2020 Census: Decennial Field Quality Monitoring (DFQM)

2021 NAS Panel to Evaluate the Quality of the 2020 Census:
Date: 7/20/2021

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2020 Census: DFQM
DFQM Goals and Monitoring Priorities

Goals

Monitor and analyze near real-time data to support field data collection

- Increase efficiency of operations

- Improve data quality

Monitoring Priorities

Outliers in Production and RI — **1**

Stale Alerts — **2**

Assessment Scores & Observations — **3**

Ad Hoc Issues & Data Requests — **4**

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2020 Census: DFQM
DFQMs Team and Operations Monitored
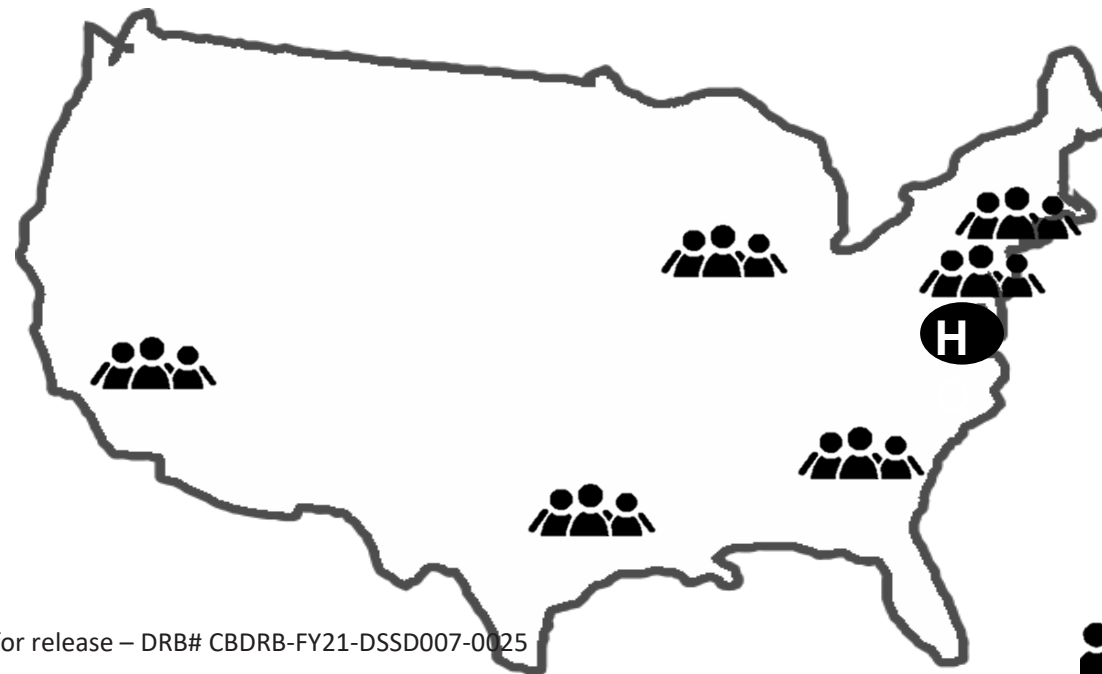
DFQM Teams

