



The Clinical Exercise Physiologist: Creating a Tool-kit for Healthcare Administrators

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Disclosures

Ash Walker-none

Cemal Ozemek-co-presented at
AACVPR 2025

Laura Richardson-co-presented at
AACVPR 2025



Outline

- Defining the CEP and what they do
- Professional standards
- Advocacy points for administrators
- Recommendations and explorations for a tool-kit



AHA SCIENTIFIC STATEMENTS

Core Components of Cardiac Rehabilitation Programs: 2024 Update: A Scientific Statement From the American Heart Association and the American Association of Cardiovascular and Pulmonary Rehabilitation

Todd M. Brown, MD, MSPH, FAHA, Chair, Quinn R. Pack, MD, MSc, FAHA, Vice Chair, Ellen Aberegg, MA, LD, RD, LaPrincess C. Brewer, MD, MPH, FAHA, Yvonne R. Ford, PhD, Daniel E. Forman, MD, FAHA, Emily C. Gathright, PhD, Sherrie Khadanga, MD, Cemal Ozemek, PhD, ACSM-CEP, and Randal J. Thomas, MD, MS, FAHA on behalf of the American Heart Association Exercise, Cardiac Rehabilitation and Secondary Prevention Committee of the Council on Clinical Cardiology; Council on Cardiovascular and Stroke Nursing; Council on Lifestyle and Cardiometabolic Health; and Council on Quality of Care and Outcomes Research

Exercise Intensity in CR

- Reductions in morbidity, mortality, and hospital readmission produced by CR participation are predominately associated with changes in cardiorespiratory fitness. ^{2,3}
- **Increasing exercise intensity by 1.0 MET over the course of CR lowers their three-year all-cause mortality by 35%. ⁴**
 - Benefit applies regardless of the initial MET level
- **Greater exercise intensity is associated with greater changes in cardiorespiratory fitness ⁵**

2. Martin BJ, Arena R, Haykowsky M, Hauer T, Austford LD, Knudtson M, Aggarwal S, Stone JA (2013); APPROACH Investigators. Cardiovascular fitness and mortality after contemporary cardiac rehabilitation. *Mayo Clinic Proceedings*;88(5):455-63. doi: 10.1016/j.mayocp.2013.02.013. PMID: 23639499.

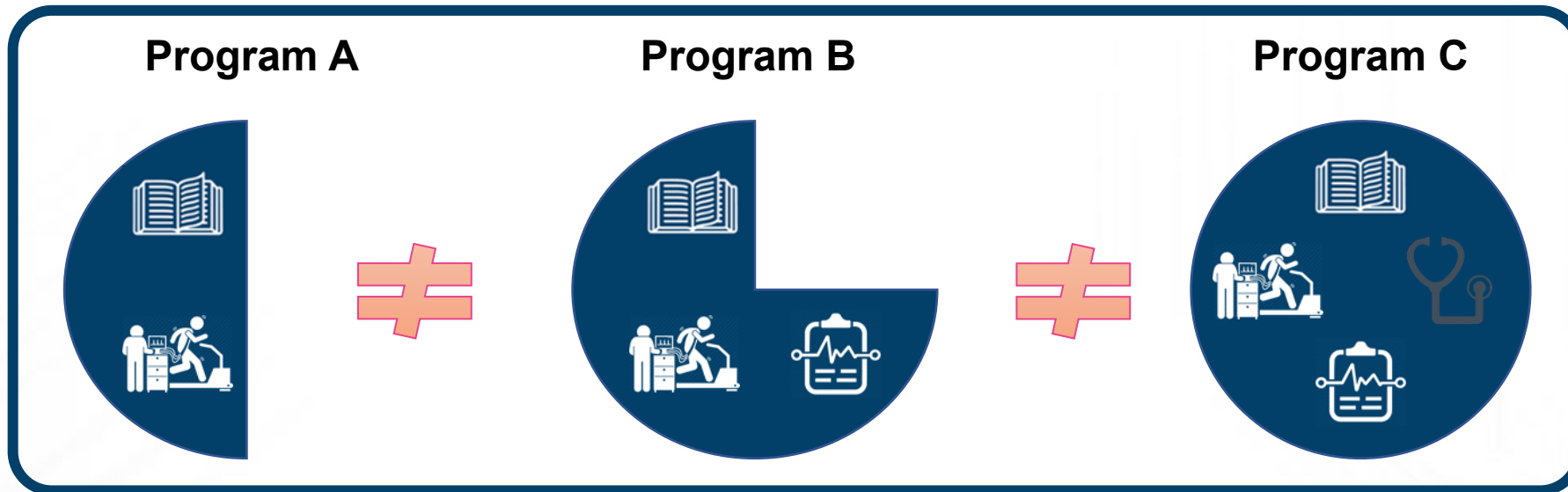
3. Suaya JA, Stason WB, Ades PA, Normand SL, Shepard DS. (2009) Cardiac rehabilitation and survival in older coronary patients. *Journal of the American College of Cardiology*,30;54(1):25-33. doi: 10.1016/j.jacc.2009.01.078. PMID: 19555836.

