ARTICLE

Pathways/Mentorship

Building a Culture of Curiosity in Family Medicine to Increase Research Capacity

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Family medicine as a discipline is the foundation of health care systems. In addition to clinical practice and education, research is a professional duty for family physicians. Unfortunately, the culture of family medicine has historically de-emphasized research. As a specialty, our clinical practices provide an excellent opportunity to create patient-oriented evidence that can benefit the patients and communities we serve. To accomplish this task, family medicine should weave curiosity into the fabric of the specialty. To create a culture of curiosity which normalizes the production of practice-based research and scholarship, the authors describe 2 approaches – top-down and grass-roots – that can be used to develop a culture of curiosity among individuals and institutions. Methods to sustain a culture of curiosity that leads to inquiry and creates further improvements in research and scholarship are also described. By harnessing the power of curiosity, we can transform our discipline into one that values and excels in research and scholarship and produces generations of family physicians that will include practice-based research as an essential part of their daily activities. (J Am Board Fam Med 2024;37:S35–S40.)

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Introduction

Historically, the culture of family medicine as a discipline has emphasized clinical practice and education but de-emphasized research as a professional pursuit. However, family medicine physicians should value the acquisition of new knowledge through research at least as much as they value patient care and teaching.[1] This change in the family medicine research culture can be accomplished by fostering curiosity among physicians from the beginning of their careers. Curiosity is a fundamental human trait that propels us to seek new information and explore novel possibilities. Much has been written on the benefits of curiosity in business.[2] By harnessing the power of curiosity in family medicine, the same benefits realized in business can create a culture of inquiry, thereby enhancing research capacity in our field.

Transforming curiosity into inquiry and inquiry into research and scholarship has tangible benefits to both the institution and the individual. From an institutional perspective, supporting curiosity creates a learning health system, which quickly learns from experience and shares discoveries with others. It encourages organizational members to ask and answer questions that are aligned with patient and institutional priorities. In addition, it fosters a widespread environment of continuous quality improvement.

From an individual perspective, curiosity benefits clinicians, faculty, learners, staff, and patients. Inquiry is applied curiosity, "where asking questions is encouraged and divergent thinking is rewarded".[3] As our innate curiosity is expressed, creativity increases, and burnout decreases. A culture of curiosity promotes the development of problem-solving

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and scientific investigation among both clinicians and learners. This process of answering questions produces a new kind of fun, and by partnering with others on this curiosity quest, it is a joy that we can share with our colleagues. This joy is further enhanced through the dissemination of our discoveries via scholarship that grants appreciation and recognition for the work of our family medicine research teams. A culture of curiosity atmosphere is favorable for clinicians and faculties in fulfilling the expectations of research activities, which then leads to outstanding annual reviews. Career advancement becomes then smoother. In a nutshell, a culture of curiosity ties scholarly activities, annual reviews, and career advancement together at the individual level for clinicians and faculties.

Exploring curiosity also enhances the experience of our learners. The authors define learners as students, residents, fellows, and any faculty who are new to research and scholarship. In a culture of curiosity, learners become adept at asking and answering questions. In addition to satisfying the scholarship requirements of accrediting bodies and institutions, a habit of critical thinking is engrained which allows for enhanced future problem-solving. Hypothetically, the joy experienced in discovering answers to questions that matter to patients and clinicians will draw more students to choose family medicine as a career and will produce a greater cadre of practice-based research-minded residents and faculty. All which increases the research capacity of our discipline.

Clinical support staff also thrive in a culture of curiosity. They become team members helping to answer questions and find solutions to improve patient care and efficiency. They feel valued beyond immediate daily tasks and gain a larger sense of purpose and meaning. Team cohesion is enhanced, improving recruitment and retention.[4] In addition, staff explore their own curiosity by suggesting questions for the team to investigate.

Patients in a family medicine clinic with a culture of curiosity receive better care. In daily patient interactions, questions arise that have a direct impact on their health and well-being. When family physicians are in an environment that fosters curiosity, answers to those questions are readily sought, allowing rapid application of patient-oriented evidence. The combined impact of a culture of curiosity on institutions and individuals will thereby improve the health of the communities we serve while enhancing the discipline of family medicine as a whole.[5]

How to Build a Culture of Curiosity

A general strategy to build a culture of curiosity is to make inquiry through research, scholarship, and quality improvement broadly feasible and gratifying. The authors have experienced many positive benefits of working in cultures of curiosity, many of which are supported by empirical evidence. To accomplish this culture shift requires simultaneous top-down leadership and grass-roots (bottom-up) approaches.[5,6] From the top, leadership should make a visible declaration and announcement of this goal and how accomplishing this goal will benefit all the stakeholders above. By engaging learners and supporting their research and scholarship, a grass-roots movement is created.

