Meet the Faculty

Kellie L.E. Musch, PharmD, MS

Multi-Hospital Director of Pharmacy

OhioHealth

Columbus, OH

Sara J. Hyland, PharmD, BCCCP

Clinical Pharmacist

OhioHealth Grant Medical Center

Columbus, OH

Relevant Financial Relationship Disclosure

- **No one in control of the content of this activity has a relevant financial relationship (RFR) with an ineligible company.**

As defined by the Standards of Integrity and Independence in Accredited Continuing Education definition of an ineligible company. All relevant financial relationships have been mitigated prior to the CPE activity.

Learning Objectives

- Describe requirements for research, scholarship, and development in ASHP Accredited Residency Training.

- Summarize barriers to residency programs' providing high-yield training experiences for residents in research, scholarship, and professional development domains.

- Evaluate ways to leverage available tools and resources to meet resident research, scholarship, and development needs.

Polling Slide

What is your role in attending this session?

A. Residency Program Leader (i.e., Director, Coordinator)

B. Preceptor

C. Mentor

D. Project Advisor

E. Other

Polling Slide

What type of institution do you represent?

A. Academic Medical Center

B. Multi-Hospital Community Health System

C. Small or Rural Hospital

D. Ambulatory Clinic / Federally Qualified Health Center (FQHC)

E. Outpatient / Community Pharmacy

F. Home Care or Long-term Care Facility

G. Other

Polling Slide
Which of the following is/are a required objective for PGY1 Residents?

1 (Creating) Design, execute, and report results of investigations of pharmacy related issues

2 (Analyzing) Participate in prospective and retrospective clinical, humanistic, and economic outcomes analyses

3 (Applying) Participate in a medication-use evaluation.

4 (Applying) Implement changes to improve patient care and/or the medication-use system.

5 (Creating) Develop a plan or research protocol for the project.

Polling Slide:
Which of the following is/are a required objective for PGY1 Residents?

1 (Creating) Design, execute, and report results of investigations of pharmacy related issues

2 (Analyzing) Participate in prospective and retrospective clinical, humanistic, and economic outcomes analyses

3 (Applying) Participate in a medication-use evaluation.

4 (Applying) Implement changes to improve patient care and/or the medication-use system.

5 (Creating) Develop a plan or research protocol for the project.

Polling Slide

I provide robust research and professional development training to my residents

A. Strongly Agree

B. Agree

C. Neither Agree or Disagree

D. Disagree

E. Strongly Disagree

ASHP Accreditation Standards

ASHP released newly harmonized standards for postgraduate residency programs, effective July 1st, 2023

Each program has unique competency areas, goals and objectives (CAGOs)

R2: Advancing Practice and Improving Patient Care

R4: Teaching, Education, and Dissemination of Knowledge

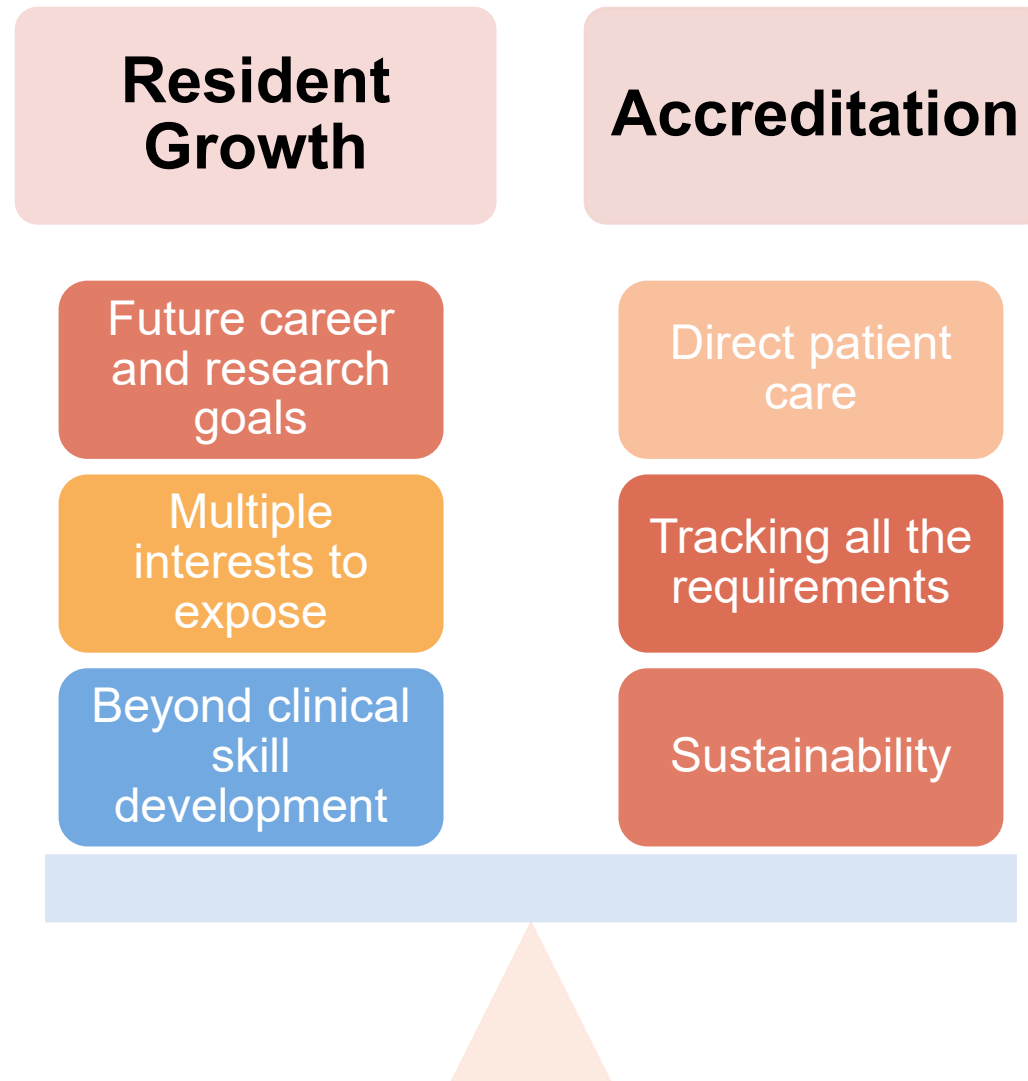Research remains an optional competency area