4. Brawner CA, Abdul-Nour K, Lewis B, Schairer JR, Modi SS, Kerrigan DJ, Ehrman JK, Keteyian SJ. (2016). Relationship Between Exercise Workload During Cardiac Rehabilitation and Outcomes in Patients With Coronary Heart Disease. *American Journal of Cardiology*, 117(8):1236-41. doi: 10.1016/j.amjcard.2016.01.018. Epub 2016 Jan 28. PMID: 26897640.

5. Wenger, H.A., Bell, G.J. (1986). The Interactions of Intensity, Frequency and Duration of Exercise Training in Altering Cardiorespiratory Fitness. *Sports Medicine* 3, 346–356. <https://doi.org/10.2165/00007256-198603050-00004>

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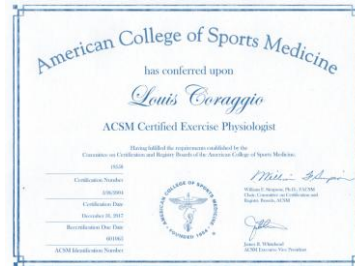
Clinical Exercise Physiologists



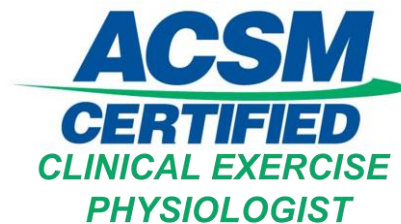
What is Required?



PROGRAMMATIC
ACCREDITATION



PROFESSIONAL
CERTIFICATION



CONTINUING
COMPETENCE



PROFESSIONAL
REGISTRATION



Job Titles

Accredited Exercise Professional	Cardiac Rehab Clinical Specialist	Cardiac Rehab Exercise Specialist	Cardiac Rehab Lead	Cardiac Rehab Therapist
Cardiopulmonary Rehab Professional	<i>Clinical Exercise Physiologist</i>	Clinical Exercise Specialist	Clinical Exercise Coordinator	Clinical Fitness Provider
Cardiac Rehab Clinical Specialist	<i>Exercise Physiologist</i>	Exercise Professional	Exercise Scientist	Exercise Specialist
Fitness Specialist	Fitness Trainer	Fitness Specialist	Personal Trainer Cardiac Rehab	

● REVIEW MEDICAL HISTORY

● ASSESS VITAL SIGNS AND ECG

● PRESCRIBE EXERCISE INTENSITY AND DEVELOP EXERCISE PLAN

● MONITOR PATIENT DURING EXERCISE

Roles & Responsibilities of the Clinical Exercise Physiologist (CEP)

● PROVIDE PATIENT EDUCATION

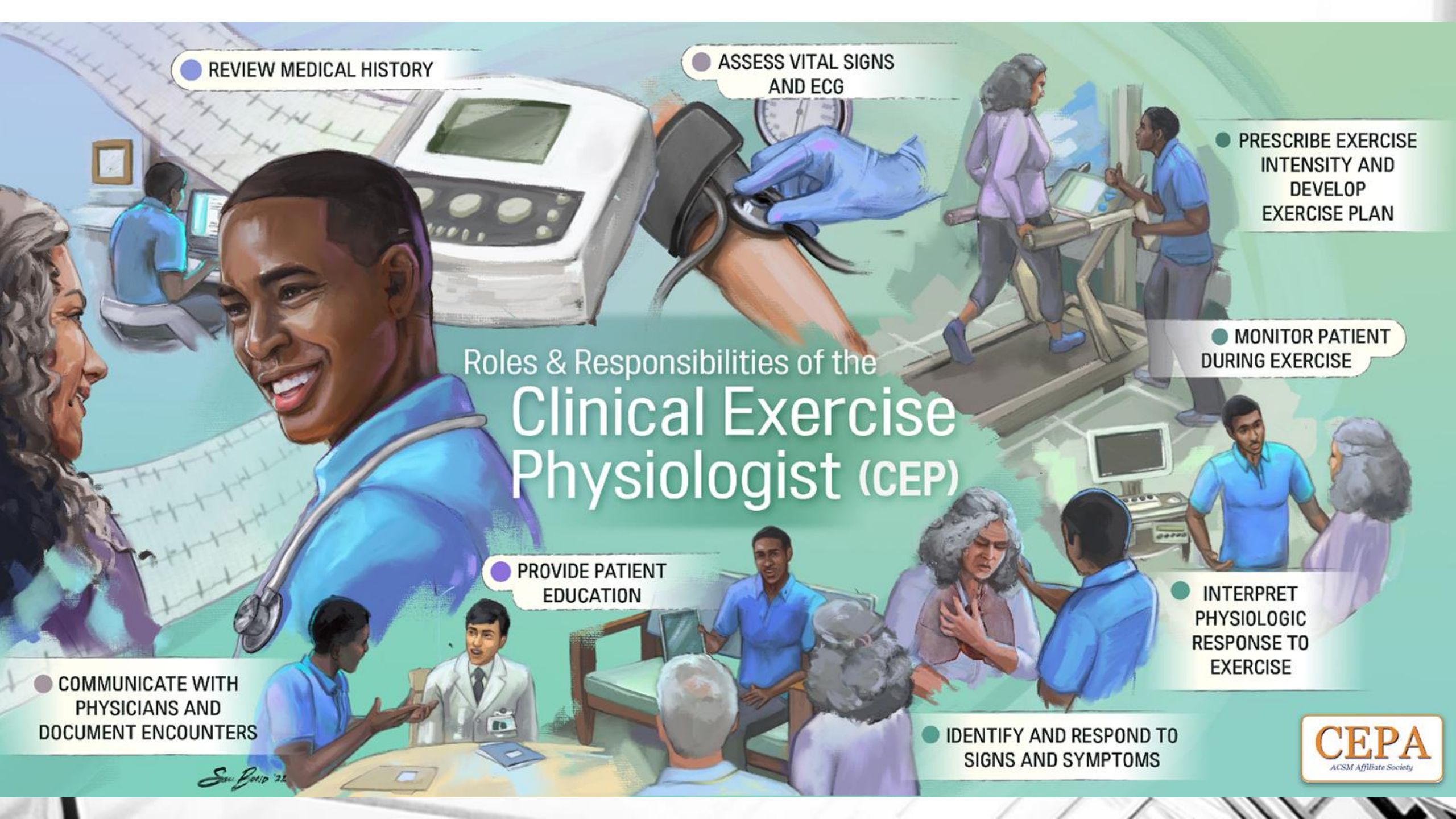
● INTERPRET PHYSIOLOGIC RESPONSE TO EXERCISE

