Characteristics of Successful Respiratory Care Programs: Achieving Excellence in Respiratory Care Education

Bill Galvin, MSEd, RRT,CPFT, AE-C,FAARC
Professor Emeritus & Adjunct Faculty,
Frances Maguire, School of Nursing & Health Professions
Former Program Director, Respiratory Care Program
Administrative/ Teaching Faculty, TIPS Program
Gwynedd Mercy University
“It’s like déjà vu all over again.”
“Excellence in Respiratory Care Education: Creating an Exemplary RC Program”
“Characteristics of Successful Respiratory Care Programs: Achieving Excellence in RC Education”
Conflict of Interest

I have no real or perceived conflict of interest that relates to this presentation. I have published book chapters, articles, presentations, and/or webcasts for W.B. Saunders, Draeger, Elsevier, Delmar/Thompson Learning, F.A. Davis, Jones and Bartlett Publishers, Massimo, Monaghan Medical, Theravance, BioPharm, Mylan Specialty and the AARC. *Am a Member of the CoARC Board of Commissioners and this presentation does not represent the views or opinions of the CoARC.* Any use of brand names is not in any way meant to be an endorsement of a specific product, but to merely illustrate a point of emphasis.
Learning Objectives

• List and explain 3 key variables that shape/impact program development, design, and evaluation
• Recognize and identify the characteristics of the RC programs receiving CoARC 2022 President's Award for Credentialing Success
• Discuss elements of success and commonly cited variables leading to program excellence
Dr. H. Fred Helmholz MD
Lecturers (1997-2021)

- H. Fred Helmholz Jr., MD
- Shelley Mishoe, PhD, RRT
- Jon Nilsestuen, PhD, RRT, Marilyn Childers, PhD, RRT, & Stephen Fracek, PhD
- William Turner, PhD
- Robert Wilkins, PhD, RRT
- Garry Kauffman, MPA, RRT
- Thomas Johnson, MS, RRT & Mike Nazarro, MPH, RRT
- Sal Sanders, MS, RRT
- Erna Boone, MEd, RRT & Bob DeLorme, MS, RRT
- Viva Jo Siddall, MS, RRT
- David Shelledy, PhD, RRT
- Jeff Ward, MEd, RRT
- Joseph Sorbello, MS, RRT
- Mark Taylor, MSW, EdD
- David Vines, MHS, RRT & Thomas Jones, MEd, RRT
- William F. (Bill) Galvin, MSEd, RRT, CPFT, AE-C, FAARC
- Susan P. Pilbeam, MEd, RRT, FAARC
- Toni L. Rodriguez Ed.D, RRT FAARC
- Kerry George, MEd, RRT, FAARC
- Gary White, MEd, RRT, FAARC
- Joseph P. Coyle, MD, FCCP and Shane Keene, DHSc, RRT-NPS, FAARC
- Dennis R. Wissing, PhD, RRT, AE-C, CPFT, FAARC
- Kenneth Winn, MHA, RRT
- Ellen A. Becker, PhD, RRT, RRT-NPS, RPFT, AE-C, FAARC

www.coarc.com
A Thank You to CoARC Board of Commissioners

• Alan F. Barker, MD
• Kelli Chronister, MS, RRT-NPS, CPFT, (Treasurer)
• Douglas R Clarke, Jr. M.Ed. (Public Representative)
• Joseph P. Coyle, MD
• Diane Flatland, MS, RRT-NPS, CPFT
• Lindsay Fox, M.Ed., RRT, RRT-ACCs, RRT-NPS
• William (Bill) Galvin, MSEd, RRT, CPFT, AE-C, FAARC
• Ian J. Gilmour. MD
• Christine Hamilton, DHSc, RRT

• Thomas Hill, PhD, RRT, FAARC, (Secretary)
• Bradley A. Leidich, MSEd, RRT, FAARC, (Emeritus)
• Shelley C. Mishoe, PhD, FAARC, FASAHP
• Pat Munzer, DHSc, RRT, FAARC, (Immediate Past President)
• Kevin O’Neil, MD, (President)
• Kathy Rye, EdD, RRT, FAARC
• Danny John Theodore, MD
• Sarah Varekojis, PhD, RRT
• Kenneth Winn, MHA, RRT
A Bigger Thank You to CoARC Executive Office

