

RO•ILS[®]

RADIATION ONCOLOGY
INCIDENT LEARNING SYSTEM

Sponsored by ASTRO and AAPM

CLARITY

PSO

A Patient Safety Organization

AGGREGATE DATA REPORT

Quarter 4, 2020

October 1 - December 31, 2020

Patient Safety Work Product

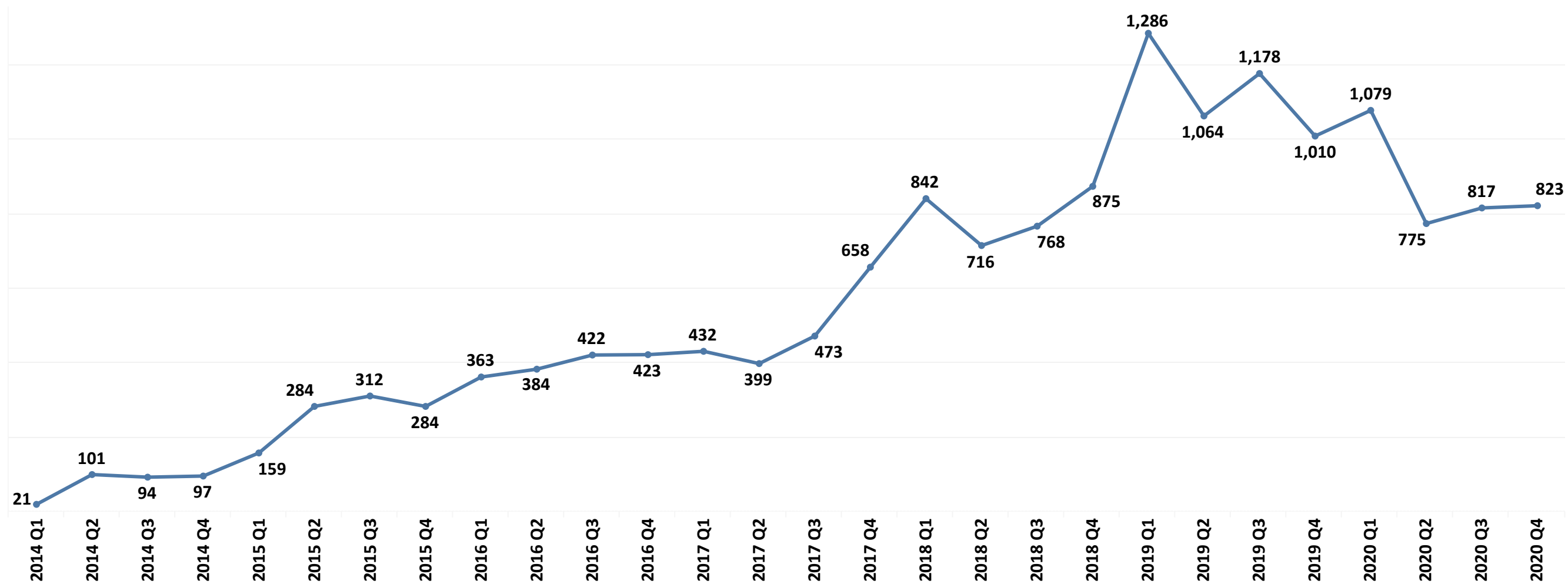
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Aggregate Report Card

The timeframes utilized throughout this report are based on the timepoint of event submission (i.e., when the event was initially entered into the RO-ILS Portal, when the “Submit Event” form was completed). The national aggregate database only includes events that have been reviewed and reported to the PSO, which occurs after submission. All information in this report represent data in the national database. For this reason, the amounts provided for previous timeframes may change as older events are reviewed and reported to the PSO.