● COMMUNICATE WITH PHYSICIANS AND DOCUMENT ENCOUNTERS

● IDENTIFY AND RESPOND TO SIGNS AND SYMPTOMS



Sam Bond '22



CEP Practice Patterns

ORIGINAL RESEARCH

Clinical Exercise Physiologists in Cardiac Rehabilitation and Clinical Exercise Testing

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Aaron W. Harding, PhD, ACSM-CEP³, Jill K. Nustad, DSc, ACSM-CEP⁴, Cemal Ozemek, PhD,
ACSM-CEP⁵, Laura A. Richardson, PhD, ACSM-CEP⁶, Patrick D. Savage, MS⁷
on behalf of the Clinical Exercise Physiology Association

ABSTRACT

Background: The unique training of clinical exercise physiologists (CEPs) positions them to be an integral part of multidisciplinary teams in phase 2 cardiac rehabilitation (CR). However, the roles and responsibilities of CEPs vary widely between institutions. In addition, job tasks of CEPs at some institutions might not fully leverage their knowledge and skills. The purpose of this study was to describe the roles and responsibilities of CEPs working in CR and noninvasive clinical exercise testing at select institutions in the United States.

Methods: This was a descriptive study of the job tasks performed by CEPs in CR and noninvasive clinical exercise testing at select institutions. Job tasks that are common to CR and noninvasive clinical exercise testing were identified by a working group of the Clinical Exercise Physiology Association.

Results: The 6 CR programs in this report are predominately staffed by CEPs with no other health care professional present during exercise classes. In 5 of these programs CEPs perform all tasks required of phase 2 CR, from patient screening to program discharge. At 3 of the 4 programs that also performed noninvasive exercise testing, CEPs performed all the necessary tasks with no other health care professional present in the room during testing.

Conclusion: CEPs play an integral role in the conduct of phase 2 CR and noninvasive cardiology exercise testing. Granting privileges to CEPs that allow them to work at the top of their knowledge and skills will allow other health care professionals to better use their skills in other high demand areas. *J Clin Exerc Physiol.* 2023;12(2):38–45.

