Applying Best Practices
To R3 Education Programs

Carl Richardson
PA Fish & Boat Commission

PFBC Mission: To protect, conserve, and enhance the Commonwealth’s aquatic resources and provide fishing and boating opportunities
A **Best Practice** is a program or practice with specific outcomes that has been clearly defined, refined, and evaluated through repeated delivery and supported by a substantial body of research. These practices represent the best knowledge available …
R3 Education Best Practices

1. Fits with broader agency goals
2. Supported by research
   - R3
   - Other fields
3. Appropriate resources
4. Defined outcomes (realistic)
5. Includes evaluation from start
   - Needs assessment
   - Short & Long-term
6. Developed by knowledgeable staff
7. Learner-centered, and relevant
8. Delivered by knowledgeable instructors
History of PFBC Angler Ed

- Guided by tradition
- “Kids aren’t fishing like they used to”
- One-shot wonders
- Little consideration of research
  - Process of becoming an angler
  - Motivations, constraints
- Often children from fishing households
Need to Do “Something”, 1994

- Need to do more for kids
- No additional resources
- Good ideas vs evidence-based
- Outputs more important than outcomes
- Didn’t consider demographic changes
  - Convert to Sr. Lifetime
- Lacked understanding of churn, R3
Reflected in Angler Ed Effort

ORAM Stage Targeted
1995-2000 R3 Activities

- Awareness: 9
- Interest: 9
- Trial: 10
- Apprentice: 4
- Active angler: 6
- Lapsed: 0
ORAM Stage, 1995-2000 and 2020

<table>
<thead>
<tr>
<th>Stage</th>
<th>1995-2000 R3</th>
<th>2020 R3</th>
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Tipping Points

- External
- Internal
- Programmatic
External Tipping Points:

Role of National Partners

- Aquatic Resource Education Association, 1995 +
- American Fisheries Society, Education and Human Dimensions Sections, 1996-2001
- Recreational Boating and Fishing Foundation, 1998+
- American Sportfishing Association, 2000+
- Association of Fish and Wildlife Agencies, 2000+
Results

- Exchange of information
- Funding for research
  - Responsive Management, Southwick Associates, DJ Case, and others
  - Future of Fishing, 2003
- RBFF market research
  - RBFF/AREA Strategies for R3, 2016
- Collection and analysis of national-level data, 2010+
- Funding for states
Threats to Fishing Participation

- Demographic changes
- Low level of:
  - Interest
  - Knowledge
  - Skills
  - Social support
- Access to opportunities
- Agency capacity

Recommendations and Strategic Tools, AREA/RBFF, 2016
Internal Tipping Point: Agency Resources

Total Project Expenditures

<table>
<thead>
<tr>
<th>Year</th>
<th>Expenditures</th>
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<tr>
<td>1989</td>
<td>$124,476</td>
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<tr>
<td>1994</td>
<td>$294,172</td>
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<tr>
<td>1999</td>
<td>$484,465</td>
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<tr>
<td>2004</td>
<td>$483,124</td>
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<td>2009</td>
<td>$836,166</td>
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<tr>
<td>2014</td>
<td>$589,769</td>
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<tr>
<td>2019</td>
<td>$1,178,090</td>
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</table>
Internal Tipping Point: PALS

Pennsylvania Automated License System (PALS 1.0), 2008

- Demographics
- Purchase patterns
- Recruitment, retention rates

2.8+ million unique customers, 2008-2019
~1.3 million transactions in 2019
PALS Insight

Better understanding of “problem”

- Aging population, aging buyers
  - Sr. Life=20% of 2017 certified license sales
- 82% males
- Majority
  - Age 45+
  - Rural areas
- Churn~300,000 lapse annually
- Under-represented segments
  - Urbanization
Programmatic shift: Target Adults

- Especially families, 2003+
  - RBFF market research
  - Responsive Management, use adults to reach youth
  - Request from parents and grandparents
- Program development by the book: Best Practices
Family Fishing Program

- Pilot, 2003-2005
- Outcomes over outputs
- Evaluation built into program
- Statewide rollout 2008
- Target new partners: parks and rec, other community groups
- Template for other programs
Shift: Collection of Participant Data

- Post-program evaluations, 2003+
  - Family Fishing Program (FFP) Pilot
- Attendance data, 2007
  - Contact information, age
- Pre-registration data, 2011
  - Participate in RM study; pre and post interviews
    - 2011 and 2014
- Event management system, 2018
  - Efficient and accurate
  - Detailed demographics
Shift: Later ORAM Stages

- 2016 map to ORAM (R3 plan prep)
  - Obvious holes later stages, social support
- Statewide rollout
  - Fly Fishing
  - Ice Fishing
  - Kayak Fishing
- Species specific
  - Trout
  - Catfish
- Meet-up, 2018
2020 R3 and ORAM Targeted

- Awareness
- Interest
- Trial
- Apprentice
- Active angler
- Lapsed
Ladies Fly-Fishing

- Basic fly-fishing
  - Dry land or on water
- Beyond basics on-the-water
  - Apply skills, nearly 1-1 ratio
- Specialty fly-fishing
  - 2018 & 2019 Lake Erie trib. steelhead
  - Plans for others

BP #7 and #8, and repeated contact
Program Shift: Urban and Suburban

RBFF First Catch, 2018

- Philadelphia MSA, 5 counties
- Staff, 2 new positions
- Equipment
  - Trailers
  - Program gear
Performance Measures & Evaluation

