ACRP
Careers In Clinical Research
Everything you need to know about finding your element in the clinical research industry and the opportunities for a rewarding career
Overview

I. Introductions

II. What is Clinical Research?

III. How Does it Make a Difference / Why You Should Consider a Career in Clinical Research?

IV. What Types of Jobs / Careers are Involved?

V. What is the Job Growth Potential and Salary Opportunities?

VI. Who Makes a Good Clinical Research Professional?

VII. How to Get Started?
How many of you...

• Have ever taken a prescription medication?
• Know someone who has had their hip replaced or had a pacemaker implanted?
• Know how new medical treatments get developed and approved?
• Have ever heard of clinical research?
What is Clinical Research?
The Definition, The Types, How It’s Different and The Clinical Research Process
Clinical Research...

Because this type of research involves the use of human subjects, it is accompanied with a number of legal and ethical issues, and studies must be carefully vetted by ethics committees and government organizations which oversee medical research.

<table>
<thead>
<tr>
<th>Is a form of medical research which involves the study and use of human subjects to further scientific knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determines the safety and effectiveness of medications, devices, diagnostic products and treatment regimens intended for human use</td>
</tr>
<tr>
<td>Aims to help prevent, treat, diagnose or relieve symptoms of a disease</td>
</tr>
<tr>
<td>Is done through a clinical trial, in which a group of patients are used to test a new medication, treatment, or medical device.</td>
</tr>
</tbody>
</table>
Different Types of Clinical Research

**Tr**
Treatment Research generally involves an intervention such as medication, psychotherapy, new devices, or new approaches to surgery or radiation therapy.

**Pr**
Prevention Research looks for better ways to prevent diseases from developing or returning. Different kinds of prevention research may study medicines, vitamins, vaccines, minerals, or lifestyle changes.

**Dr**
Diagnostic Research refers to the practice of looking for better ways to identify a particular disorder or condition.

**Sr**
Screening Research aims to find the best ways to detect certain disorders or health conditions.

**Qr**
Quality of Life Research explores ways to improve comfort and the quality of life for individuals with a chronic illness.

**Gs**
Genetic Studies aim to improve the prediction of disorders by identifying and understanding how genes and illnesses may be related.

**Es**
Epidemiological studies seek to identify the patterns, causes, and control of diseases in groups of people.
### How is Clinical Research Different?

<table>
<thead>
<tr>
<th>Type</th>
<th>Basic or Foundational Research</th>
<th>Translational Research</th>
<th>Clinical Research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To understand at a very basic level some aspect of biology</td>
<td>This research is needed to show that a drug or device works in some living system before it is used on humans</td>
<td>To test the safety and effectiveness of drugs, diagnostic tests, and devices that could be used in the detection, treatment, prevention or tracking of a disease</td>
</tr>
<tr>
<td><strong>Important Aspects</strong></td>
<td>Basic research generates new ideas, principles, and theories, which may not be immediately utilized but nonetheless form the basis of progress and development in different fields</td>
<td>Often called “bench-to-bedside” or research (referring to the research bench and the patient’s bedside) or “applied” research (of applying basic research to solve a real-world problem)</td>
<td>The cornerstone of clinical research is the clinical trial. Clinical research is done in humans and within the healthcare environment</td>
</tr>
<tr>
<td><strong>Typically funded by</strong></td>
<td>The Government (such as National Institutes of Health – NIH)</td>
<td>The Government, Universities, Patient Associations / Foundations (such as Michael J. Fox Foundation for Parkinson’s Research, the Gates Foundation)</td>
<td>Pharmaceutical or medical device companies</td>
</tr>
</tbody>
</table>
### The Research and Development Process

