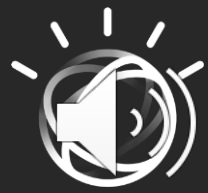
Child Welfare – Is your data telling the right story?



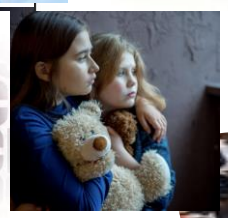
IBM Watson Health / © 2019 IBM Corporation

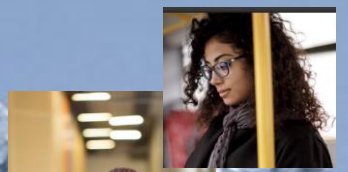
Welcome to NorthLand

Pop: 76,257

Est: 1859

NL OFS





FAMILY FIRST PREVENTION ACT

Expanding care to vulnerable segments

Improving health & human services

IBM Watson Health / © 2019 IBM Corporation

NorthLand

–

Office of Family Services

Robert – Program Manager

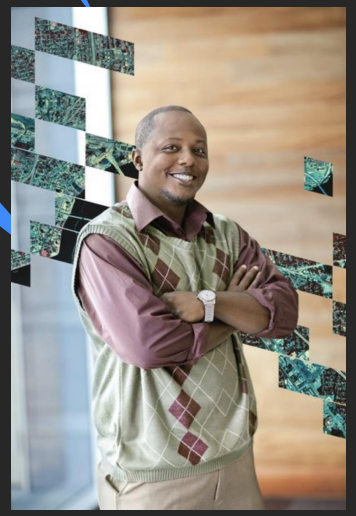
Clarence – Supervisor

Tim – Caseworker

IBM Watson Health / © 2019 IBM Corporation

How is my team performing against other in the county/state?

Are my case workers compliant with the policy mandates?



Clarence – Supervisor

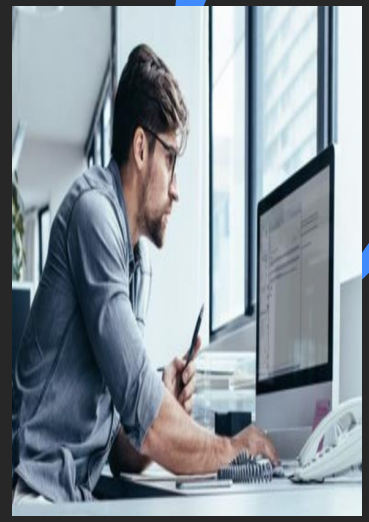
I feel like a data clerk and all I want to do is my job - take care of children and families!

Did I enter all the information? Am I missing something?

Tim – Caseworker

How effective are the programs I put in place?

Am I measuring the right metric to effect the outcome?



Robert – Program Manager

Data & Analytics

Trends & Benchmarks

Quality Data

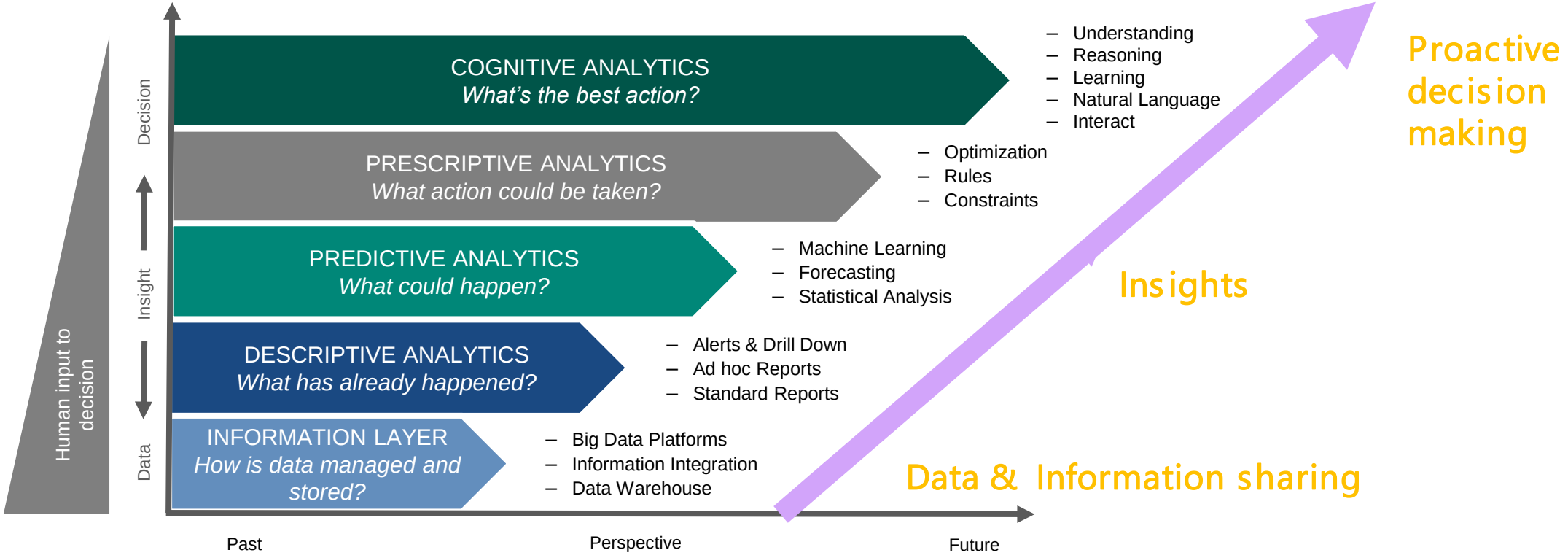
Actionable Insights

Cohort Analysis

IBM Watson Health / © 2019 IBM Corporation

The Analytic Journey

What is Happening?	Why Did It Happen?	What Will Happen Next?	What Should I Do?
What are the key trends and areas of opportunities?	*How do I understand what is driving the trend?*	*How do I predict what I need to focus on before it becomes a bigger issue?*	*What are my intervention options? What's worked elsewhere?*



1. What is your data telling you?

2. Telling the story with Analytics

Data Quality

Watson Health © IBM Corporation 2018

We have over 20 data sources – is it being integrated properly?

Are my case workers compliant with the policy mandates?

Clarence – Supervisor

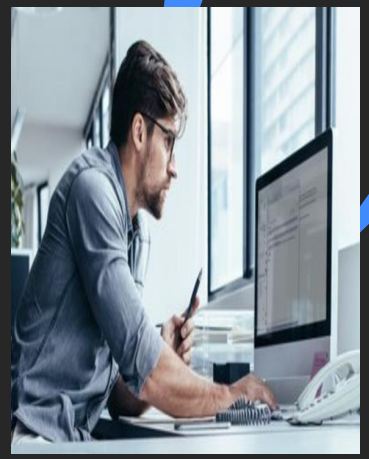
I saw the child and entered the documentation. Why is it not showing up? My numbers cannot be this bad.

Did I enter all the information? Am I missing something?

Tim – Caseworker

I want to add SDoH data fields. How will that impact data quality? Should I talk to the architect about Data Governance?

Am I measuring the right metric to effect the outcome?



Robert – Program Manager

QUALITY DATA

IBM Watson Health / © 2019 IBM Corporation

DATA QUALITY

Upstream

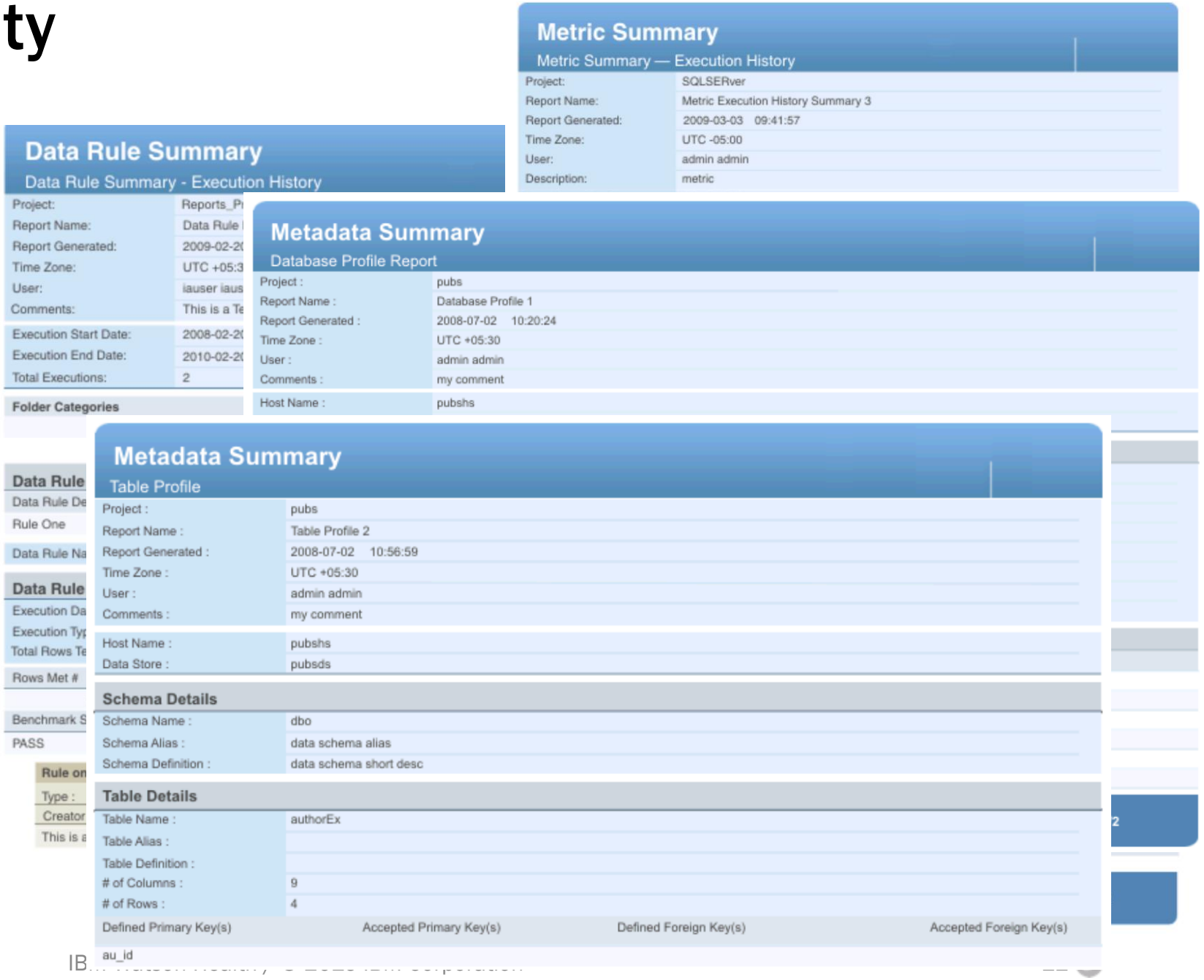
- Data errors in the database
- Data maintenance issues
- Data Quality Analyses

At the point of use

- Checking to ensure that users can go back and check data.