HQ:
- Program Director
- Two Program Coordinators
- Two Data Coordinators
- Three Support Staff
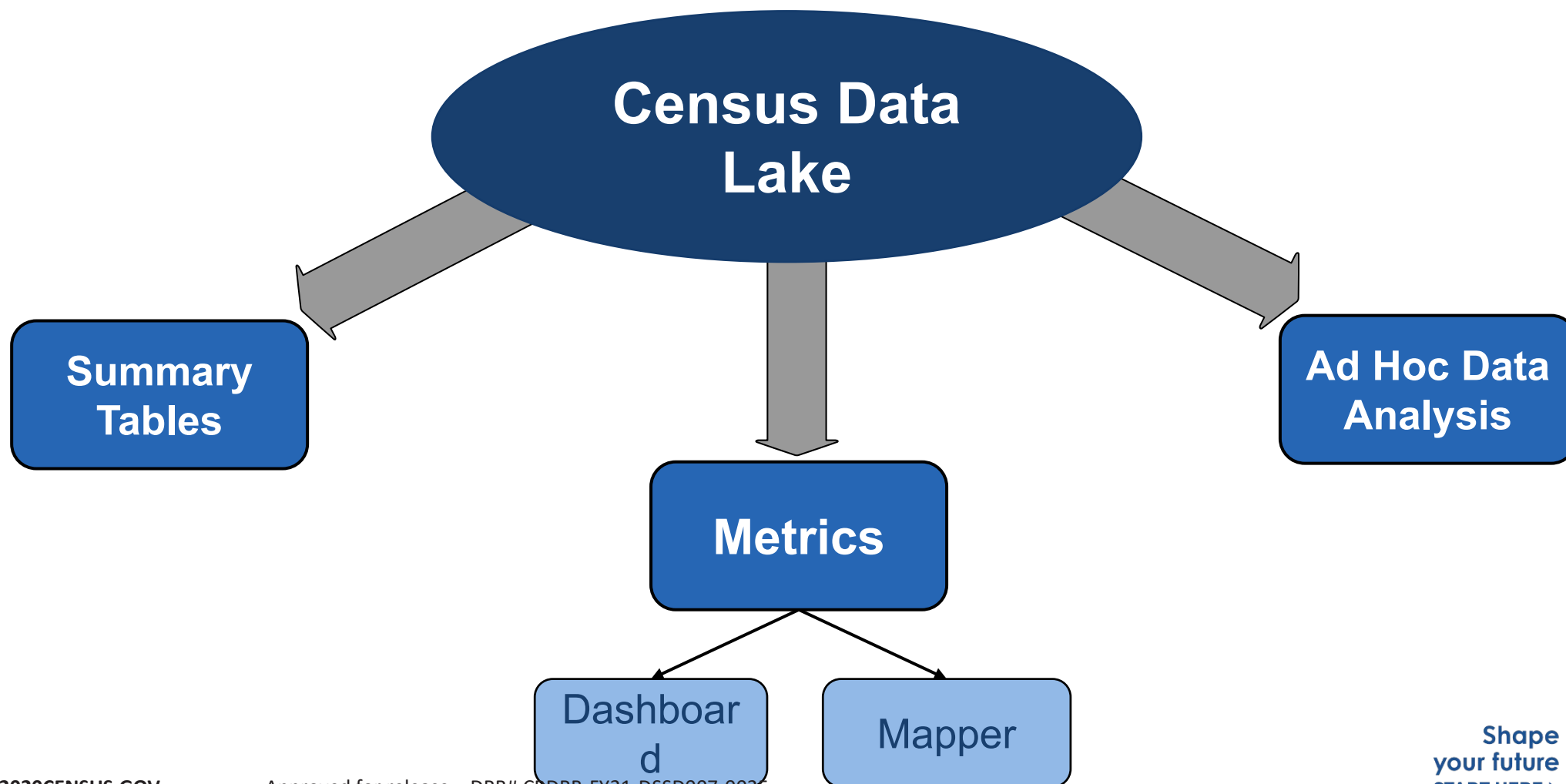
RCCs:
- Program Coordinator
- 4-6 Data Analysts

Operations Monitored

- Address Canvassing
- Update Leave
- NRFU

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2020 Census: DFQM
Use of Census Data Lake

Census Data Lake

Summary Tables

Ad Hoc Data Analysis

Metrics

Dashboard

Mapper

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2020 Census: DFQM
Metrics: DFQM NRFU Production and Reinterview

