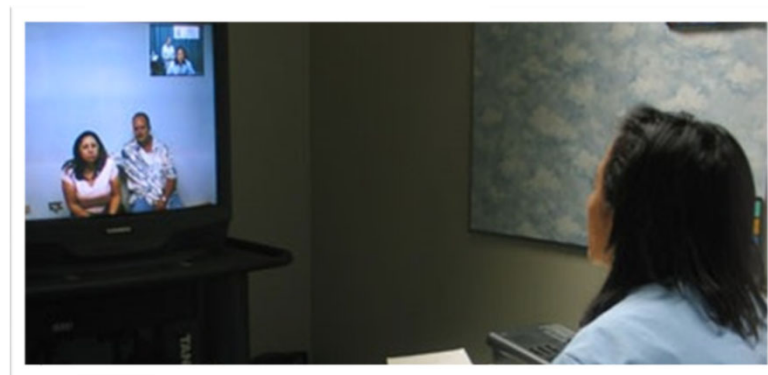
- *“Our vision is to fully incorporate telehealth technologies into our routine practices for the provision of health care in our County.”*

Establish Your Vision

Uhdow| #Whvwlgj

The Physician-Patient Relationship

- **Generally, once a physician affirmatively acts in a patient's case by examining, diagnosing, treating, or agreeing to do so, and the patient accepts, a relationship exists**
- **Must establish an appropriate physician-patient relationship in order to prescribe**



**Establish Your
Vision**

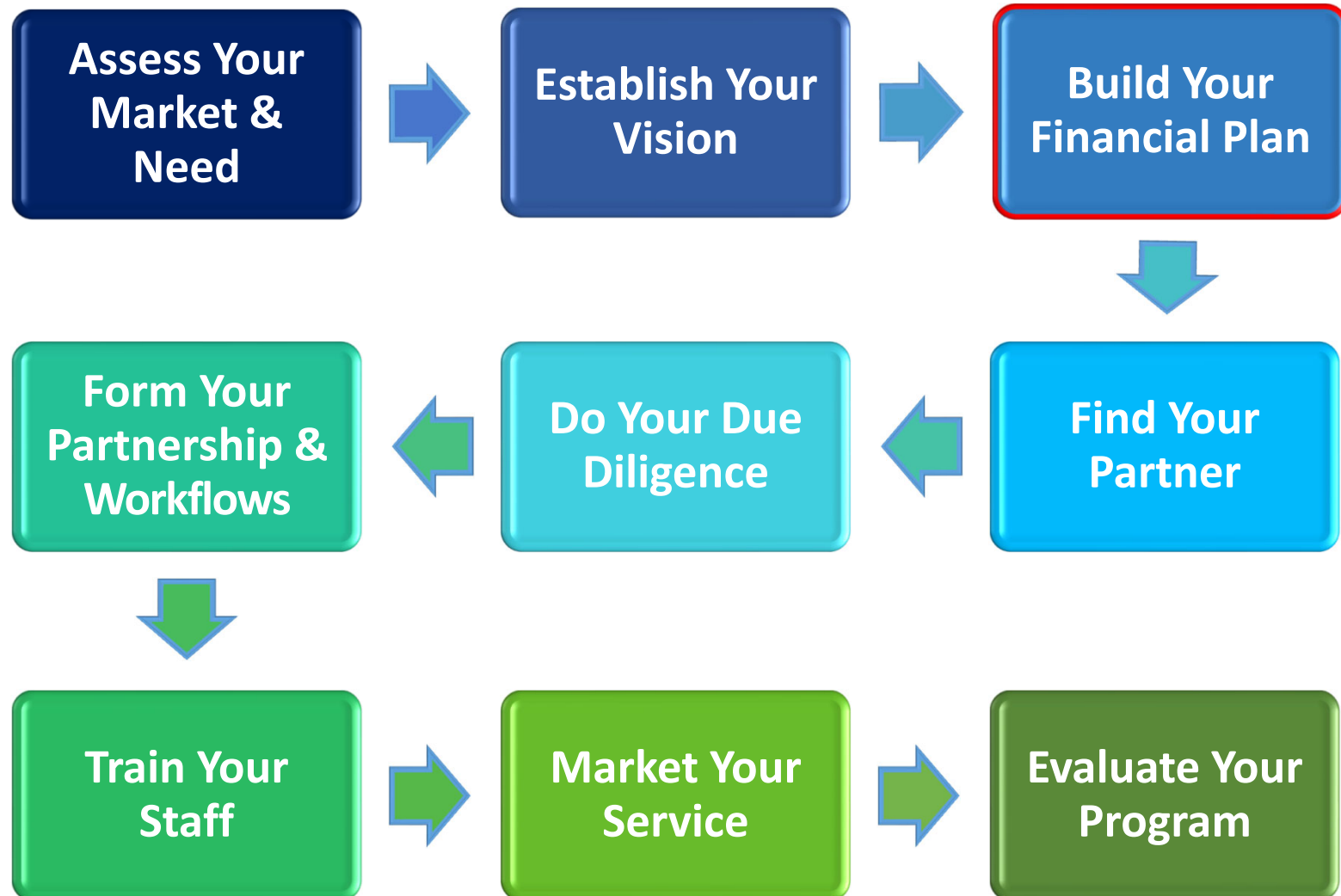
Know the Legal and Regulatory Landscape

- **All the laws still apply regardless of whether it's in-person or via telemedicine: HIPAA, privacy & security, licensing, anti-kickback, liability, standard of care.**



