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# *Alternate delivery models for genetic counseling: clinical and implementation considerations*

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*The demand for genetic counseling services and the need for alternate service delivery models to meet this demand in cancer care is continually growing. Models exist, however, there is little evidence on which models*

*work best for which individuals or healthcare systems. Implementation science offers the tools to address this gap and evaluate such models in context for broader impact to integrate these models into cancer care delivery.*

**Key Words:** genetic counseling, alternate genetic service models, implementation science, cancer genetic counseling

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## Introduction

The incorporation of genomic information for cancer care has experienced exponential growth in recent years, and with this growth has come the ever-increasing demand for genetic counseling services and alternate service delivery models. Many of these models have varying levels of evidence compared to traditional in-person genetic counseling and have rarely been evaluated for multi-level impact at the patient, provider, and system levels. As important as generating evidence for alternate service delivery models to meet the growing need in cancer care, is generating evidence on contextual barriers and facilitators to promote effective implementation of these models into different clinical environments and different patient populations as appropriate.

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## Alternate service delivery models

Adopting alternate service delivery models for genetic counseling has the potential for improving access to services, may help reduce disparities in healthcare, and ultimately help achieve the promise of genomic medicine related to cancer care. Current alternate service delivery models for genetic counseling include broadly: alternate technology models, alternate visit models, and direct access testing models.<sup>1</sup> Another alternative model more aptly described as a telementoring model, may address the immediate concern that the workforce shortage of genetic counselors is not expected to reach equilibrium until around 2024.<sup>2</sup> The Extension for Community Healthcare Outcomes (ECHO) model uses telemedicine concept to create communities of practice where specialists work with local providers to manage patients by moving knowledge rather than individual patients and empowering other providers to deliver ongoing high quality care<sup>3</sup>.

It is also likely regarding these alternate service delivery models that one size does not fit all at the

patient level, provider level, or the system level. Patient uptake of services and satisfaction may improve when allowed to choose how they receive genetic counseling. Likewise, the ability for organizations to implement alternate delivery models differs depending on factors such as provider acceptance, workflows, resources, and other internal and external factors<sup>1</sup>.

## Implementation science

The use of implementation science in cancer care has grown in the recent decade, as evidenced through many initiatives led by the National Cancer Institute, most notably the Cancer Moonshot, and has gained prominence in professional organizations such as the American Society of Preventive Oncology and the American Society of Clinical Oncology.<sup>4</sup> Implementation science broadly is the study of integrating research findings into healthcare policy and practice. In the case of alternate genetic counseling service delivery models in cancer genetics, utilizing implementation science helps to generate evidence for broader impact by providing tools to consider context, multi-level complexity (patients, providers, and system level issues), and promotes real-world feasibility and functionality.<sup>5</sup> Using tools from implementation science we can design studies of alternate service delivery models in context of the healthcare system and populations and learn which model works best for who under what conditions at the patient level, and what model works best for which system based on available resources and other factors. Implementation science provides multiple frameworks, theories, and models to guide the design, implementation, and evaluation of alternate delivery models in the context of care delivery settings. Key outcomes such as implementation outcomes, program outcomes, patient outcomes, and provider outcomes should be considered. Because alternate service models may work differently for different individuals or be more effective in different organizations or populations, it is critical to include these outcomes when designing and reporting on studies of alternative service delivery models.

As the need for alternative genetic service models grows due to the continued expansion and integration of genomic information in cancer care, it will be important to evaluate these models in the context of the various care delivery settings and populations that make up the US healthcare system today. Using the tools from implementation science we can better understand for whom different models work best and which models may be most effectively implemented to improve patient care in different clinical settings and populations to improve patient outcomes.

## Disclosure

Dr. Alana Kulchak Rahm has no disclosures.

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