Upstream Data Quality Analysis

- *Data Quality analysis at the data set level & the database level*



Confidently add new data sets and metrics

Have faith in the information included in the reports

Data Rule Summary

Data Rule Summary - Execution History

Project:	Reports_P
Report Name:	Data Rule
Report Generated:	2009-02-2
Time Zone:	UTC +05:3
User:	iauser iaus
Comments:	This is a Te
Execution Start Date:	2008-02-2
Execution End Date:	2010-02-2
Total Executions:	2

Folder Categories

Metric Summary

Metric Summary — Execution History

Project: SQLSERver

Metadata Summary

Database Profile Report

Project :	pubs
Report Name :	Database Profile 1
Report Generated :	2008-07-02 10:20:24
Time Zone :	UTC +05:30
User :	admin admin
Comments :	my comment
Host Name :	pubshs

Metadata Summary

Table Profile

Project :	pubs
Report Name :	Table Profile 2
Report Generated :	2008-07-02 10:56:59
Time Zone :	UTC +05:30
User :	admin admin
Comments :	my comment
Host Name :	pubshs
Data Store :	pubsds

Schema Details

Schema Name :	dbo
Schema Alias :	data schema alias
Schema Definition :	data schema short desc

Table Details

Table Name :	authorEx
Table Alias :	
Table Definition :	
# of Columns :	9
# of Rows :	4

Defined Primary Key(s)	Accepted Primary Key(s)	Defined Foreign Key(s)	Accepted Foreign Key(s)
au_id			

IBM Information Server 1 / 2

1. Recording client information

Effective and efficient design supports quality information gathering = quality data

2. Telling the story with Analytics

Analytics

IBM Watson Health / © 2019 IBM Corporation

3,276

children where maltreated while in foster care

15.2%

of child fatalities where non-parents (i.e. kin, child care providers) were responsible

2 years

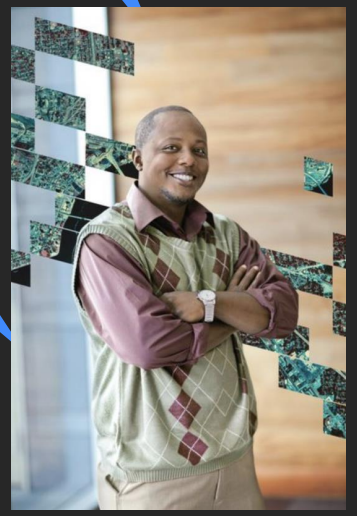
Minimum frequency for repeat background checks on Foster or Adoptive parents

IBM Watson Health / © 2019 IBM Corporation

Children's Bureau's Child Maltreatment 2017 Statistics

How is my team performing against other in the county/state?

Can I create a common set of reports and dashboards without having to call the IT analyst every single time?



Clarence – Supervisor

Trends & Benchmarks

I have created this useful template – wonder if I can share it with Jessica and the others?

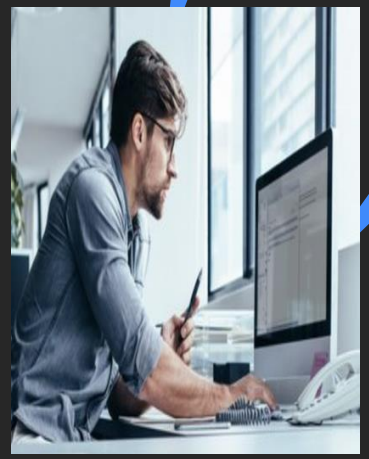
Did I enter all the information? Am I missing something?

Tim – Case worker

Actionable Insights

How is the performance across counties and teams?

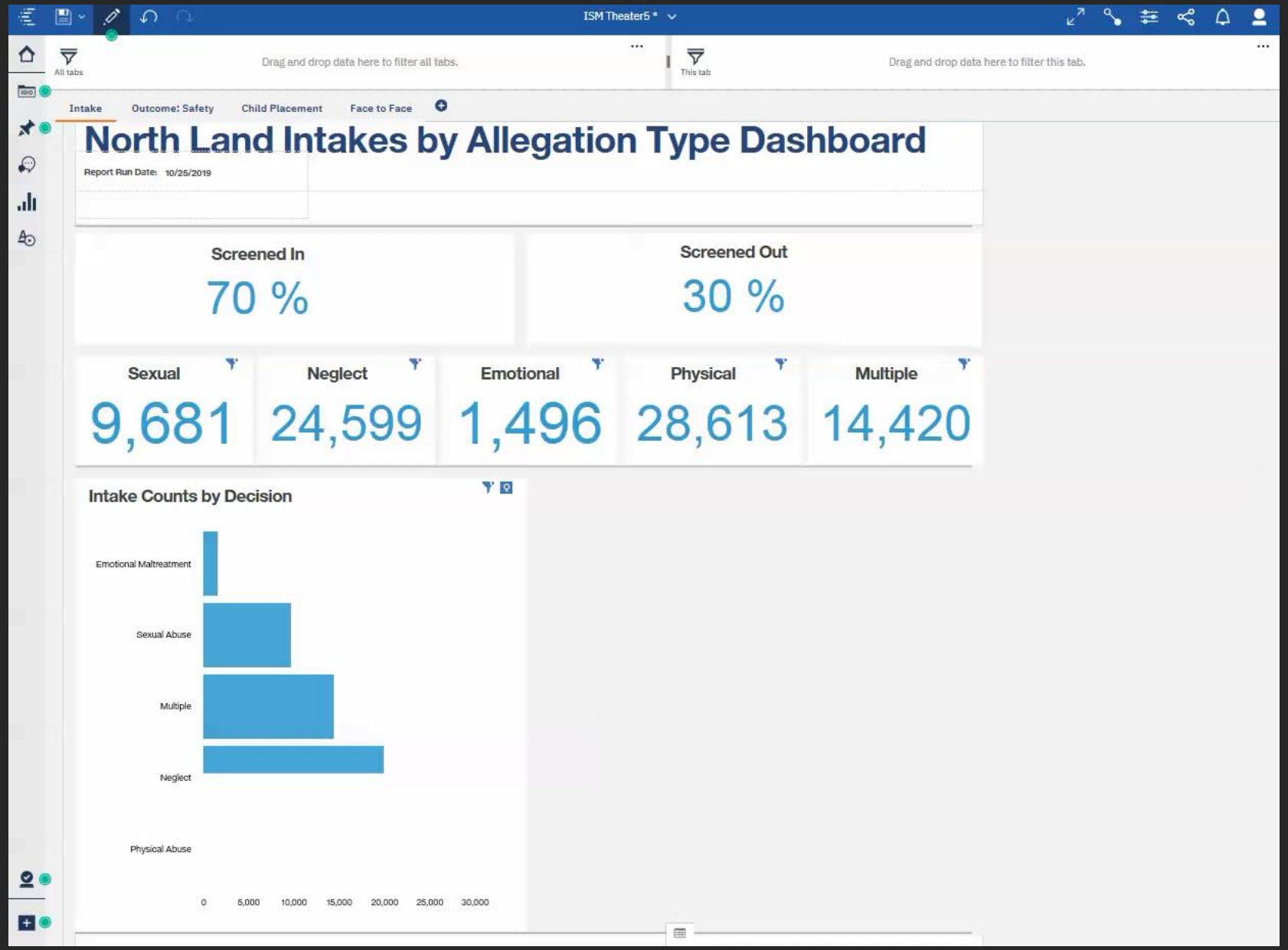
Am I measuring the right metric to effect the outcome?



Robert – Program Manager

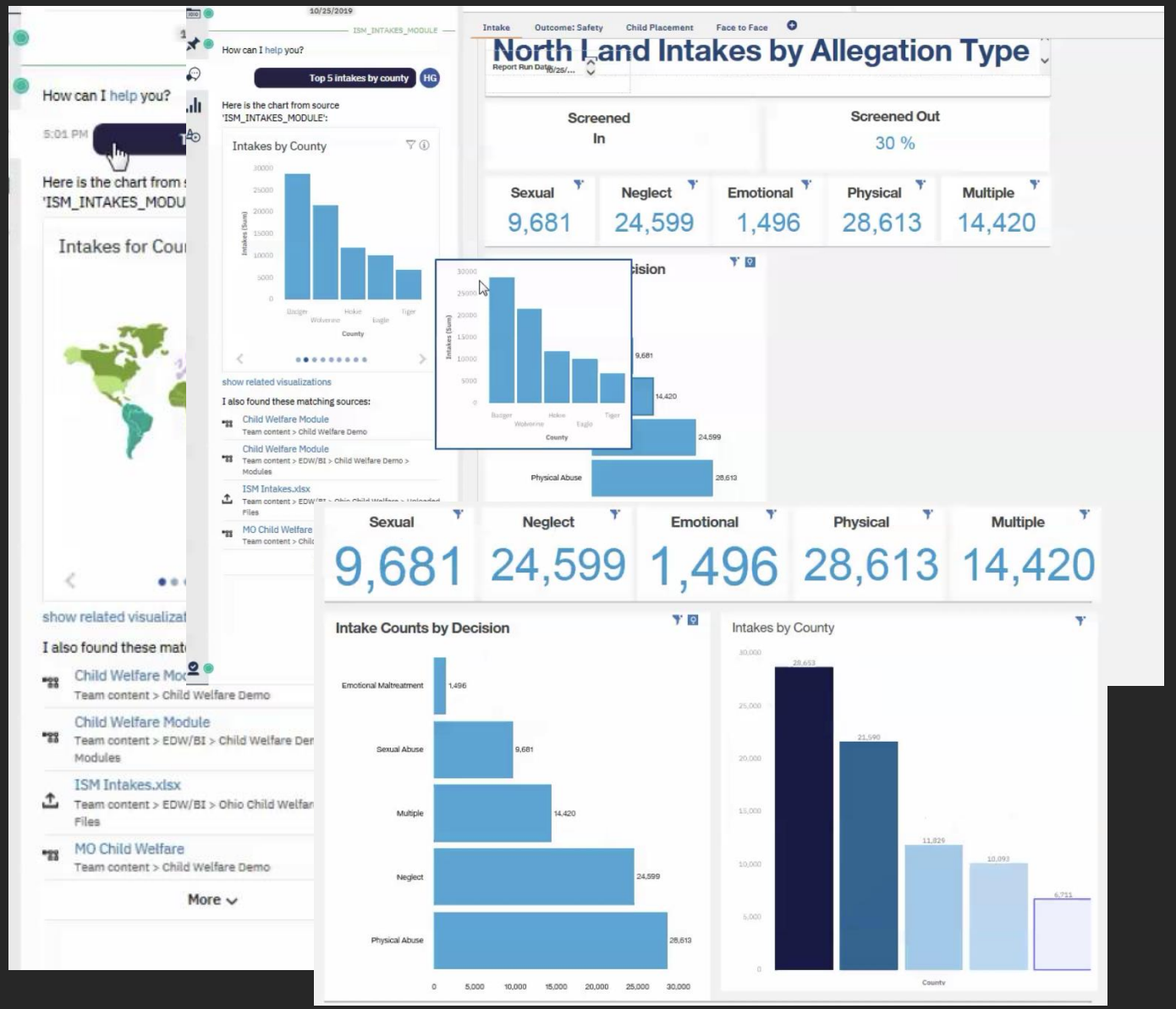
Cohort Analysis

IBM Watson Health / © 2019 IBM Corporation


ISM Theater5 *
All tabs
Drag and drop data here to filter all tabs.
This tab
Drag and drop data here to filter this tab.
Intake
Outcome: Safety
Child Placement
Face to Face
North Land Intakes by Allegation Type Dashboard
Report Run Date: 10/25/2019
Screened In
70 %
Screened Out
30 %
Sexual
9,681
Neglect
24,599
Emotional
1,496
Physical
28,613
Multiple
14,420
Intake Counts by Decision
Emotional Maltreatment
Sexual Abuse
Multiple
Neglect
Physical Abuse
0
5,000
10,000
15,000
20,000
25,000
30,000

Saves me time – don't have to call the IT analyst.

I can share the template – we are all tracking the same thing.



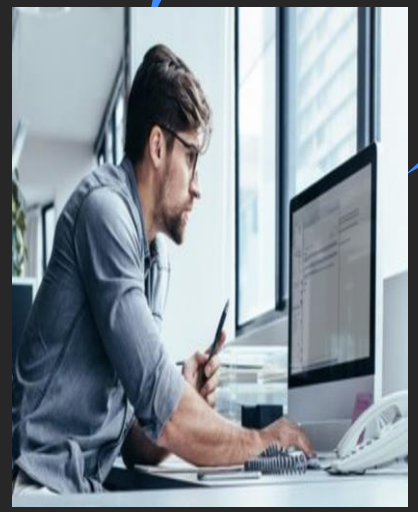
How is my team performing against other in the county/state?

Are my case workers compliant with the policy mandates?

Clarence – Supervisor

How is the performance across counties and teams?

Am I measuring the right metric to effect the outcome?