- Tom Smalling (Chief Executive Officer)
- Shane Keene (Chief Operating Officer)
- Bonnie Marrs (Senior Accreditation Specialist)
- Shelley Christensen (Director of Accreditation Services)
- Tammy Alsup (Director of Operations and Technology)
And finally, a Thank You to AARC Program Committee

- Kim Bennion
- Rich Branson (Consultant)
- Brian Carlin
- Rob DiBlasi
- Dana Evans (Chair-elect)
- Jackie Grimball
- Lanny Inabit (Staff Liaison)
- Doug Laher (Staff Liaison)
- Karen Schell (AARC Board Liaison)
- Brady Scott (Chair)
- Sarah Varekojis (Past Chair)
- Annissa Buchanon (Staff Liaison)
Characteristics of Successful Respiratory Care Programs: Achieving Excellence in Respiratory Care Education – A Sequel

Bill Galvin, MSEd, RRT,CPFT, AE-C,FAARC
Professor Emeritus & Adjunct Faculty,
Frances Maguire, School of Nursing and Health Professions
Former Program Director, Respiratory Care Program
Administrative/ Teaching Faculty, TIPS Program
Gwynedd Mercy University
Conflict of Interest

I have no real or perceived conflict of interest that relates to this presentation. I have published book chapters, articles, presentations, and/or webcasts for W.B. Saunders, Draeger, Elsevier, Delmar/Thompson Learning, F.A. Davis, Jones and Bartlett Publishers, Massimo, Monaghan Medical, Theravance, BioPharm, Mylan Specialty and the AARC. Am a Member of the CoARC Board of Commissioners and this presentation does not represent the views or opinions of the CoARC. Any use of brand names is not in any way meant to be an endorsement of a specific product, but to merely illustrate a point of emphasis.
Objectives

- game plan -

• List and explain 3 key variables that shape/impact program development, design, and evaluation
• Recognize and identify the characteristics of the RC programs receiving CoARC 2022 President’s Award for Credentialing Success
• Discuss elements of success and commonly cited variables leading to program excellence
an obvious starting point is ...

a “Systems Approach” to Education*

Point: simply a conceptual way of viewing organizations, a management theory for administering and controlling education programs

A “Systems Approach” to Education

Environment
(Employers/ NBRC/ CoARC)

Inputs
(students)

Processes
(faculty/ RC lab/ clinical/curriculum/ library)

Outcomes
(RRT success rates/ Employment)
**Inputs**

- The characteristics, traits, skills, talents, abilities, experiences and capabilities the students bring to the program

- Student inputs are generally assessed during the admissions process where high school and/or previous college academic performance, and life experiences are evaluated in form of:
  - High school/ college transcripts
  - Overall GPA
  - Science GPA
  - SATs/ACTs
  - previous life/work experiences
  - family commitments
  - work requirements, etc.
Processes

• Represent the sum total of all components that make up or support the teaching/learning activities, to include:
  – Curriculum
  – Didactic/clinical faculty
  – RC Lab
  – Clinical affiliates/ resources
  – Library
  – Student services
  – Computer/ learning lab
  – Operating budget

• Processes hold a central role or pivotal position in the system
Outcomes

• The teaching/learning activities represented by the curriculum, faculty, lab, clinical, etc. (the process) transforms the student (input) into a caring, compassionate, and competent RC professional (outcome).

• Outcomes can generally be measured by attainment of certain standards or desired results, such as:
  – meaningful, discipline-specific employment
  – professional credentialing exams
  – a well-rounded liberal arts education
  – service
  – civic responsibility
  – a contributing member of society
Key points to the “Systems Approach”

- Components are interrelated
- System is impacted by the external environment (receiving constant feedback)
- It is dynamic (constantly subject to change)
- It exists for transforming inputs into some altered form that leaves the system as outputs
The magic question ... 

What makes an RC program successful?
But, I thought ... Why don't we ask the programs that demonstrate success ...