Keywords: privileges, profession, roles, responsibilities, staffing

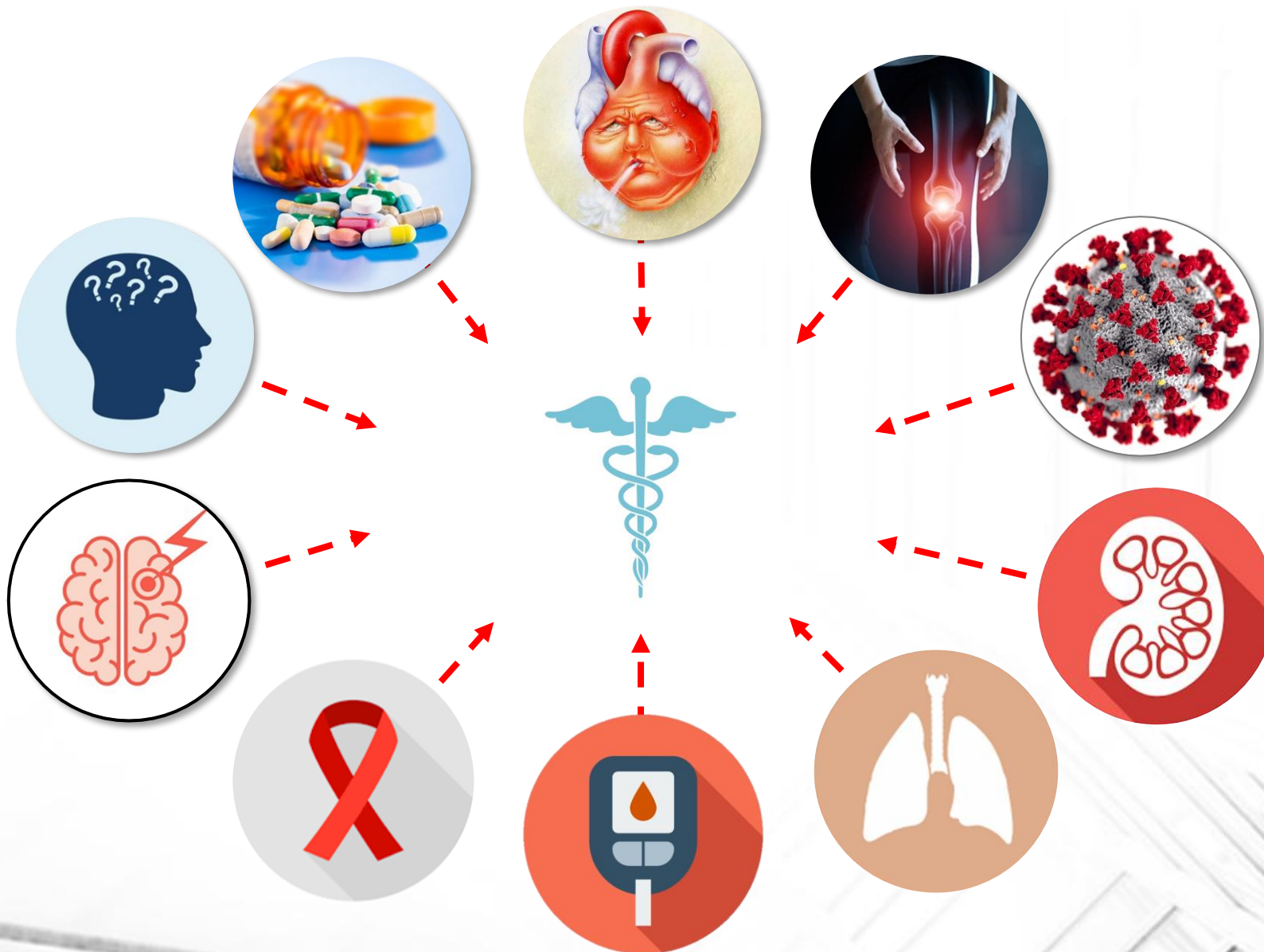
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6. Brawner, C.A., et al., Clinical exercise physiologists in cardiac rehabilitation and clinical exercise testing., *Journal of Clinical Exercise Physiology.* 12 (2), 38-45.

TABLE 3. Roles and responsibilities of clinical exercise physiologists working in phase 2 cardiac rehabilitation at select institutions.^a

Roles and Responsibilities	CHI SA	HFHMG	OHVI	U of IL-C	U-M Health	U of VT Health
Screen and enroll patients into program	Yes	Yes	Yes	Yes	No	Yes
Introductory group session (e.g., orientation)	Yes	Yes	Yes	Yes	Yes	Yes
Review medications	Yes	Yes	Yes	Yes	Yes	Yes
Develop exercise prescription	Yes	Yes	Yes	Yes	Yes	Yes
Clear patient for daily exercise	Yes	Yes	Yes	Yes	Yes	Yes
Prep patient for telemetry ECG (as indicated)	Yes	Yes	Yes	Yes	Yes	Yes
Supervise exercise	Yes	Yes	Yes	Yes	Yes	Yes
Adjust exercise workloads	Yes	Yes	Yes	Yes	Yes	Yes
Monitor ECG during exercise	Yes	Yes	Yes	Yes	Yes	Yes
Measure blood pressure through auscultation	Yes	Yes	Yes	Yes	Yes	Yes
Measure blood pressure with doppler	Yes	Yes	Yes	Yes	Yes	NA
Develop individual treatment plan	Yes	Yes	Yes	Yes	Yes	Yes
Complete individual treatment plan reports	Yes	Yes	Yes	Yes	Yes	Yes
Deliver patient education	Yes	Yes	Yes	Yes	Yes	Yes
Assess symptoms	Yes	Yes	Yes	Yes	Yes	Yes
Assess blood glucose	Yes	Yes	Yes	Yes	Yes	Yes
Assess lung sounds	Yes	NA	Yes	NA	NA	NA
Assess extremities for edema	Yes	Yes	Yes	NA	Yes	Yes
Assess pulse oximetry	Yes	Yes	Yes	Yes	Yes	Yes
Administer oxygen (as indicated)	Yes	Yes	Yes	Yes	Yes	Yes
Administer nitroglycerin (as indicated)	Yes	Yes	Yes	Yes	No	Yes
Administer aspirin (as indicated)	Yes	Yes	NA	Yes	No	Yes
Lead BLS with AED	Yes	Yes	Yes	Yes	Yes	Yes
Defibrillate during cardiac arrest	Yes	Yes	Yes	Yes	Yes	Yes
Communicate orders from physician to patient	Yes	Yes	Yes	Yes	Yes	Yes
Sign daily encounters	Yes	Yes	Yes	Yes	Yes	Yes
Discharge patient from program	Yes	Yes	Yes	Yes	Yes	Yes

Who do they work with?



