Critical Element
Data Entry and Analysis
Objectives

- Describe why data is critical to school-wide PBIS/Tier process.
- Identify the BIG 5 data reports/graphs.
- Use data to identify a possible problem and then build a precise problem statement?
- Identify problems in data within each of the BIG "5" graphs.
- Determine possible solutions based on the data.
“Decisions are more likely to be effective and efficient when they are based on... DATA.”

Horner, Todd, Newton, Algonzzine, B, & Algonzzine, K.
Ever Feel like this?

We don’t want you to drown in a sea of data!!
Data is Your Friend

Without data, you are just another person with an opinion.....
Using Data Core Skills

• Use data to identify a possible problem?

• Use data to build a precise problem statement?

• Use data to select a solution (intervention)?

• Use data to assess if a solution is (a) being implemented, and (b) being effective
What Data?

- Attendance
- Suspensions Rate
- Expulsions Rate
- Drop-Out Rate
- MCT2 scores
- Grades
One of the most useful sources of behavioral data in schools is...

**Office Discipline Referrals (ODR)**
Office Discipline Referrals

“Wherever patterns of misbehavior exist, there is an opportunity to employ preventive measures.”

School teams that use ODR data are able to implement and maintain school-wide discipline systems that result in a 50 - 60% reduction in ODRs.
The PBIS Team Should:

• analyze disciplinary referrals
• determine if patterns exist
• form hypotheses about what is shaping those patterns
• develop universal practices that will prevent or reduce disciplinary problems
However....
All ODR systems are not created equally!
ODR Systems Should Have...

- Clearly defined problem behaviors
- Consistent procedures for managing and reporting problem behaviors
- Consistent and simple recording and collection of data
- ODR forms include needed information:
  - Name, Date, Time
  - Staff
  - Problem Behavior & Maintaining Function
  - Location
Big Ideas...

- Data help put the “problem” in the context instead of in the student.

- Data does not provide answer, but they help us to ask the right questions.

- Use your data to:
  - Identify problems
  - Clarify problems
  - Define the questions that lead to the solutions
Things to Avoid

1. Defining a solution before defining the problem
2. Building solutions from broadly defined, or fuzzy problem statements
3. Failing to use data to confirm/define problem
4. Agreeing on a solution without building a plan for how to implement or evaluate the solution
5. Agreeing on a solution but never determining if the solution was implemented
6. Serial problem solving without decisions
People aren’t tired from solving problems – they’re are tired from solving the same problems over and over.
Improving Decision-Making

From Problem to Solution
How do we get from here to there?

System Change:
We can’t wait for miracles!

The Change Process

**Community Wide Strategy**

**Implementation Plan**

THEN A MIRACLE OCCURS

**Self-sufficiency, good citizens, healthy community**

GOOD WORK,
BUT I THINK WE NEED JUST A LITTLE MORE DETAIL RIGHT HERE!
Improving Decision-Making

From Problem → Solution

Problem Solving

To Problem → Solution

Information
Identifying “Problems” with “Precision”

- Well defined problems prompt functional solutions.
- Poorly defined problems prompt discussions in which the problem is admired, but not addressed.

"Everything is vague to a degree you do not realize till you have tried to make it precise.”  Bertrand Russell
Precise Problem Statements
(What are the data we need for a decision?)

• Solvable problem statements include information about the five core “W” questions:

  • **What** is the problem, and how often is it happening?
  • **Where** is it happening?
  • **Who** is engaged in the behavior?
  • **When** is the problem most likely to occur?
  • **Why** is the problem sustaining?
Primary vs. Precise Problem Statements

• Primary Statements
  • Too many referrals
  • This September has more suspensions than last year
  • Gang behavior is increasing
  • The cafeteria is out of control
  • Student disrespect is out of control

• Precise Statements
  • There are more ODRs for aggression on the playground than last year. These are most likely to occur during first recess, with a large number of students, and the aggression is related to getting access to the new playground equipment.
Primary or Precise Statement?

- ODRs during December are higher than in any other month.

- Minor disrespect and disruption are increasing over time, and are most likely during the last 15 minutes of our block periods when students are engaged in independent seat work. This pattern is most common in 7th and 8th grades, involves many students, and appears to be maintained by escape from work (but may also be maintained by peer attention... we are not sure).
Primary or Precise Statement?