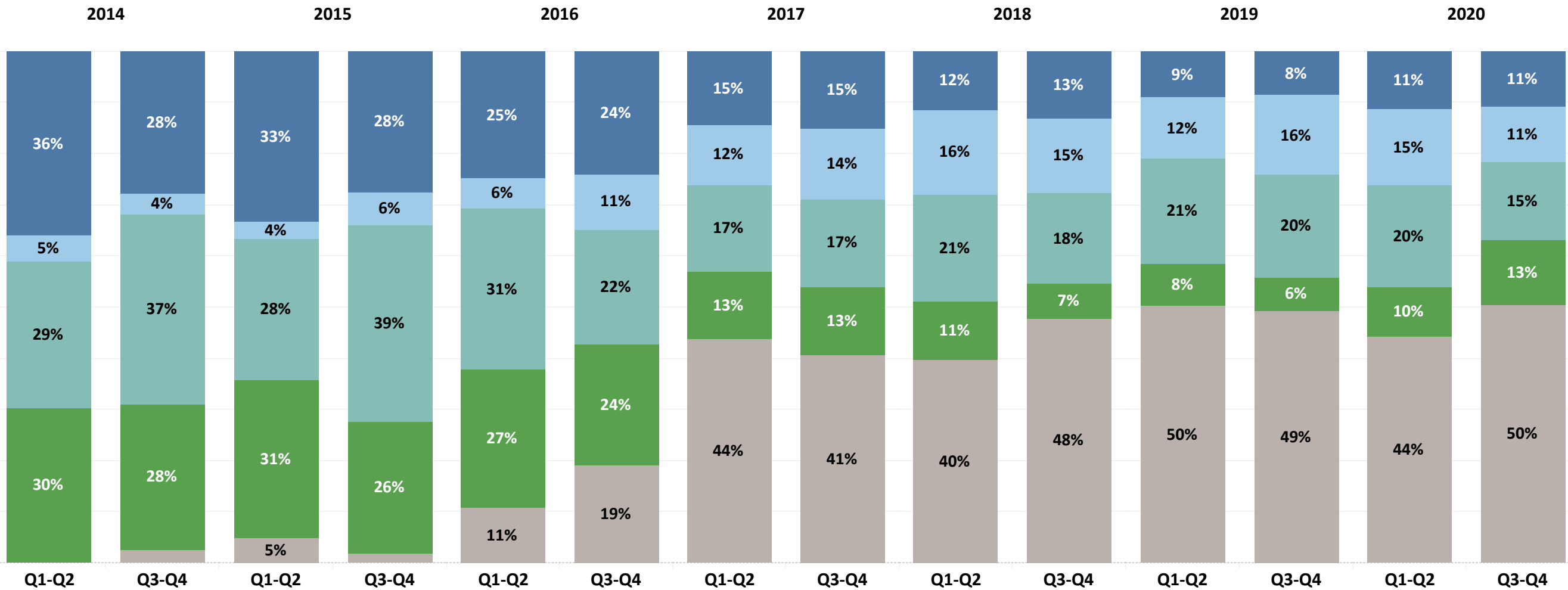
METRIC	Q3 2020	Q4 2020	AGGREGATE HISTORICAL SUM
Total Number Of Events	817	823	16139
Therapeutic Radiation Incident	83	96	2272
Other Safety Incident	85	92	2030
Near Miss	112	139	3375
Unsafe Condition	91	114	2057
Operational/Process Improvement	446	382	6405
Most Commonly Identified Workflow Step Where Event Occurred	Treatment Planning 41% (339/817)	Treatment Planning 36% (297/823)	Treatment Planning 31% (5064/16139)
Most Commonly Identified Workflow Step Where Event was Discovered	Treatment Planning 25% (204/817)	Treatment Delivery Including Imaging 38% (312/823)	Treatment Delivery Including Imaging 30% (4904/16139)
Most Commonly Identified Treatment Technique	IMRT/VMAT 45% (370/817)	IMRT/VMAT 36% (300/823)	IMRT/VMAT 30% (4847/16139)
Most Commonly Identified Dose Deviation for Therapeutic Radiation Incidents that Did Not Effect Multiple Patients	≤ 5% maximum dose deviation to target 85% (28/33)	≤ 5% maximum dose deviation to target 92% (46/50)	≤ 5% maximum dose deviation to target 86% (982/1148)

Aggregate: Total Number of Events Reported to PSO by Quarter Submitted



This graph displays how many events were submitted, reviewed, and reported to the PSO per quarter based on the date of submission.