Value of the CEP

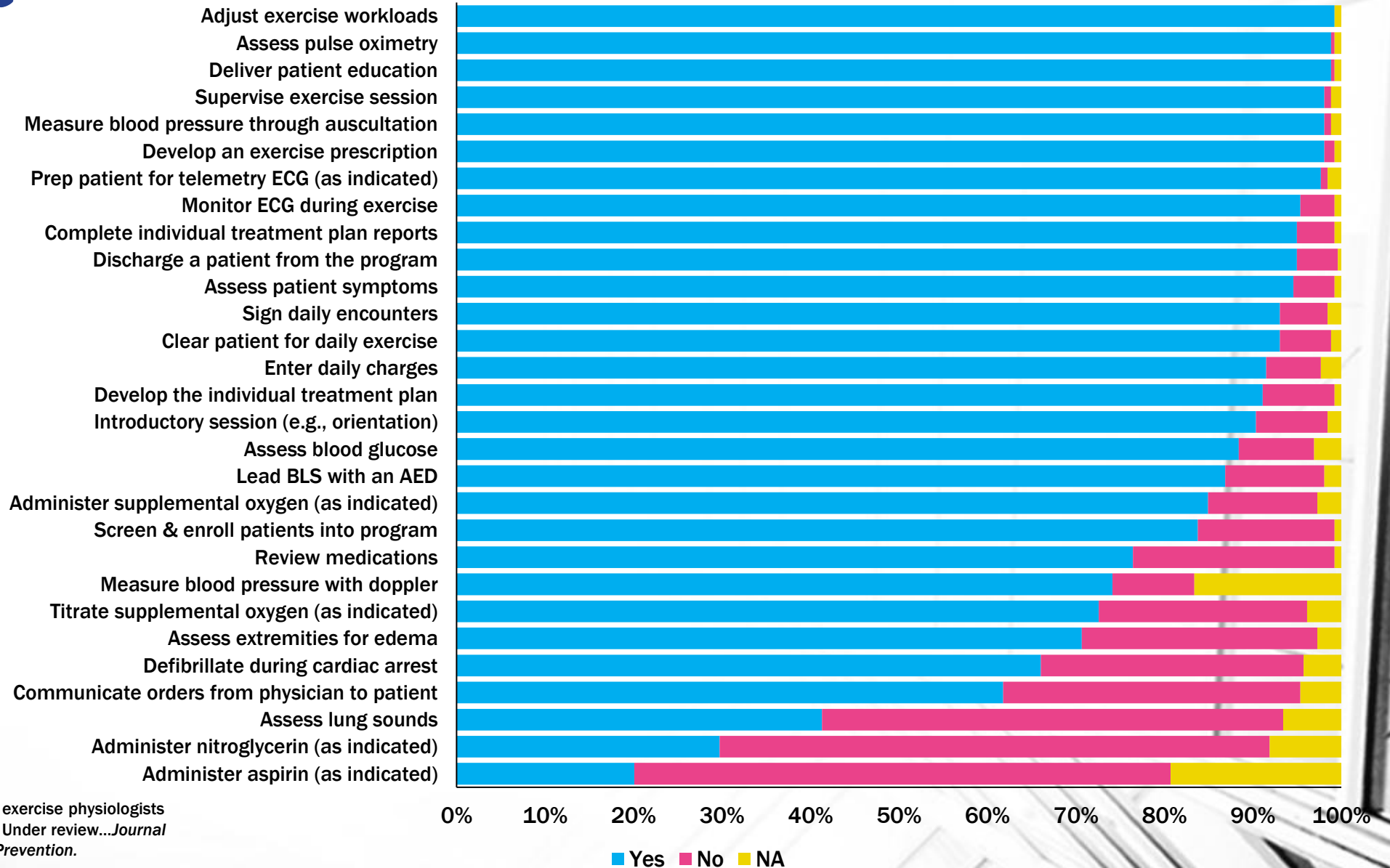
- Improvement of clinical outcomes
- Enhanced patient engagement
- Reduction in hospital readmissions

Skills & Abilities

In Press!

A. Cardiac Rehabilitation (n= 259)

7.

