Research Quality Management at Duke
Innovate and implement research quality best practices

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BACKGROUND

Academic institutions operate within a broad range of highly specialized disciplines, across multiple departments, centers and institutes. This diverse environment fosters research synergies and interdisciplinary innovations but poses a challenge to any centralized approach to research quality oversight.

At the Duke University School of Medicine (DUSOM), **we developed a central resource for research quality management, and then partnered with each department, center and institute to create unit-level research quality management programs.**

PURPOSE

This program seeks to build local, unit-based infrastructure in the form of Research Quality Teams (RQTs) to ensure compliance as well as to serve as the primary node of communication and the resource for ensuring data management best practices and accountability for faculty and staff engaged in research in the unit.

The program applies five principles to strengthen research culture that create an inclusive, empowering, comprehensive, pragmatic and multi-faceted approach to research integrity.

The foundation for this program was to build faculty-administrator partnerships that serve to facilitate issues that arise at the local level and to connect researchers and research groups to the Duke Office of Scientific Integrity (DOSI).
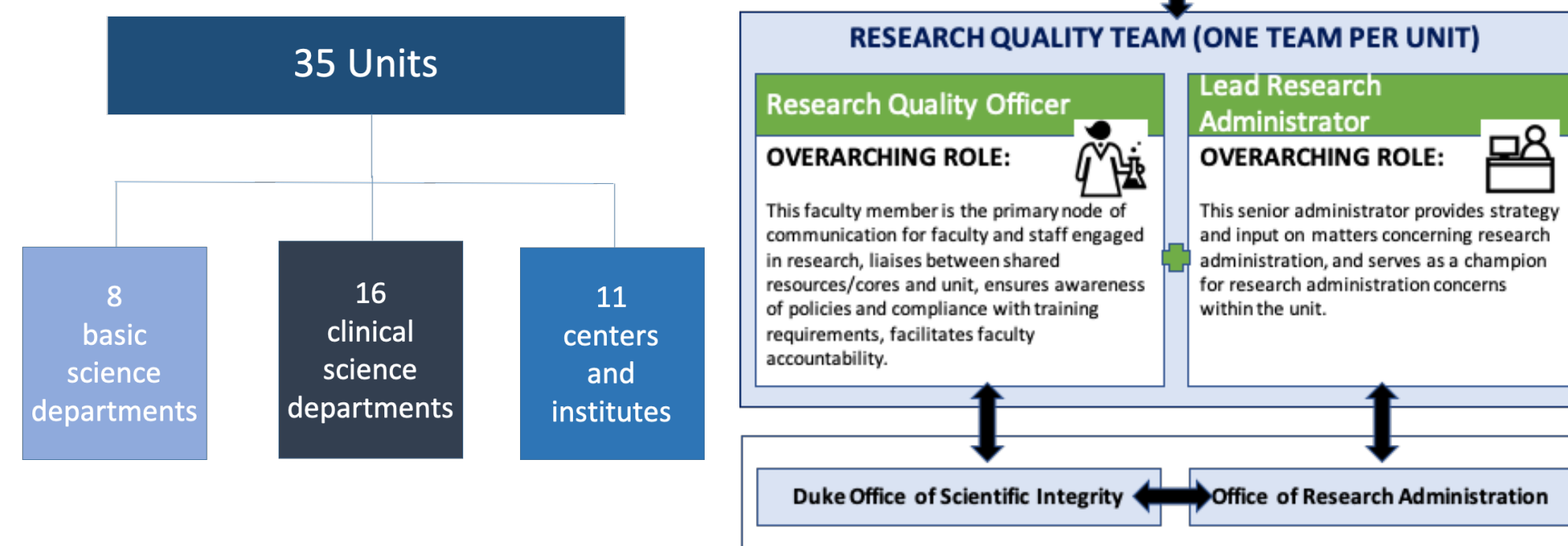
Principles of RQMP