Robert – Program Manager

Trends & Benchmarks

Actionable Insights

Cohort Analysis

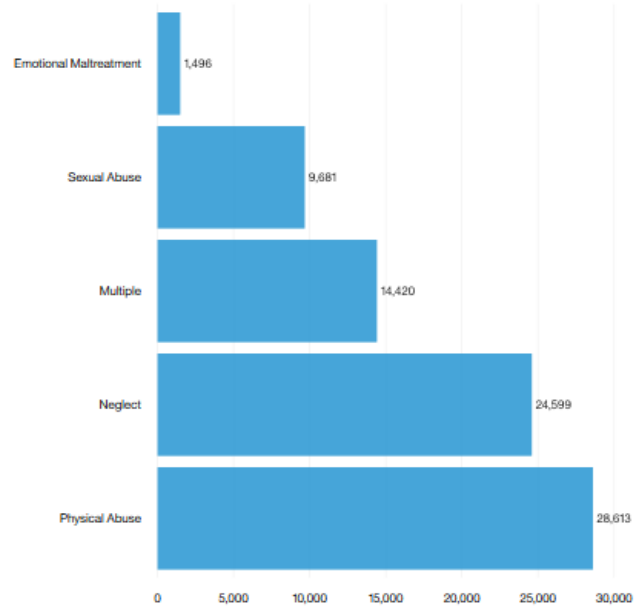
North Land Intakes by Allegation Type Dashboard

Report Run Date: 10/25/2019

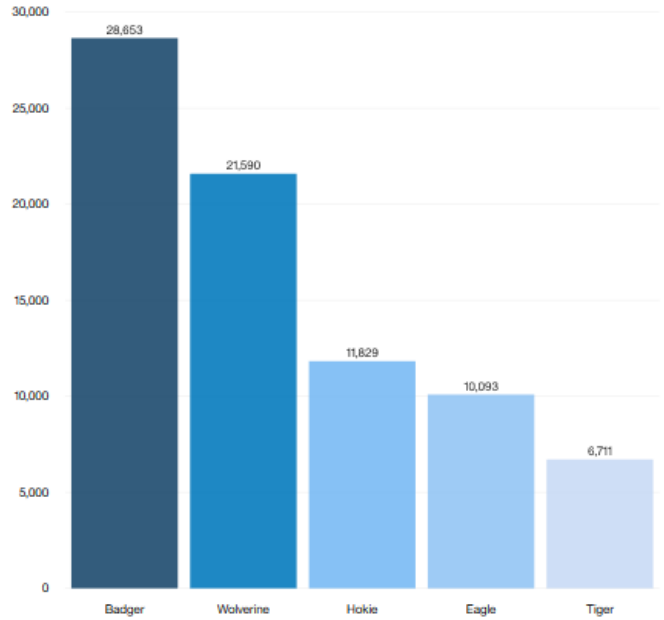
Screened In	Screened Out
70%	30%

Sexual	Neglect	Emotional	Physical	Multiple
9,681	24,599	1,496	28,613	14,420

Intake Counts by Decision



Intakes by County



Simple Cognos Analytics dashboards prepared for webinar presentation.

Intake | Outcome: Safety | Child Placement | Face to Face

North Land Intakes by Allegation Type Dashboard

Report Run Date: 10/25/2019

Screened In

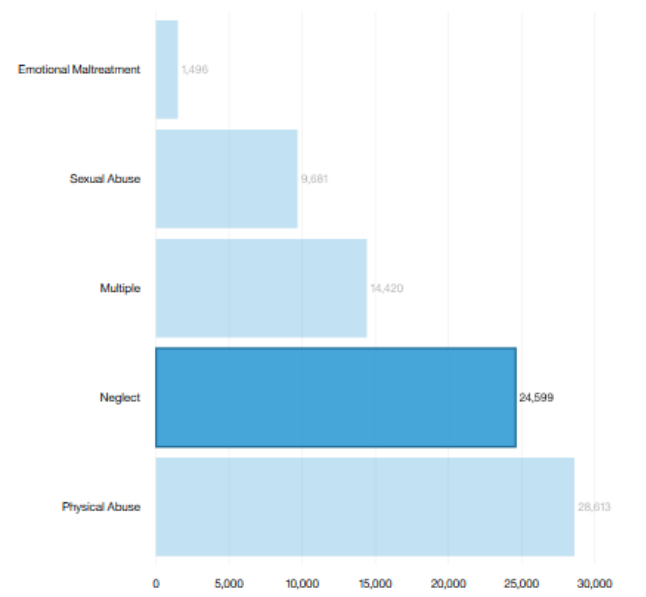
70%

Screened Out

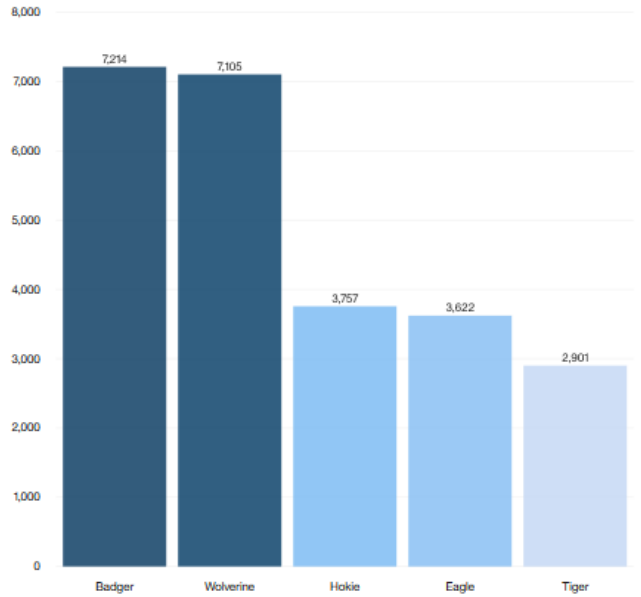
30%

Sexual	Neglect	Emotional	Physical	Multiple
(no value)	24,599	(no value)	(no value)	(no value)

Intake Counts by Decision



Intakes by County



Simple Cognos Analytics dashboards prepared for webinar presentation.

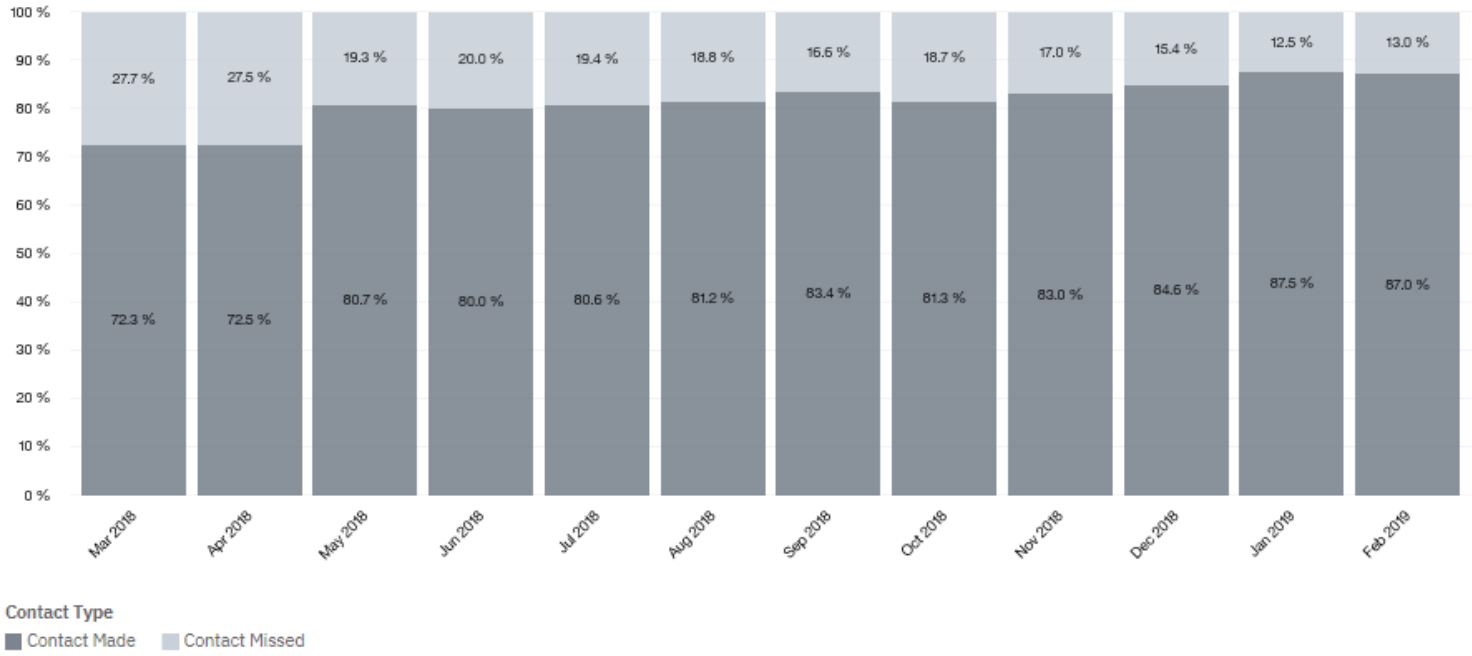
Face to Face Contacts Dashboard

Report Run Date: 10/25/2019

Contact Details by Region

Number of Cases	Contact Made	Contact Missed	Ended in Month	Started in Month
Badger	1,538	769	193	254
Eagle	617	315	72	117
Hokie	504	234	64	87
Tiger	917	460	103	142
Wolverine	1,427	739	184	228

Cases - Trend



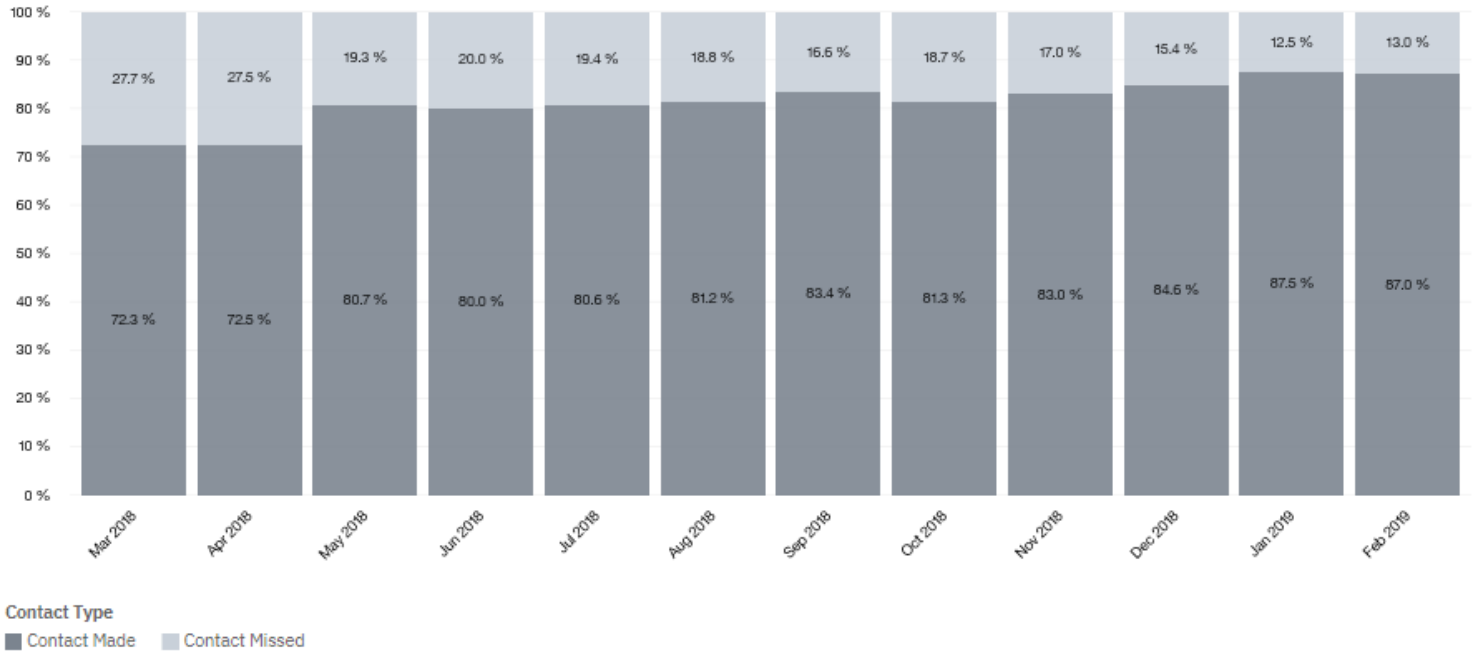
Face to Face Contacts Dashboard

Report Run Date: 10/25/2019

Contact Details by Region

Number of Cases	Contact Made	Contact Missed	Ended in Month	Started in Month
Badger	1,538	769	193	254
Eagle	617	315	72	117
Hokie	504	234	64	87
Tiger	917	460	103	142
Wolverine	1,427	739	184	228