E1: Pharmacy Research

https://www.ashp.org/-/media/assets/professional-development/residencies/docs/examples/ASHP-Accreditation-Standard-for-Postgraduate-Residency-Programs-effective-July-2023.pdf
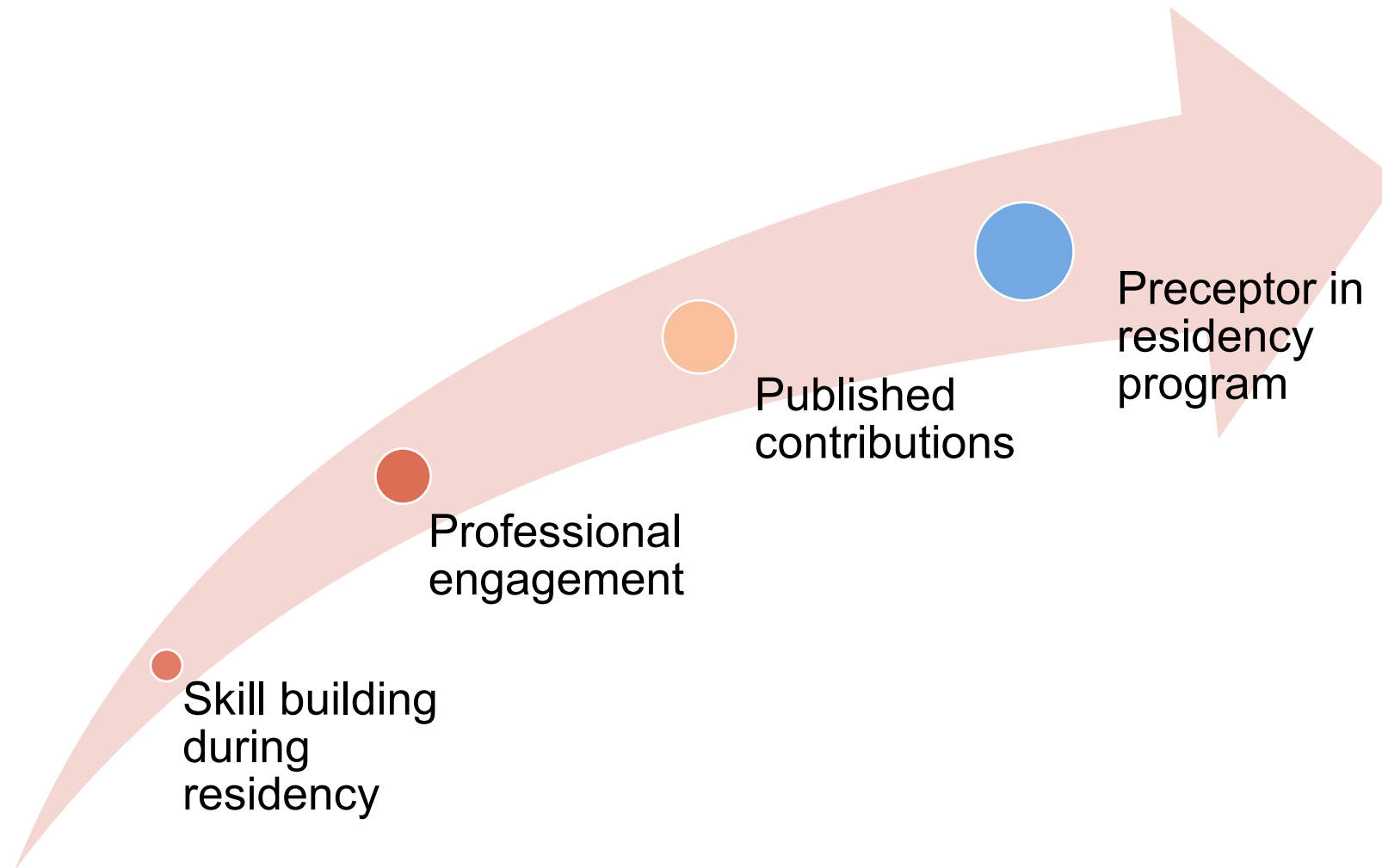https://www.ashp.org/-/media/assets/professional-development/residencies/docs/required-competency-areas-goals-objectives
https://www.ashp.org/-/media/assets/professional-development/residencies/docs/elective-competency-areas-goals-objectives-2014
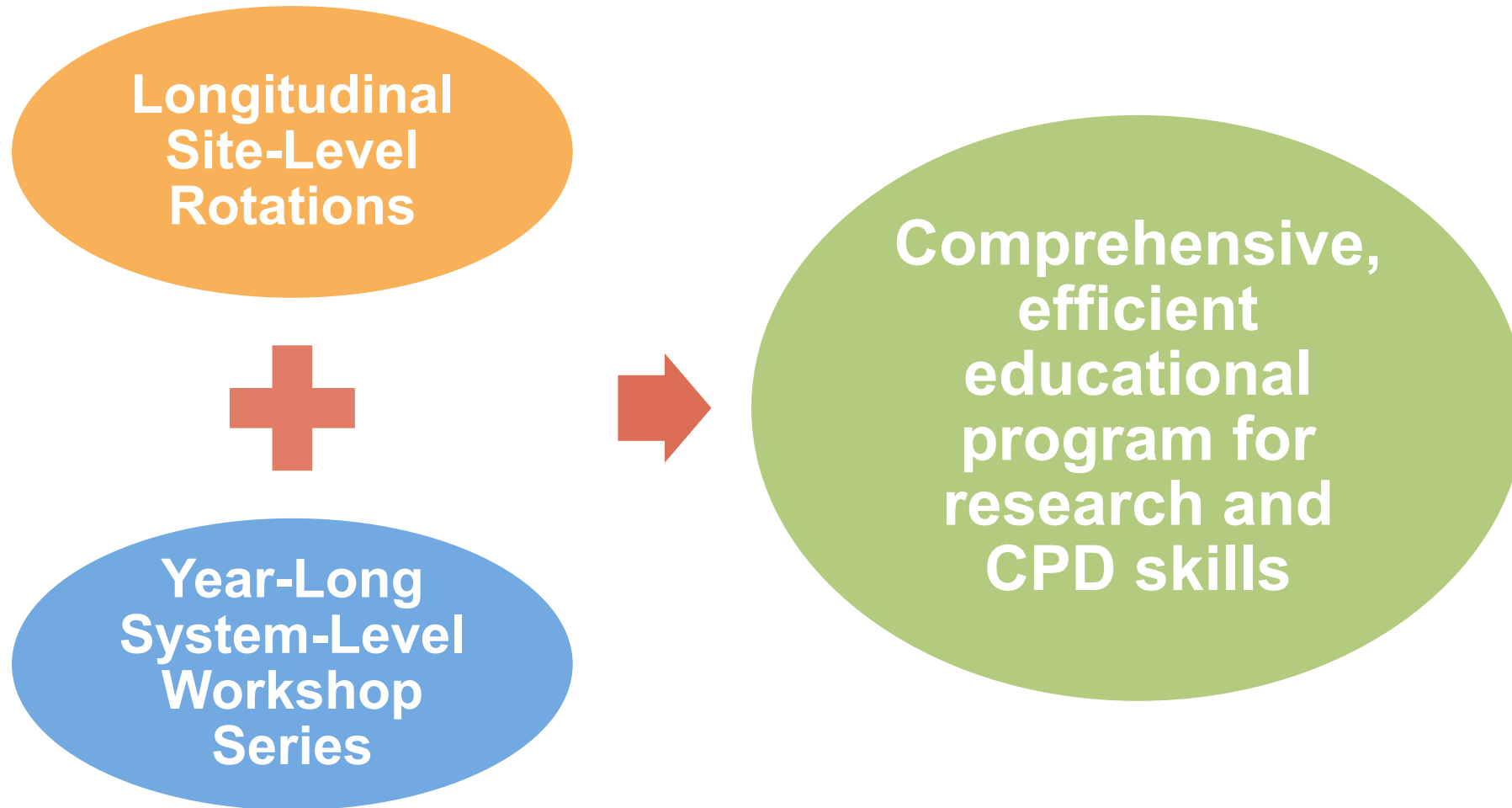
Delicate Balance: Only So Much Time

Resident Growth

Accreditation

Future career and research goals

Direct patient care

Multiple interests to expose

Tracking all the requirements

Beyond clinical skill development

Sustainability

Long Term Benefit

Preceptor in residency program

Published contributions

Professional engagement

Skill building during residency

Current OhioHealth Pharmacy Resident Research and CPD Program Structure

CPD=Continuous Professional Development (CPD). Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.

Longitudinal Site-Level Experience

Research Rotation	
Jul	Orientation, topic selection, research question
Aug	Initial research proposal
Sept	Full IRB protocol
Oct	Submit protocol, write abstract
Nov	IRB approval, data report request/validation, make poster
Dec	Present poster, data collection

Research Rotation	
Jan	Compile and clean data, submit to stats
Feb	Receive analyses, write abstracts
Mar	Prepare podium and poster presentations
Apr	Present at external conference (podium)
May	Present poster internally, write manuscript
Jun	Finalize manuscript, dissemination phase, leave all data and materials prior to graduation

ashp NATIONAL PHARMACY PRECEPTORS CONFERENCE

Longitudinal Site-Level Experience

Professional Development Rotation	
Jul	Rotation Overview; Blooms Taxonomy, SMART Goals
Aug	Managing Expectations & Giving/Receiving Feedback
Sept	*State Society Pharmacy Professional Org Meeting*
Sept	Emotional Intelligence/Emotional Literacy
Sept	*System Development Workshop*
Oct	Death and Dying as a Health Care Practitioner
Nov	Clear Messages and Effective Communication
Dec	*National Pharmacy Professional Org Conference*
Dec	*System Development Workshop*
Dec	Midyear Feedback Session

Professional Development Rotation	
Jan	Decision Making
Feb	Implicit Bias
Feb	*State Society Pharmacy Professional Org Meeting*
Mar	5 Languages of Appreciation in the Workplace
Apr	Effective Delegation
Apr	*System Development Workshop*
May	Preceptor Roles and Managing Difficult Students
May	*Regional Residency Conference*
Jun	Continuing Professional Development
Jun	End of Year Feedback Session

Color notates session facilitator: White = Manager or Clinical Preceptor; **Green** = Professional Organization; **Yellow** = Feedback Session; **Gray** = System Workshop
Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.

System-Level Workshop Series

	Research	CPD/Other
Summer	- Orientation and regulatory trainings - Study design and biostatistics - Developing good research questions	ACLS/Emergency response training
Fall	- Scientific abstract writing - Developing and presenting scientific posters	- Personal branding - CV design with review program - Successful interviewing strategies
Winter	Podium presentation development and delivery	- Career search and negotiation strategies - Financial management for new practitioners
Spring	Manuscript writing and publication primer	Transitioning out of residency

ashp NATIONAL PHARMACY PRECEPTORS CONFERENCE

OhioHealth Pharmacy Resident Research – Program Outcomes

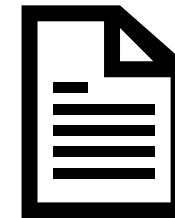**Pharmacist Winners of Enterprise-Wide Research Competition**
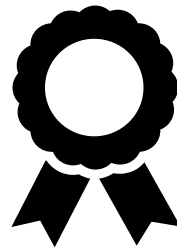
<u>2014</u>
9%

➡

<u>2022</u>
100%

Annual Pharmacist-Authored Publications from Health System

<u>2014</u>
3

➡

<u>2021</u>
17

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.

How did we get there?

Barriers to Effectively Teaching Research and Development Skills in Residency Programs

ashp® NATIONAL PHARMACY PRECEPTORS CONFERENCE

Polling Slide (Select All that Apply)

Which challenge(s) do you currently face in teaching important research skills?

A. Limited available content experts

B. Preceptor/leadership time constraints to facilitate

C. Minimizing interruptions to rotations

D. Physical space

E. Quantity of residents to reach

F. Leadership support

Polling Slide (Select One)

Which is currently your greatest challenge?