Inclusive
All stakeholders need to participate

Empowering
Empower community to speak up

Comprehensive
Education, oversight and accountability

Pragmatic
Provide resources and tools to make it "easy" to do the right thing

Multi-faceted
Holistic approach across all dimensions of research integrity

APPROACH

Unit-based Research Quality Teams (RQTs), comprised of a lead research administrator (LRA) and one faculty research quality officer (RQO), were established in each department, center and institute in the DUSOM. The oversight responsibilities of the RQO and LRA are generally split between research and research administration, respectively.
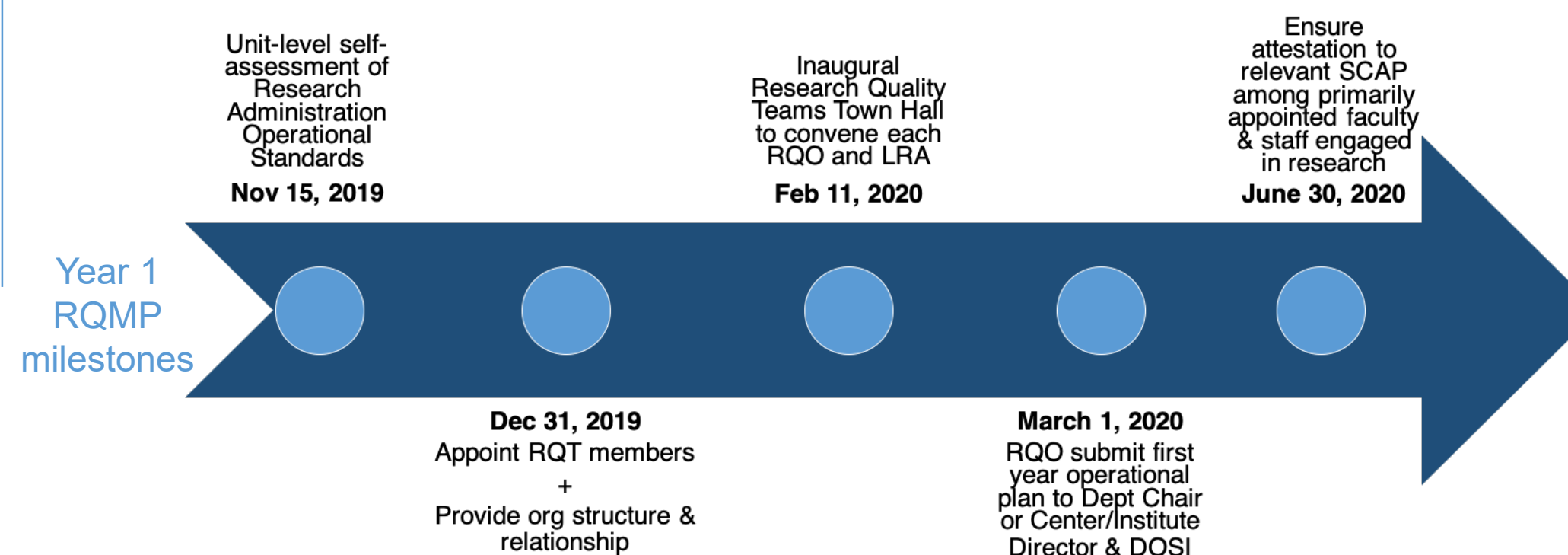
Milestones for each RQT were set such that a unit-level self-assessment of research administration was conducted, RQTs were designated, the organizational relationship of between the RQO and LRA were articulated, and operational plans for measuring success were reported from each department, center and institute (35 units). RQTs were convened during year 1 in a townhall-style setting where expectations were set, and experiences and expertise were shared across teams. The structure and function of the RQTs is outlined in the diagram.

Structure of the Research Quality Management Program

35 Units
- 8 basic science departments
- 16 clinical science departments
- 11 centers and institutes

Individuals within the research unit (department/center/institute)

RESEARCH QUALITY TEAM (ONE TEAM PER UNIT)

Research Quality Officer
OVERARCHING ROLE:
This faculty member is the primary node of communication for faculty and staff engaged in research, liaises between shared resources/cores and unit, ensures awareness of policies and compliance with training requirements, facilitates faculty accountability.

Lead Research Administrator
OVERARCHING ROLE:
This senior administrator provides strategy and input on matters concerning research administration, and serves as a champion for research administration concerns within the unit.

Duke Office of Scientific Integrity ⟷ Office of Research Administration

OUTCOME

The timeline of year 1 activities for the Research Quality Management Program (RQMP) is outlined below. Year 1 milestones for RQTs included a unit-level self-assessment of research administration, RQT designations, articulation of the organizational relationship between the RQO and LRA, and operational plans for implementing research quality. Each unit wrote a Science Culture and Accountability Plan (SCAP), that describes 1) fundamental principles to guide researchers' daily research practices, 2) the structural organization of the entity, and 3) information on how to promote a culture of accountability. To ensure faculty and staff awareness and understanding of their unit's SCAP and new RQMP, all faculty and staff engaged in research (5,147 overall) attested to their unit's SCAP.

Year 1 RQMP milestones

Unit-level self-assessment of Research Administration Operational Standards
Nov 15, 2019

Inaugural Research Quality Teams Town Hall to convene each RQO and LRA
Feb 11, 2020

Ensure attestation to relevant SCAP among primarily appointed faculty & staff engaged in research
June 30, 2020

Dec 31, 2019
Appoint RQT members
+
Provide org structure & relationship

March 1, 2020
RQO submit first year operational plan to Dept Chair or Center/Institute Director & DOSI

DISCUSSION

Traditional training approaches to promote research integrity (re: RCR training) can raise awareness around research integrity and best practices in data management, but they do not often promote a shared understanding that leads to culture change in units or individual research groups. Any program developed to broadly foster research integrity across the institution requires an infrastructure that provides for unit-based leadership and intervention enabled and supported by central administration.

Building a community: town hall meeting with RQTs

SUMMARY

- We successfully implemented a research quality program in which units (35/35) designated Research Quality Teams and developed operational plans to ensure implementation of best practices with regards to quality, integrity and accountability in research.
- Moving forward, the roles and responsibilities of the RQO and LRA will be expanded to enable RQTs to actively participate in detecting, mitigating and preventing detrimental research practices.

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