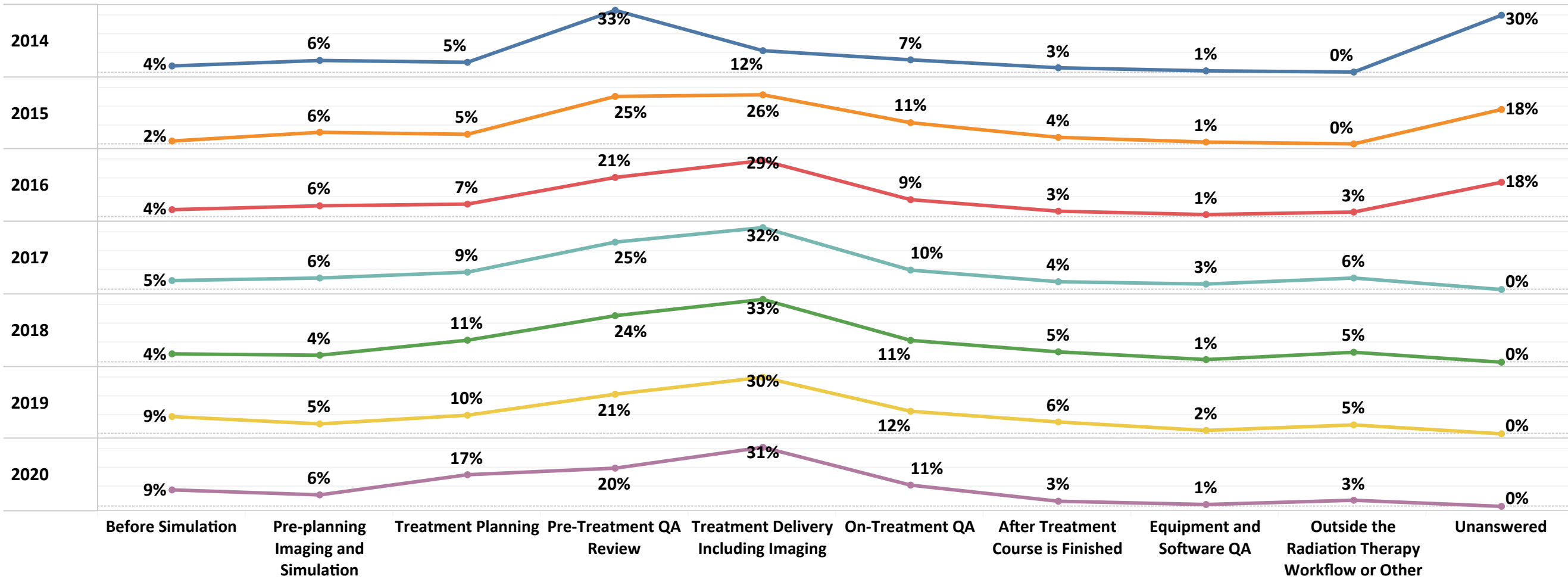
Aggregate: Event Classification



This graph depicts the distribution of data for data element #104 (*Event_Classification*) on a bi-annual basis. The "Operational/Process Improvement" answer option became available in the Q3 2016 data element update.