Metric Name	Calculation	Why this metric?
NRFU Completed Ratio	Total Complete / NRFU Current Workload	Measures progress in completing assigned NRFU workload
NRFU Deleted Ratio	Deleted Units / Total Field Closed	May indicate enumerators deleting cases rather than working them in order to save time
NRFU Enumerated Ratio	Total NRFU Enumerated / NRFU Current Workload	Measures progress in conducting an enumeration from assigned NRFU workload
NRFU Enumerated via Proxy Ratio	Total Enumerated via Proxy / Total Enumerated	Enumerators may act as proxy themselves, go to proxy too soon, or not use proxies when prompted. Proxy interviews may also be less reliable than HH enumerations. RTAD asked us to track this
Max Attempts Reached w/ Minimal Data Ratio	Max Att. Reached w/ Minimal Data / Total Field Closed	Enumerators may be going to close out procedures too quickly or not asking all survey questions
NRFU RI Cases in Reinterview Ratio	NRFU RI Current Workload / NRFU Current Workload	May indicate insufficient quality checks
NRFU RI Completed Ratio	NRFU RI Complete / NRFU RI Current Workload	Measures progress in completing assigned NRFU RI workload
NRFU RI Unresolved Ratio	# Unresolved RI cases / Total Complete in Reinterview	RI cases that cannot be resolved cannot be used to verify original interviews, decreasing the efficacy of the RI operation, and reducing the ability to quality check

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2020 Census: DFQM
Tools: Metrics Dashboard

RCC	ACO	ACO Name	CFMA	CFSA	Workload	Total # Outliers	NRFU Rank Score	NRFURI Rank Score	Combined Rank Score	NRFU Completed Std. Score	NRFU Deleted Std. Score	NRFU Enumerated Std. Score	NRFU Enumerated via Proxy Std. Score	NRFU Max Attempts Min Data Std. Scor	NRFU RI Cases in Reint Std. Score	NRFU RI Completed Std. Score	NRFU RI Unresolved Std. Score
					7,163	3	9.29	4.53	13.82	-5.52			3.77			-4.53	
					997	3	11.95	0.00	11.95	-3.38	4.47	-4.10					
					3,748	3	7.17	4.51	11.68		-3.46		3.71			-4.51	
					3,603	2	0.00	11.64	11.64						7.76	-3.88	
					8,544	3	10.84	0.00	10.84	-3.36	3.09	-4.39					
					8,417	3	3.04	6.87	9.91	-3.04					3.09	-3.78	
					9,177	2	6.50	3.28	9.78	-6.50						-3.28	
					168	2	9.34	0.00	9.34		6.30	-3.04					
					752	2	9.34	0.00	9.34	-4.18	5.16						
					5,937	1	0.00	9.12	9.12						9.12		
					5,674	2	3.46	5.54	9.00				3.46		5.54		
					6,644	2	4.40	4.56	8.96				4.40		4.56		
					2,707	2	0.00	8.83	8.83						4.85	-3.98	
					12,411	2	0.00	8.79	8.79						5.31	-3.48	
					5,489	2	4.32	4.46	8.78				4.32		4.46		
					5,317	2	4.81	3.94	8.75		4.81						3.94
					8,378	2	8.59	0.00	8.59		5.03	-3.56					
					172	2	8.48	0.00	8.48	-4.95				3.53			
					4,540	2	4.27	4.15	8.42				4.27		4.15		

Last Saved Date 9/15/2020 8:15

Hide Data **Unhide Data** **RUN IT!**

*Note: CFMA and CFSA have been removed.

