

Training a Non clinician to become a Leader in Trans-disciplinary Clinical Research: Clinical Observer ships

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Introduction

As institutions and funders expand their efforts toward multidisciplinary, interdisciplinary, and even trans-disciplinary research, there is a substantial need for scientists who can lead such efforts. The traditional image of a leader of trans-disciplinary clinical research is a quantitatively savvy clinician conducting research at some point along the continuum from the "bench to the bedside." However, this is not the only alternative. Non clinician scientists can also provide effective leadership in multidisciplinary clinical research teams. To foster the development of such non clinician leaders, we suggest the completion of a comprehensive clinical observer ship as an appropriate and valuable training activity. The clinical setting can foster unique insight, providing invaluable training for leadership in translational research. Observing both providers and patients immerses non clinician scientists in the health care experience, providing them with direct exposure to clinicians, patients, and patients' families, and thereby motivating patient-centered research.

Research institutions and funders have increased interest in cross-disciplinary research, which enables researchers to branch out, gain new perspectives, and pursue novel ideas. This can in turn shed light on human and organizational processes that research isolated to a single field might otherwise overlook. Commonly, three types of approaches-multidisciplinary, interdisciplinary and trans-disciplinary -are used as models for involving multiple disciplines in research. In a multidisciplinary approach, researchers draw appropriately from multiple disciplines to redefine problems and reach solutions but remain within the boundaries of the different disciplines. An interdisciplinary approach integrates separate disciplines into a coordinated and coherent whole. A trans-disciplinary approach transcends the pre-conceived boundaries of the different disciplines and refers to learning that is authentic and relevant to the real world.

Rather than being confined by traditional ways of thinking about problems, learning in the trans-disciplinary approach is supported and enriched by them.

Determining to what degree an individual clinical observer ship achieves the four advantages outlined above is a measure of effectiveness. The experience will most likely lead to a short term emotional surge due to the inspiring stories of individual patients. Thus, when evaluating the experience, it is important for the non-clinician to take a step back and note if goals were objectively achieved. One way to do this is to record notes about the observer ship in a journal and then reflect on these notes a month or so removed from the experience. As previously discussed, since the observer ship leads to some material output (journal notes, papers and seminars), at least some of the benefits of the observer ship can be objectively assessed. Also, the supervisors/mentors of the observer ship could themselves participate in a formal evaluation of the observer ship. This might involve their objective assessment if the formal goals of the observer ship were met as well as recommendations of future activities to further enhance the education of the non-clinician/mentee. Since many of the benefits of the clinical observer ship have future implications, rather than only present implications, it may not be entirely feasible to explicitly evaluate the entire experience in the short term. In short, the clinical observer ship immerses a non-clinician directly in the clinical setting in a role that crosses disciplinary boundaries (i.e. biostatistician, electrical engineer, and clinician). This new role provides invaluable experience towards becoming a leader in trans-disciplinary research.

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