Top-Down Approach

In the top-down approach, whether you are part of an academic health center or private health system, harmonize your missions so that scholarship emerges from innovation in care and education rather than being squeezed out by competing demands. This should include incorporating curiosity and/or inquiry in your vision and mission statements.[5]

Leadership should develop metrics and track the organization's scholarship in family medicine. Initially, a small increase can be expected. However, as the culture of curiosity impacts the entire family medicine team, momentum builds, and an exponential increase can occur. From the authors' experience, having each trainee or new faculty develop an initial area of interest is key to their being successful in turning curiosity into a completed scholarly activity.

The expectation for scholarship should also be incorporated into the recruitment process, annual reviews as well as discussion for promotion and tenure. Scholarships should be included in job descriptions and offer letters/contracts. Incentives should be considered for success in scholarly activity. Additional recognition of the victories in successful scholarships is recommended.[1] These include celebrating publications, presentations, and grants at faculty meetings, posting accomplishments where faculty and patients can see them, and creating annual research awards for residents and faculty.[6,7] Leaders should budget for the costs of publication and presentations at regional and national meetings. Some organizations even create their own regional research meetings, resulting in increased scholarship.[8]

Grass-Roots Approach

Creating a culture of curiosity using a grass-roots (bottom-up) approach can work well in environments with learners. By instituting an organized research and quality improvement curriculum with a dedicated faculty lead (called the Curator of Curiosity), trainees learn the basics of how to conduct research, including how to formulate an appropriate question, critically appraise the literature, design studies to answer the question, meet regulatory (IRB) requirements, collect and analyze data, and how to present and publish the findings in conferences, journals, and the Family Physician Inquiry Network (FPIN). The joy of discovery and having fun in the research journey are emphasized, which simultaneously improves internal motivation and decreases the fear of conducting research.[9] If residents are required to include a faculty mentor/advisor as part of the study team, there is an added benefit of increased faculty engagement in scholarship. One year after using this curiosity curriculum at 2 different universities, the lead author noted significant increases in research and scholarship for both residents and faculty. In addition to a faculty lead, some residency programs have also included a resident research coordinator, resulting in peer-driven mentorship that successfully solidified scholarship into the culture.[6] Residents and faculty have Accreditation Council for Graduate Medical Education (ACGME)-required scholarly activities and success in creating a culture of curiosity helps to fulfill them. A curiosity curriculum when implemented in undergraduate medical education has also proven effective in markedly increasing medical student participation in research activities.

How to Sustain a Culture of Curiosity

The simultaneous creation of an evenly developed ensemble of interrelated components is significant to sustain a culture of curiosity and scholarship capacity. This includes training resources, coaching, research tools, mentorship with individual planning, networking with other researchers and celebration after successful accomplishments. Peer support, research affinity groups, and networks can be developed allowing individuals to link up with the curators of curiosity and others who have similar questions they wish to explore. To assist with this effort, authors have used online methods to capture research and quality improvement ideas that arise during daily clinical operations. At

Figure 1. Summary of the top-down and grass-root approaches of building a culture of curiosity.

