Research is approachable, achievable, and available at UT Tyler

First Friday Lecture
February 3, 2023
Alan Cook, MD, MS, FACS
Objectives

• Getting started
  • Examples from my career

• Research for fun and profit

• Resources at UT Tyler
My background

• Bachelor’s degree in Photography from East Texas State University, Commerce, TX
• Commercial photographer 10 years
My background

• Bachelor’s degree in Photography from East Texas State University, Commerce, TX
• Commercial photographer 10 years
• Medical School, University of Vermont, 2001
My background

• Bachelor’s degree in Photography from East Texas State University, Commerce, TX
• Commercial photographer 10 years
• Medical School, University of Vermont, 2001

The Journal of TRAUMA® Injury, Infection, and Critical Care

Chest Radiographs of Limited Utility in the Diagnosis of Blunt Traumatic Aortic Laceration

Alan D. Cook, BA, Jeffrey S. Klein, MD, Frederick B. Rogers, MD, FACS, Turner M. Osler, MD, FACS, and Steven R. Shackford, MD, FACS
My background

• Bachelor’s degree in Photography from East Texas State University, Commerce, TX
• Commercial photographer 10 years
• Medical School, University of Vermont, 2001
• General Surgery Residency, University of Vermont, 2007
• Critical Care Fellowship, UT Southwestern / Parkland, 2008
• Masters of Science, Epidemiology, University of AZ, 2019
My background

• Bachelor’s degree in Photography from East Texas State University, Commerce, TX
• Commercial photographer 10 years
• Medical School, University of Vermont, 2001
• General Surgery Residency, University of Vermont, 2007
• Critical Care Fellowship, UT Southwestern / Parkland, 2008
• Masters of Science, Epidemiology, University of AZ, 2019
• Trauma/Acute Care Surgery/Critical Care 2008-2019
  • East Texas Medical Center, Tyler 2008-2011
  • Baylor University Medical Center, Dallas 2011-2014
  • Chandler Regional Medical Center, Chandler, AZ 2014-2019
My background

• Bachelor’s degree in Photography from East Texas State University, Commerce, TX
• Commercial photographer 10 years
• Medical School, University of Vermont, 2001
• General Surgery Residency, University of Vermont, 2007
• Critical Care Fellowship, UT Southwestern / Parkland, 2008
• Masters of Science, Epidemiology, University of AZ, 2019
• Trauma/Acute Care Surgery/Critical Care 2008-2019
  • East Texas Medical Center, Tyler 2008-2011
  • Baylor University Medical Center, Dallas 2011-2014
  • Chandler Regional Medical Center, Chandler, AZ 2014-2019

• Joined UTHSCT 2019
Research Sites
Timeline: 76 Years
Timeline: 76 Years
Timeline: 76 Years

1947
East Texas Tuberculosis Sanatorium

1951
Renamed East Texas Tuberculosis Hospital

WW2

Medical Center Hospital Opens
Timeline: 76 Years

- WW2
- 1947: Renamed East Texas Tuberculosis Hospital
- 1951: Renamed East Texas Chest Hospital
- 1971: Hospital Opens
- 2000: Medical Center
- 2012: Renamed East Texas Tuberculosis Hospital
Timeline: 76 Years

- 1947: East Texas Tuberculosis Sanatorium
- 1951: Medical Center Hospital Opens
- 1971: Renamed East Texas Tuberculosis Hospital
- 1974: First Grant NIH NCI 1-CN-45066 Tyler Asbestos Workers Program
- 1976: Renamed East Texas Chest Hospital
- 1977: Renamed UT Health Center at Tyler

First Clinical Publications:
Timeline: 76 Years

- **1947**: East Texas Tuberculosis Sanatorium
- **1951**: Medical Center Hospital Opens
- **1974**: Renamed East Texas Chest Hospital
- **1976**: Renamed UT Health Center at Tyler
- **1981**: Center for Biomedical Research Opens
- **1985**: First Grant NIH NCI 1-CN-45066 Tyler Asbestos Workers Program
- **1987**: Family Medicine Residency Started