A. Limited available content experts

B. Preceptor/leadership time constraints to facilitate

C. Minimizing interruptions to rotations

D. Physical space

E. Quantity of residents to reach

F. Leadership support

Barriers at OhioHealth

One system, many sites, very different needs and capacities

Community health system – academic productivity not fostered or prioritized

Very few preceptors with research methodology expertise or publishing experience

Getting to a shared vision – rotation preceptors, leadership seeing the value

Schedule coordination across programs, residents, facilitators, sites
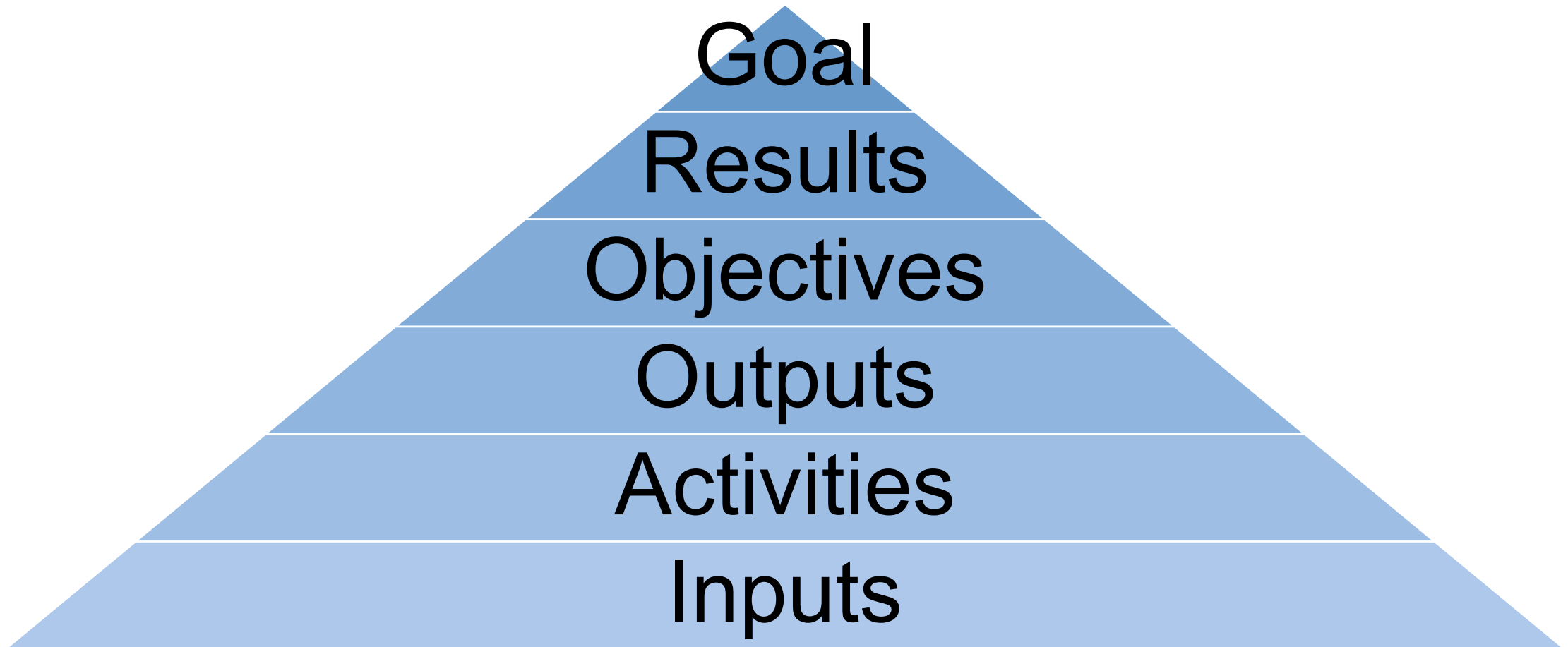
Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.

Utilizing Program Theory and Building a Logic Model

Goal

Results

Objectives

Outputs

Activities

Inputs

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.
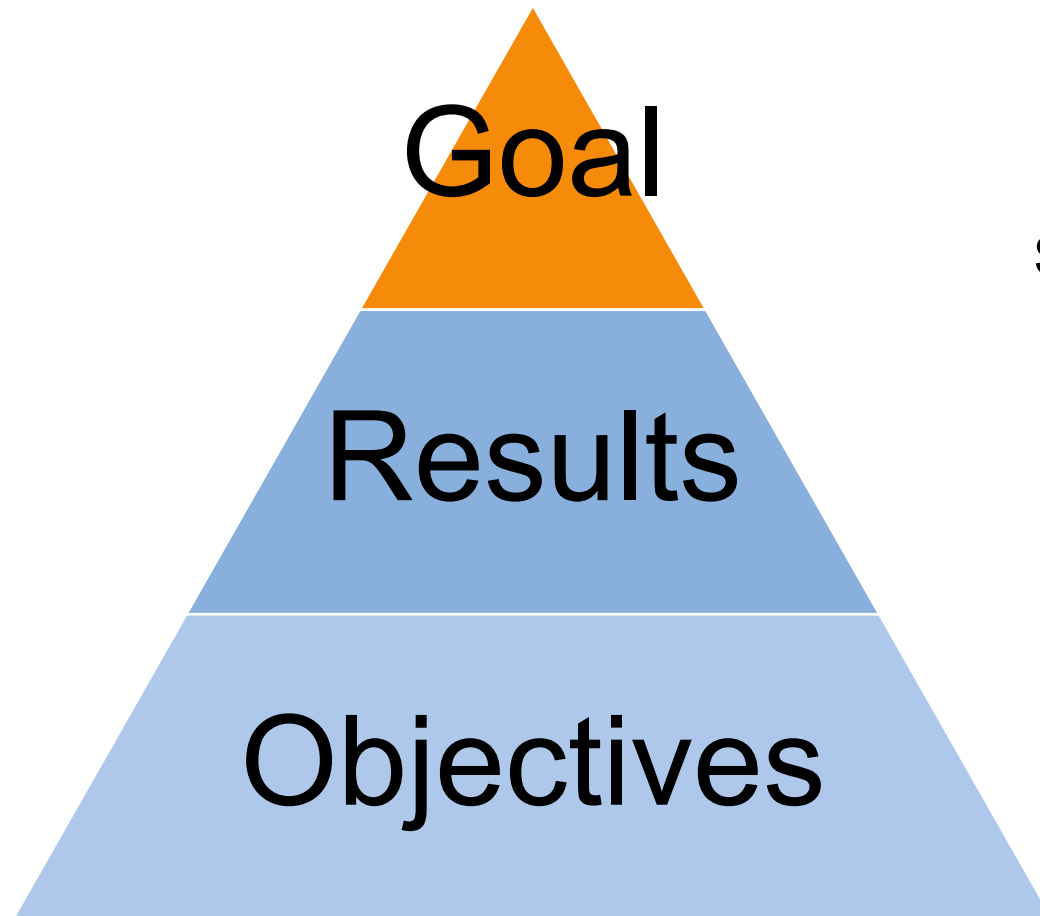
# Utilizing Program Theory and Building a Logic Model

Goal

Results

Objectives
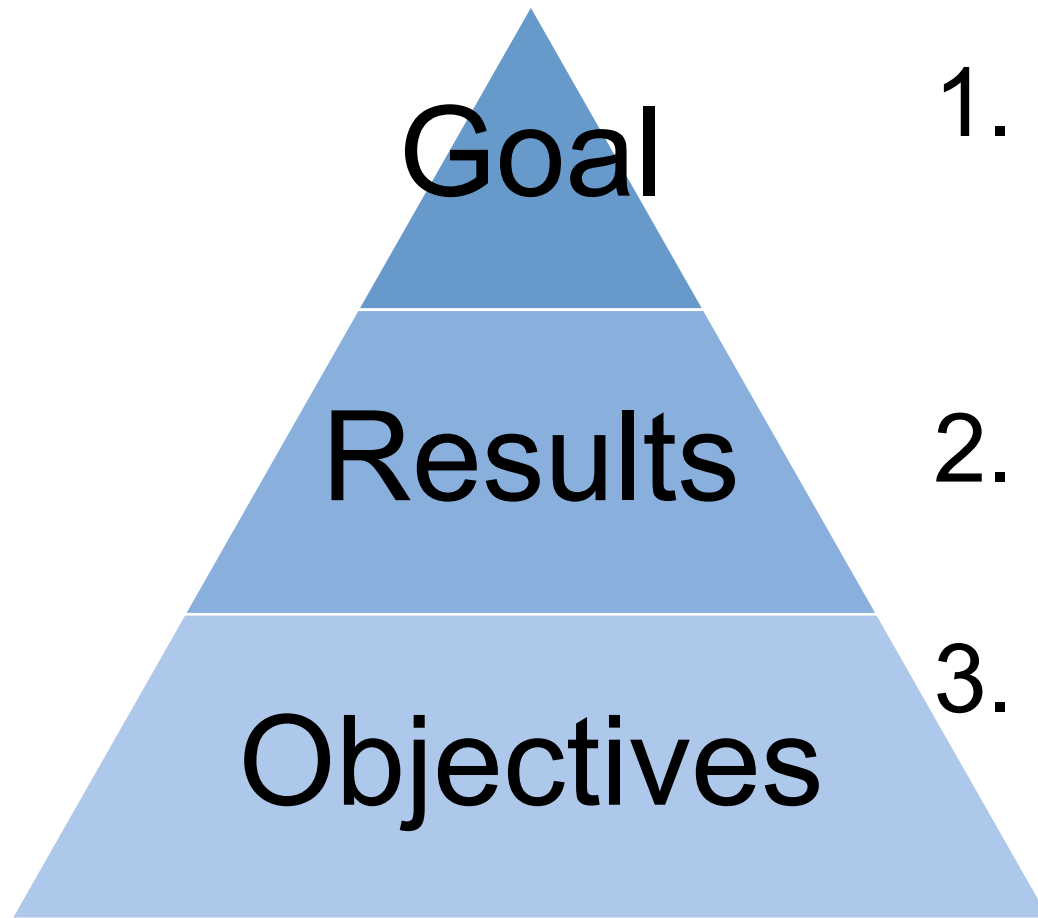
1. Desired long-term impact to which the program contributes

2. Desired measurable changes in outcomes

3. Measurable changes in behavior expected in response to the program

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.