Stark & Anti-Kickback Statutes

- Stark Law prohibits physicians from referring patients for designated health services to an entity with which the physician has a financial relationship.
- AKS prohibits offering or soliciting anything of value, directly or indirectly, in return for patient referrals.
- Telemedicine may be subject to fraud and abuse laws if the use directly or indirectly generates reimbursement from a federal health program.
- Equipment leases or the provision of free telemedicine equipment to referral sources **should be evaluated under fraud and abuse laws.**



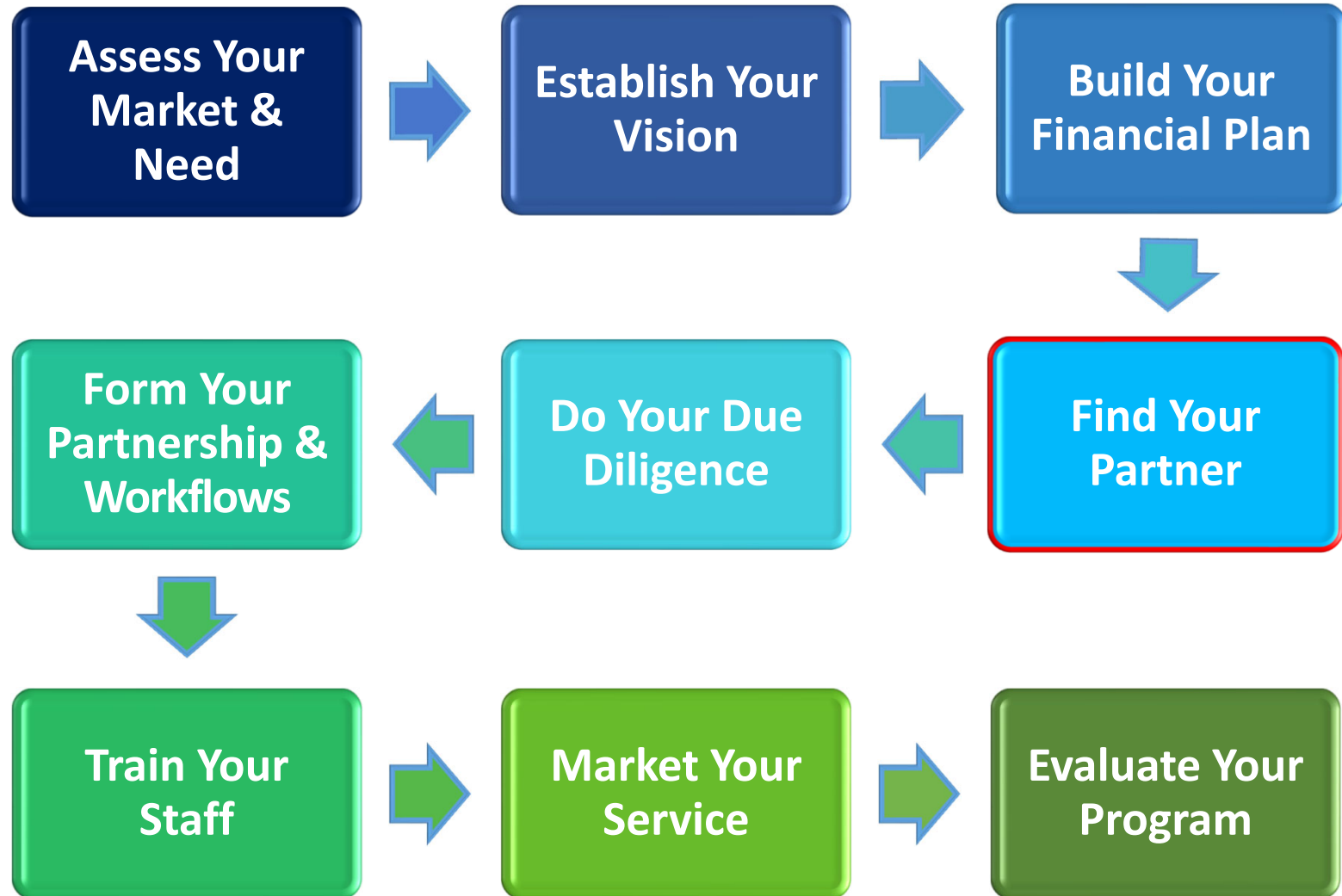
Build Your Financial Plan

Build Your Financial Plan

Build Your
Financial Plan

- Return on investment
 - Savings
 - Revenue
 - Strategic contribution
 - Penalty avoidance
- Payment for services
 - Subscription
 - Fee-for-service
 - Direct from patient
 - Who will do the billing?