Timeline: 76 Years


First Grant NIH NCI 1-CN-45056 Tyler Asbestos Workers Program

East Texas Tuberculosis Sanatorium

Medical Center Hospital Opens

WW2 1947 1951

Renamed East Texas Chest Hospital

1971 1974

1976 1977

1981 1985


Family Medicine Residency Started

Center for Biomedical Research Opens

ETMC Trauma Program Begins

ETMC

East Texas Medical Center Regional Healthcare System

First Trauma Publication: The Early Effects of Implementing American College of Surgeons Level II Criteria on Transfer and Survival Rates at a Rurally Based Community Hospital. Norwood, et al., J 1995 Aug 1;39(2):240-5
Timeline: 76 Years

1947 - East Texas Tuberculosis Sanatorium Opens
1951 - Medical Center Hospital Opens
1974 - First Grant NIH NCI 1-CN-45066 Tyler Asbestos Workers Program
1977 - East Texas Tuberculosis Hospital Renamed East Texas Chest Hospital
1981 - Renamed UT Health Center at Tyler
1985 - Center for Biomedical Research Opens
1987 - ETMC Trauma Program Begins
1992 - ETMC Trauma Program Begins
1995 - Family Medicine Residency Started
1996 - Occupational Medicine Residency Started

First Trauma Publication:
East Texas Tuberculosis Sanatorium

WW2 1947

1951

Medical Center Hospital Opens

First Grant NIH NCI 1-CN-45066

Tyler Asbestos Workers Program

1971 1974

East Texas Chest Hospital

First Clinical Publications:

1976 1977

ETMC Trauma Program Begins

1981

Renamed UT Health Center at Tyler

1985

Family Medicine Residency Started

1987

Center for Biomedical Research Opens

1992

ETMC Becomes Level I Trauma Center

1995

ETMC Trauma Program Begins

Occupational Medicine Residency Started

Center for Clinical Research Created

1996

First Trauma Publication:

First Clinical Publications:

1998

ETMC Becomes Level I Trauma Center

1995

ETMC Becomes Level I Trauma Center

1998

ETMC Becomes Level I Trauma Center

First Clinical Publications:

1998

ETMC Becomes Level I Trauma Center

1995

ETMC Becomes Level I Trauma Center

First Clinical Publications:

1998

ETMC Becomes Level I Trauma Center

1995

ETMC Becomes Level I Trauma Center

First Clinical Publications:

1998

ETMC Becomes Level I Trauma Center

1995

ETMC Becomes Level I Trauma Center

First Clinical Publications:

1998

ETMC Becomes Level I Trauma Center

1995

ETMC Becomes Level I Trauma Center

First Clinical Publications:

1998

ETMC Becomes Level I Trauma Center

1995

ETMC Becomes Level I Trauma Center

First Clinical Publications:

1998

ETMC Becomes Level I Trauma Center

1995

ETMC Becomes Level I Trauma Center

First Clinical Publications:

1998

ETMC Becomes Level I Trauma Center

1995

ETMC Becomes Level I Trauma Center

First Clinical Publications:

1998

ETMC Becomes Level I Trauma Center

1995

ETMC Becomes Level I Trauma Center

First Clinical Publications:

1998

ETMC Becomes Level I Trauma Center

1995

ETMC Becomes Level I Trauma Center

First Clinical Publications:

1998

ETMC Becomes Level I Trauma Center

1995

ETMC Becomes Level I Trauma Center

First Clinical Publications:

1998

ETMC Becomes Level I Trauma Center

1995

ETMC Becomes Level I Trauma Center

First Clinical Publications:

1998

ETMC Becomes Level I Trauma Center

1995

ETMC Becomes Level I Trauma Center

First Clinical Publications:

1998

ETMC Becomes Level I Trauma Center

1995

ETMC Becomes Level I Trauma Center
Timeline: 76 Years

East Texas Tuberculosis Sanatorium

1947

First Grant
NIH NCI 1-CN-45066
Tyler Asbestos Workers Program

1951

Medical Center Hospital Opens

Renamed East Texas Tuberculosis Hospital

WW2

1971

First Clinical Publications*

1974

Renamed East Texas Chest Hospital

1976

East Texas Medical Center Opens

1981

Renamed UT Health Center at Tyler

1977

Family Medicine Residency Started

1985

Center for Biomedical Research Opens

1992

ETMC Trauma Program Begins

1995

ETMC Becomes Level I Trauma Center

1996

Preventive Medicine Residency Started

1998

Occupational Medicine Residency Started

2002

Center for Clinical Research Created

First Trauma Publication:

First Clinical Publications*:
Timeline: 76 Years

First Clinical Publications:

1976
First Clinical Publications:

1974
WW2 1947 1951
Medical Center Hospital Opens

1951 1971
East Texas Tuberculosis Sanatorium

1974
East Texas Tuberculosis Hospital

1971
Renamed East Texas Chest Hospital

1976
Renamed UT Health Center at Tyler

1981
Family Medicine Residency Started

1985
Center for Biomedical Research Opens

1992
ETMC Trauma Program Begins

1995
ETMC Becomes Level I Trauma Center

1996
Preventive Medicine Residency Started

1998
Occupational Medicine Residency Started

2002
Family Medicine Residency Started

2017
Occupational Medicine Residency Started

First Trauma Publication:
Timeline: 76 Years

- **1947**
  - East Texas Tuberculosis Sanatorium
  - WW2

- **1947-1951**
  - East Texas Tuberculosis Hospital
  - Medical Center Hospital Opens

- **1951**
  - East Texas Chest Hospital

- **1971**
  - Renamed East Texas Chest Hospital
  - First Grant NIH NCI 1-CN-45066 Tyler Asbestos Workers Program

- **1974**
  - Renamed UT Health Center at Tyler

- **1976**

- **1977**
  - Renamed UT Health Center at Tyler
  - Occupational Medicine Residency Started

- **1977**
  - Family Medicine Residency Started

- **1981**
  - Center for Biomedical Research Opens

- **1985**
  - Center for Clinical Research Created

- **1987**
  - Preventive Medicine Residency Started

- **1987**
  - ETMC Trauma Program Begins

- **1992**
  - ETMC Becomes Level I Trauma Center

- **1995**
  - UT Health Science Center at Tyler Buys ETMC

- **1996**
  - Psychiatry Residency Started

- **1998**
  - UT Health Science Center at Tyler Buys ETMC

- **2002**
  - Preventive Medicine Residency Started

- **2017**
  - Psychiatry Residency Started

- **2018**
  - UT Health Science Center at Tyler Buys ETMC

**First Trauma Publication:**

**First Clinical Publications:**
Timeline: 76 Years


- **1947**: East Texas Tuberculosis Sanatorium
  - **1971**: East Texas Tuberculosis Hospital Renamed
  - **1974**: Medical Center Hospital Opens

- **1951**: East Texas Tuberculosis Sanatorium
  - **1976**: East Texas Chest Hospital
  - **1981**: UT Health Center at Tyler Renamed
  - **1985**: Center for Biomedical Research Opens

- **1977**: Family Medicine Residency Started

- **1981**: Preventive Medicine Residency Started

- **1987**: ETMC Trauma Program Begins

- **1992**: ETMC Becomes Level I Trauma Center

- **1995**: UT Health Science Center at Tyler Buys ETMC

- **1996**: UT Health Science Center at Tyler

- **1998**: Center for Clinical Research Created

- **2002**: Psychiatry Residency Started

- **2017**: Preventive Medicine Residency Started

- **2018**: Internal Medicine and General Surgery Residency Started

- **2020**: Family Medicine Residency Started
  - **2020**: Preventive Medicine Residency Started
  - **2020**: Psychiatry Residency Started
  - **2020**: Occupational Medicine Residency Started