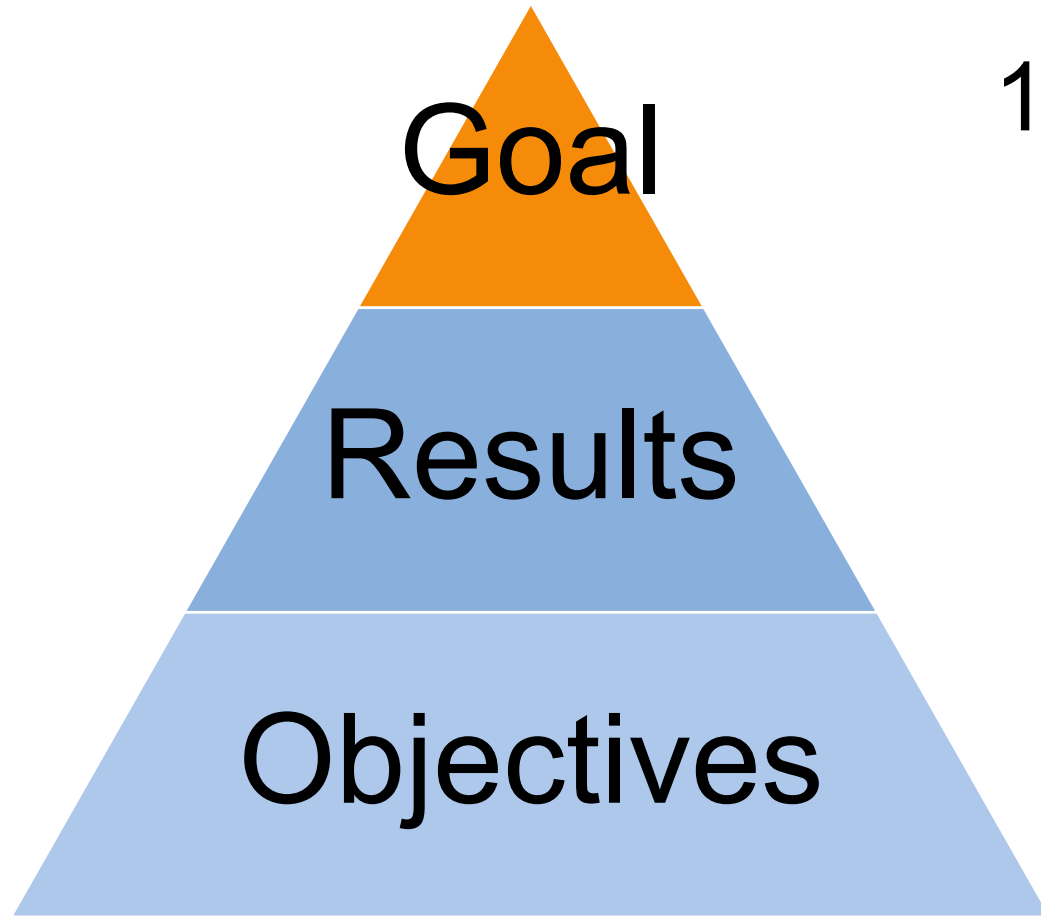# OhioHealth Research and Development Program Logic Model
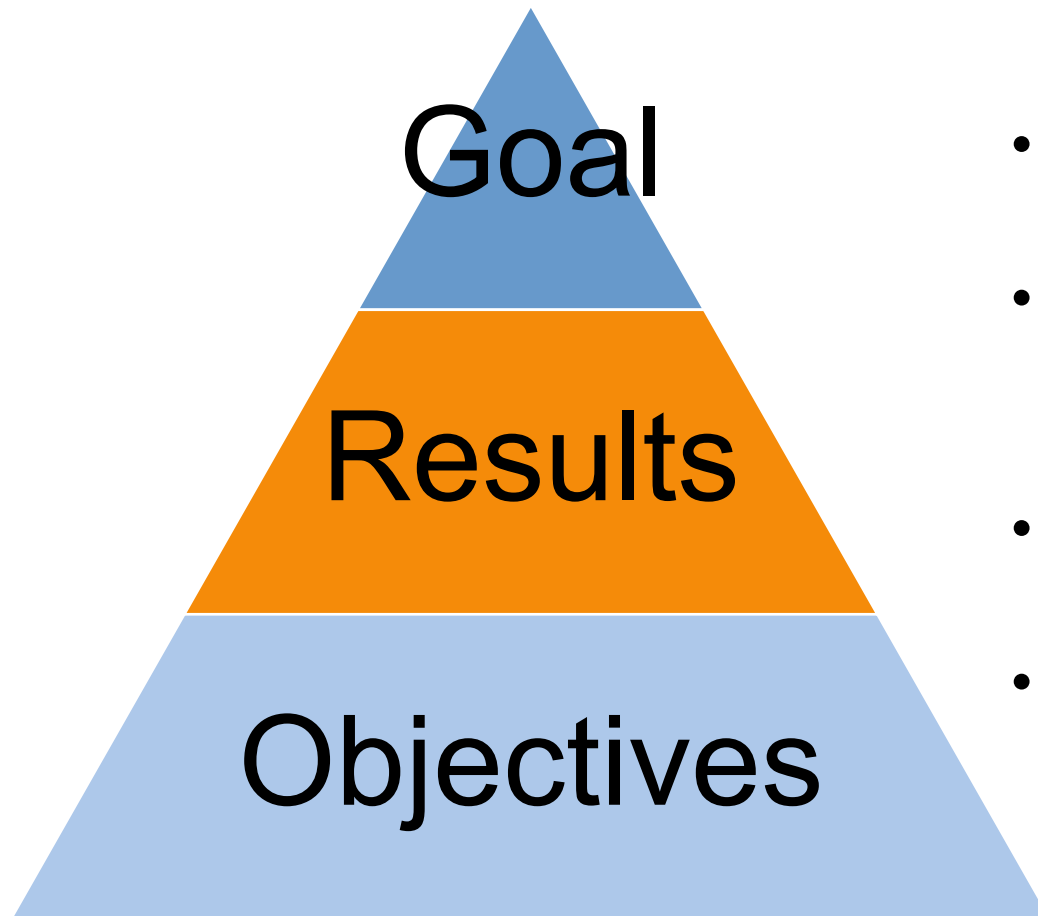
- Pharmacists complete quality research and QI projects
- Pharmacists present research and QI projects internally and outside the organization
- Pharmacists publish their research and QI projects
- Pharmacists effectively navigate job acquisition and promotion opportunities to achieve career goals

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.

OhioHealth Research and Development Program Logic Model

Goal

Results

Objectives

- Pharmacists value and desire to pursue scholarship in their careers
- Pharmacists possess the necessary skills and feel prepared to pursue research and QI
- Pharmacists pursue projects with intent to disseminate in addition to fulfilling internal needs
- Pharmacy and hospital leadership value and incentivize pharmacist research and QI work

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.

ashp NATIONAL PHARMACY PRECEPTORS CONFERENCE

Utilizing Program Theory and Building a Logic Model – Your Turn

Goal

Results

Objectives

1. What is your desired long-term goal to which your research and/or development program contributes?

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.

Utilizing Program Theory and Building a Logic Model – Your Turn

Goal

Results

Objectives

2. What improvements do you want to see that will move your program toward the goal?

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.

ashp® NATIONAL PHARMACY PRECEPTORS CONFERENCE

Utilizing Program Theory and Building a Logic Model – Your Turn

Goal

Results

Objectives

3. What do you intend to do to get the results you want for the program?

Adapted Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.

ashp® NATIONAL PHARMACY PRECEPTORS CONFERENCE

How do we achieve our objectives despite many barriers?

Polling Slide (Select All that Apply)

What resources exist today in your institution?