• Boys are engaging in sexual harassment

• Three 5th grade boys are name calling and touching girls inappropriately during recess in an apparent attempt to obtain attention and possibly unsophisticated sexual expression.
YOUR CONSISTENT QUESTION SHOULD BE

WHAT DOES THE DATA TELL US?
Where do we get the data to develop precise problem statements?
The BIG “5”
The Big “5”

**How Much** - Office discipline referrals (ODR)
  - Average ODRs per school day per month

**What** - ODR by type of problem behavior

**Where** - ODR by location

**When** - ODR by time of day

**Who** - ODR by student

**Why** - ODR by perceived motivation
Using
The BIG “5”
To Make Decisions for…

Tier 1
First Place to Start?

How Much

Average ODRs per school day per month
Why Not Total ODRs?

Total number of ODRs per month is often misleading due to the difference in the number of school days per month.
Total Ref versus Ref/Day/Mo

NV High School

January 10
Calculating Average ODRS per Day per Month

Number of ODRS for the Month ÷ Number of School Days for the Month
Example:

140 ODRS for August
20 schools days in August

140 ÷ 20 = 7 ODRS per day in August
Is There a Problem?

• **National Average**: depends on size of school
  • Elementary - >1 per day per 450 students
  • Middle - >1 per day per 225 students
  • High - > 1 per day per 175

• **Trends**
  • Spikes before or after breaks?
  • Steady increase in ODRs across the year?

• **Compare levels to last year**
Elementary School with 450 students

1 per 450 students

Trend
Middle School with 500 students

The bar graph shows the average referrals per day per month. The graph indicates spikes in referrals during December and March.

- December: 16 referrals per month (1 per 225 students)
- March: 17 referrals per month (1 per 225 students)

Other months have lower referral rates.

Change Report Option

| Change Report Options | 0.00 | 5.00 | 6.50 | 11.00 | 12.00 | 16.00 | 9.00 | 12 | 7.50 | 0.00 | 0 |
High School with 700 students

1 per 175 students

Trend

Average Referrals Per Day Per Month

Referrals Per Day Per Month

Months

August  September  October  November  December  January  February  March  April  May  June  July
Middle School with 900 students

1 per 225 students
There is a problem,

now what?
Get more specific...

ODRs by Problem Behavior

What

What

Where

When

Who

How

Much
Questions to ask about Referrals by Problem Behaviors

• Is it one, a few or many problem behaviors?

• Is it a cluster of problem behaviors?

• Which school-wide expectation do we need to re-teach?
Get more specific...

Where ODRs by Location
Middle School

Number of Referrals

Locations

- Park lot
- Plygd
- Unknown loc
- Office
- Bus zn
- Other loc
- Special evt
- Bus
- Common
- Gym
- Library
- Bathrm
- Hall
- Cafe
- Class

Graph showing the number of referrals by location for Middle School.
Questions to ask about Referrals by Location

• In what areas are the problem behaviors occurring?

• Are they occurring in one location, many locations or clusters of locations?
Get more specific...

When

ODRs by
Time of Day
Questions to ask about Referrals by Time

• What time are the problem behaviors occurring?

• How do the times compare to the daily schedule?

• How does this compare to Referrals by Location?
Get more specific...

Who

ODRs by Student
Questions to ask about Referrals by Student

• Are a few students or many students getting ODRs?

• What proportion of the student body has 0-1 ODRs? (Tier 1)

• What proportion of the student body has 2-5 ODRs? (Tier 2)
Designing Solutions

• If many students are making the same mistake it typically is the **system** that needs to change not the students.

• Teach, monitor and reward before relying on punishment.
## General Guidelines

<table>
<thead>
<tr>
<th>IF...</th>
<th>Focus on...</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;40% of students received 1+ ODRs</td>
<td>School-Wide System</td>
</tr>
<tr>
<td>&gt;2.5 ODR per student</td>
<td></td>
</tr>
<tr>
<td>&gt;60% of ODRs come from classroom</td>
<td>Classroom System</td>
</tr>
<tr>
<td>&gt;50% of ODRs come from &lt;10% of classrooms</td>
<td></td>
</tr>
<tr>
<td>&gt;35% of ODRs come from non-classroom settings</td>
<td>Non-classroom Systems</td>
</tr>
<tr>
<td>&gt;15% of students referred from non-classroom settings</td>
<td></td>
</tr>
</tbody>
</table>
Reviewing the Data

• The school-wide PBIS team should review the BIG 5 graphs at least monthly to:
  
  • Identify problem areas
  • Determine possible solutions
  • Monitor efficacy of any changes that are made
Decision-Making

• Is there a problem?
• What areas/systems are involved?
• Are there many students or a few involved?
• What kinds of problem behaviors are occurring?
• When are these behaviors most likely?
• What is the most effective use of our resources to address this problem?
Rose Elementary School
K-5

500 students

Rose Elementary started SWPBIS last year. Their school expectations are Be Safe, Be Responsible and Be Prepared. Rules are posted in all areas of the school including the playground, gym, cafeteria, etc. Teachers taught the rules at the beginning of the year in each area of the school and then retaught through the year. The PTO raised enough money last year to purchase several new pieces of playground equipment which was installed the end of September.
Step One: Review Status and Identify Problems
Is there a Problem?