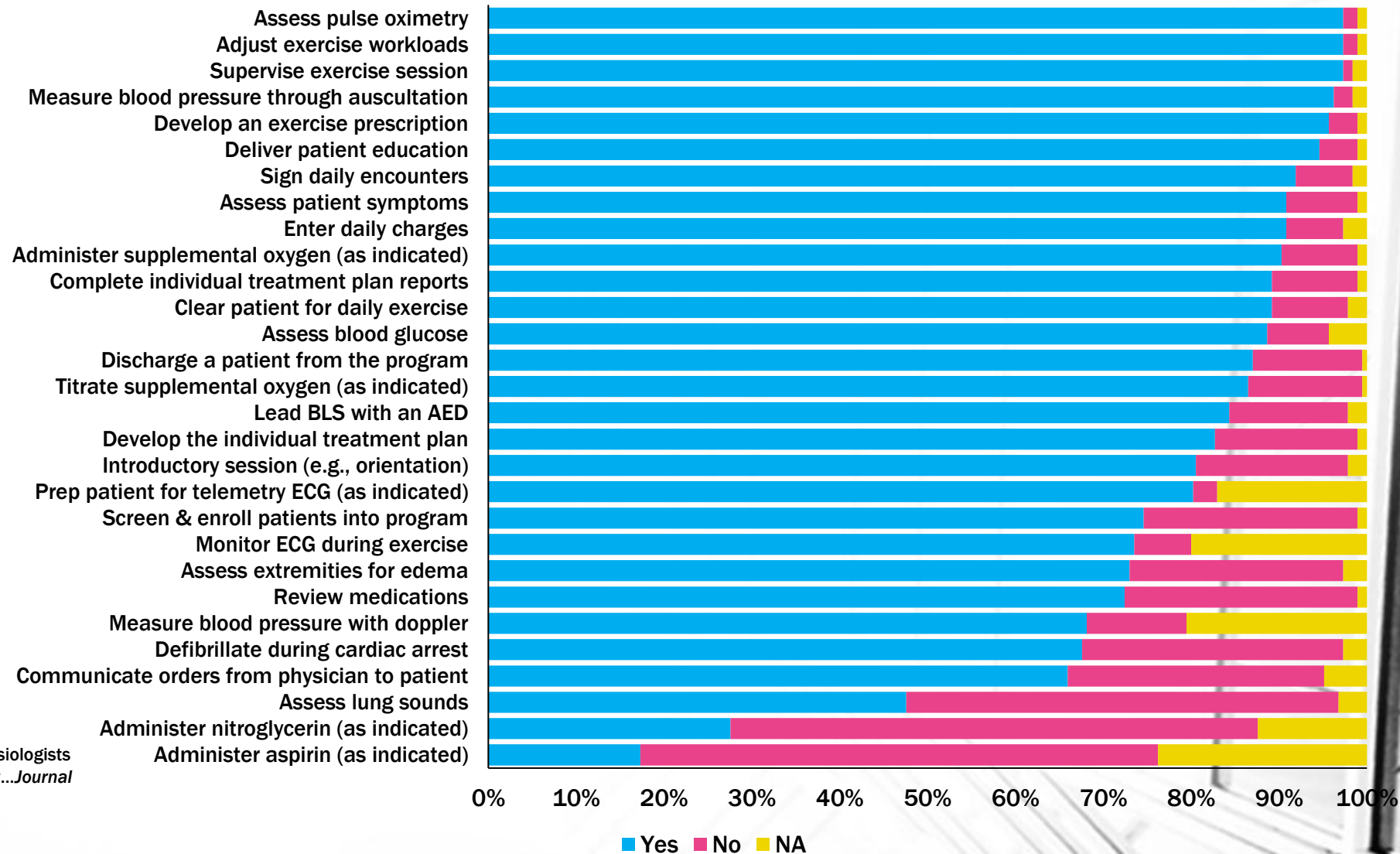


7. Richardson, L.A, et al. (2025). Clinical exercise physiologists in cardiac and pulmonary rehabilitation. Under review...*Journal of Cardiopulmonary Rehabilitation and Prevention*.