A. Research Institute / Office

B. Pharmacy Informatics with reporting capacity

C. Pharmacist with research methodology expertise

D. Pharmacist who published research

E. Centralized RAC for your system

F. Centralized location to use for larger events

G. Leadership Support

Timing/Scheduling of Workshops
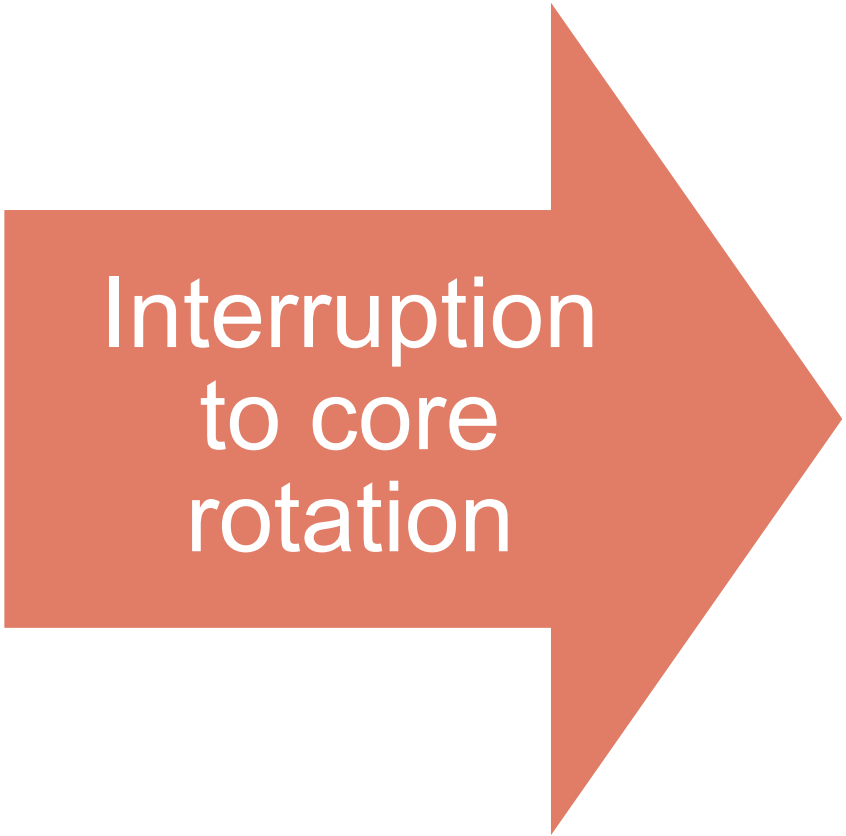
Timeliness

Aligned with program deadlines

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.

Timing/Scheduling of Workshops

Interruption to core rotation

Changed Workshop Dates

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.

Program Facilitators

Limited Expertise → ← Local Experts Centralized

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.

Program Facilitators

Increase Care Site Involvement

Call for co-facilitators

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.

Support for Programming

Limited Leader Engagement

Presented gap analysis

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.

Support for Programming

Limited Preceptor Engagement

Presented needs assessment

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.
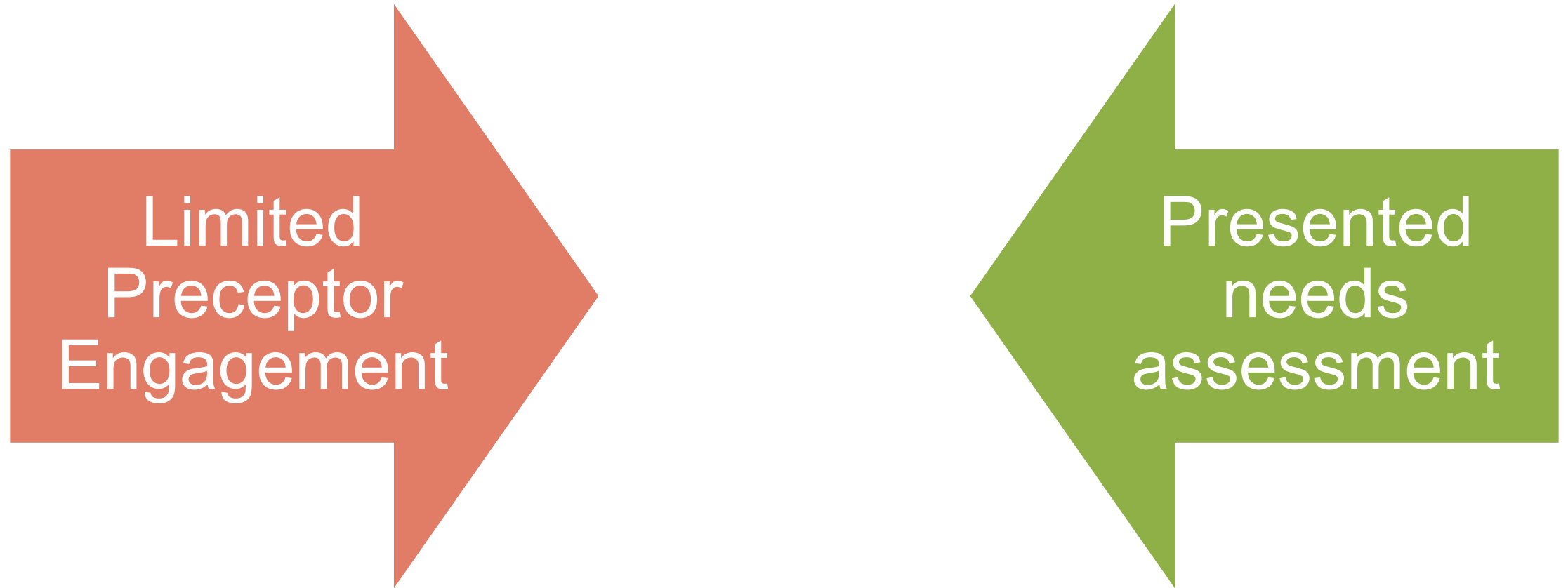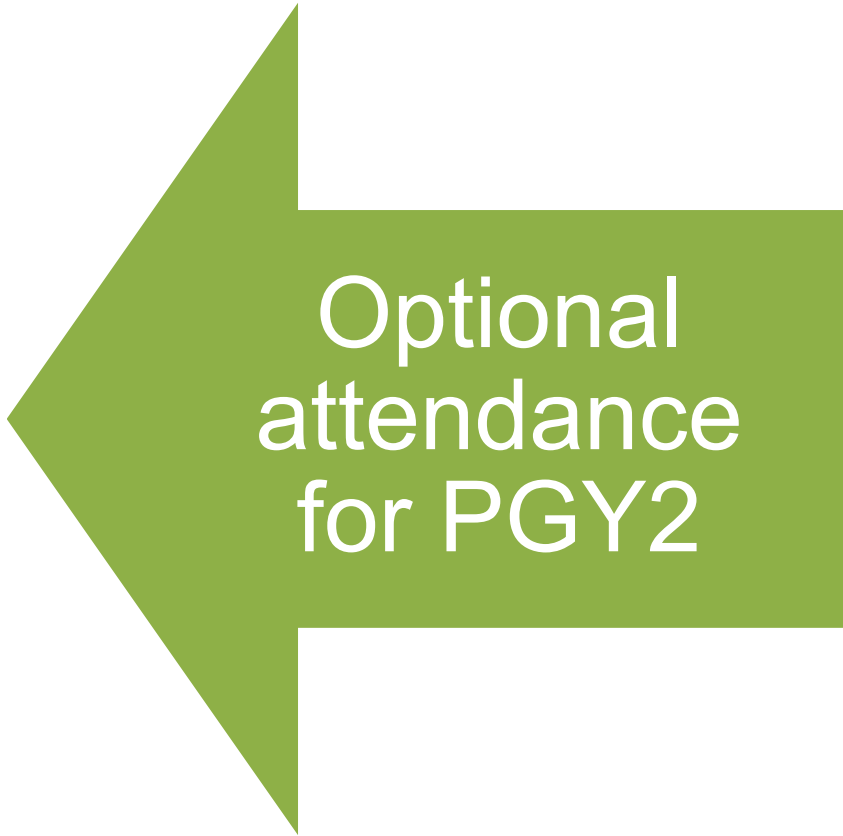
Resident Needs of Programming
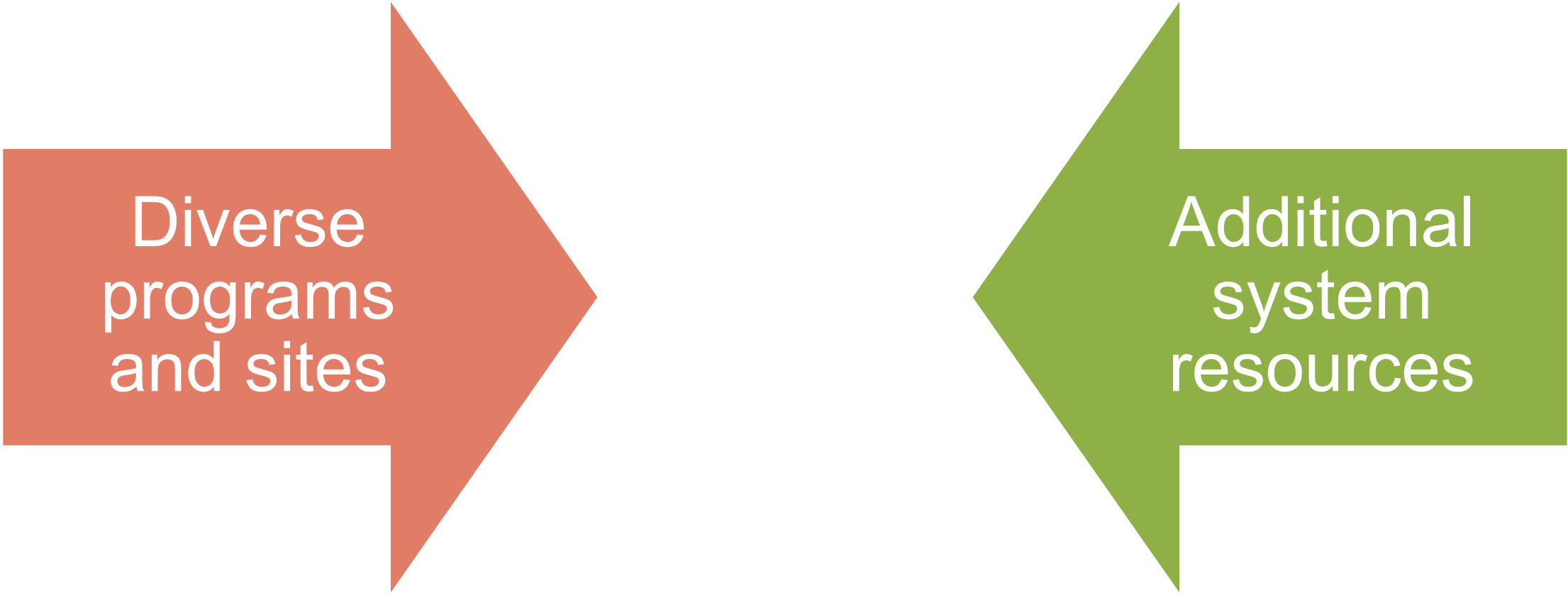
PGY1 vs PGY2

Optional attendance for PGY2

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.