Cases - Trend



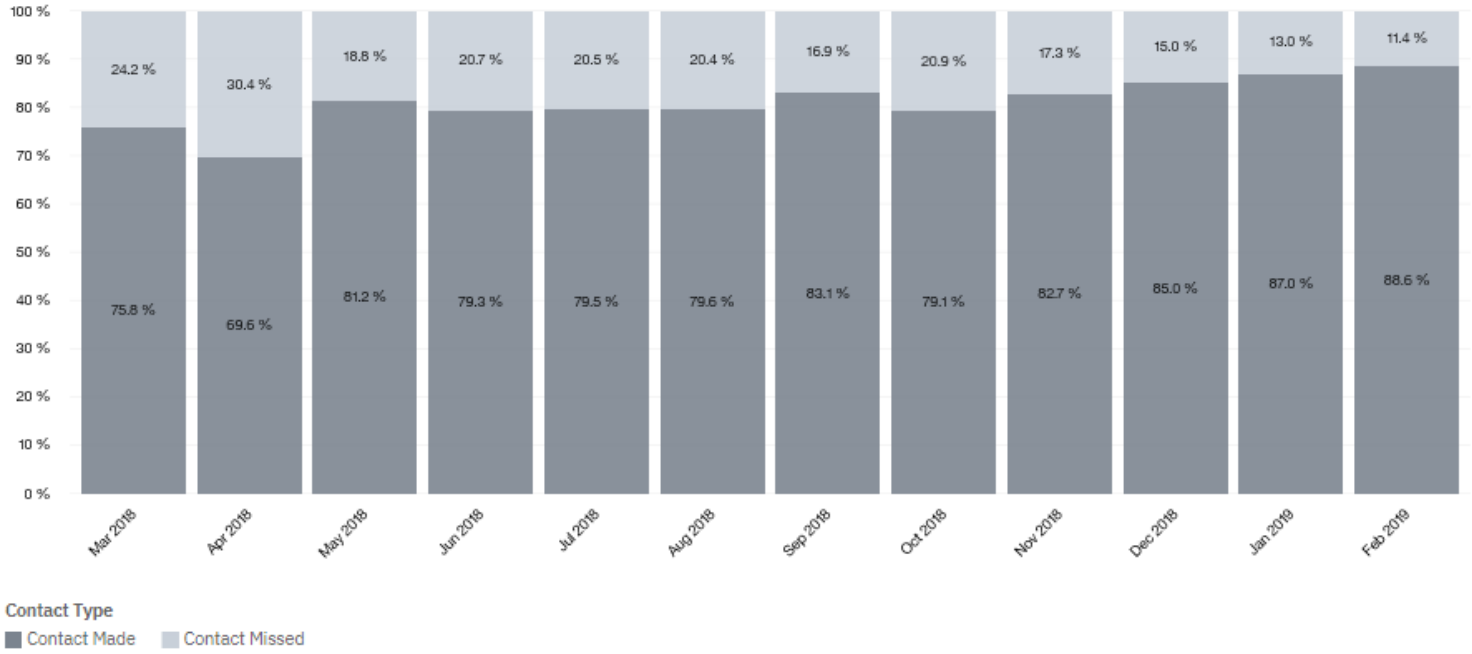
Face to Face Contacts Dashboard

Report Run Date: 10/25/2019

Contact Details by Office

Number of Cases	Contact Made	Contact Missed	Ended in Month	Started in Month
East Office	428	218	64	63
North Office	414	201	42	75
South Office	336	171	40	52
West Office	360	179	47	64

Cases - Trend



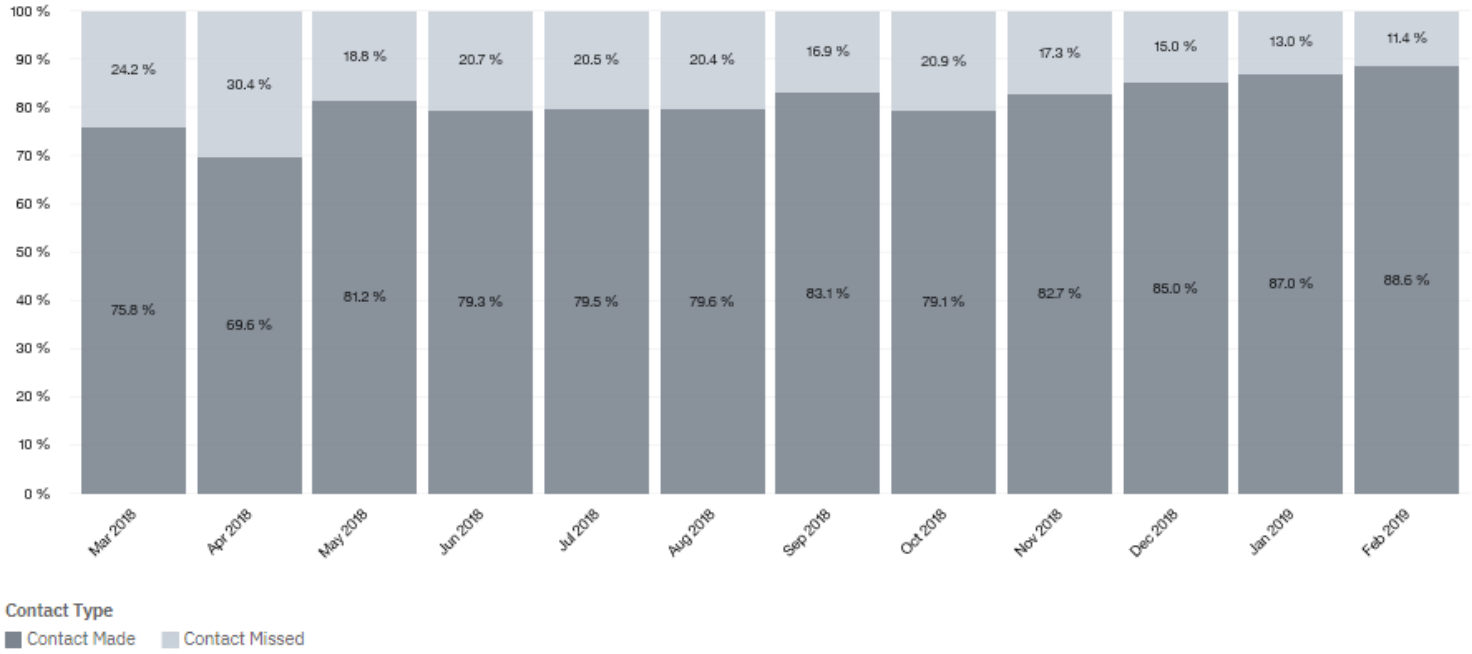
Face to Face Contacts Dashboard

Report Run Date: 10/25/2019

Contact Details by Office

Number of Cases	Contact Made	Contact Missed	Ended in Month	Started in Month
East Office	428	218	64	63
North Office	414	201	42	75
South Office	336	171	40	52
West Office	360	179	47	64

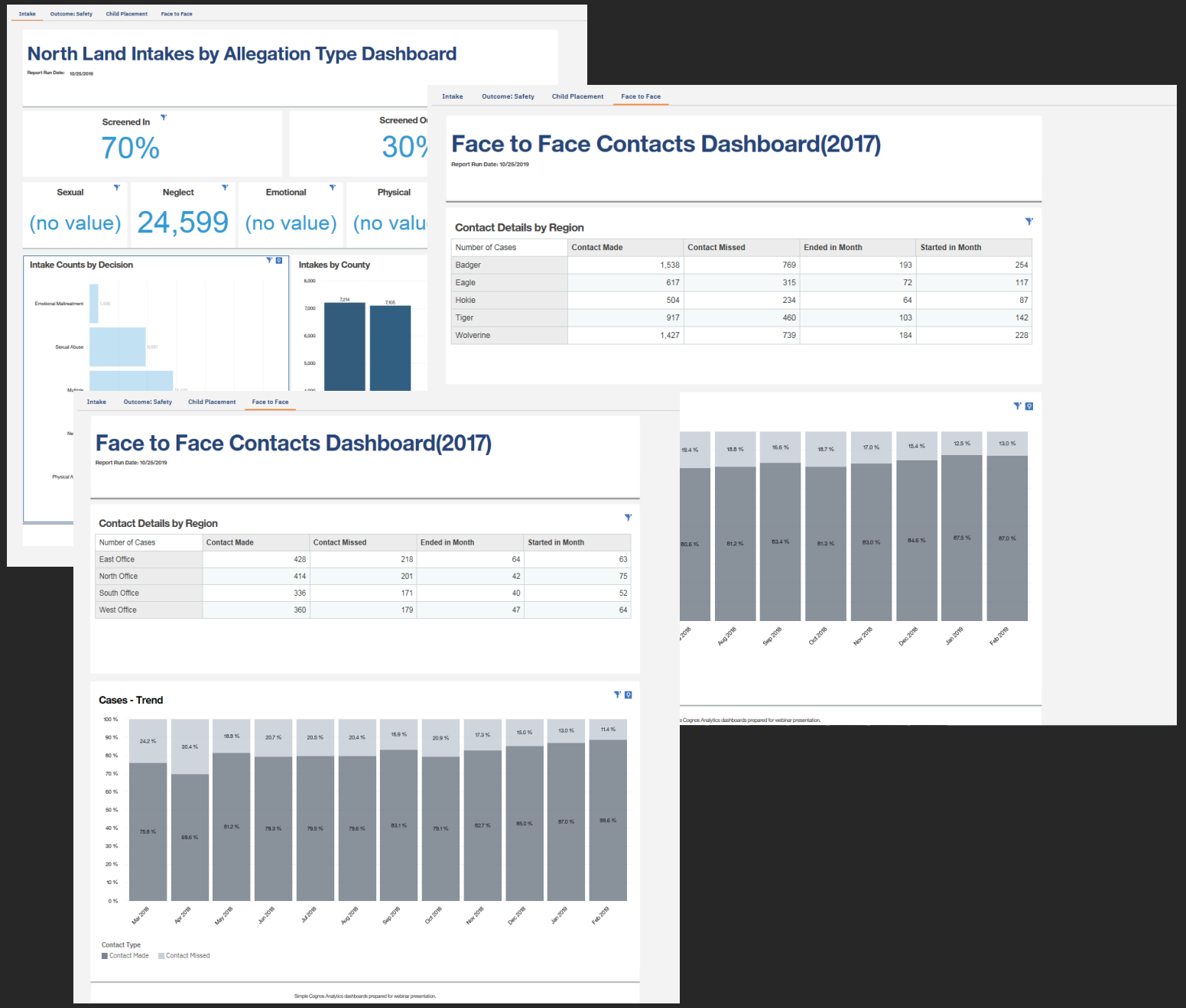
Cases - Trend



View performance on Key Performance Metrics

Can see performance at the state and in my regions

Determine compliance of identified measures



How is my team performing?
How am I doing/

Jessica is new to the team? How is her performance?