Allow me to recognize two very special groups of programs:

#1 - the 96 RC programs in the country that received the “Distinguished RRT Success Award” and

#2 the 23 highly coveted and prestigious programs awarded the CoARC's “President’s RRT Success Award”
CoARC Credentialing Success

- award criteria -

• Results from 2018, 2019 and 2020 cohort years
• A “clean” RCS - no citations or progress reports
• 90+% pass rate on NBRC Exams for “Distinguished RRT Award”
• 100% pass rate on NBRC Exams for “President’s Award for RRT Success”
Successful RC Programs
2021 CoARC Presidents RRT Credentialing Success Awardees (23)

- American River College - Sacramento, CA
- Delaware Technical and Community College - Wilmington, DE
- Durham Technical Community College - Durham, NC
- Elizabeth Community College, Elizabethtown, KY
- Florida Southwestern College, Fort Myers, FL
- Georgia State University, Atlanta, GA
- Indian River State College, Fort Pierce, FL
- Kettering College, Kettering, OH
- Lakeland Community College - Kirkland, OH
- Mansfield University, Sayre, PA
- Mayo Clinic College of Med/ Mayo School - Rochester, MN
- Midlands Technical College - Columbia, SC
- Monument Health Rapid City/South Dakota State University-Satellite - Rapid City, SD
- Mt. San Antonio College - Walnut, CA
- Newman University - Wichita, KS
- Pennsylvania College of Health Sciences - Roane State Community College - Knoxville, TN
- St. Johns River State College - St. Augustine, FL
- The Ohio State University - Columbus, OH
- University of Arkansas for Medical Science - Little Rock, AK
- University of Missouri at Mercy Hospital - St. Louis, MO
- Weatherford College - Weatherford, TX
- Wilkes Community College - Wilkesboro, NC
Survey of 23 Programs with 100% Success on RRT

• 1\textsuperscript{st} – Congratulations!
• 2\textsuperscript{nd} – Thank You!
• 3\textsuperscript{rd} – Share results (descriptive not evaluative)

• Suggestion – view data from perspective that this is what the 20 of the 23 reported out and how does the data compare with my program
• What gems can I garner from the survey results to aid me in making improvements in my own program?
Successful RC Programs
-Survey Results of Select Variables-

**Institutional Data**

- Type of Degree
- Institution Type
- Institutional Control/ Funding
- Geographic Location
- Program Inception Date
Successful RC Programs

Degree Offered*
N-23

- AAS (9)
- AS (7)
- BS (7)

*one of the programs identified itself as having both a BS and MS
Successful RC Programs
Institutional Type
N-23

- Community/Junior College (11)
- 4-Year College/University (10)
- Academic HSC/Med Center (1)
- Career/Technical College (1)
Successful RC Programs

Institutional Control/ Funding

N=23

- Public, Not-for-Profit (19)
- Private, Not-for-Profit (4)
Successful RC Programs

Geographic Location

n=23
Successful RC Programs
-survey results of select variables-

Student Demographics*

• Number applicants per year
• Maximum annual enrollment (capacity/year)
• Number enrolled per year
• Number graduates per year
• Per cent retention

* in a typical year
Successful RC Programs

Number of Applicants/ Yr

<table>
<thead>
<tr>
<th># Applicants</th>
<th># Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;24</td>
<td>8</td>
</tr>
<tr>
<td>25-49</td>
<td>6</td>
</tr>
<tr>
<td>50-99</td>
<td>4</td>
</tr>
<tr>
<td>&gt;100</td>
<td>1</td>
</tr>
</tbody>
</table>
Successful RC Programs
Maximum Annual Enrollment (capacity/year)

- 10 ~ 19: 2 programs
- 20 ~ 25: 10 programs
- 26 ~ 30: 2 programs
- 31 ~ 35: 1 program
- 36 ~ 40: 2 programs
- >40: 1 program
Successful RC Programs
Number of Graduates

- 0~10 graduates: 6 programs
- 11~20 graduates: 12 programs
- 21~30 graduates: 1 program
- 31~40 graduates: 1 program
- >40 graduates: 0 programs
Successful RC Programs
Percent Retention

- <70%
- 70-79%
- 80-89%
- >90%
Successful RC Programs
-survey results of select variables-

**Student Characteristics/Profile***

- Admission criteria
- Age at program entry
- Educational level at time of program entry
- Personal experiences with health care

* In a typical year for majority of students
Successful RC Programs

Admission Criteria

- Interview (personal) interview
- Group interview
- Essay
- GPA
- SAT/ACT
- Hobet et al.
- Other
Successful RC Programs