Resident Needs of Programming

Diverse programs and sites

Additional system resources

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.

Platform for Delivering Programming

Geographic spread of Residents

Centralized location

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.

Resident Needs of Programming

New Virtual Environment

Adapted objectives and programming
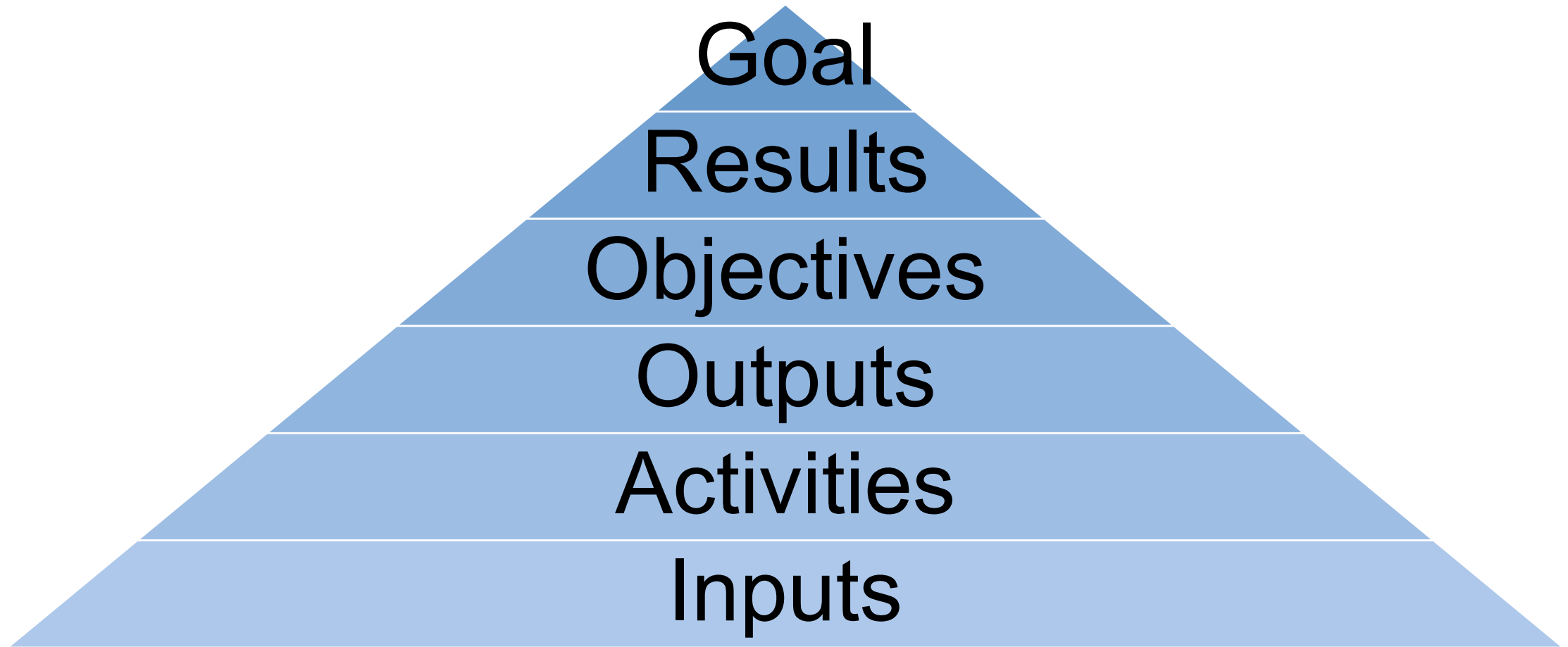
Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.

Continuing Our Logic Model

Goal

Results

Objectives

Outputs

Activities

Inputs

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196.; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.

ashp® NATIONAL PHARMACY PRECEPTORS CONFERENCE

Continuing Our Logic Model

Outputs

Activities

Inputs

4. Demonstrated attitudes and behaviors in response to program activities

5. Processes designed and implemented to help achieve each objective and generate the outputs

6. Resources needed to do the work

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.

OhioHealth Research and Development Program Logic Model

Outputs

Activities

Inputs
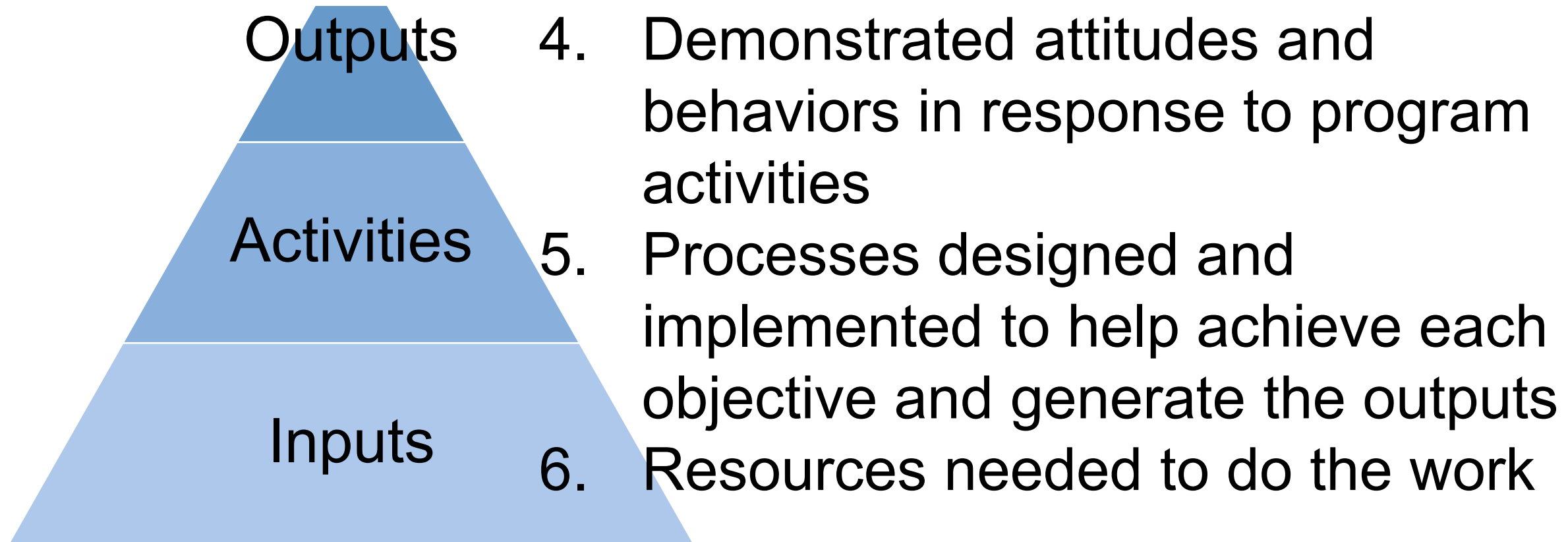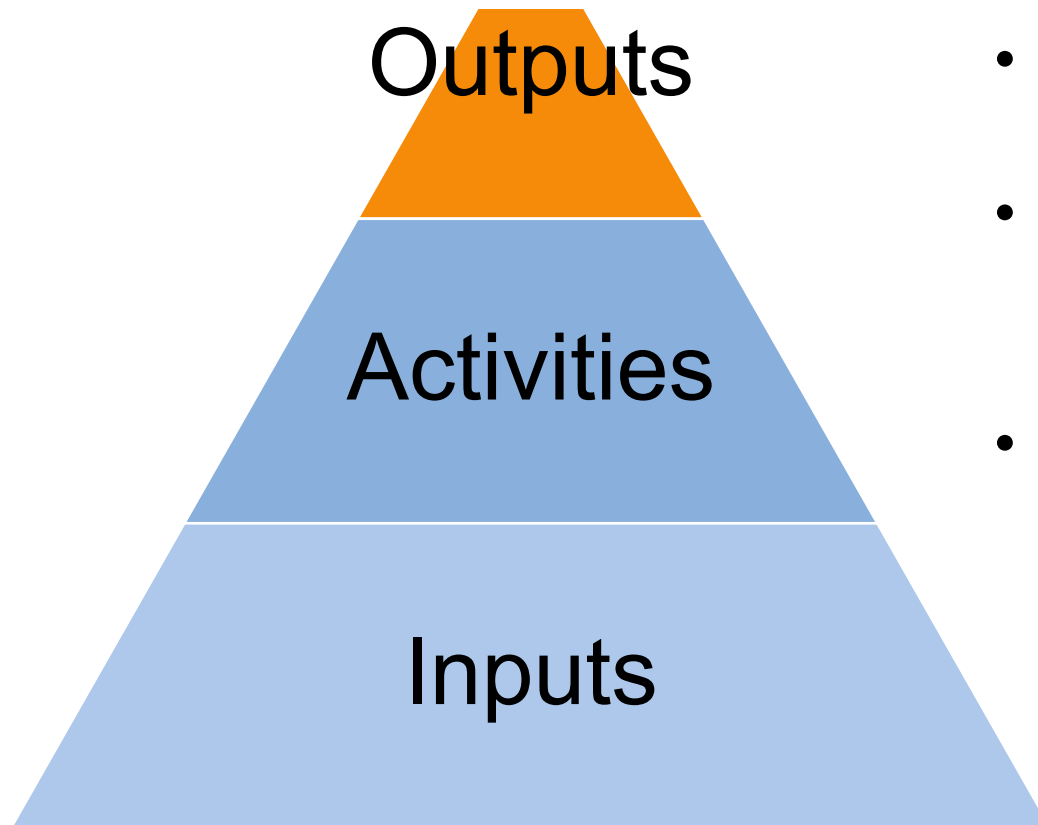
- Residents complete quarterly research and professional development workshops
- Residents complete 2 abstracts, 2 posters, 2 podium presentations, and a final written manuscript of their research/QI project
- Residents complete professional social media profile optimization, CV refinement, mock interviews and salary negotiations, and financial planning exercises
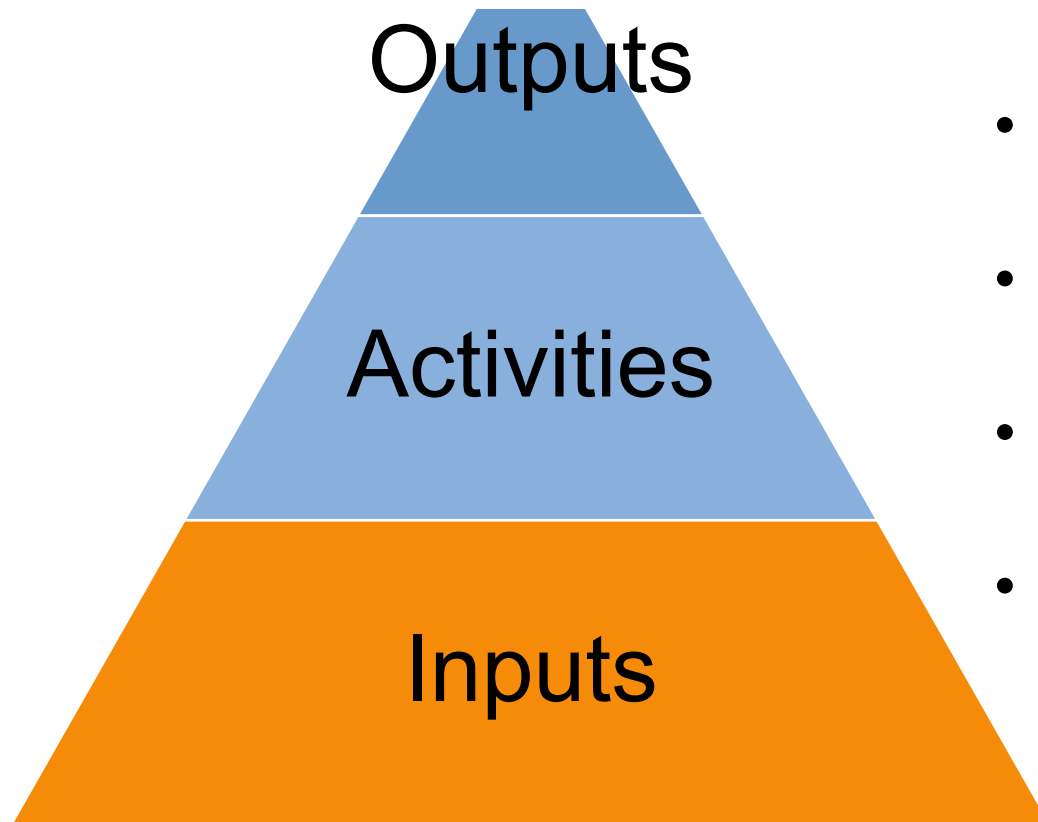
Adapted Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.