<table>
<thead>
<tr>
<th>Research</th>
<th>Development</th>
<th>Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drug Discovery</strong></td>
<td><strong>Clinical Trials</strong></td>
<td><strong>NDA</strong></td>
</tr>
<tr>
<td>Screening of 5k-10k compounds</td>
<td>Phase I</td>
<td>Regulatory Review and Market Authorization</td>
</tr>
<tr>
<td></td>
<td>250 compounds</td>
<td>Scale-Up To Manufacturing</td>
</tr>
<tr>
<td></td>
<td>1 compound</td>
<td>Post-marketing Surveillance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Phase IV Trials</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td><strong>Duration</strong></td>
<td><strong>Duration</strong></td>
</tr>
<tr>
<td>3-6 years</td>
<td>6-7 years</td>
<td>0.5-2 years</td>
</tr>
<tr>
<td><strong>Share of Budget</strong></td>
<td><strong>Share of Budget</strong></td>
<td><strong>Share of Budget</strong></td>
</tr>
<tr>
<td>21.5%</td>
<td>Up to 65%</td>
<td>Up to 3.5%</td>
</tr>
<tr>
<td><strong>Chances of Success</strong></td>
<td><strong>Chances of Success</strong></td>
<td>Up to 10%</td>
</tr>
<tr>
<td>&lt;0.01%</td>
<td>65% in Phase I</td>
<td><strong>ROI</strong></td>
</tr>
<tr>
<td></td>
<td>40% in Phase II</td>
<td>1:3</td>
</tr>
<tr>
<td></td>
<td>50% in Phase III</td>
<td><strong>Duration:</strong> Ongoing</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Share of Budget:</strong> Up to 10%</td>
</tr>
</tbody>
</table>

#### Research
- **Drug Discovery**
  - Screening of 5k-10k compounds
  - 250 compounds
  - 1 compound

#### Development
- **Clinical Trials**
  - Phase I: 20-100 Volunteers
  - Phase II: 100-500 Volunteers
  - Phase III: 1k-5k Volunteers

#### Approval
- **NDA**
- **Regulatory Review and Market Authorization**
- **Scale-Up To Manufacturing**
- **Post-marketing Surveillance**
- **Phase IV Trials**

**Share of Budget:**
- Up to 65%
- Up to 3.5%
- Up to 10%

**ROI:** 1:3
How Does it Make a Difference?
Why You Should Consider a Career in Clinical Research
Did You Know…

It is estimated that every 66 seconds, someone in the U.S develops Alzheimer’s.  

*By mid-century, it’s projected that someone in the U.S. will develop the disease every 33 seconds*

The number of new cancer cases per year is expected to rise to 23.6 million globally by 2030.

Cancer is among the leading causes of death worldwide. In 2012, there were 14.1 million new cases and 8.2 million cancer-related deaths worldwide.

*You could be part of the clinical research team that helps to combat these and many other scary statistics!*
**How Does Clinical Research Make a Difference?**

<table>
<thead>
<tr>
<th>Pharmaceutical, medical device and health care innovation improve public health</th>
</tr>
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<tbody>
<tr>
<td>Medical discoveries have increased life expectancy and improved the quality of life for many people around the world</td>
</tr>
<tr>
<td>Not only do these advances improve the physical and mental health of individuals but they reduce hospitalization and other healthcare costs</td>
</tr>
</tbody>
</table>
Despite these advances, we still have lots of challenges and need talented people to help solve them!

- Million children are saved each year by vaccines
- New types of antibiotics have been developed since 1928
- Antiretroviral treatments have been developed for HIV/AIDS
- New treatments have been developed in the last 10 years for hard-to-treat diseases

Survival rates for patients with cancer have increased dramatically

Decline in infant mortality over the past 20 years
Decrease in chronic disability among seniors
Reduction in the death rates for coronary heart disease and stroke

To learn more about health statistics and the impact of diseases, visit the World Health Organization, [http://origin.who.int/features/factfiles/global_burden/en/](http://origin.who.int/features/factfiles/global_burden/en/)
Considering a Career in Clinical Research

Clinical research is an important part of the healthcare industry, an industry that is expanding faster than any other (in the U.S.).

Combine the overall growth of healthcare sector, with rapid growth of new technologies and innovations, clinical research presents a huge employment opportunity which should see continued growth for a long time.
Considering a Career in Clinical Research

A career in clinical research will give you

- The opportunity to advance scientific discovery
- An ability to improve individuals’ lives
- A chance to be involved in a challenging and rewarding career
What Types of Careers are Involved?

Take a Glance at Where You Could be Working
Where Clinical Research Professionals Work

- Home Office
- Research Centers
- Hospitals
- Pharmaceutical and Medical Device Companies
- Medical Offices
- Contract Research Organizations
The Types of Jobs That Exist

Jobs That Interact Directly with Patients (Research Subjects)

- Principal Investigators*
- Clinical Research Nurses*
- Clinical Research Coordinators (CRC)
- Clinical Research Pharmacists*

The CRC and CTA roles are common entry points into a career in clinical research and from there, the possibilities are unlimited based on your interests and additional educational background.