**First Trauma Publication**: The Early Effects of Implementing American College of Surgeons Level II Criteria on Transfer and Survival Rates at a Rurally Based Community Hospital. Norwood, et al., J 1995 Aug 1;39(2):240-5
First Clinical Publications:

First Grant
NIH NCI 1-CN-45066
Tyler Asbestos Workers Program

Occupational Medicine Residency Started

Center for Clinical Research Created

Preventive Medicine Residency Started

Psychiatry Residency Started

UT Health Science Center at Tyler Buys ETMC

Internal Medicine and General Surgery Residency Started

First Trauma Publication:
Timeline: 76 Years


Occupational Medicine Residency Started

First Grant NIH NCI 1-CN-45066 Tyler Asbestos Workers Program

Center for Clinical Research Created

Medical Center Hospital Opens

Preventive Medicine Residency Started

WW2 1947 1951

East Texas Tuberculosis Sanatorium

Renamed East Texas Chest Hospital

ETMC Trauma Program Begins

ETMC Becomes Level I Trauma Center

UT Health Science Center at Tyler Buys ETMC

UT Health Science Center at Tyler

UT Tyler MEDICINE

Internal Medicine and General Surgery Residency Started

Psychiatry Residency Started

2018 2020 2023


ETMC Trauma Program Begins

ETMC Becomes Level I Trauma Center

Family Medicine Residency Started

Center for Biomedical Research Opens

UT Health Science Center at Tyler

Preventive Medicine Residency Started

WW2 1947 1951

East Texas Tuberculosis Sanatorium

Renamed East Texas Chest Hospital

ETMC Trauma Program Begins

ETMC Becomes Level I Trauma Center

UT Health Science Center at Tyler

Internal Medicine and General Surgery Residency Started

Psychiatry Residency Started

2018 2020 2023


ETMC Trauma Program Begins

ETMC Becomes Level I Trauma Center

UT Health Science Center at Tyler

Internal Medicine and General Surgery Residency Started

Psychiatry Residency Started

2018 2020 2023

Trauma Research at the Midtown Campus
Trauma Research at the Midtown Campus
Trauma Research at the Midtown Campus

• From Resources for Optimal Care of the Injured Patient, 2014

• Research and scholarly activity are some of the capabilities that distinguish a Level I trauma center from other trauma centers.
Trauma Research at the Midtown Campus

- From Resources for Optimal Care of the Injured Patient, 2014

- Research and scholarly activity are some of the capabilities that distinguish a Level I trauma center from other trauma centers.

- Research, the process to advance knowledge, is essential to optimize the care of injured patients.
Trauma Research at the Midtown Campus

- 20 trauma-related, peer-reviewed articles in journals listed in Index Medicus or PubMed in a 3-year period
Trauma Research at the Midtown Campus

- 20 trauma-related, peer-reviewed articles in journals listed in Index Medicus or PubMed in a 3-year period
  - 10 trauma-related articles with
    - Demonstration of trauma-related scholarly activity
Trauma Research at the Midtown Campus

- 20 trauma-related, peer-reviewed articles in journals listed in Index Medicus or PubMed in a 3-year period
  - 10 trauma-related articles with
    - Demonstration of trauma-related scholarly activity
- At least one article with a general surgery author or co-author
- Trauma-related articles from at least three of the following 12 disciplines
Trauma Research at the Midtown Campus

• 20 trauma-related, peer-reviewed articles in journals listed in Index Medicus or PubMed in a 3-year period
  • 10 trauma-related articles with
    • Demonstration of trauma-related scholarly activity

• At least one article with a general surgery author or co-author

• Trauma-related articles from at least three of the following 12 disciplines
  - Anesthesia
  - Basic Sciences
  - Cardiothoracic Surgery
  - Critical Care
  - Emergency Medicine
  - Neurosurgery
  - Nursing
  - Orthopaedics
  - Plastic Surgery/OMFS
  - Radiology
  - Rehabilitation/Physiatry
  - Vascular Surgery
Trauma Research at the Midtown Campus