ashp NATIONAL PHARMACY PRECEPTORS CONFERENCE

OhioHealth Research and Development Program Logic Model

Outputs

Activities

Inputs
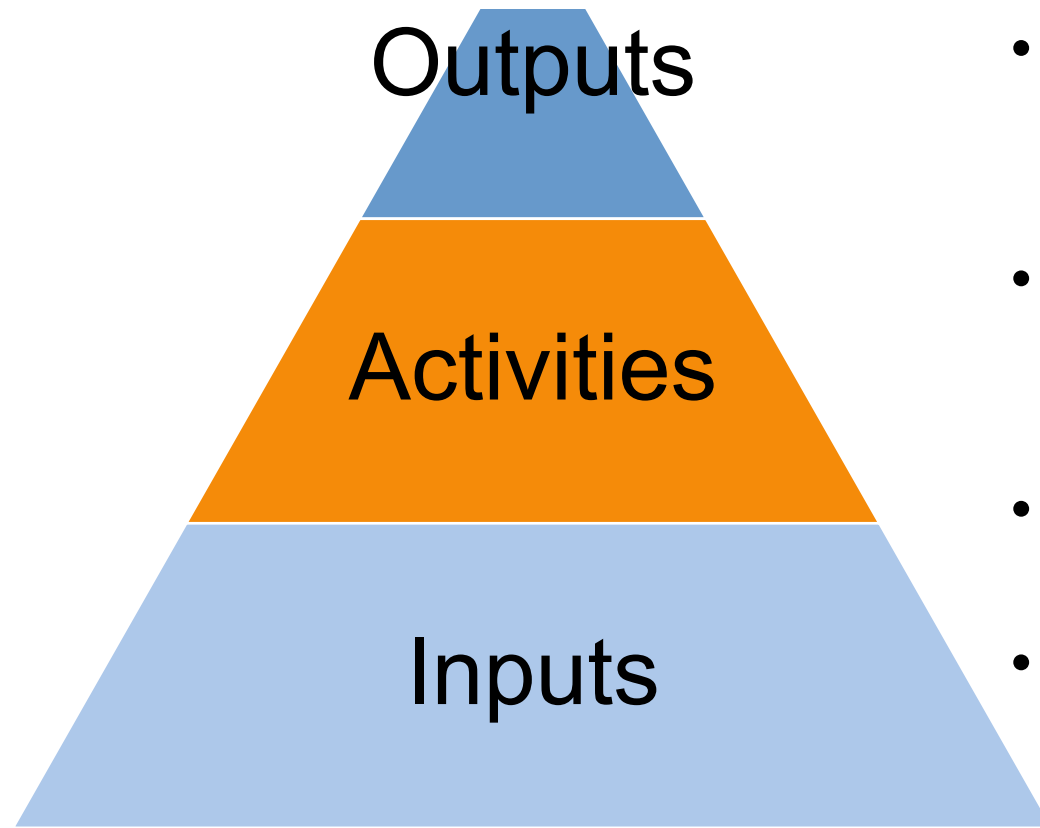
- Topic discussions on research fundamentals including study design, regulatory processes, and biostatistics
- Workshops on developing and delivering effective poster and podium presentations
- Scientific writing workshops and training on the publication process
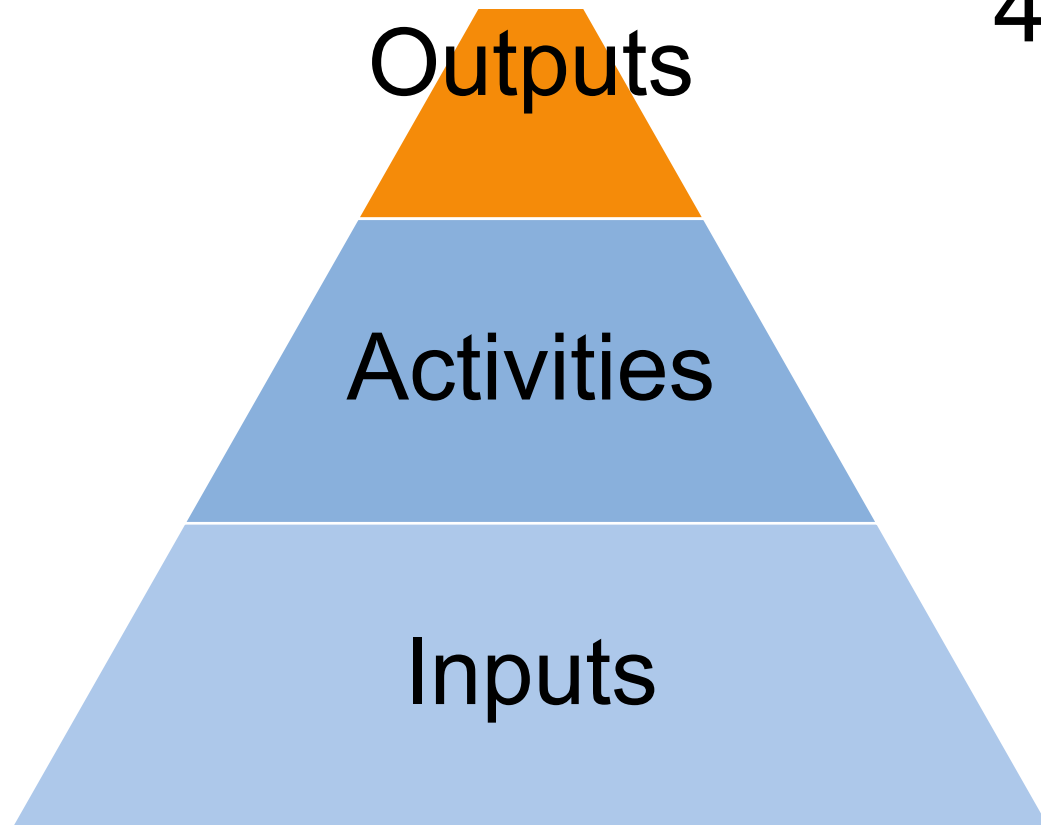- Training on personal branding, CV development, interviewing and financial skills