Age at Program Entry

- 17-19
- 20-24
- 25-29
- 30-34
- 35-39
- >40
Successful RC Programs

Educational Level at Program Entry

- Recent HS Grad
- Some College (1-29 credits)
- Over a year but < AS degree (30-59 credits)
- AS degree (>60 <120)
- BS degree (120 or >)
Successful RC Programs

Personal HC Experience Motivation to Enter RC

- Yes (14)
- No (6)
Successful RC Programs
-survey results of select variables-

Curriculum

- Total college credits
- College credits in RC
- College credits in math/ natural science
- On-line option
Successful RC Programs
Total College, RC Credits, Math & Science Credits

Total Credits
- For AS - range was 62-83 total
- For BS degree - range was 120-137 total credits

RC Credits
- For AS degree - range was 36-59
- For BS degree - range was 62-72 RC course credits

Science Credits
- For AS degree - range was 8-29
- For BS degree - range was 23-39 total math & science credits
Successful RC Programs
On-Line Option

- yes (9)
- no (9)
Successful RC Programs
-survey results of select variables-

Characteristics/Profile of Faculty & Key Program Personnel

- Number of full time
- Number of part time
- Highest degree of PD/DCE
- Years as PD/DCE at this program
- Years as PD/DCE at other institutions
- Years of experience in RC education for PD/DEC
- Years of experience for PD/DCE in all phases of RC
Successful RC Programs
-number of program faculty-

**Full Time**

<table>
<thead>
<tr>
<th>Number of Faculty</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>2.5</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>5 or &gt;</td>
<td>1</td>
</tr>
</tbody>
</table>

**Part Time**

<table>
<thead>
<tr>
<th>Number of Faculty</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3 or &gt;</td>
<td>1</td>
</tr>
</tbody>
</table>
Successful RC Programs
Highest Academic Degree of Program Director and Director of Clinical Education

**Program Director**
- Doctorate: 14
- Masters: 12
- Bachelors: 4

**Director of Clinical Education**
- Doctorate: 14
- Masters: 12
- Bachelors: 4
Successful RC Programs

Years PD at Current Institution

1 to 9
10 to 19
20 to 29
30 to 39
40 to 49
Successful RC Programs

Total Years Experience of PD in RC Education and in All Phases of RC

Total Years in RC Education

Total Years in RC

[Bar charts showing years of experience in RC education and in all phases of RC, with bars for 1 to 9, 10 to 19, 20 to 29, 30 to 39, and 40 to 49 years.]

[Bar charts showing total years in RC, with bars for 1 to 9, 10 to 19, 20 to 29, 30 to 39, and 40 to 49 years.]
Successful RC Programs
Total Years Exp of DCE in RC Education and in All Phases of RC

**Total Years of DCE in RC Education**

- 1 or <
- 2 to 5
- 6 to 10
- 11 to 15
- 16 to 20
- 21 to 25

**Total Years in RC**

- 1 or <
- 2 to 5
- 6 to 10
- 11 to 15
- 16 to 20
- 21 to 25
- > 25
Successful RC Programs
-survey results of select variables-

Laboratory Resources

- Dedicated laboratory
- Open lab
- Use of lab
- Square footage
- Simulation technology
Successful RC Programs
Dedicated Lab - Open Lab - Usage of Lab

Dedicated Lab

Open Lab

Regular Use
Successful RC Programs

Lab Space (best estimate of square footage)
Successful RC Programs
Simulation Technology

Do you employ Simulation Technology

If yes, Is shared with other disciplines
Successful RC Programs
-survey results of select variables-

**Clinical Resources**

- Number of clinical sites
- Total number of clinical contact hours
- Clinical contact hours by specialty area
- Compensation of clinical faculty
Successful RC Programs

Number of Clinical Sites

<table>
<thead>
<tr>
<th>Number of Sites</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>0</td>
</tr>
<tr>
<td>10 to 19</td>
<td>10</td>
</tr>
<tr>
<td>20 to 29</td>
<td>2</td>
</tr>
<tr>
<td>30 to 39</td>
<td>1</td>
</tr>
<tr>
<td>&gt; 40</td>
<td>0</td>
</tr>
</tbody>
</table>
Successful RC Programs
Per Cent of Clinical Contact Hours
in Routine Care/Procedures
Successful RC Programs
Per Cent of Clinical Contact Hours in Critical Care

- < 25
- 25-34
- 35-44
- 45-54 (highest)
- 55 or >
Successful RC Programs
Per Cent of Clinical Contact Hours in Diagnostics
Successful RC Programs

Per Cent of Clinical Contact Hours in Neonatal/ Pediatrics

1 to 4 5 to 9 10 to 14 15 to 19 20 or >
Successful RC Programs
Per Cent of Clinical Contact Hours in Physician Interaction
Successful RC Programs
Source of Clinical Funding

Does your sponsor pay clinical faculty?