• Next Level I site visit February, 2023
  • Ninth Level I verification site visit for this institution
Trauma Research at the Midtown Campus

• Next Level I site visit February, 2023
  • Ninth Level I verification site visit for this institution
Trauma Research at the Midtown Campus

• Next Level I site visit February, 2023
  • *Ninth* Level I verification site visit for this institution

• 41 Articles published since 2020
  • 15 Multicenter papers
  • 6 trauma-related articles from the list of 12 disciplines
Clinical Research at the North Campus

• Legacy Areas of Research
  • Pulmonary
    • Infectious Disease
    • Occupational/Environmental Lung Injury
    • Lung Development
    • Inflammatory Cell Mediated Diseases
    • Oxidant Mediated Damage
    • Cancer
    • Blood Coagulopathy
Center for Clinical Research

- 20 Full time staff
- 290 Active studies overseen by the IRB
  - 14 Departments

Trauma
Nursing
Psychiatry
Cardiology
Orthopedics
Oncology
Pulmonary
Surgery

Rural / Community
Health
Wound Healing
Internal Medicine
Pediatric General Practice
Radiology
Neurology
Center for Clinical Research

Julie Philley, MD  
Vice Provost, UT Tyler

Alan Cook, MD, MS  
Medical Director

Center for Clinical Research and Human Research Protection Program

Director of Human Research Protection Program  
Lisa Bush, MS

IRB Coordinator I  
Felicia Calico

IRB Coordinator I  
Corrinne Warren

IRB Coordinator I  
Vacant Position

Research Regulatory Specialist  
Position TBA

Reliance Coord./Auditor  
Position TBA

Director of Clinical Research  
Debbie Fielder

Regulatory Specialist  
Christopher Herrick

Sr CRC/Clinical Mgr.  
Benji Hawkins

Sr CRC/Clinical Mgr.  
Rebekah Hibbard

Research Coord.  
Elizabeth (Lilly) Dohanich

Research Coord.  
Kimberly Greenlee

Research Coord.  
Alexis Hester

Research Coord.  
Ayomide Odugbesi

Research Coord.  
Anne Ford

Administrative Assistant  
Dana Bryant

Research Pharmacist  
Tameka Jackson

Clinical Grant Billing Lead  
Shelley Bernardelli

Director of Oncology Research  
Grace Loredo, PhD

Research Coord.  
Chaney Storey

Research Coord.  
Dana Gorbett

Data Coordinator  
Keysha Reeves

Data Coordinator  
Wendy Attaway

Contracts/Billing  
Jamie McBride

Trials Navigator  
Gabriela Salazar

Regulatory Specialist  
Jenny Collins
Center for Clinical Research

• Founded in 1998
Center for Clinical Research

- Founded in 1998
- 86 Active/Open Studies
- ~1,100 patients enrolled in protocols
Center for Clinical Research

• Founded in 1998
• 86 Active/Open Studies
• ~1,100 patients enrolled in protocols
• Phase I – Phase IV trials
• Annual revenue ~$1.5M
Center for Clinical Research

- Clinical Areas with active studies:
  - Cardiology
  - Gastroenterology
  - Infectious Disease
  - Neurology
  - Oncology
  - Psychiatry/Behavioral Health
  - Psychology
  - Pulmonary
  - Trauma
Our Process

• Studies can originate as an idea from the investigator
  • “Investigator initiated”
Our Process

• Studies can originate as an idea from the investigator
  • “Investigator initiated”

• Industry-sponsored
Our Process

• Studies can originate as an idea from the investigator
  • “Investigator initiated”

• Industry-sponsored

• Award-funded
  • ex. NIH, Dept. of Defense
Our Process

Center for Clinical Research

Industry-Sponsored

Investigator Initiated

Award-Funded

Office of Sponsored Programs
Our Process

- Activation and Management of Clinical Research

Industry-Sponsored

Investigator Initiated

Award-Funded

Center for Clinical Research

Office of Sponsored Programs
Our Process

Center for Clinical Research

- Activation and Management of Clinical Research
- Auditing and Monitoring of Clinical Trials