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2020 Census: DFQM
Tools: Metrics Mapper
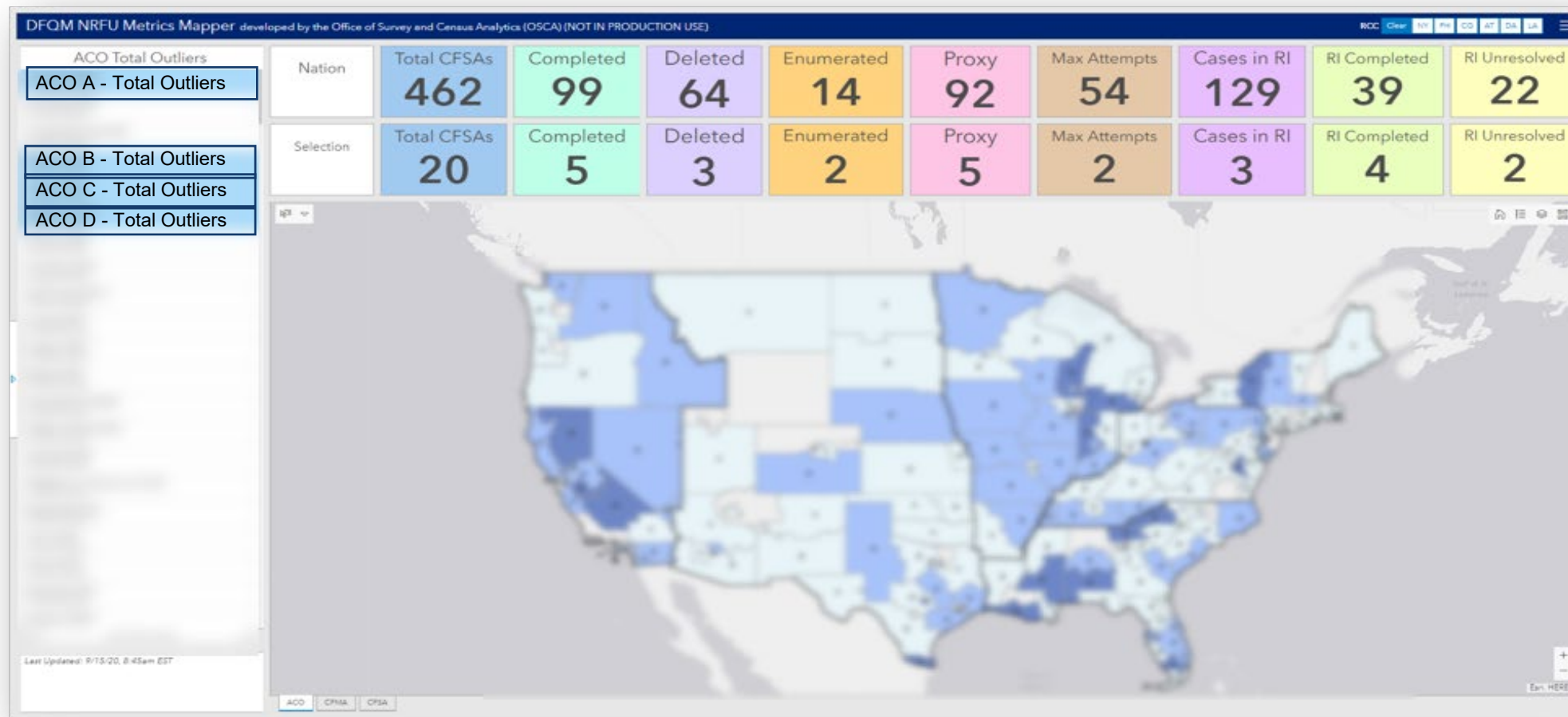
2020 Census: DFQM
Open Stale Alerts for NRFU

- The Operational Control System (OCS) generated alerts that notified supervisors and managers of situations that require immediate attention (Ex – No Proxy Attempt, Long Distance, Unconfirmed Delete)
- Stale alerts were a notification that an alert had not been resolved within 3 days