*Requires a medical, nursing or pharmacy degree
The Types of Jobs That Exist

<table>
<thead>
<tr>
<th>Jobs That Support Clinical Research But Don’t Directly Interact with Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Clinical Trial Assistant (CTA)</td>
</tr>
<tr>
<td>• Clinical Research Associate (CRA) or study monitor</td>
</tr>
<tr>
<td>• Drug Safety Specialist</td>
</tr>
<tr>
<td>• Biostatistician</td>
</tr>
<tr>
<td>• Study Manager / Project Manager</td>
</tr>
<tr>
<td>• Data Scientist, Clinical Data Coordinator, Analyst or Manager</td>
</tr>
<tr>
<td>• Quality Assurance Specialist, Auditor</td>
</tr>
<tr>
<td>• Medical Officer*</td>
</tr>
<tr>
<td>• Clinical Business Analysis</td>
</tr>
<tr>
<td>• Medical Writer</td>
</tr>
</tbody>
</table>

*Requires a medical degree
Job Growth Potential and Salary Opportunities

Secure Your Future
Number of clinical trials registered on clinicaltrials.gov as of Jan 2, 2020 – by country

<table>
<thead>
<tr>
<th>Rank</th>
<th>Registrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>21,224</td>
</tr>
<tr>
<td>3</td>
<td>127,485</td>
</tr>
<tr>
<td>4</td>
<td>3,540</td>
</tr>
<tr>
<td>5</td>
<td>2,994</td>
</tr>
<tr>
<td>6</td>
<td>10,415</td>
</tr>
<tr>
<td>7</td>
<td>92,927</td>
</tr>
<tr>
<td>8</td>
<td>9,322</td>
</tr>
<tr>
<td>9</td>
<td>13,697</td>
</tr>
<tr>
<td>10</td>
<td>4,962</td>
</tr>
<tr>
<td>11</td>
<td>36,343</td>
</tr>
<tr>
<td>12</td>
<td>5,692</td>
</tr>
<tr>
<td>13</td>
<td>5,741</td>
</tr>
<tr>
<td>14</td>
<td>6,523</td>
</tr>
<tr>
<td>15</td>
<td>7,671</td>
</tr>
</tbody>
</table>
A recent search on Career OneStop highlights nearly 50,000 current jobs available in the U.S.!

This illustrates the high volume of jobs available.
This showcases both volume of jobs and different tier levels for growth potential.
The CRA role has been in the Top 100 Best Jobs in America for a few years and in 2012 it was #4!

This role has experienced an 8% growth rate for the past 10 years

It has a high quality of life rating!

## Typical Salary Ranges for Key Roles

<table>
<thead>
<tr>
<th>Role</th>
<th>Low</th>
<th>Average</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTA Clinical Trial Assistant</td>
<td>$31,000</td>
<td>$51,000</td>
<td>$74,000</td>
</tr>
<tr>
<td>CRC Clinical Research Coordinator</td>
<td>$41,000</td>
<td>$57,000</td>
<td>$80,000</td>
</tr>
<tr>
<td>CRA Clinical Research Associate</td>
<td>$58,000</td>
<td>$84,000</td>
<td>$108,000</td>
</tr>
</tbody>
</table>

*Based on December 2019 Survey of Salaries Posted on Glassdoor*
Who Makes a Great Clinical Research Professional?

The Key Elements of a Great CR Professional
Do You…

- Have a passion for science – but don’t always know the fields to apply beyond the traditional (nursing, pharmacy, medical or veterinary doctor)?

- Want a “pay it forward” career or profession?

- Want to combine your interests in cutting-edge science, medicine and business – all while directly advancing potential new medicines for patients in need?
Characteristics of Successful Clinical Research Professional

Knowledge
- Medical Terminology

Skills and Abilities
- Attention to detail
- Excellent verbal and written communication skills
- Connection and collaboration
- Cool under pressure
- Strong organizational capabilities
- Creativity
- Critical Thinking Skills
- Customer Focused
- Empathetic
- Flexible and Adaptable
- Professional
- Multi-tasker
- Self-Directed
- Team Player
- Tech Savvy

Attitudes & Behavior
- Commitment
- Curiosity
- Enthusiasm
- Humbleness
- Integrity
How to Get Started?

Find Your Element and More
Find Your Element: careersinclinicalresearch.org | ACRP: acrnet.org
Questions?
THANK YOU