Industry-Sponsored

Investigator Initiated

Award-Funded

Office of Sponsored Programs
Our Process

- Center for Clinical Research
  - Activation and Management of Clinical Research
  - Auditing and Monitoring of Clinical Trials
  - Assurance of Regulatory Compliance

- Office of Sponsored Programs

- Industry-Sponsored
- Investigator Initiated
- Award-Funded

- Activation and Management of Clinical Research
- Auditing and Monitoring of Clinical Trials
- Assurance of Regulatory Compliance
Our Process

Center for Clinical Research

- Activation and Management of Clinical Research
- Auditing and Monitoring of Clinical Trials
- Assurance of Regulatory Compliance
- Financial Management

Industry-Sponsored

Investigator Initiated

Award-Funded

Office of Sponsored Programs
Our Process

Industry-Sponsored
Investigator Initiated
Award-Funded

Center for Clinical Research

- Activation and Management of Clinical Research
- Auditing and Monitoring of Clinical Trials
- Assurance of Regulatory Compliance
- Financial Management
- Data Safety and Monitoring

Office of Sponsored Programs
Our Process

Center for Clinical Research

- Activation and Management of Clinical Research
- Auditing and Monitoring of Clinical Trials
- Assurance of Regulatory Compliance
- Financial Management
- Data Safety and Monitoring
- Data Collection and
Our Process

• Activation and Management of Clinical Research
• Auditing and Monitoring of Clinical Trials
• Assurance of Regulatory Compliance
• Financial Management
• Data Safety and Monitoring
• Data Collection and
• Pre-Award Services
• Post-Award Services
Our Process

Center for Clinical Research

- Activation and Management of Clinical Research
- Auditing and Monitoring of Clinical Trials
- Assurance of Regulatory Compliance
- Financial Management
- Data Safety and Monitoring
- Data Collection and
- Pre-Award Services
- Post-Award Services
- Guidance with grant writing and submission
Our Process

Center for Clinical Research

Industry-Sponsored
Investigator Initiated
Award-Funded

Office of Sponsored Programs

• Activation and Management of Clinical Research
• Auditing and Monitoring of Clinical Trials
• Assurance of Regulatory Compliance
• Financial Management
• Data Safety and Monitoring
• Data Collection

• Pre-Award Services
• Post-Award Services
• Guidance with grant writing and submission
• Budget Preparation
Our Process

Center for Clinical Research

- Activation and Management of Clinical Research
- Auditing and Monitoring of Clinical Trials
- Assurance of Regulatory Compliance
- Financial Management
- Data Safety and Monitoring
- Data Collection
- Pre-Award Services
- Post-Award Services
- Guidance with grant writing and submission
- Budget Preparation
- Support Contract Negotiation
Our Process

Center for Clinical Research

- Activation and Management of Clinical Research
- Auditing and Monitoring of Clinical Trials
- Assurance of Regulatory Compliance
- Financial Management
- Data Safety and Monitoring
- Data Collection

Industry-Sponsored

Investigator Initiated

Award-Funded

Office of Sponsored Programs

- Pre-Award Services
- Post-Award Services
- Guidance with grant writing and submission
- Budget Preparation
- Support Contract Negotiation
- Proposal Review
Our Process

Center for Clinical Research

- Activation and Management of Clinical Research
- Auditing and Monitoring of Clinical Trials
- Assurance of Regulatory Compliance
- Financial Management
- Data Safety and Monitoring
- Data Collection

Industry-Sponsored

Investigator Initiated

Award-Funded

Office of Sponsored Programs

- Pre-Award Services
- Post-Award Services
- Guidance with grant writing and submission
- Budget Preparation
- Support Contract Negotiation
- Proposal Review
- Reimbursement Processing
Our Process