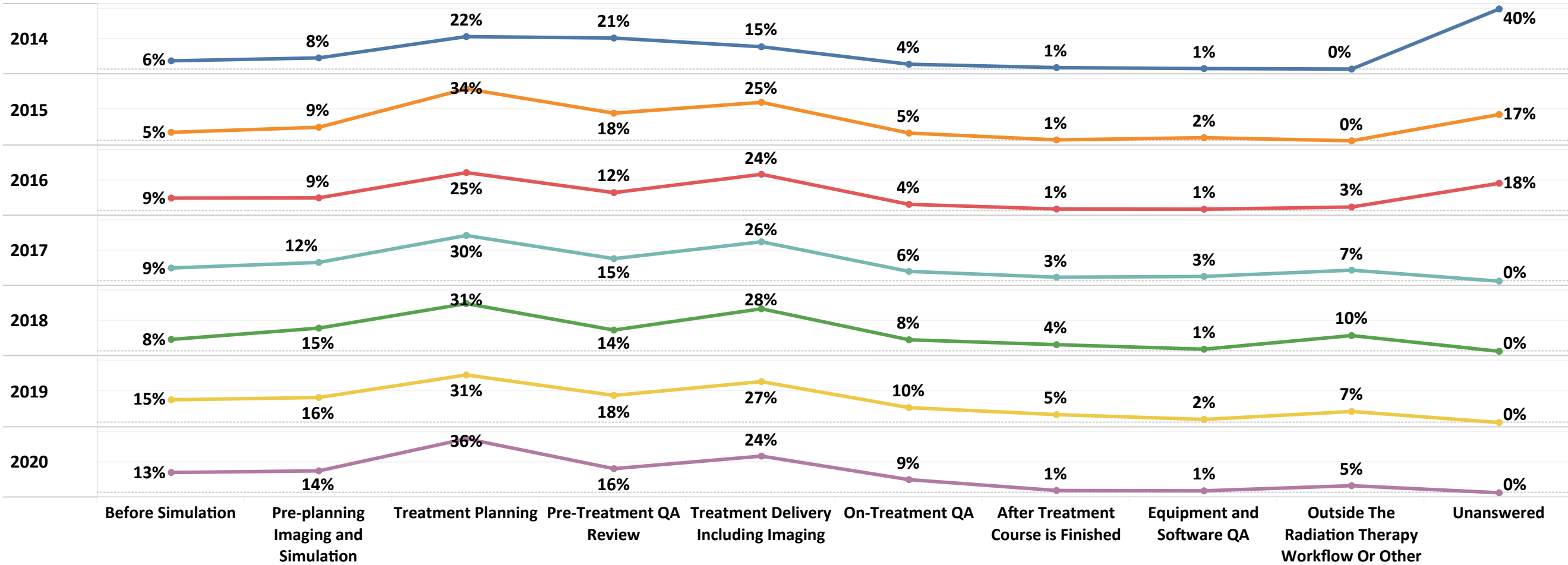
■ Therapeutic Radiation Incident
 ■ Other Safety Incident
 ■ Near-miss
 ■ Unsafe condition
 ■ Operational/Process Improvement

Aggregate: Workflow Step Where Event Discovered



This data is based on data element #207 (*Discovered_Workflow*), presented in yearly increments. As a part of the Q3 2016 data element update, this question became required and an answer option of "Outside the Radiation therapy Workflow or Other" was added.