Skills & Abilities

B. Pulmonary Rehabilitation (n= 185)

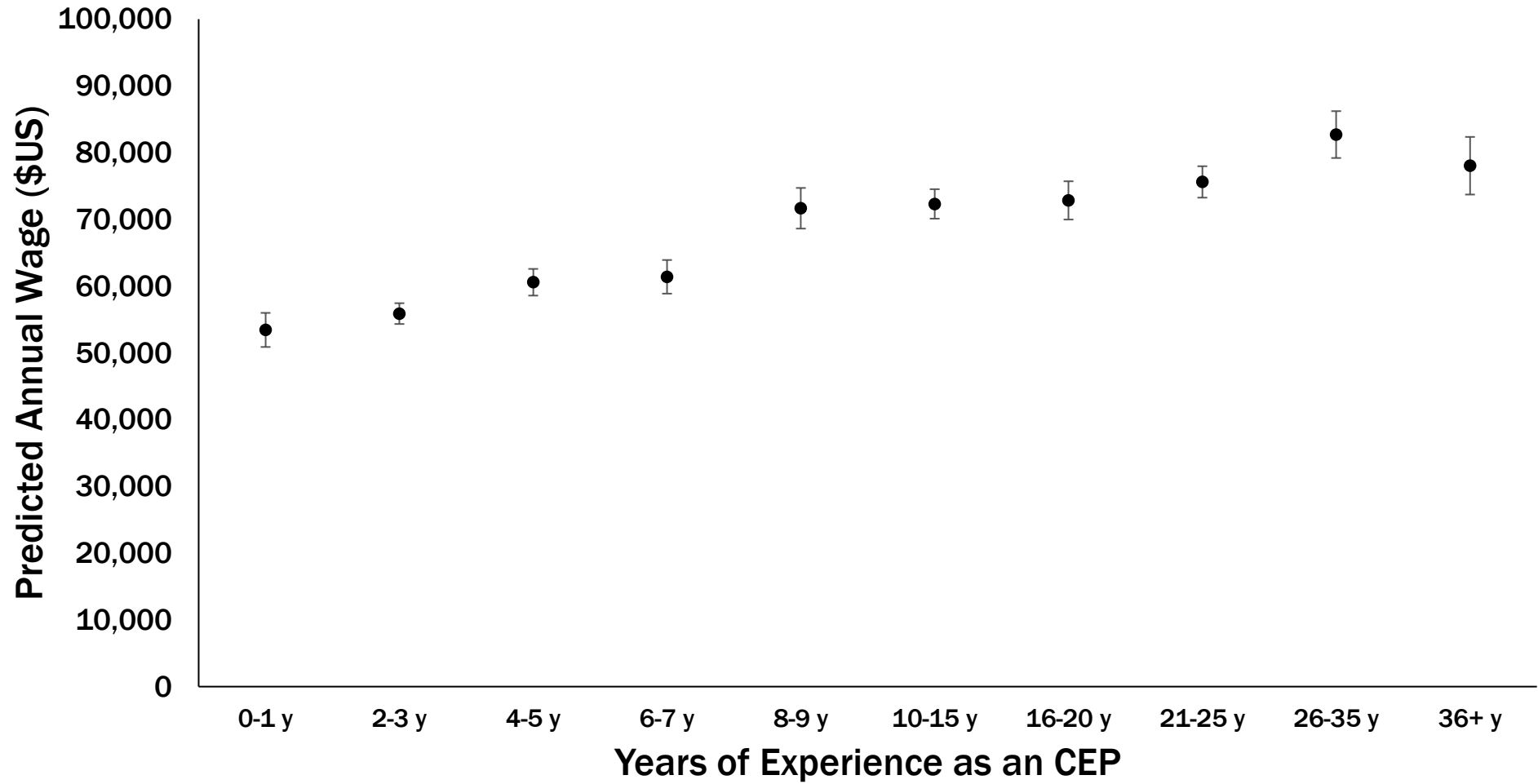
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7. Richardson, L.A, et al. (2025). Clinical exercise physiologists in cardiac and pulmonary rehabilitation. Under review...*Journal of Cardiopulmonary Rehabilitation and Prevention*.

In Press!