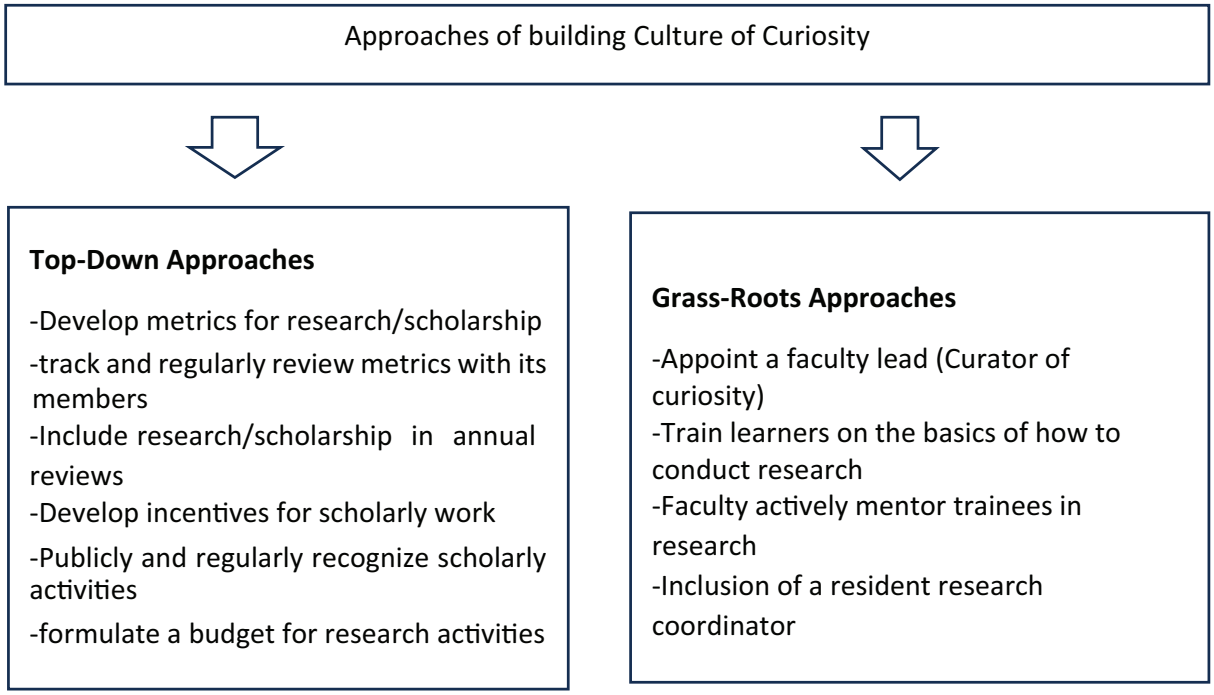
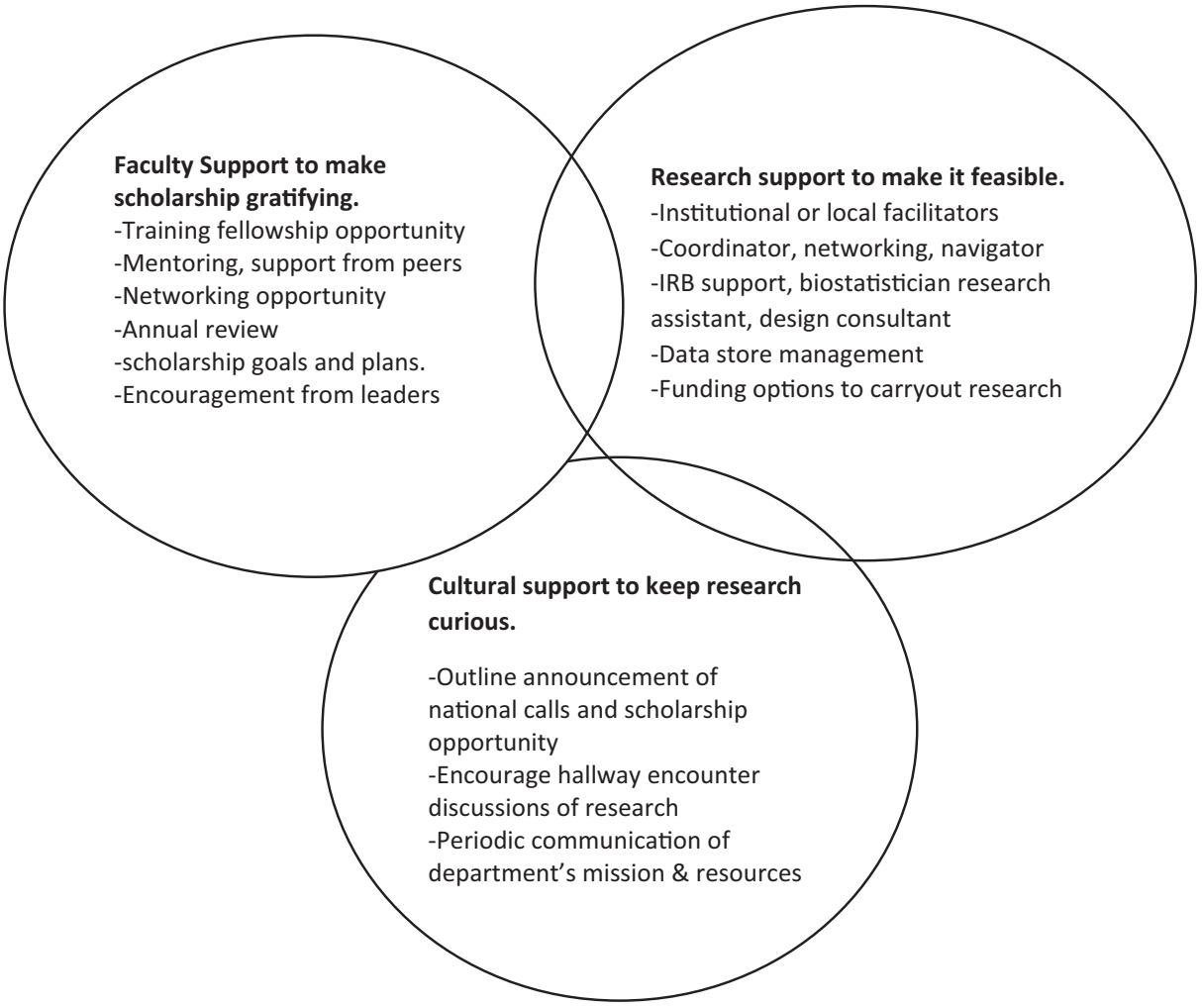