Find the Right
Partner(s)

TELEMEDICINE APPLICATIONS

Where to Start?

- Arizona Telemedicine Program (ATP) – Home page
- ATP -- Service Provider Directory

http://telemedicine.arizona.edu/servicedirectory

telemedicine.arizona.edu | The... Service Provider Directory | ...

3rd Biennial Interprofession... AOL Mail AOL.com CBA Record - Legal Ethics... Free Hotmail http://opa.ahsc.arizona

Home About Us Clinical Services Distance Education Applications & Network Publications Blog

Service Provider
Telemedicine & Telehealth

ARIZONA
TELEMEDICINE
PROGRAM

SOUTHWEST
TELEHEALTH
RESOURCE CENTER

Telemedicine
SPS
Telehealth
Service Provider Summit

Welcome to the Telemedicine & Telehealth Service Provider Directory, a service of the Arizona Telemedicine Program. The directory is a resource for hospital and healthcare administrators and other decision-makers who want to expand or improve their healthcare services to their patients, employees, clients, etc. The directory lists companies providing medical specialty services (such as radiology, rheumatology, neurology, psychiatry) and ancillary services (such as patient education and language interpretation) through telemedicine to healthcare providers such as hospitals, clinics, nursing homes, private practices and urgent care centers.

Service Providers: [List your company here.](#)

Search the Directory

Company Name (or part of)

Services In

- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware

Tele-services

- Allergy
- Audiology
- Autism
- Bariatric medicine
- Diabetes
- Cardiology
- Chronic disease management
- Dementia

Customers

- Accountable Care Organizations
- Assisted living facilities
- Community mental health clinics
- Correctional facilities
- Educational institutions
- Employers
- FQHCs
- Government agencies

Ancillary Services

- Continuing education
- Continuing medical education
- Distance education
- Health call center
- Language interpretation services
- Patient education
- Patient engagement
- Support groups

Items per page
20

Search listings Clear search

100%

2:24 PM
1/7/2018

Find Your
Partner

Company A

Company B

Company C

Company D

131 service companies

**Find Your
Partner**

Overview:

Service Provider Directory



Questions to Start With

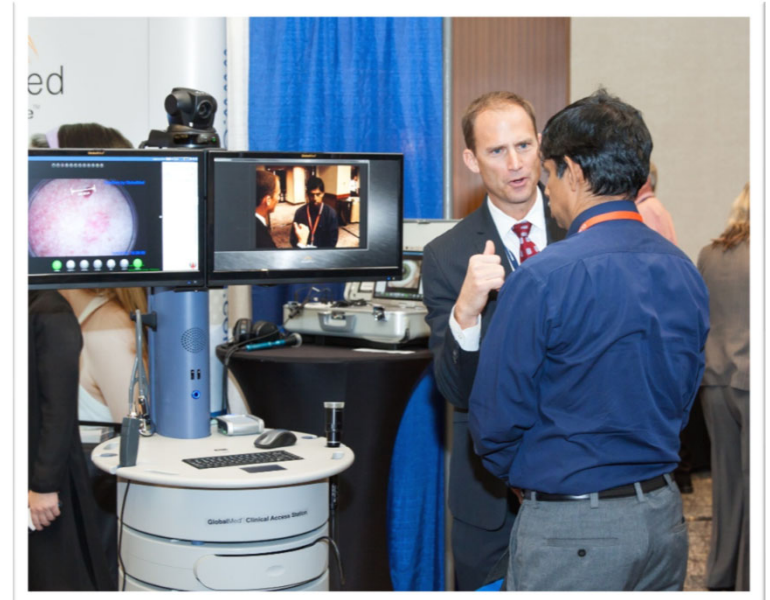
**Find Your
Partner**

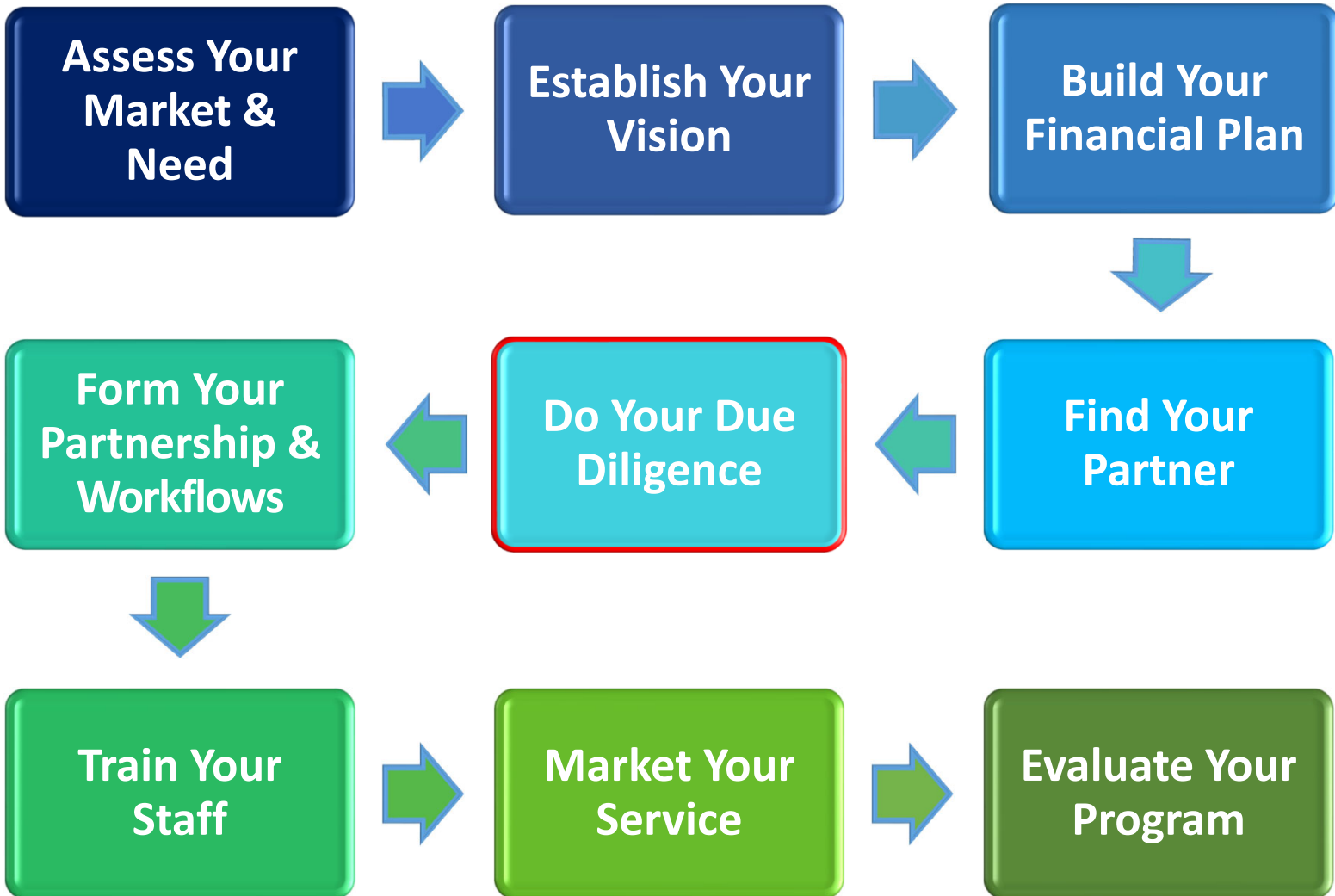
- **Number of years in telehealth business**
- **How strong is your management team?**
- **Where are the located – headquarters, providers, tech support?**

What Technology Platform Do They Use?

Find Your
Partner

- How strong is their platform?
 - Does it meet standards?
 - FDA-approved devices?
 - HIPAA compliant?
 - Reliable, easy to use? How many clicks/how much training is required?
 - What is the failure rate?
 - Interoperability?
 - Connections to EHRs? PACS? Does it work with your EHR and your PACS? Costs to integrate?
- Or, will they use whatever platform you provide?