Salary





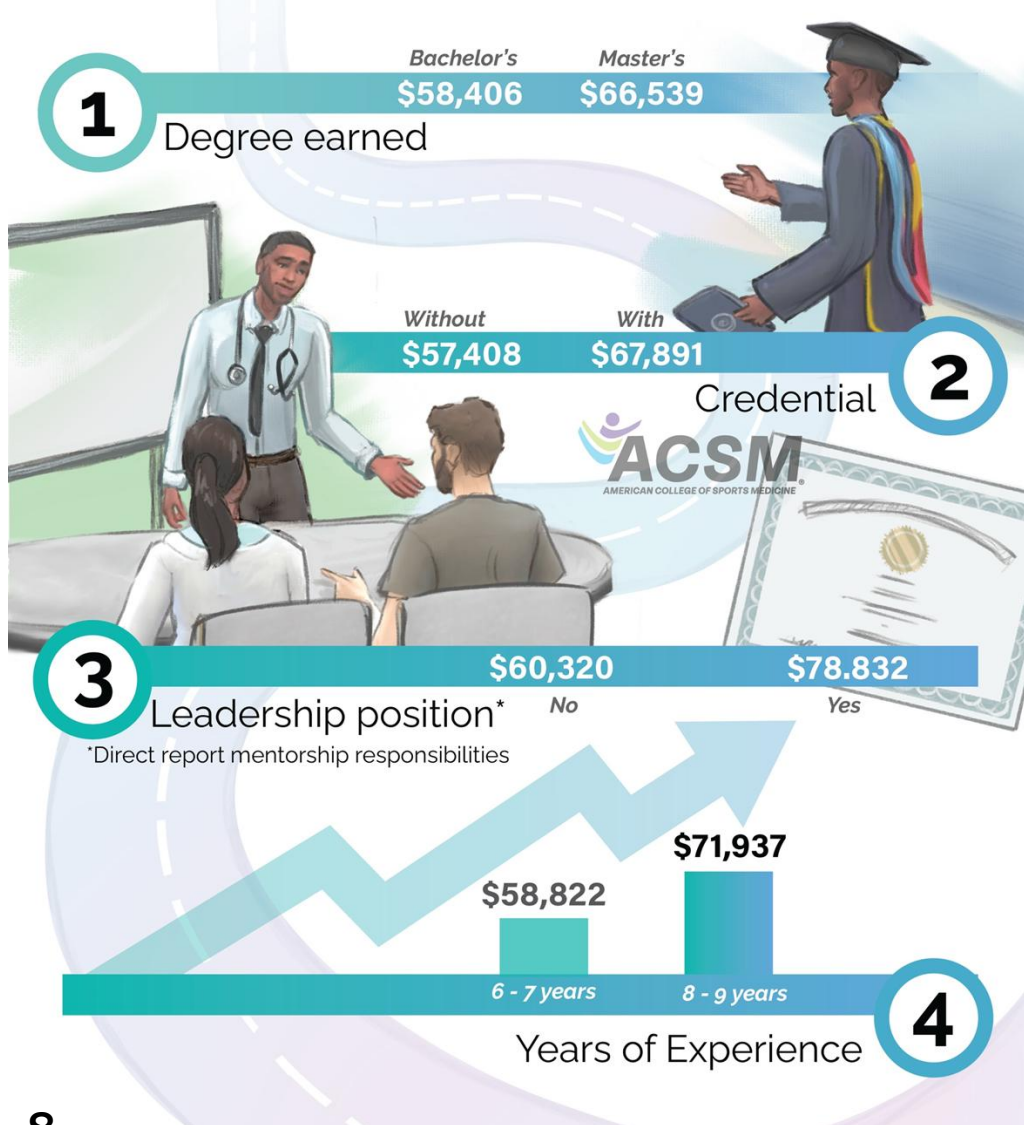
2025 Salary

8. Richardson, LA, et al. (2025). National Salary Survey of Clinical Exercise Physiologists. *In Press at Journal of Clinical Exercise Physiology*

Degrees and Dollars:



4 Factors Influencing Clinical Exercise Physiologists Salaries



Workforce potential

- **Leadership ability**

- Leveraging the CEP practice patterns to serve as CR clinical leaders
- Findings suggest that CEPs are competent to run and oversee CR programs
- Innovative strategies to improve referral, enrollment, and retention of patients with heart disease into CR will require increases in CR capacity which can be filled by CEPs

- **Growth of potential offerings**

- Diabetes education
- Weight management
- Exercise oncology
- Parkinson's

Advocacy Points for Administrators

- **What administrators need to know**
 - Who and what is a CEP.
 - CEP's bring value to healthcare systems with their training.
 - Demand for cost-efficient, patient centered care will continue to rise.
 - They are a part of the chronic disease management team.
 - They help fill in the gaps of care delivery, especially in outpatient settings.
 - They complement NOT compete, with other licensed healthcare professionals.
- **How do you get them to understand the value of CEP's?**
 - Take action!
 - Take advantage of your resources.
 - Look for opportunities to engage healthcare leaders

Strategies for Engaging Healthcare Administrators

- **Know your role!**

- We MUST use the same terminology...Clinical Exercise Physiologist (CEP).
- Make sure CEP job descriptions are up to date
 - If you do not have one...be proactive and create one

- **Know your business!**

- Collections
- Net gain/loss
- Expenses
- Readmission rates

- **Understand their world!**

- Understand the organization's strategic goals, financial pressures, and quality metrics
- Speak their language...cost savings, quality scores, compliance, etc.
- Possess evidence...Do you know your program outcomes?
 - Do you use the AACVPR Cardiac and Pulmonary Rehab Registries?

Strategies for Engaging Healthcare Administrators

- **Make the right connections.**
 - Who are your internal champions?
 - Nurses, Physicians, Department heads, etc.
- **Join hospital committees.**
 - Ensure your program needs have a seat at the table
- **Look for other opportunities.**
 - Admin focused sessions
 - Grand rounds
 - Roundtables
 - Community health events
- **Work on your elevator pitch.**
 - Have facts ready to share
 - Practice in staff meetings

Strategies for Engaging Healthcare Administrators

- **Deliver value every time!**
 - Have potential solutions ready to implement.
 - Highlight team synergy
 - CEPs enhance (NOT REPLACE) other health professionals
 - Follow up with your success
 - Be present and allow trust to grow
- **Get involved!**
 - Community groups
 - State level
 - National level
 - Speaking on authority/credibility on policy

Recommendations and Explorations for a CEP Toolkit

- **Recommendations and Exploration of a Tool Kit**
- **Sample Job Descriptions for CEPs**
- **Evaluation and Monitoring:**
 - Metrics to track the success of CEP integration, including patient outcomes, cost savings, and staff satisfaction.
- **Templates for Proposals and Budget Justifications:**
 - Ready-to-use templates to help create formal proposals for administrators.

Recommendations and Explorations for a CEP Toolkit

- **Glossary of Terms:**
 - Clear definitions of common terms used in clinical exercise physiology field (e.g., USREPS, ACSM, etc.).
- **Certification and Licensing Requirements:**
 - A guide for administrators on the qualifications and regulatory requirements for hiring CEPs.
- **Business plan**
 - to expand services to other patient populations that CEPs can lead (e.g., bariatrics, diabetes, oncology, etc.).

Recommendations and Explorations for a CEP Toolkit

- **FEEDBACK & INPUT?**

References

1. Brown, T.M., et al. (2024). Core Components of Cardiac Rehabilitation Programs: 2024 Update: A Scientific Statement From the American Heart Association and the American Association of Cardiovascular and Pulmonary Rehabilitation. *Circulation*. 150(18), e328-e347
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Discussion

- Thank you!