<table>
<thead>
<tr>
<th>How Often are the ODRs?</th>
<th>More than 1 ODR per day per month</th>
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</thead>
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<td>• National Average?</td>
<td>• Significant increases in ODRs in Oct.</td>
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<td>• Trends?</td>
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<td>• Compared to last year?</td>
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YES
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<th><strong>Describe...</strong></th>
<th><strong>Ideas for Solutions</strong></th>
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**Precision Statement:**
Team Activity

Complete a Tier 1 Data Summary Sheet for Phoenix High School.

– Is there a problem?
– Define the problem in each of the Big 5 data.
– Write a precision problem statement
– What intervention options would you recommend be considered?
Phoenix High School

360 students

After starting SWPBIS two years ago, Phoenix High saw significant reductions in ODRs last year. However, administration changed this year, and SWPBIS did not kick off this year until November. It is now January, and the teachers have taught the expectations and rules for most of the areas of the school.
Phoenix High
Referrals by Location

Number of Referrals

- Gym
- Other
- Unknown
- Bus Zone
- Common
- Library
- Office
- Park Lot
- Class
- Restroom
- Hall
- Bus
- Café
Phoenix High
Referrals by Time

Number of Referrals

7:00 AM:15 30 45
8:00 AM:15 30 45
9:00 AM:15 30 45
10:00 AM:15 30 45
11:00 AM:15 30 45
12:00 PM:15 30 45
1:00 PM:15 30 45
2:00 PM:15 30 45
3:00 PM:15 30 45
4:00 PM:15 30 45

Number of Referrals
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• Trends?  
• Compared to last year? | | |
| **What** are the problem behaviors?  
• One, few, many behaviors?  
• Clusters of behaviors? | | |
| **Where** are the behaviors occurring?  
• One, few, many location?  
• Clusters of locations? | | |
| **When** are the behaviors occurring?  
• Compare to the schedule?  
• Compare to the locations? | | |
| **Who** is involved?  
• A few or many students? | | |

**Precision Statement:**
Team Activity

• Complete a Tier 1 Data Summary Sheet for King Middle School.
  • Is there a problem?
  • Define the problem in each of the Big 5 data.
  • Write a precision problem statement
  • What intervention options would you recommend be considered?
King Middle School

386 students
6th - 8th grades

King Middle has seen an increase in the number of students enrolled over the last couple of years. The district is planning to bring in portable buildings to help with the crowding, but the buildings will not be delivered until after Christmas. Each grade level has its own hallway, but the bells are scheduled for the whole school. Classes change at a quarter after each hour.
King Middle School
Referrals by Time

Number of Referrals

Time:
7:00 AM, 7:15, 7:30, 7:45
8:00 AM, 8:15, 8:30, 8:45
9:00 AM, 9:15, 9:30, 9:45
10:00 AM, 10:15, 10:30, 10:45
11:00 AM, 11:15, 11:30, 11:45
12:00 PM, 12:15, 12:30, 12:45
1:00 PM, 1:15, 1:30, 1:45
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**Precision Statement:**
Sharing the Information...

- The school-wide PBIS team should share the BIG “5” data with the school faculty/staff on a monthly basis
- Discuss the data and options for solutions
- Be open to feedback and other ideas
How are You Using Data?

- Recommended that data are entered daily, but at least weekly!
- Are you sharing data with faculty monthly?
- Is the data meaningful?
- Is it in graphical form?
- Are you reviewing data at all PBIS team meetings?
- Are you making data based decisions?
- Are you using ODR’s as one data source for Universal Screening?
Will you be able to obtain this necessary data from your current data system?
**Action Plan!**

**PBIS Critical Element**

**Using Data for Long – Term Change**

- In the Overview Resource Section complete Benchmarks of Quality items 13-16 and the Action Plan form

- With your team, evaluate your school’s data system, can you identify the “Big Five” for your school

- If you can not retrieve the “Big Five” from your current system, what action(s) must occur to address this area of need?

- How will you use data to continuously action plan?