Clarence – Supervisor

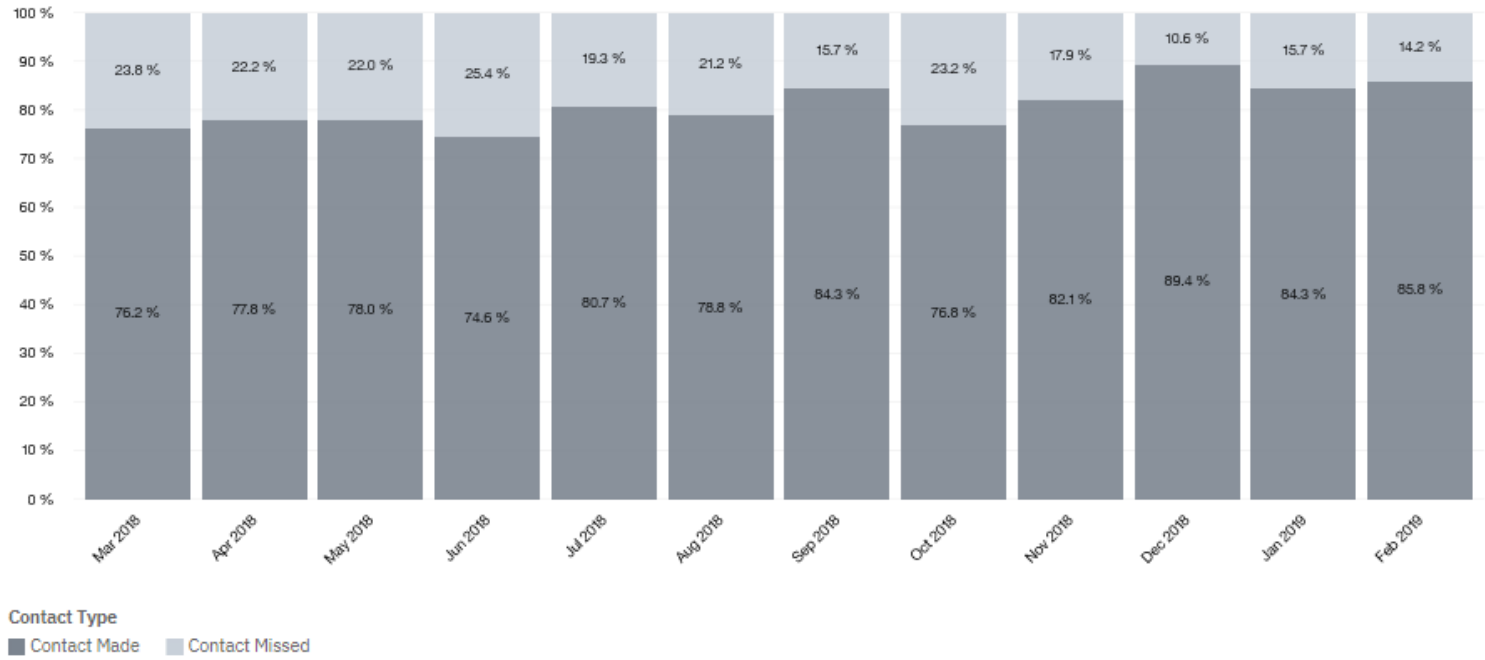
Face to Face Contacts Dashboard

Report Run Date: 10/25/2019

Contact Details by Supervisor

Number of Cases	Contact Made	Contact Missed	Ended in Month	Started in Month
Clarence Scott	117	66	27	15
Jannet Maringly	61	31	5	11
Leon Burns	103	52	11	17
Marv Montgomery	68	32	10	8
Vernon Holland	79	37	11	12

Cases - Trend



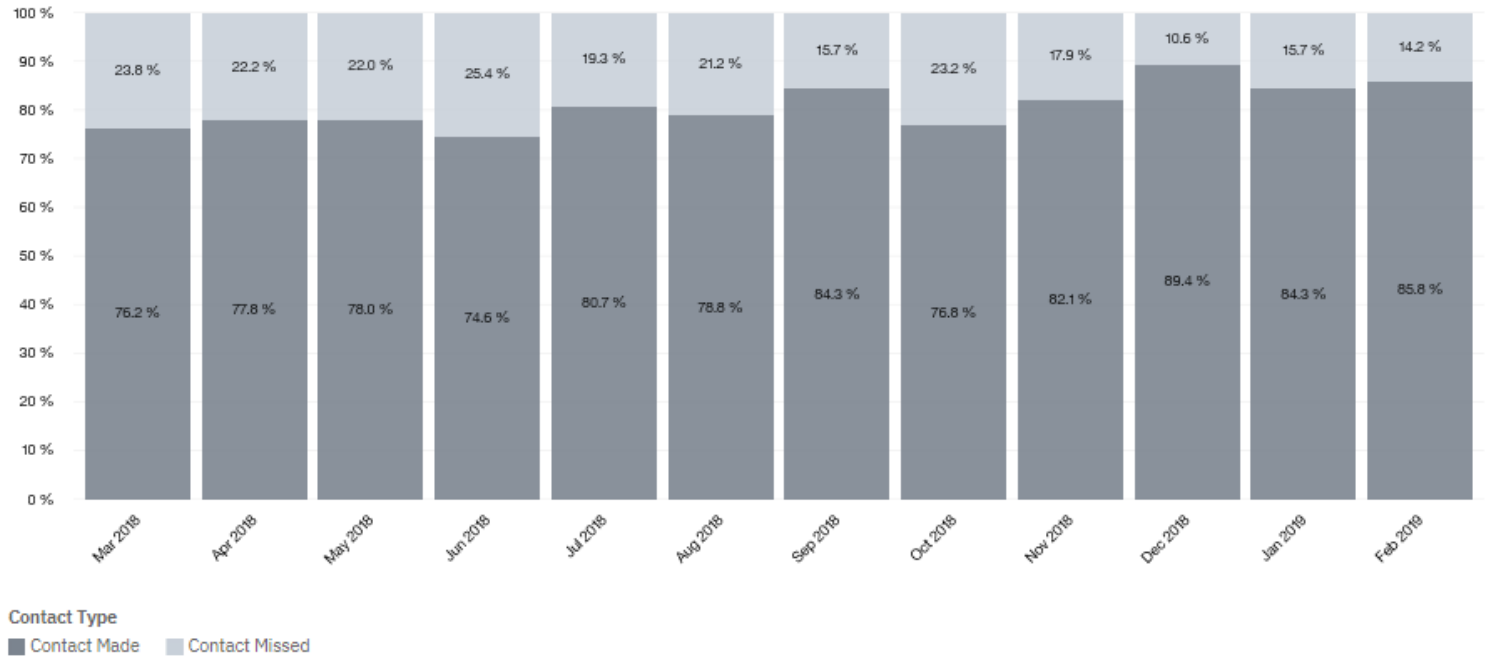
Face to Face Contacts Dashboard

Report Run Date: 10/25/2019

Contact Details by Supervisor

Number of Cases	Contact Made	Contact Missed	Ended in Month	Started in Month
Clarence Scott	117	66	27	15
Jannet Maringly	61	31	5	11
Leon Burns	103	52	11	17
Marv Montgomery	68	32	10	8
Vernon Holland	79	37	11	12

Cases - Trend



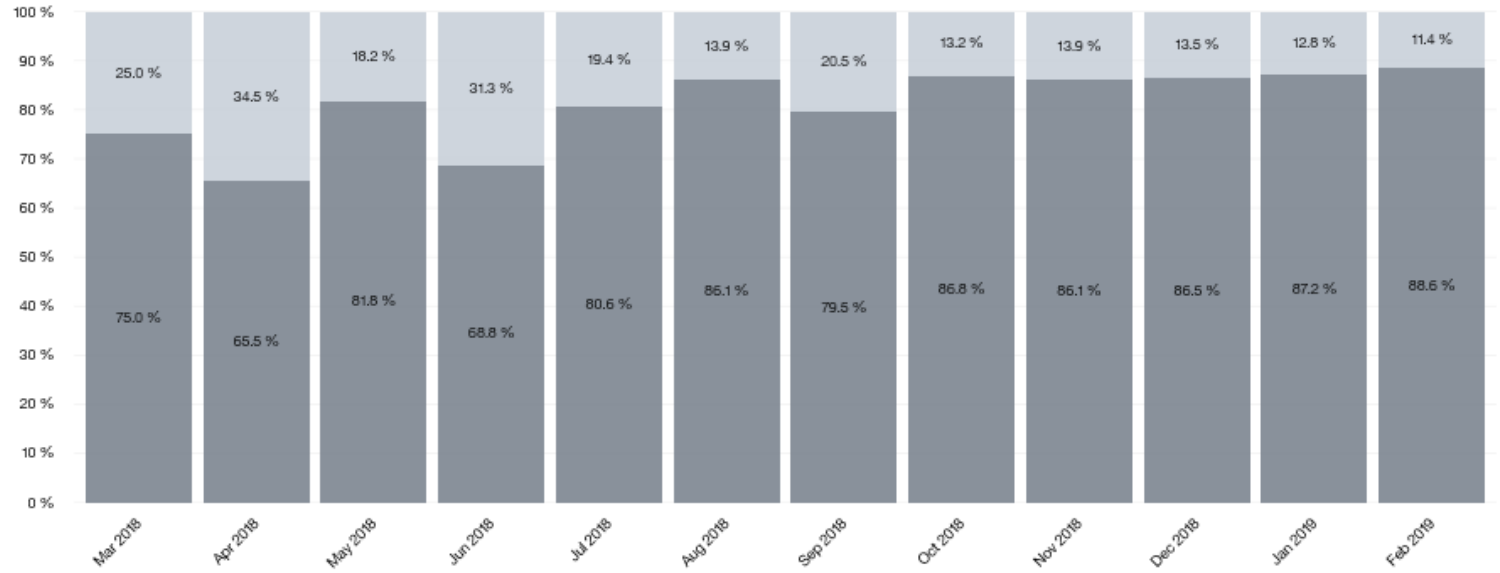
Face to Face Contacts Dashboard

Report Run Date: 10/25/2019

Contact Details by Caseworker

Number of Cases	Contact Made	Contact Missed	Ended in Month	Started in Month
Henry Reed	27	14	8	4
Jessica Popplewell	27	15	6	4
Ronda Maree	27	18	7	3
Tim Oesterling	36	19	6	4

Cases - Trend



My team is performing very well, although it is not equal across all members

How can I better distribute the cases among my team?

How can I help train Jessica better?

Intake | Outcome: Safety | Child Placement | Face to Face

Face to Face Contacts Dashboard

Report Run Date: 10/25/2019

Contact Details by Supervisor

Number of Cases	Contact Made	Contact Missed	Ende
Clarence Scott	117	66	
Jannet Maringly	61	31	
Leon Burns	103	52	
Marv			
Verno			

Intake | Outcome: Safety | Child Placement | Face to Face

Face to Face Contacts Dashboard

Report Run Date: 10/25/2019

Contact Details by Supervisor

Number of Cases	Contact Made	Contact Missed	Ended in Month	Started in Month
Clarence Scott	117	66	27	15
		31	5	11
		52	11	17
		32	10	8
		37	11	12

Intake | Outcome: Safety | Child Placement | Face to Face

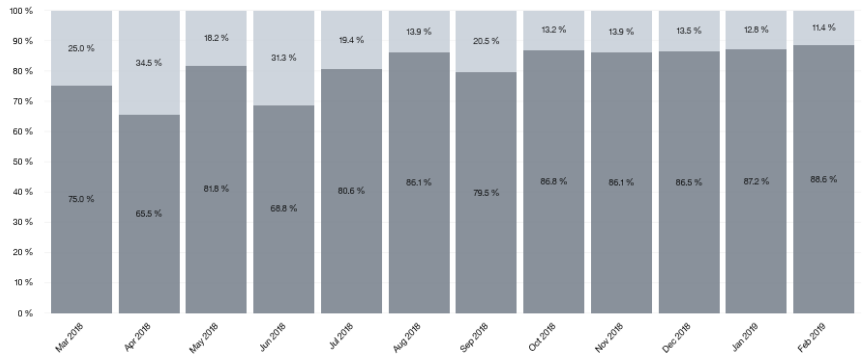
Face to Face Contacts Dashboard(2017)

Report Run Date: 10/25/2019

Contact Details by Region Caseworker

Number of Cases	Contact Made	Contact Missed	Ended in Month	Started in Month
Henry Reed	27	14	8	4
Jessica Popplewell	27	15	6	4
Ronda Maree	27	18	7	3
Tim Oesterling	36	19	6	4

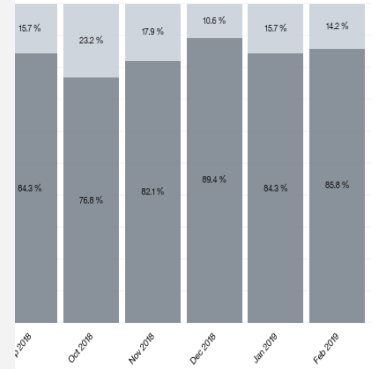
Cases - Trend



Contact Type

Contact Made Contact Missed

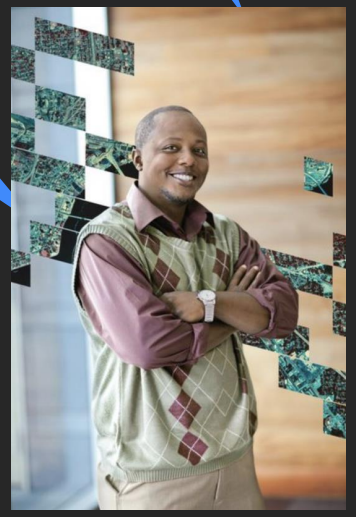
Simple Cognos Analytics dashboards prepared for webinar presentation.



or webinar presentation.