Due Diligence, Documentation & Your Contract

Due Diligence: References

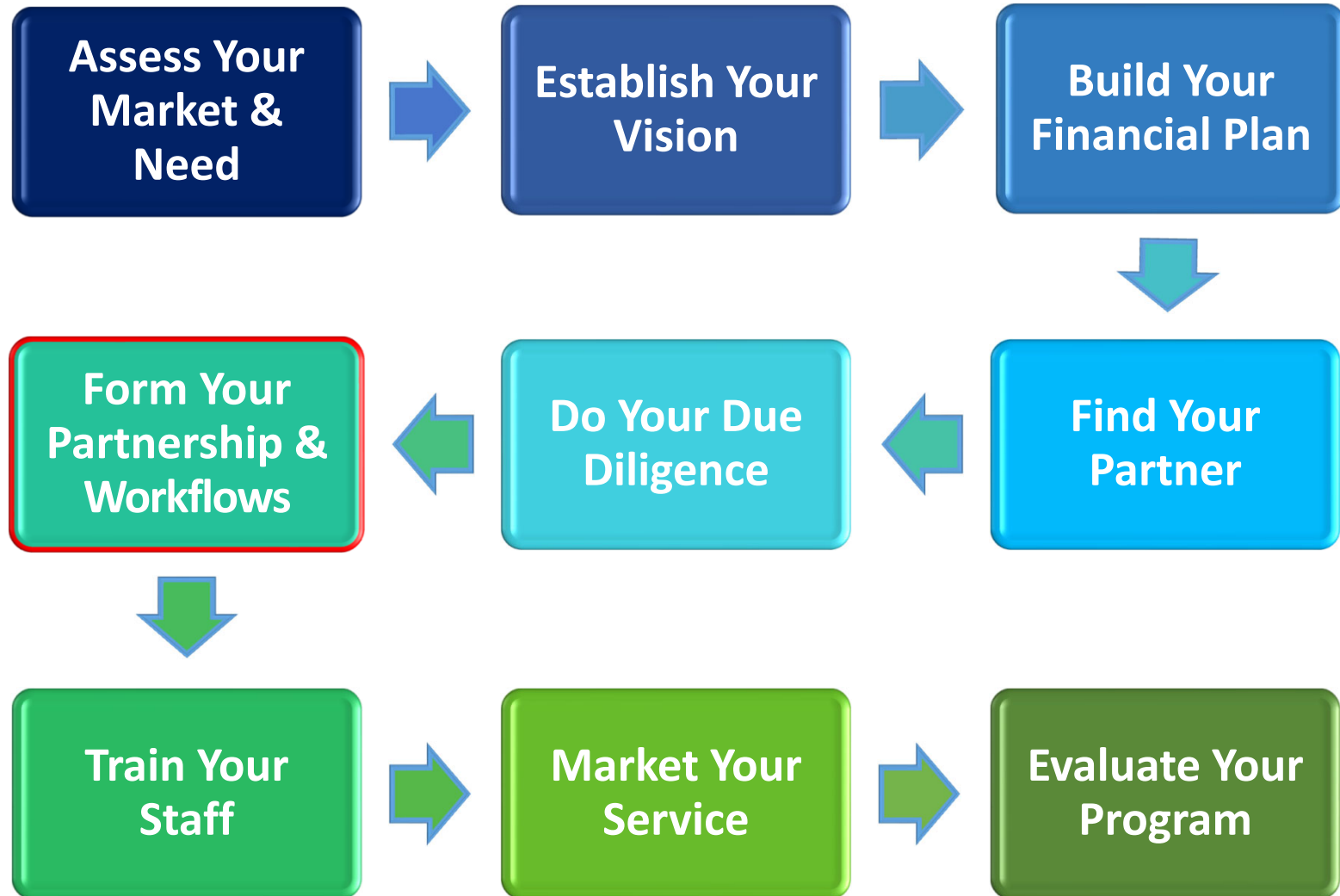
Do Your Due
Diligence

- Request a customer list/references and contact them
 - Are you happy with this company?
 - What have they provided to you?
 - What have your challenges been with this company?
- Find and interview customers not given as references
 - Search the web
 - Go to trade shows & conferences
 - Look for user groups

The Contract

Do Your Due
Diligence

- Ensure they have appropriate medical malpractice insurance, liability insurance
- Who will own the data? What data? Who will have rights to retain copies of the data? To license it, to sell it? For how long?
- Who will be responsible for continuity of care?
- Consider annually renewable contract
- Cover expansion



Form Your Partnership &
Integrate Telemedicine
into Your Workflows

Form a Partnership

Form Your
Partnership &
Workflows

- Telemedicine service programs are not one-sided, turnkey programs
- Requires effort on both sides:
 - putting together a program and educating the user ends (client org staff, health care provider org staff, and patients)
 - integrating workflows
- Collaborate with partner on what program will look like; form unity of vision for what you are trying to accomplish