Aggregate: Workflow Step(s) Where Event Occurred



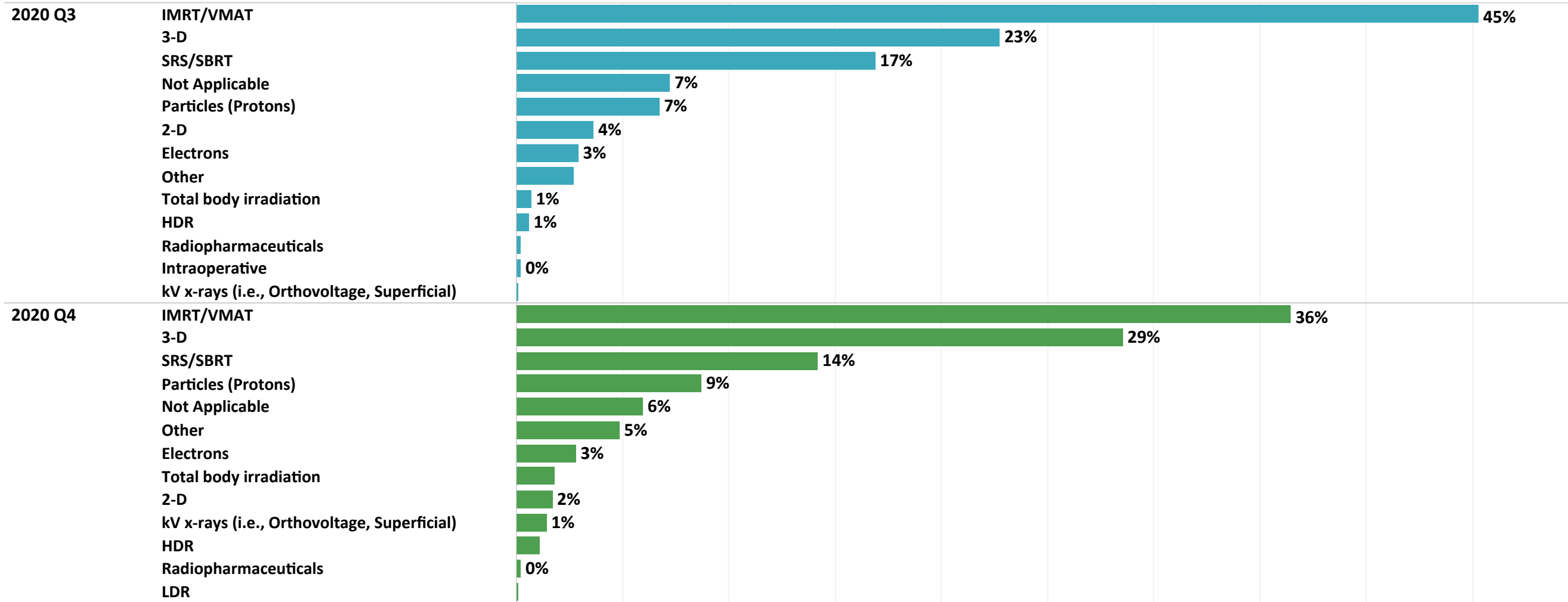
This graph depicts the frequency of answer options for data element #208 (*Occurred_Workflow*) based on the calendar year it was submitted. Users have the option to select more than one answer option, therefore, there is a potential for each year's total percentage to be greater than 100%. As a part of the Q3 2016 data element update, this question became required and an answer option of "Outside the Radiation therapy Workflow or Other" was added.

Aggregate: Workflow Step Where Event Occurred & Event Discovered

<u>Quarter</u>	<u>Discovered Workflow</u>	<u>Occurred Workflow</u>									Grand Total
		Before Simulation	Pre-planning Imaging and Simulation	Treatment Planning	Pre-Treatment QA Review	Treatment Delivery Including Imaging	On-Treatment QA	After Treatment Course is Finished	Equipment and Software QA	Outside The Radiation Therapy Workflow Or Other	
2020 Q4	Before Simulation	90%	5%							5%	100%
	Pre-planning Imaging and Simulation	45%	47%	3%	3%					2%	100%
	Treatment Planning	5%	16%	71%	5%	1%	1%			1%	100%
	Pre-Treatment QA Review	5%	11%	47%	33%	1%			1%	1%	100%
	Treatment Delivery Including Imaging	2%	6%	24%	9%	55%	1%			3%	100%
	On-Treatment QA	3%	7%	19%	11%	29%	30%			1%	100%
	After Treatment Course is Finished	5%	10%	24%	19%	10%	10%	19%		5%	100%
	Equipment and Software QA	17%				17%			50%	17%	100%
	Outside the Radiation Therapy Workflow or Other					10%				90%	100%