- Yes (9)
- No (8)
Successful RC Programs
- survey results of select variables -

Medical Director

• Contractual academic appointment
• Compensation
Successful RC Programs

Does Medical Director have a contract and/or hold an academic appointment, Do you pay your Medical Director, If yes, how much?
Successful RC Programs
-survey results of select variables-

Advisory Board

• Number
• Frequency of meetings
Successful RC Programs
Number of Advisory Board Members and Frequency of Meetings

# Advisory Board Members

- 1 to 9: 10
- 10 to 19: 12
- 20 to 29: 4
- 30 to 39: 2
- > 40: 1

Frequency of Meetings/ Yr

- One: 12
- Two: 10
- Three: 2

- 1 to 9
- 10 to 19
- 20 to 29
- 30 to 39
- > 40
Successful RC Programs
-survey results of select variables-

**Budget**

- Annual capital budget
- Annual operating budget
Successful RC Programs
Annual Capital and Operating Budgets

**Annual Capital Budget**

- $0
- $1 - 4,999
- $5,000 - 9,999
- $10,000 - 24,999
- $25,000 - 49,999
- > $50,000
- No Response

**Annual Operating Budget**

- < $5,000
- $5,000 - 14,999
- $15,000 - 24,999
- $25,000 - 34,999
- $35,000 - 49,999
- > $50,000
- No response
Successful RC Programs
- survey results of select variables -

Participation in Credentialing Process and Membership in Profession

- Employer mandated credential
- Program mandated membership
Successful RC Programs
Employer Mandates RRT as Requirement for Employment

- Optional (10)
- Mandatory Rqt (6)
Successful RC Programs

Program's Position Regarding Professional Membership
(AARC or State Society)

N=16

- Optional (10)
- Mandatory Rqt (6)
Elements of Success

Ok ... So let’s return to that magic question again, what was the relative importance of select program factors leading to your success
Elements of Success
Relative Importance of Program Factors

- Library: 3
- Med Director: 3.562
- Remediation Ctr: 3.625
- Science Faculty: 3.687
- Capital Budget: 3.875
- Institutional Admin: 3.93
- Advisory Board: 4
- MD Interaction: 4.187
- Operating Budget: 4.2
- Students: 4.437
- Clinical Faculty: 4.5
Question: Name the most important factors that led to your RRT Success?

#5 Laboratory
#4 Program Administration (PD & DCE)
#3 Curriculum
#2 Clinical Sites
#1 ??????
Summary
-take home points-

• Listed 3 key variables that shape program development, design and evaluation
• Recognized 97 and 23 “RRT Success Programs”
• Identified some of the characteristics of successful program (encourage you to view these from the perspective of your own program)
• Closing thoughts on Success/Excellence
Closing thoughts
Excellence ...

• ... means striving to be the very best we can be in everything we do - not because some institutional administrator or accrediting body or other “authority” figure pushes us to do so, but because we can not imagine functioning in any other way
• ... means setting high standards for ourselves and the groups in which we are involved, holding ourselves to those standards despite challenges or pressures to reduce or lower them and not being satisfied with anything less than the very best
• ... means not accepting the status quo, it’s being all you can be
Closing thoughts

Excellence*

• “Can be attained if you care more than others think is wise, risk more than others think is safe, dream more than others think is practical, and expect more than others think is possible”

Key ingredients to program and professional success

3 Elements of Excellence*

• Skepticism – keeping a proper distance from the truth, not accepting everything blindly, keeping our mind open to new ideas & approaches

• Perseverance – continually striving to fulfill a goal or realize a vision

• Passion – being “inflamed” by your work – passion is “the essence of excellence”

Thank you for the privilege and honor of presenting the 2022 Dr. H. Fred Helmholz, MD Education Lecture.