Recognize You Are Changing the Status Quo

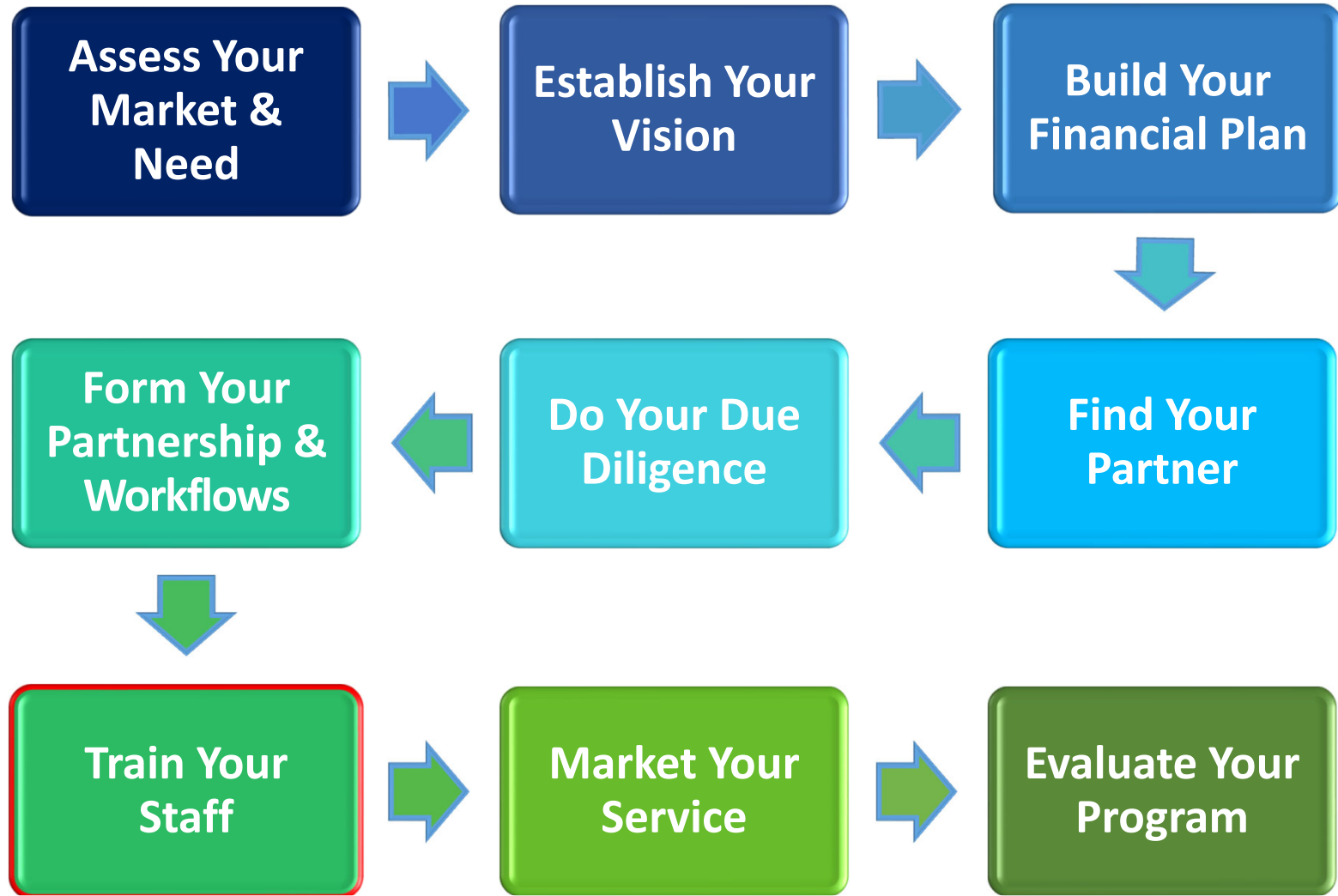
Form Your
Partnership &
Workflows

- Identify and leverage the proponents/champions: CMO, CNO tend to be important sponsors
- Identify and embrace the outliers: Reach out, make them part of the process, hear and address their concerns
 - e.g., “Big Brother”: eICU does not mean you are being watched 24/7; just that trends are being identified that need your attention
 - e.g., Will I have to become a technical expert?
 - e.g., Will my patients receive care as good as in person?

**Form Your
Partnership &
Workflows**

Standards and Guidelines

- [ATA Practice Guidelines:](#)
 - Multiple specialties including telepathology, teleICU, telemental health, teledermatology, telerehabilitation, home telehealth, diabetic retinopathy
 - Also primary and urgent care, telepresenting, and core operational guidelines
 - Remote healthcare data management
 - others