Are my case workers compliant with the policy mandates?

Where are the placements happening?



Clarence – Supervisor

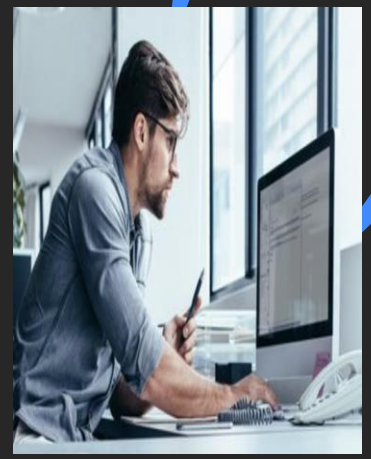
How do the county/office placement numbers look like?

Did I enter all the information? Am I missing something?

Tim – Case worker

Do we have enough resources necessary to

Am I measuring the right metric to effect the outcome?



Robert – Program Manager

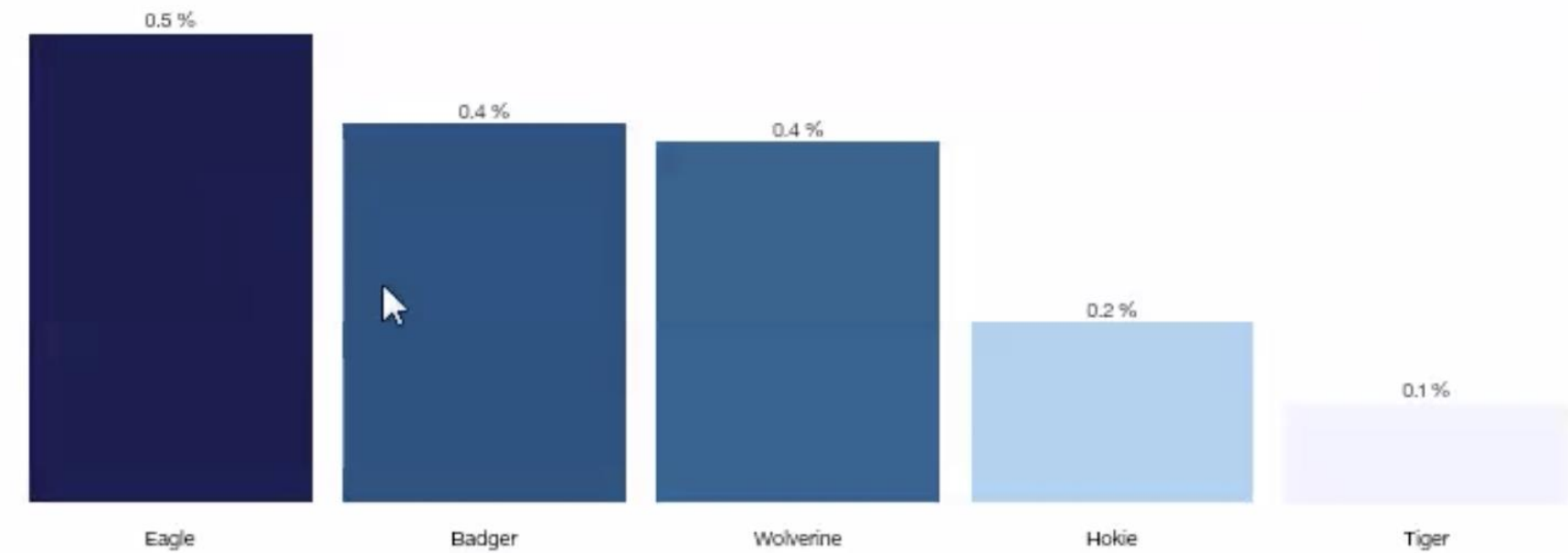
North Land Child Welfare Dashboard

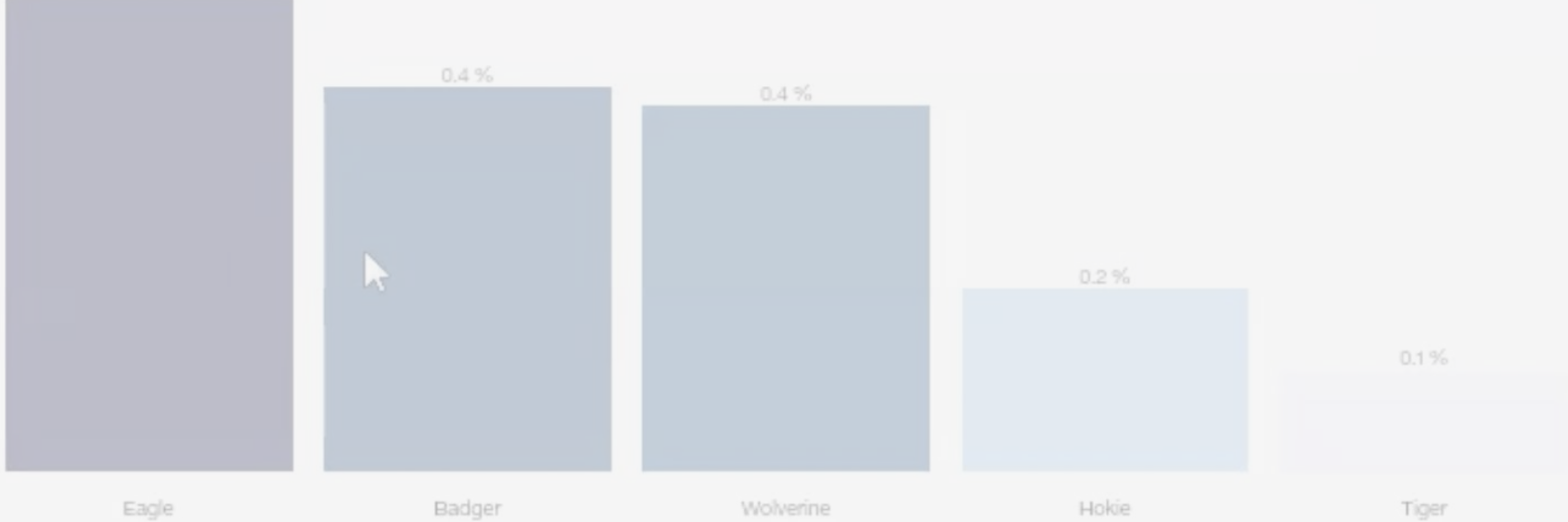
Report Run Date: 10/25/2019

Maltreatment Response Rate

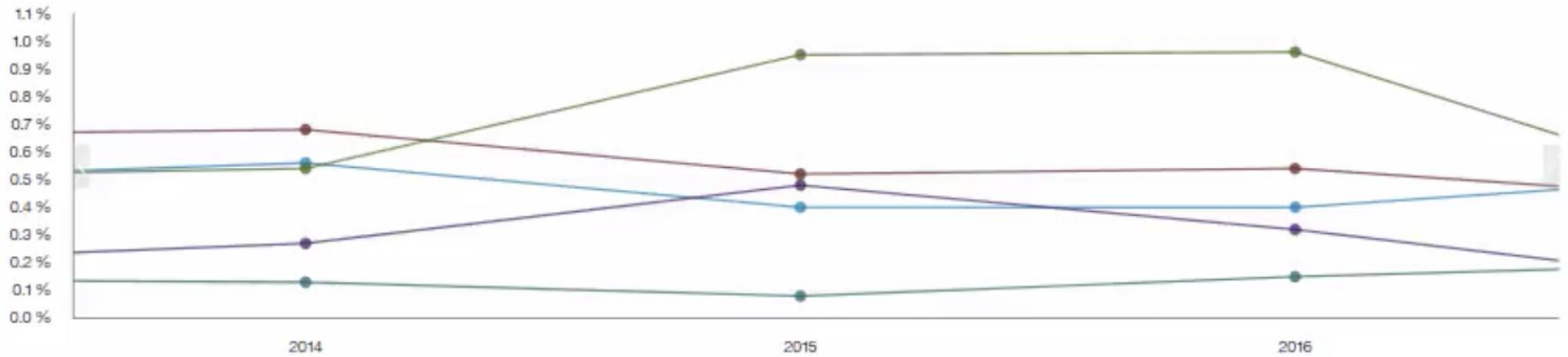
1.7 %

Maltreated While in Foster Care (2017)