Figure 2. Ensemble of related components to sustain a culture of curiosity.



LSU, a Google Doc was created called the "Curiosity Box" where ideas can be captured as they arise. The document is periodically reviewed, and people with similar interests form a team to refine the question and design a study to answer it. At the University of Minnesota, an online portal was created for the same purpose with functionality added that provides the ability to track project progress.[5] Figure 2 illustrates

Table 1. Culture of Evaluation Rules[10]

Old Rules	New Rules
Evaluation is reactive: If facts arise, then evaluate.	Evaluation is proactive: Actively search for the small facts to accomplish a large goal.
Designs evaluation questions and measures later.	Determine what questions are significant? What are the tools needed to answer the questions?
Setting up the survey questions by myself without having adequate experience and expertise.	Ask for help from experts. Involve information technology to set up the surveys.
I conduct research by myself.	Embrace or encourage teamwork
I analyze the data by myself.	Ask for assistance, such as a biostatistician, to analyze the results of significance. Also, seek qualitative methods expertise.
Research faculty and general faculty work separately.	Research and general faculty work under a common platform, which is shared across the department.
The department has a minimum threshold that needs to be fulfilled as a faculty or resident.	Reputable achievements will be formally evaluated for career advancement, including successful residency.

the components that are needed to work together to sustain a culture of curiosity in an institution.

The operational dimension of a culture of curiosity is to make research and scholarship feasible and gratifying. From both the leadership and institutional perspective, understanding the shifts toward a culture of evaluation is needed to sustain the curiosity in the environment. One suggestion is to contrast the current culture with the desired future culture of curiosity via an illustration of "old rules versus new rules".[10]

Although time, funding, and research mentorship are the restraints that many departments and residency programs may experience, a change in attitude toward an inquiry-based learning culture with proactive initiatives incorporating practice-based learning through research is a crucial step to launch scholarly activities in an institution. To support a culture of curiosity by maximizing effort and minimizing time constraints, it is beneficial to have an accessible and organized research and quality improvement infrastructure that makes it easier to conceive, design, and carry out research and evaluation. From the institution's perspective, having an efficient support system and assurance of compensation for time required for faculty to conduct research and scholarship is important for building, maintaining, and growing a practice-based, curious research culture within the health system.

Individual mentorship and coaching will also assist in identifying tasks that busy family physicians are already doing clinically and/or educationally that, with proper guidance and support, can become scholarships. Mentorship sessions can also uncover personal passions which, when combined with curiosity, can create research and quality improvement opportunities[11,12].

If the discipline of family medicine incorporates into its fabric a culture of curiosity, practice-based research becomes an essential and routine part of what we do as family physicians. Our trainees will have role models who embrace curiosity, practice-based inquiry, and scholarship as an expectation of every family physician, thereby, producing future generations of family physicians who include this necessary activity as part of their daily work.

Conclusion

Family physicians have 3 professional duties – clinical practice, education, and research. Unfortunately, the discipline's culture has historically de-emphasized its role in research. As the medical specialty that provides the majority of primary care in the United States, we have the opportunity to produce patient-oriented evidence through our daily practices. By creating and sustaining a culture of curiosity throughout family medicine, we will transform our discipline into 1 that readily answers questions that matter to our patients and the medical teams that care for them. By discovering patient-oriented evidence, we will improve patient care, enhance professional satisfaction, and create better work environments. By dually supporting leadership (the top) and learners (grassroots), we can transform our discipline into 1 that values and excels in research and scholarship and produces generations of family physicians that will include practice-based research as an essential part of their daily activities.

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