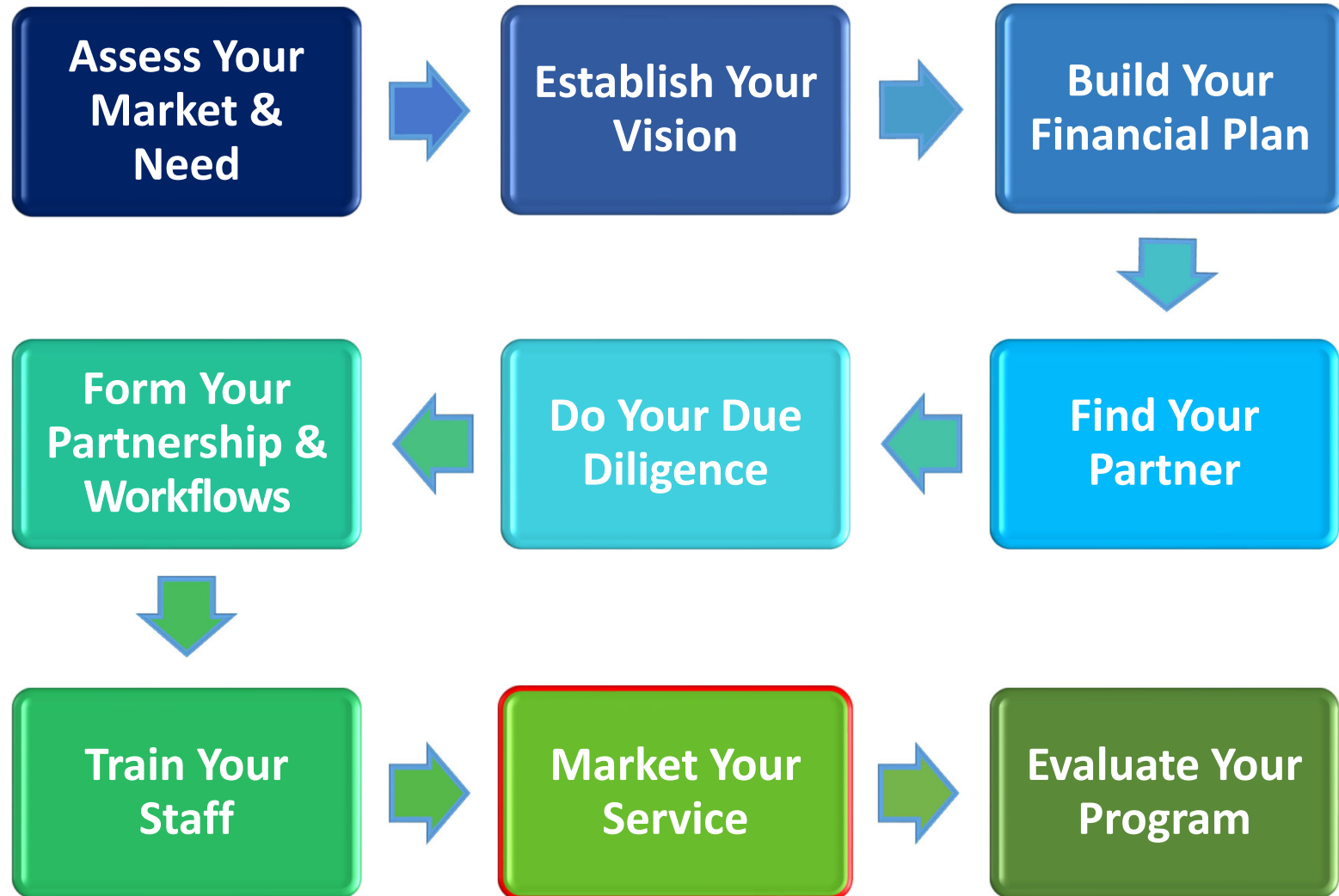


Train Your Providers & Staff

**Train Your
Staff**

Train Your Providers & Staff

- **Telemedicine is an integrated component of your institution or practice and should be part of the normal position expectations**
- **Determine who needs to be trained (usually everyone)**
- **Determine content & extent of training needed for each position involved**
- **Determine how to provide the training & how often (for new users as well as refresher training)**
- **Evaluate training results**