Maltreated While in Foster Care Trend



Regions

Badger Eagle Hokie Tiger Wolverine

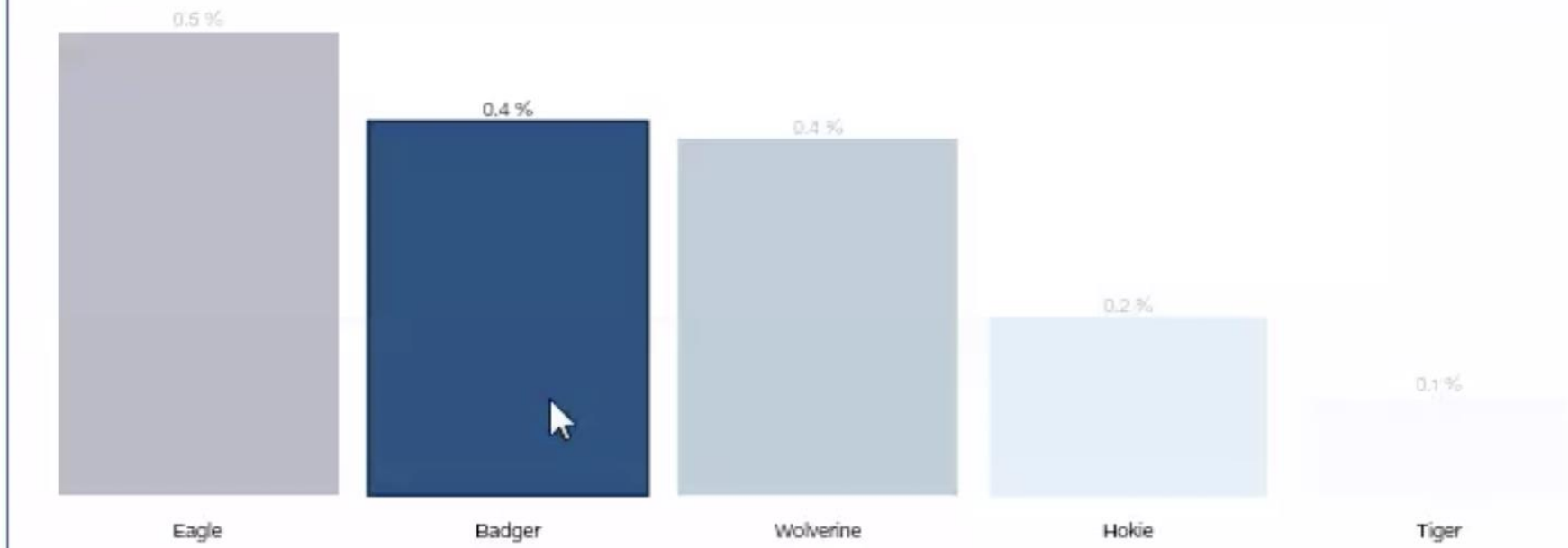
North Land Child Welfare Dashboard

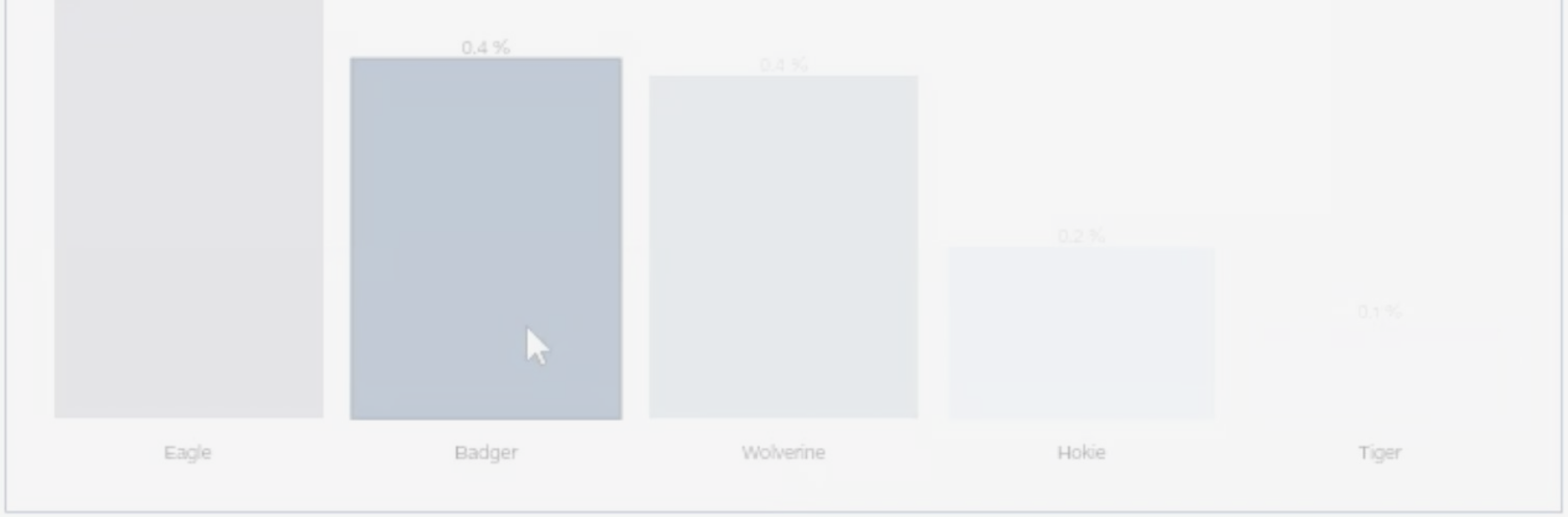
Report Run Date: 10/25/2019

Maltreatment Response Rate

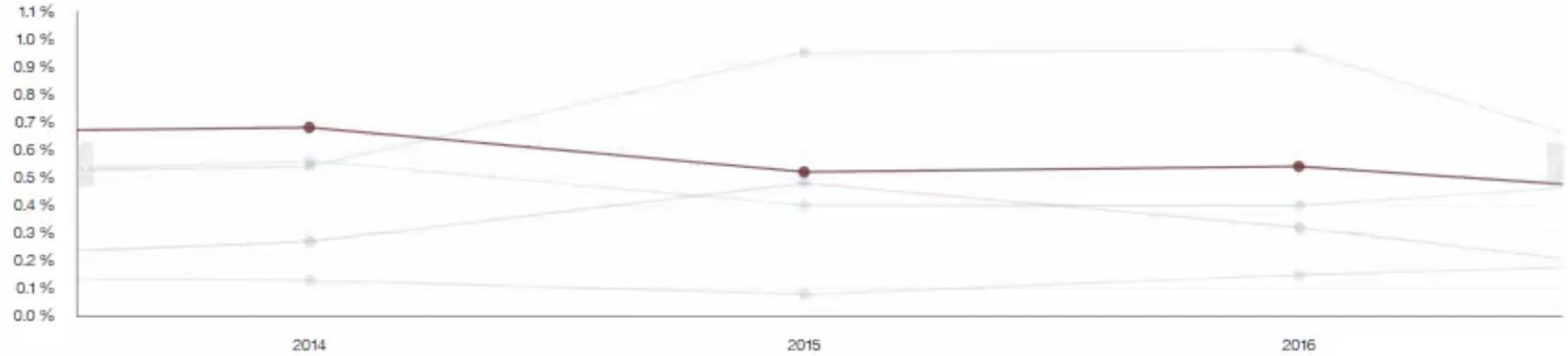
0.4 %

Maltreated While in Foster Care (2017)