Center for Clinical Research

- Activation and Management of Clinical Research
- Auditing and Monitoring of Clinical Trials
- Assurance of Regulatory Compliance
- Financial Management
- Data Safety and Monitoring
- Data Collection and Submission to Sponsors

Office of Sponsored Programs

- Pre-Award Services
- Post-Award Services
- Guidance with grant writing and submission
- Budget Preparation
- Support Contract Negotiation
- Proposal Review
- Reimbursement Processing
- Financial Reporting
Our Process

Industry-Sponsored
Investigator Initiated

Center for Clinical Research

Investigator

Award-Funded

Office of Sponsored Programs
Our Process

Investigator
• Identifies patients appropriate for the trial
Our Process

Investigator
- Identifies patients appropriate for the trial
- Collects data
  - Clinical follow-up
Our Process

Investigator
- Identifies patients appropriate for the trial
- Collects data
  - Clinical follow-up
- Can be compensated for time
Clinical Research, The Future
Clinical Research, The Future

• We could present a vision of the future as
Clinical Research, The Future

• We could present a vision of the future as
  • How many studies
  • How much money
  • How big is the staff
  • How many centers
  • How many investigators
Clinical Research, The Future

• We could present a vision of the future as
  • How many studies
  • How much money
  • How big is the staff
  • How many centers
  • How many investigators

• We need to talk about the future clinical research will help create
Clinical Research, The Future

• 70% of Chief Scientific Officers at top 10 pharmaceutical companies and NIH institute directors hold M.D. degrees.
Clinical Research, The Future

• 70% of Chief Scientific Officers at top 10 pharmaceutical companies and NIH institute directors hold M.D. degrees.

• In the last 40 years, the proportion of US physicians engaged in research has declined
Clinical Research, The Future

70% of Chief Scientific Officers at top 10 pharmaceutical companies and NIH institute directors hold M.D. degrees.

In the last 40 years, the proportion of US physicians engaged in research has declined
- Peak of 4.7% of the overall physician workforce in the 1980s
- 1.5% today
Clinical Research, The Future

• 70% of Chief Scientific Officers at top 10 pharmaceutical companies and NIH institute directors hold M.D. degrees.

• In the last 40 years, the proportion of US physicians engaged in research has declined
  • Peak of 4.7% of the overall physician workforce in the 1980s
  • 1.5% today

• Because of numerous changes, “... aspiring young physician-scientists see careers combining research and patient care as unattainable.”

Clinical Research and Medical Education

• We need physician-scientists

Figure 1. Postdoctoral Traineeships Awarded by the National Institutes of Health to Candidates Holding M.D. and M.D. plus Ph.D. Degrees, as Compared with Those Holding the Ph.D. Degree Only, 1968-77.
The data include renewal awards as well as first-time awards.
Clinical Research and Medical Education

• We need physician-scientists

Figure 1. Postdoctoral Traineeships Awarded by the National Institutes of Health to Candidates Holding M.D. and M.D. plus Ph.D. Degrees, as Compared with Those Holding the Ph.D. Degree Only, 1966–77. The data include renewal awards as well as first-time awards.


Graduating medical students with strong research career intentions.

Clinical Research and Medical Education

- We need physician scientists
Clinical Research and Medical Education

• We need physician scientists

• ALL physicians are expected to deliver evidence-based care throughout their careers
Clinical Research and Medical Education

• LCME Standards and Elements, Functions and Structure of a Medical School
Clinical Research and Medical Education

• LCME Standards and Elements, Functions and Structure of a Medical School

• ACGME Required Educational Program Components
Clinical Research and Medical Education

- LCME Standards and Elements, Functions and Structure of a Medical School

- ACGME Required Educational Program Components

- We are educating our residents in research methodology and many are conducting their own studies
Clinical Research and Medical Education

• LCME Standards and Elements, Functions and Structure of a Medical School

• ACGME Required Educational Program Components

• We are educating our residents in research methodology and many are conducting their own studies

• The students of the UT Tyler School of Medicine will all engage in a scholarly project
Thank you