Market Your Service

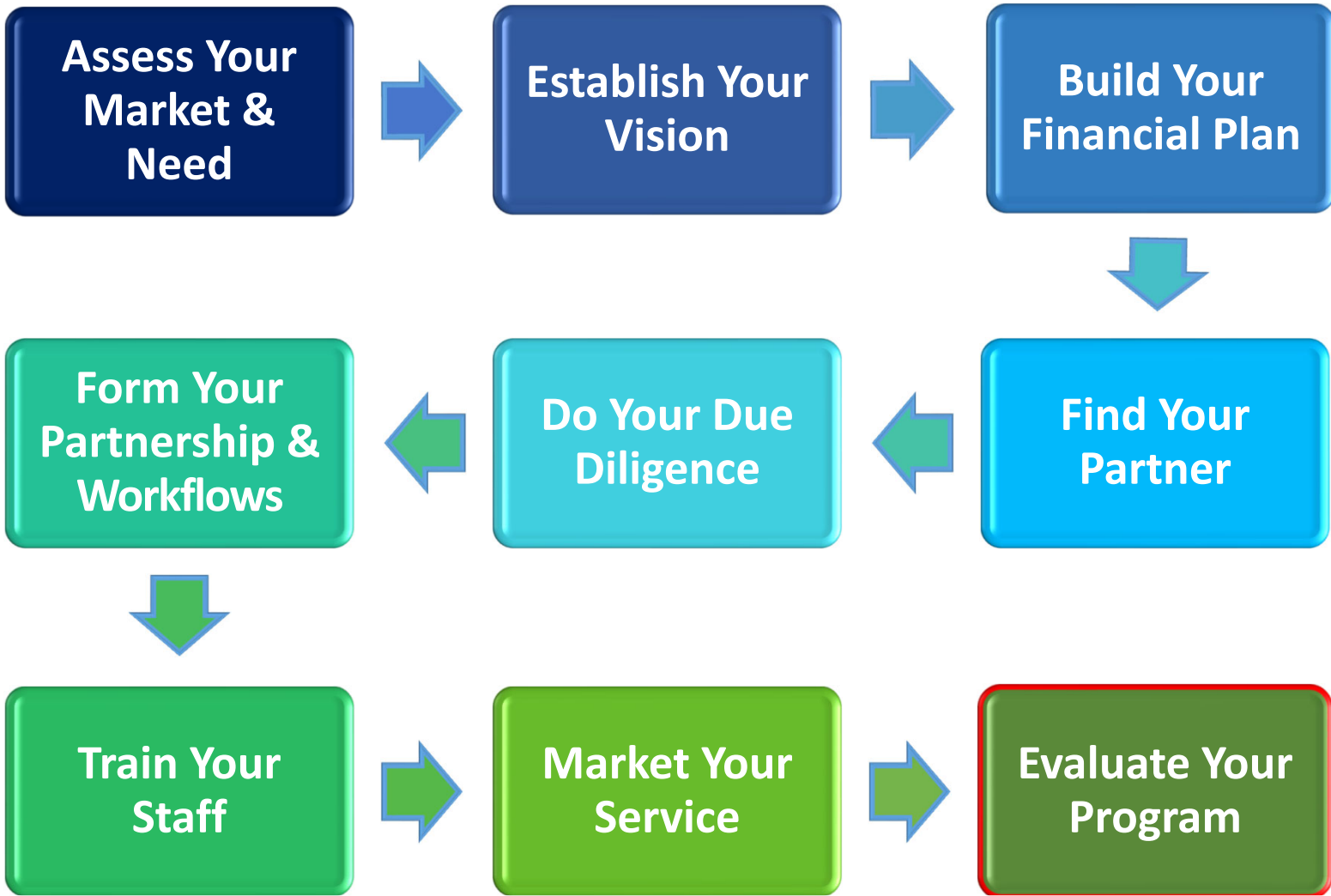
Marketing Internally

**Market Your
Service**

- **Let people & stakeholders know what your results are**
 - **Consult numbers**
 - **Patient outcomes**
 - **Patient satisfaction**
 - **Staff satisfaction**
- **This is a team process; be transparent**
- **Invite input/suggestions**
- **Tell them in more than one way (meetings, website, emails, etc.)**

Marketing Externally

- **Let your community know there is a new service available**
 - Press release
 - PSA
 - Website and web content marketing (SEO)
 - Blog with email updates/sign-up
 - Letter to patients
 - Success stories
 - Social media
- **Cite partner experience & successes**



Evaluate Your Program

Evaluation: How to Start

- View transition on a relative basis:
 - Have we improved?
 - In what ways?
 - To what extent?
- Use measurable, objective data – choose metrics in advance
- What are you concerned with?

What to Measure

- Patient-centered outcomes (e.g., clinical markers, reduced hospital stays)
- Provider-centered outcomes (e.g., diagnostic accuracy, efficiency & efficacy)
- Business outcomes (e.g., increased profits, reduced travel costs)
- Technical outcomes (e.g., faster network, more reliable communications, redundancy, better peripheral technology)
- Program outcomes (e.g., more sites added to network, number of consults, is the program growing?)

Evaluation Resources

**Evaluate Your
Program**

- Southwest Telehealth Resource Center Online Learning Module:
[Evaluation](#)
- [Telehealth Resource Centers Toolkits](#)

TELEMEDICINE AND TELEHEALTH INNOVATIONS

Telemedicine, Telehealth and Telepresence

Principles, Strategies, Applications, and New Directions
Rifat Latifi
Charles R. Doarn
Ronald C. Merrell
Editors

Springer

R.S. Weinstein et al, In: "Telemedicine, Telehealth, and Telepresence," R. Latifi, et al, Eds. Springer Publishers, NY, *In press*.



Harvard & MGH
Medical Student
& Resident
Telemedicine Training
(1968-1970)



First Trainees: The Golden Anniversary of the Early History of Telemedicine Education at the Massachusetts General Hospital and Harvard (1968-1970)

Ronald S. Weinstein, Michael J. Holcomb, Elizabeth A. Krupinski, and Rifat Latifi

Recently, interest in creating curriculum in telemedicine for medical students, nurses, and most other health professionals has spiked because of the healthcare industry's rapid shift to providing care via telemedicine as a means of infection control due to the Covid-19 pandemic [1, 2]. This commentary describes the initial medical student and resident training in telemedicine at the Massachusetts General Hospital (MGH) a half century ago.

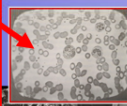
John H. Knowles, MD, a Unique Academic Medicine Leader

John H. Knowles, MD, was an MGH-trained cardiopulmonary internist and the MGH Director who was a principal architect for the Logan International Airport MGH Medical Station multispecialty telemedicine program (LIA-MGH-TP). He also touched the lives of both Michael Crichton and Ronald S. Weinstein, MD, two of the initial trainees at TIA-MGH-TP. Crichton was a Harvard Medical School (HMS) fourth year medical student, in 1969, and Weinstein was a third year MGH pathology resident a year earlier, in 1968, when each of them, separately, encountered telemedicine for the first time, unknowingly to become recognized as "pioneers in telemedicine training" a half century later.

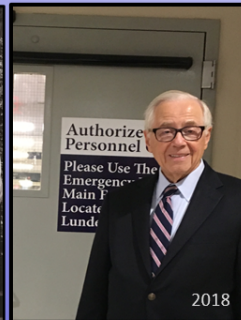
R. S. Weinstein et al, M. J. Holcomb



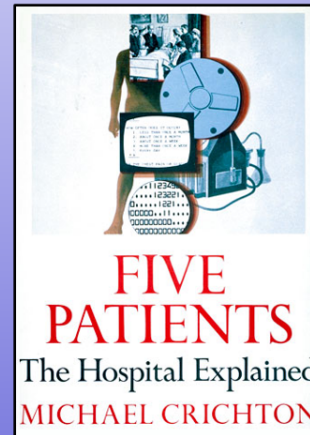
John H. Knowles, MD
General Director, MGH
Boston, MA (1962-1972)



MGH Department of Pathology 1968



Ronald S. Weinstein, M.D. 1968



Michael Crichton, HMS-4 1969

Questions!

Ronald S. Weinstein, M.D.

rweinstein@telemedicine.arizona.edu