- Outputs
  - Counts
  - Attendance
- Outcomes
  - Short-term
  - Long-term
Short-term Outcomes

- Reaching intended audience?
- Increase interest level
- Knowledge of fishing technique and local opportunities
- Skills
  - Casting
  - Knot tying
  - Rigging
  - Application
- Likelihood of future behaviors
Measuring Short-term

- Participant characteristics
- Changes in knowledge, skills, attitudes
  - Based on RM study, 2011 and 2014
  - Pre- and post-program interviews
- Post-program evaluation forms
Participants younger than age 45

- Family Fishing: 61.60%
- FSI: 58.10%
- PALS 2017: 48.60%
- Fly fishing: 35.50%
Female Participants

- **Fly**: 86.6%
- **FFP**: 32.4%
- **FSI**: 27.5%
- **PALS- 2017**: 18.7%
Responsive Management, 2014

FFP top 5 in effectiveness in 10 categories (69 programs).

Increases in percent who:

* Self-identify as angler
* Likely to go fishing
* Correctly named agency
* 48% increased knowledge great deal
FFP Post-program Results

How much did the program increase your knowledge about the topics listed below?

- The Pennsylvania Fish and Boat Commission: 3.5
- Basic fishing methods: 3.4
- Fishing equipment: 3.4
- Sources of information about fishing in...: 3.3
- Proper handling of fish: 3.2
- Fish and fish habitats: 3.2
- Local places to go fishing: 3.2
- License requirements and regulations: 3.2

Weighted Average
How much did the program increase your confidence in the areas below?

*scale 1 to 4, 4=increased great deal*

- Purchasing fishing equipment for myself or my family: 2.89
- Fishing on my own: 3.16

Weighted Average
How much did the program increase the likelihood of the following?

- Taking my family or friends fishing: 3.7
- Fishing more often: 3.6
- Purchasing fishing equipment and/or tackle: 3.4
- Purchasing a fishing license: 3.3
Long-term Outcomes

- Purchase of first license
- Reactivate lapse
- Reduce churn
- *Increase fishing activity*
- *Increase interest*
- *Unmet needs*

*survey planned for late 2020*
R3 Treatments Evaluated

Contest Entry @ Events 2016-2017

Angler Award Program 2010-2017

Family Fishing Programs 2011-2017

Family Fly Fishing 2012-2017

Instructor Training 2008-2017

Late Season Discount 10/16-12/16
## Treatment Sample

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Records</th>
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<tbody>
<tr>
<td>Contest entries at shows &amp; expos</td>
<td>10,506</td>
</tr>
<tr>
<td>Angler Award Program</td>
<td>5,020</td>
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<tr>
<td>Family Fishing Program</td>
<td>2,751</td>
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<tr>
<td>Fly Fishing Program</td>
<td>332</td>
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<tr>
<td>Fishing Skills Instructor Training</td>
<td>529</td>
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<tr>
<td>Late Season Discount</td>
<td>6,597</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>29,042</strong></td>
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Definitions

- **Potential Buyer**: no PALS transaction that year
- **Recruited Buyer**: no purchase the five years prior to treatment, and purchased a license in 18 months post-treatment.
- **Retained Buyer**: purchase in treatment year and prior year
- **Reactivated Buyer**: at least one purchase in 5 year period, but not year prior to treatment (lapse)
  - Short-term: 3 years
  - Long-term: >4 years
Potential Buyers

No license at program

<table>
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<th>Category</th>
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<td>88.7%</td>
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<tr>
<td>Fly Fishing</td>
<td>74.4%</td>
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<tr>
<td>FSI</td>
<td>70.5%</td>
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Conversion

Percentage of those with no pre-treatment license who purchase w/in 18 months post-treatment

- Reactivated lapsed
- Recruited new
Conversion Rate

- Fly Fishing: 34.8%
- Family Fishing: 13.3%
- Skills Instructor: 9.6%
- Contests: 4.9%
Post Program Churn

Mean Churn by Treatment

- **PALS 2017**: 38.6%
- **FFP**: 27.9%
- **Fly Fishing**: 18.0%
- **Contest**: 16.9%
- **FSI**: 11.6%
Purchase 5-yrs Post-Treatment

- **Angler Award**: 76%
- **FSI Training**: 72%
- **PALS**: 58%
- **Family Fishing Program**: 49%
Setbacks and Challenges

- Random acts of R3
  - Distraction
  - Diversion of resources
- Fiscal
  - 2010-2018
  - Vacant positions
  - Reduced operating budget
- Leadership change
  - 4 directors since 1995
  - Commissioners
  - 4 bureau directors
  - 3 agency reorganizations
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Success

- Understanding of situation; demographics, churn
- Acknowledge research not aligned with beliefs
- Not education alone
  - Lapsed angler campaigns
  - Digital marketing
  - Social media
  - User-friendly access information
- Shift in approach; adults, later ORAM
Common Denominators

- Data-driven, evidence based, evaluation
- Took years, often after national tipping point
- Best practices had best results
- Sustainable funding
- Dedicated and patient staff
- Continuous improvement
- Communicate up and down org chart
Questions?

Carl Richardson
Education and Outreach Manager
PA Fish & Boat Commission
crichardso@pa.gov