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.

ashp® NATIONAL PHARMACY PRECEPTORS CONFERENCE

OhioHealth Research and Development Program Logic Model

Outputs

Activities

Inputs

- Local pharmacist research and professional development expertise
- Time for facilitators to develop and execute programming
- Centralized meeting spaces for workshops
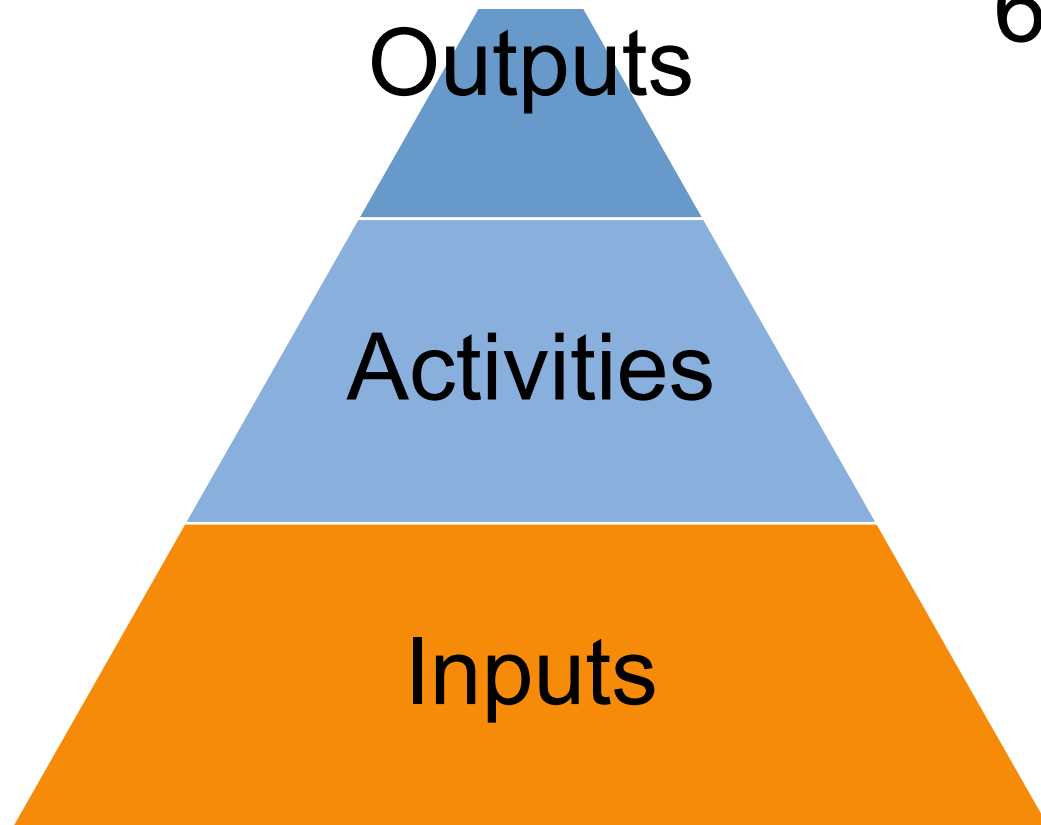- Scheduled resident time to prepare for and participate in programming

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.

ashp® NATIONAL PHARMACY PRECEPTORS CONFERENCE

Continuing Our Logic Model – Your Turn

Outputs

Activities

Inputs

4. What process measures can you develop, or what demonstrated changes in behavior or attitudes do you want to see in response to your educational program?

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.

Continuing Our Logic Model – Your Turn

Outputs

Activities

Inputs
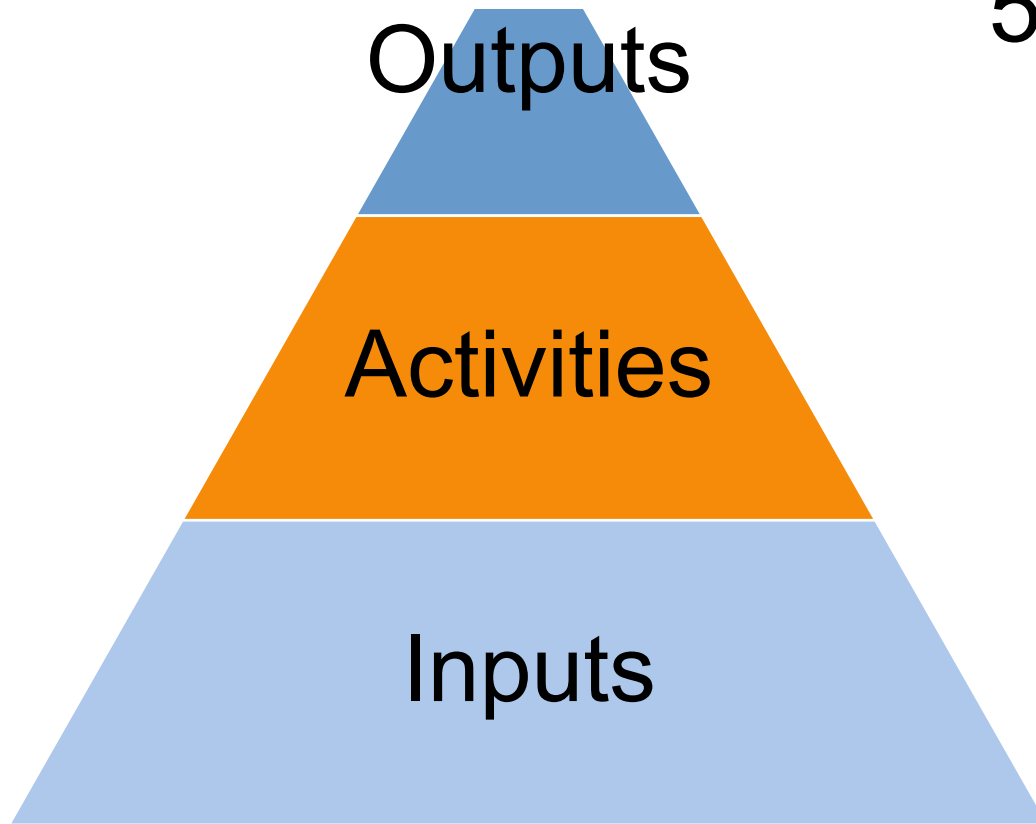
5. What processes can you design and implement to help achieve each objective and generate the outputs?

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.

ashp NATIONAL PHARMACY PRECEPTORS CONFERENCE

Continuing Our Logic Model – Your Turn

Outputs

Activities

Inputs

6. What resources do you need to do the work?

Adapted from Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196; Davidoff F et al. BMJ Qual Saf. 2015;24:228–238.; Goeschel CA et al. Int J Qual Health Care. 2012;24:330-337.

ashp® NATIONAL PHARMACY PRECEPTORS CONFERENCE

Recommendations

Align with organization mission	Clearly defined principles, outcomes, and assessments	Oversight committee
Integrate trainees into existing high-priority research	Solicit ideas in advance	Incentivize trainee participation

Morbitzer KA, et al. J Am Coll Clin Pharm. 2021;4:743–753

Recommendations

Incentivize mentor participation	Structured timeline	Dedicated time for trainees
Education	Financial Support	Frequent assessment

Morbitzer KA, et al. J Am Coll Clin Pharm. 2021;4:743–753

Recommendations – From the Community Health System Perspective

Resource local experts and centralize

System data and research resources

Leverage interprofessional relationships

Recurring project summaries

Lateralize to system-wide preceptor development

Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196

ashp® NATIONAL PHARMACY PRECEPTORS CONFERENCE

Resources for Delivering Resident Research and CPD Programming

- OhioHealth Resources – see publication
  - Research and professional development workshop structure and topics
  - Research and professional development rotation components and monthly calendar
  - Itemized resident research project tracker (see supplement for download!)
- NPF / ASHP resources
  - Research Resource Center (ashp.org)
  - Research-Project-Tip-Sheet_Final.pdf (ashp.org)
  - Pharmacy Residents Resources (ashp.org)
  - New Practitioners Forum Resources - ASHP

Hyland SJ and Musch KLE, J Am Coll Clin Pharm. 2023;6(2):186-196

Research Resource Center (ashp.org)

[Pharmacy Residents Resources (ashp.org)](#)

Ashp.org

New Practitioners Forum Resources - ASHP

Key Takeaways

1 Research and professional development programming is valuable and desired

2 Numerous barriers exist to delivering research and development training

3 A systematic approach can be applied to educational program development

4 Leveraging available resources is key to success and sustainability