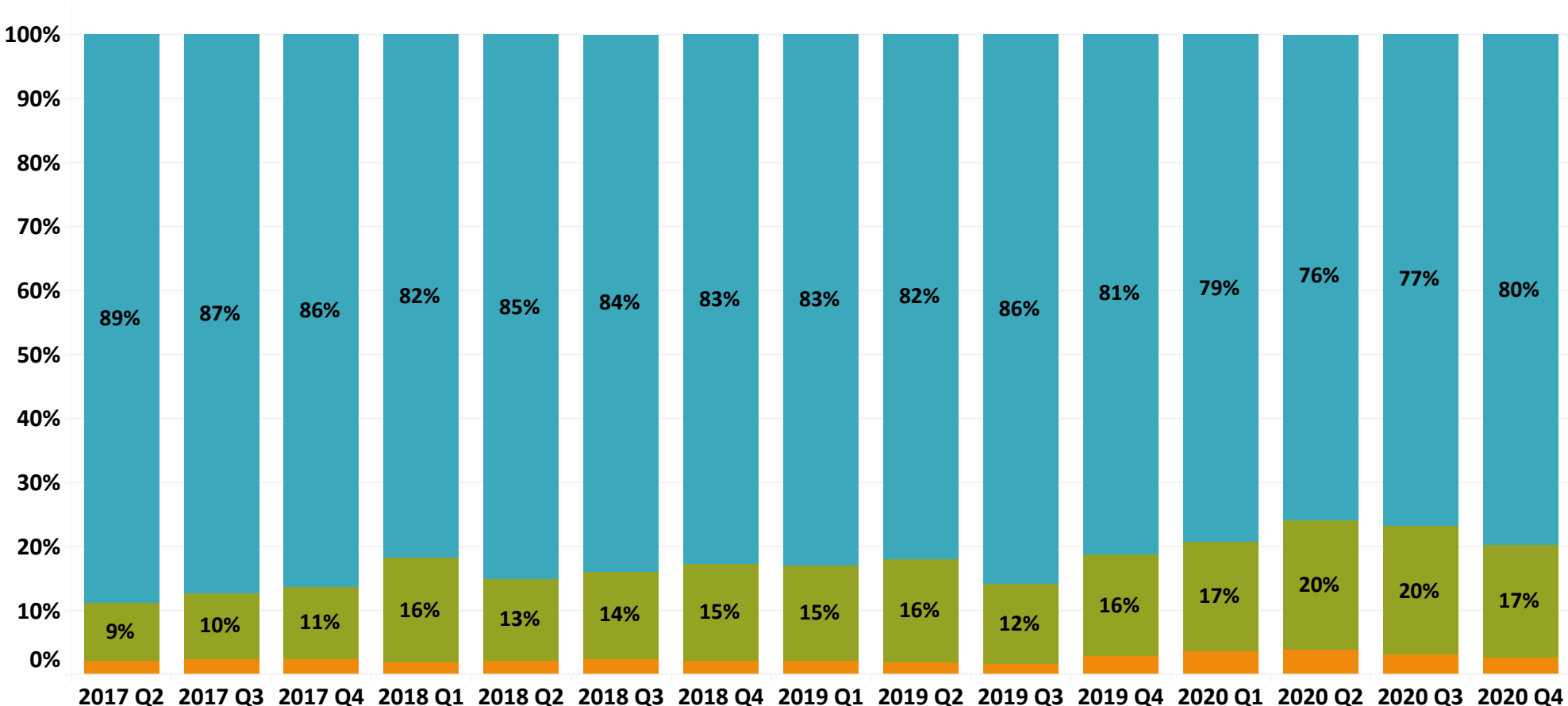
This graph displays the overlap of where in the workflow events occurred (208. Occurred_Workflow) and where it was discovered (207. Discovered_Workflow) for the most recent quarter. The percentage is based on the total number of events that were discovered in that workflow step (e.g., of events that were discovered “before simulation”, X% occurred “before simulation”).

Aggregate: Treatment Technique(s)



This graph demonstrates the distribution of answers for data element #106 (*Tx_Technique*) per quarter for the last two quarters. Users may be select more than one technique if pertinent to the event and thus the quarterly percentage total may be greater than 100%.

Aggregate: Significance Scale



Quarter	Mild	Moderate	Severe
2017 Q2	89%	9%	2%
2017 Q3	87%	10%	2%
2017 Q4	86%	11%	2%
2018 Q1	82%	16%	2%
2018 Q2	85%	13%	2%
2018 Q3	84%	14%	2%
2018 Q4	83%	15%	2%
2019 Q1	83%	15%	2%
2019 Q2	82%	16%	2%
2019 Q3	86%	12%	2%
2019 Q4	81%	16%	3%
2020 Q1	79%	17%	4%
2020 Q2	76%	20%	4%
2020 Q3	77%	20%	3%
2020 Q4	80%	17%	3%

This graph shows the frequency of answers for data element #225 (*Significance_Scale*) which asks, "In terms of risk to patient safety, how significant was this event?" This question was introduced in Q3 2016. The graph and table provide the severity percentages per quarter since 2017.

■ Mild
 ■ Moderate
 ■ Severe