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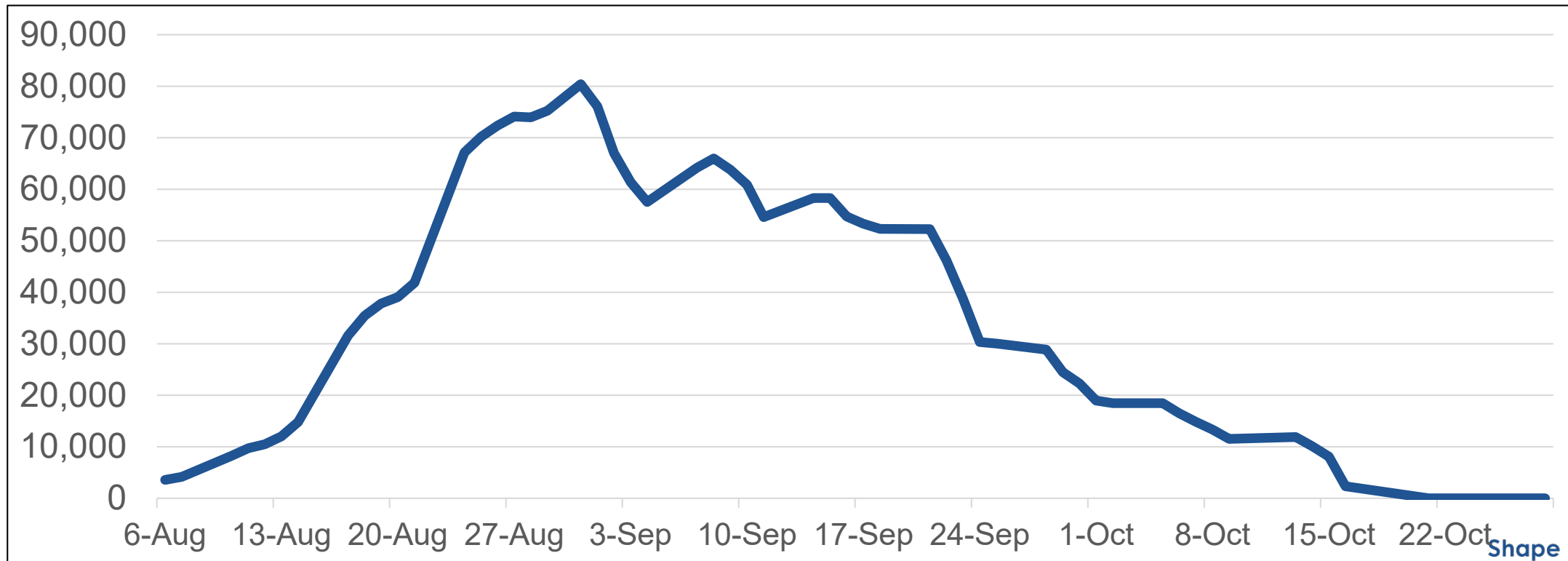
2020 Census: DFQM
Enumerator Assessments and Observations

Completed NRFU Assessment	332,000	100%
Passed Assessment	289,000	87.0%
Failed Assessment, Worked, Observed	23,000	6.9%
Failed Assessment, Never Worked	12,000	3.6%
Failed Assessment, Worked, Not Observed	8,000	2.4%

*97.5 % of Enumerators who completed the NRFU Assessment passed, were observed, or never worked
** Percentages do not add to 100% due to rounding to thousands

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2020 Census: DFQM
Ad Hoc Monitoring and Data Requests

- **HQ:**
  - University Area Self Response Rates
  - Enumerations by Proxy
  - Enumerators Working without Completing Training or the Final Assessment
  - Awards Program
  - Daily NRFU Completion Rates to the Fusion Center
  - Weekly ACO Self Response Rates

- **RCCs:**
  - Mapping and Reports on Completion Rates
  - Traveling Enumerators to include hours worked and productivity
  - Hiring, Fingerprinting and Training timelines and reports
  - Observation Forms Tracking
  - COVID Issues and Restrictions Tracking
  - Staffing Reports including availability and hours worked by enumerators
  - Self Response Rate Reports
  - Short Interview Report
  - Deletes and Vacants Report

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DFQM made the 2020 Census more efficient and increased the quality of the field data collection.

- Detected outliers in data collection and provided rapid feedback to RCC and ACO management. Helped ensure isolated issues didn't become larger.

- Brought a systematic process to monitor and address alerts.

- Tracked the status of enumerators who failed the NRFU assessment and attempted to ensure that they were observed or did not work.

- Provided customized, on-demand data tabulations and analysis to increase the efficiency of the field data collection production operations.

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Questions?

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