Maltreated While in Foster Care Trend



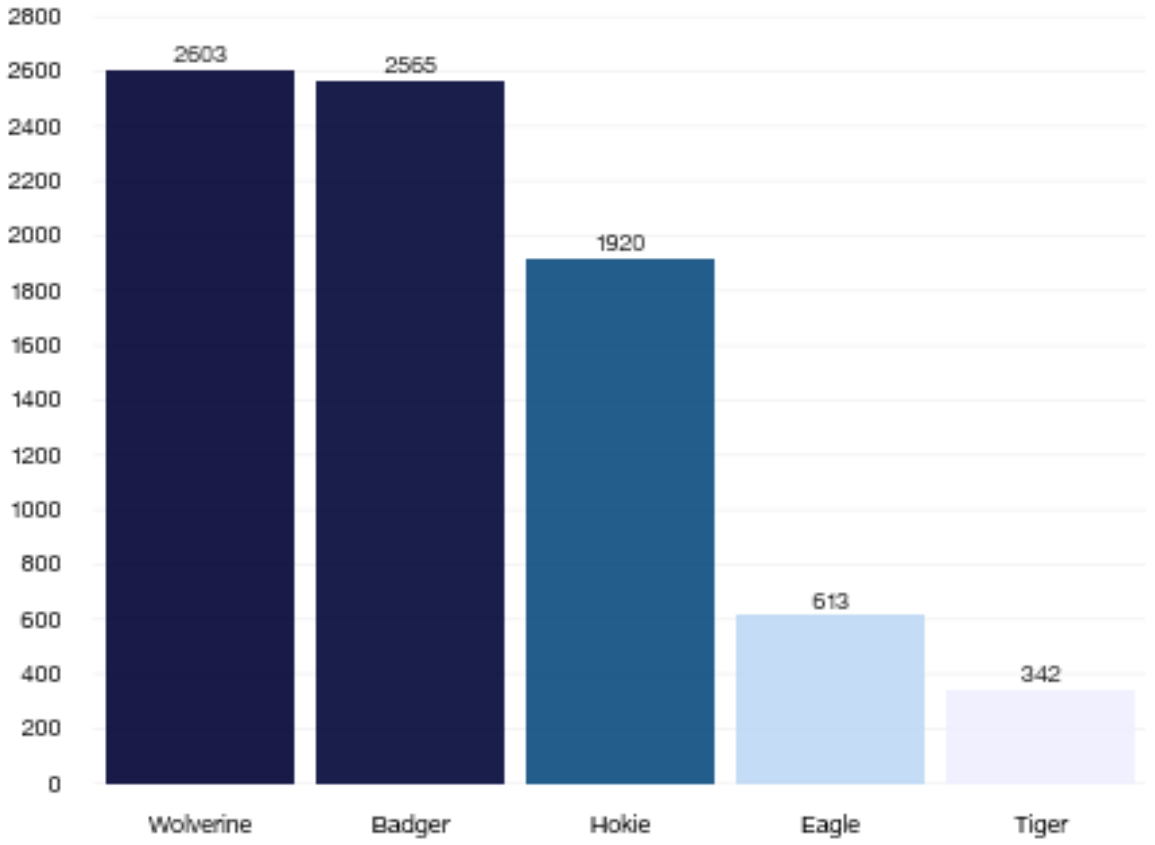
Regions

Badger Eagle Hokie Tiger Wolverine

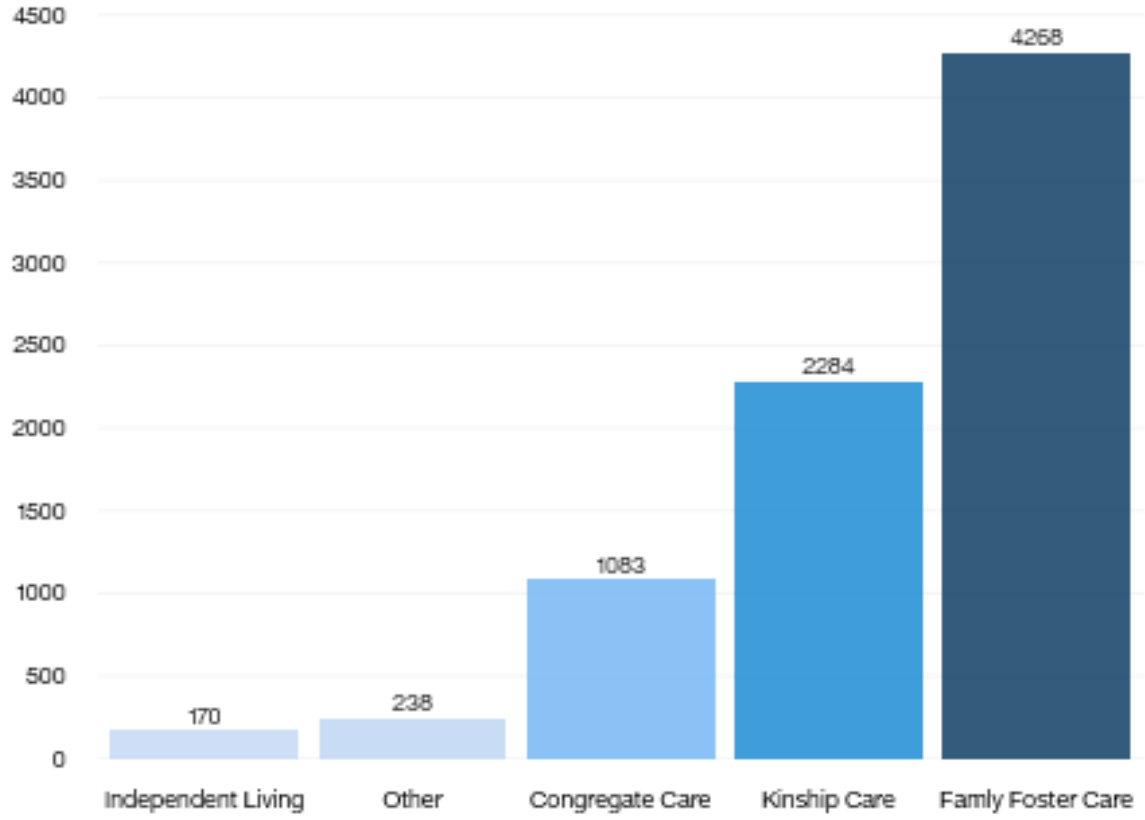
North Land Child Placement Dashboard

Report Run Date: 10/25/2019

Count by Region



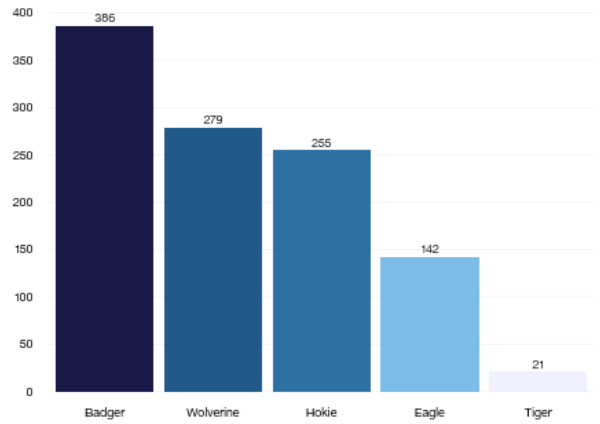
Count by Placement Type



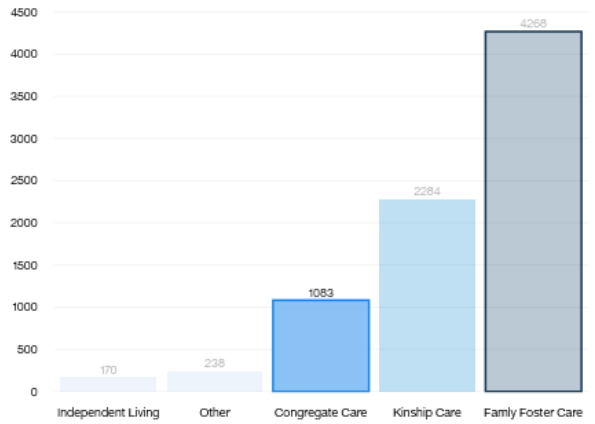
North Land Child Placement Dashboard

Report Run Date: 10/25/2019

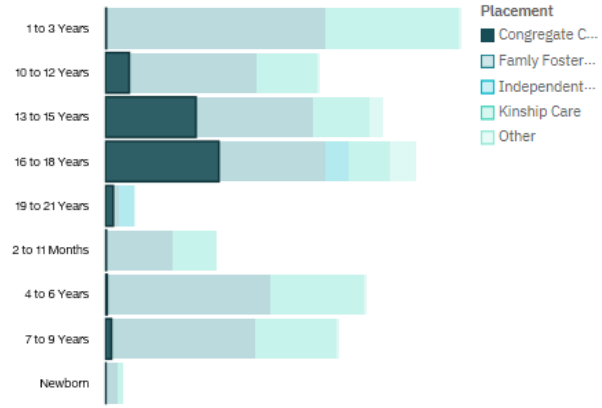
Count by Region



Count by Placement Type

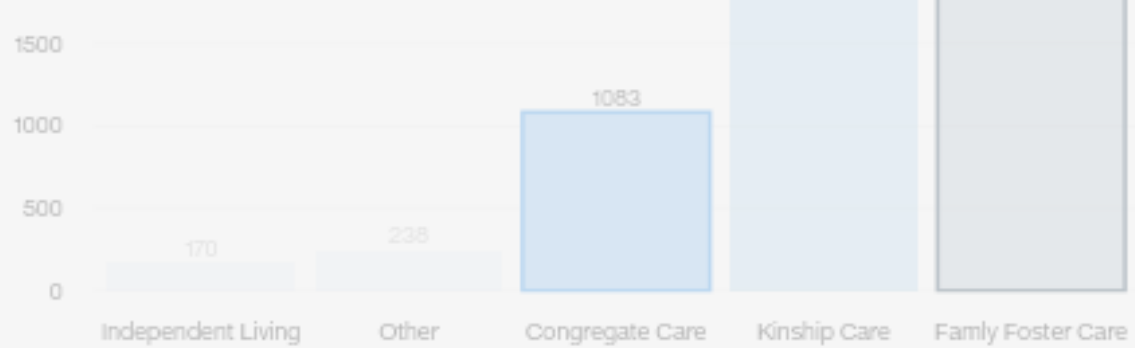


Count by Placement Type and Age Group

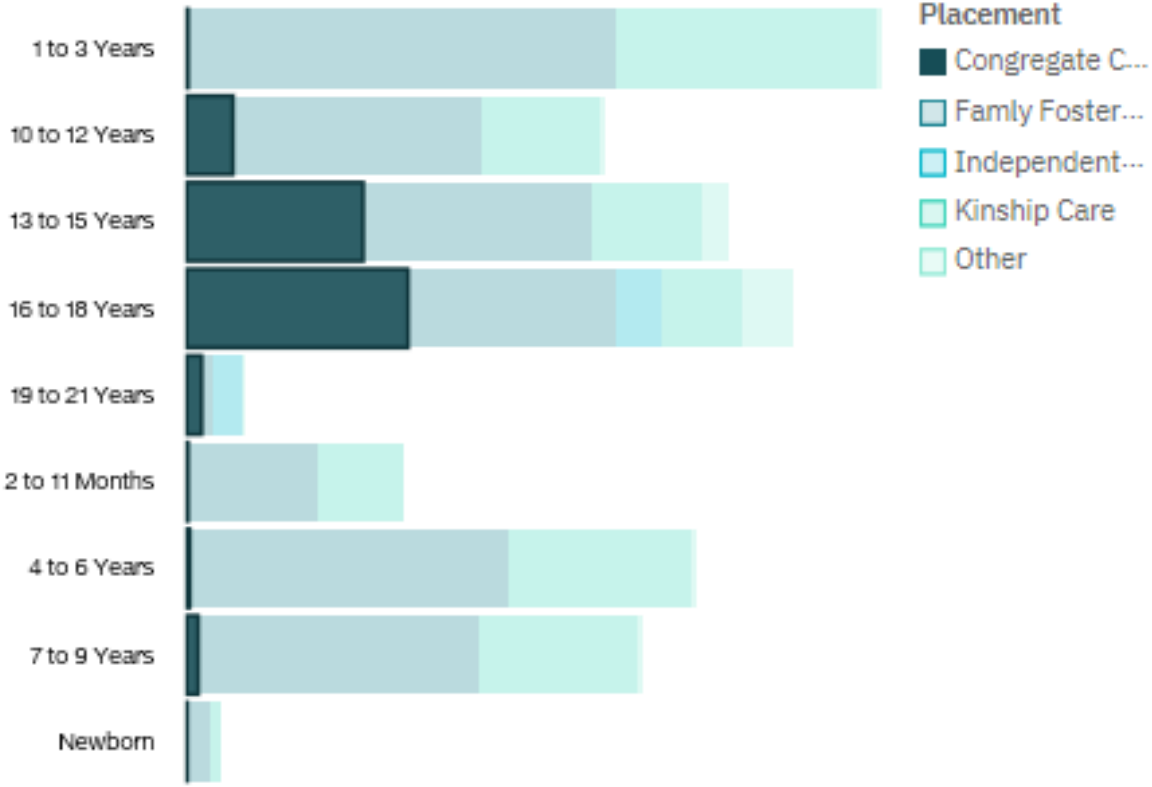


Count by Placement Type and Age Group

Children_in_Care	Years	13 to 15 Years	16 to 18 Years	19 to 21 Years	O
Congregate Care	105	401	503	34	
Famly Foster Care	568	519	472	26	
Kinship Care	266	248	183	0	
Other	11	62	120	6	
Summary	950	1230	1278	66	



Count by Placement Type and Age Group



Count by Placement Type and Age Group

Children_in_Care	Years	13 to 15 Years	16 to 18 Years	19 to 21 Years	O
Congregate Care	105	401	503	34	
Famly Foster Care	568	519	472	26	
Kinship Care	266	248	183	0	
Other	11	62	120	6	
Summary	950	1230	1278	66	

Confident that the metric can be tied to the outcome.

Compliance with policy mandates like Family First Prevention Act

Identify where placements are happening

Determine placement estimates

IBM Watson Health / © 2019 IBM Corporation

Do my case workers have all the information they need?

Are my case workers compliant with the policy mandates?

Clarence – Supervisor

How can I make sure that this new person will not hurt the child?

Do I have all the information needed to make the right decision?

Tim – Case worker

Background check conducted at the time of application is successful

Joan applies to be a foster parent

Background check is successful

Max is placed under Joan's care with current information

Max is placed under Joan's care

Integration to other data sources for most current information

Billy, relative of Joan, provides her address in the parolee system

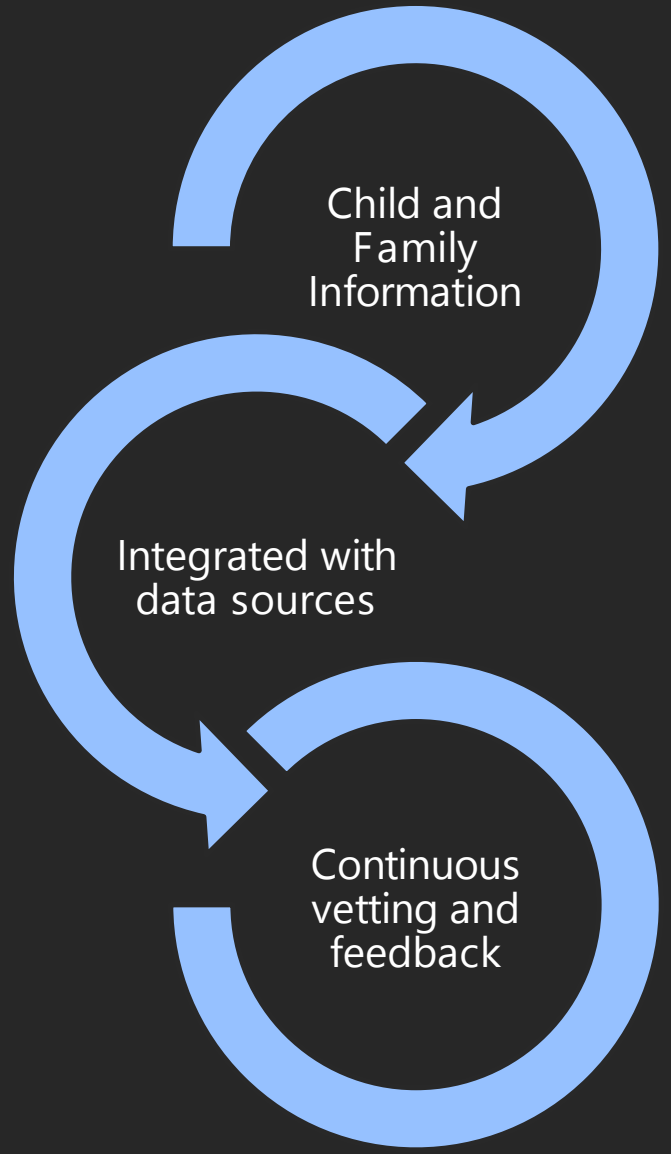
Without continuous vetting, the possibility of the child's safety could be at risk

Offender is in close proximity to Max

Billy, relative of Joan, provides her address in the parolee system

The right decision was made based on accurate information

I know I need to inform the family and possibly call for some police protection.



1 Recording client information

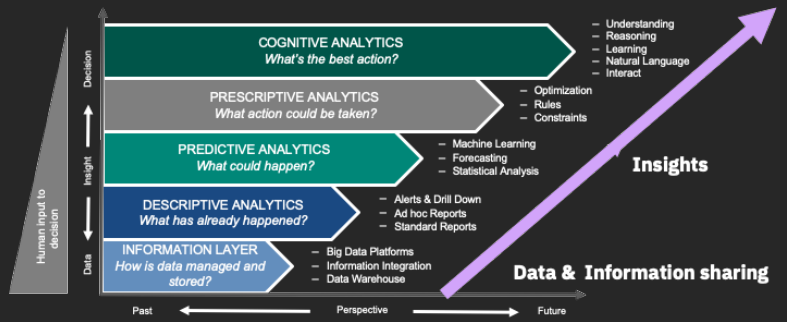
Effective and efficient design supports quality information gathering = quality data

2 Telling the story with Analytics

Meaningful insights to drive actionable outcomes

Continuous vetting of current information

Intuitive visualization to understand the story


COGNITIVE ANALYTICS
What's the best action?
– Understanding
– Reasoning
– Learning
– Natural Language
– Interact
PRESCRIPTIVE ANALYTICS
What action could be taken?
– Optimization
– Rules
– Constraints
PREDICTIVE ANALYTICS
What could happen?
– Machine Learning
– Forecasting
– Statistical Analysis
DESCRIPTIVE ANALYTICS
What has already happened?
– Alerts & Drill Down
– Ad hoc Reports
– Standard Reports
INFORMATION LAYER
How is data managed and stored?
– Big Data Platforms
– Information Integration
– Data Warehouse
Human input to decision
Decision
Insight
Data
Past
Perspective
Future
Insights
Proactive decision making
Data & Information sharing

Thank You!