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# Examining interprofessional collaboration in oncogenetic service delivery models for hereditary cancers: a scoping review protocol

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## ABSTRACT

**Introduction** In a context of limited genetic specialists, collaborative models have been proposed to ensure timely access to high quality oncogenetic services for individuals with inherited cancer susceptibility. Yet, extensive variability in the terminology used and lack of a clear understanding of how interprofessional collaboration is operationalised and evaluated currently constrains the development of a robust evidence base on the value of different approaches used to optimise access to these services. To fill in this knowledge gap, this scoping review aims to systematically unpack the nature and extent of collaboration proposed by these interventions, and synthesise the evidence available on their implementation, effectiveness and economic impact.

**Methods and analysis** Following the Joanna Briggs Institute guidelines for scoping reviews, a comprehensive literature search will be conducted to identify peer-reviewed and grey literature on collaborative models used for adult patients with, or at increased risk of, hereditary breast, ovarian, colorectal and prostate cancers. An initial search was developed for Medline, Embase, CINAHL (Cumulative Index to Nursing and Allied Health Literature), Cochrane and Web of Science on 13 June 2022 and will be complemented by searches in Google and relevant websites. Documents describing either the theory of change, planning, implementation and/or evaluation of these interventions will be considered for inclusion. Results will be summarised descriptively and used to compare relevant model characteristics and synthesise evidence available on their implementation, effectiveness and economic impact. This process is expected to guide the development of a definition and typology of collaborative models in oncogenetics that could help strengthen the knowledge base on these interventions. Moreover, because we will be mapping the existing evidence on collaborative models in oncogenetics, the proposed review will help us identify areas where additional research might be needed.

**Ethics and dissemination** This research does not require ethics approval. Results from this review will be disseminated through peer-reviewed articles and conferences.

## STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This review will use a recognised methodology to systematically identify and synthesise peer-reviewed and grey literature on the theory of change, implementation evaluation, effectiveness and economic impact of collaborative models of oncogenetic service delivery.
⇒ The use of a collaboration theory framework will ensure a comprehensive and rigorous examination of this topic.
⇒ It is expected that the lack of consistent classification of existing oncogenetic models and high variability in the terminology used will increase the complexity of the screening and selection process.
⇒ Findings from this scoping review may be limited because the characteristics and outcomes of interprofessional collaboration in oncogenetic models are often not well described in the literature.

## BACKGROUND

Cancer poses a significant burden on patients, their caregivers and the healthcare system.[1–3] While hereditary cancers only represent 5%–10% of all cancer incidence worldwide,[4] their earlier onset, severity and rapid evolution has resulted in considerable efforts being made to identify at-risk individuals. Advances in genetics and genomics have enabled the identification of pathogenic variants associated with predisposition to numerous hereditary cancers, with breast, ovarian, colorectal and prostate cancers being among the most common.[5–11] Testing for pathogenic variants is now a well-established tool for cancer risk reduction,[12–14] and its use has become central to inform diagnosis and treatment decisions in oncology.[15] Although there is consensus regarding the need to ensure timely access to high-quality genetic services for patients with inherited cancer susceptibility, in practice, genetic referral and testing rates remain

suboptimal in many jurisdictions.[16–19] The resource-intense nature of traditional genetic services,[20–22] and constraints related to the number and location of geneticists and genetic counsellors (hereafter referred to as genetics providers) available, remain key barriers to timely and equitable access to these services.[23 24]

In traditional models of oncogenetic service provision, patients with cancer are referred to a geneticist for in-person, one-on-one genetic counselling (pre-test and post-test) and genetic testing.[25] While this was the most widely used model of care by 2013,[26] the rising demand for genetic testing and the shortage of genetics-trained professionals meant that not all patients could benefit from these services in a timely manner, even in high-income countries[27] where the profession of genetic counselling is well developed.[28] The need to increase access led to the development of alternative approaches that incorporate telephone pre and/or post counselling, telegenetics, group counselling and/or non-genetics clinician counselling.[29] Evidence on genetic testing uptake, patient knowledge and satisfaction, and psychosocial measures suggests that these models can be considered adequate alternatives to traditional approaches.[30] Yet in recent years, more innovative approaches have redefined professional roles[31–35] and/or reorganised existing genetic services to increase equitable access for patients with inherited cancer susceptibility.[36 37] Overall, these new models propose interventions with minimal involvement of genetics providers during the ordering of tests,[34 38–40] or rely on interprofessional and/or interorganisational collaboration to increase accessibility to these services.[23 41]

While a consistent classification of existing oncogenetic models (and of the strategies to implement them) is still lacking,[39] an innovative model that has gained a lot of ground in recent years is known as 'mainstreaming', or oncologist-mediated testing model, as referred to by McCuaig *et al*.[38] In mainstreaming, staff in non-genetic medical specialties (eg, oncology) are responsible for counselling, consenting and arranging of genetic testing,[40] ensuring thus direct access to genetic testing and tailored treatment for individual patients.[34] Mainstreaming pathways have shown to be feasible and acceptable,[39 40] and effective in increasing access to genetic counselling and testing completion rates in oncology services.[39] As shown by O'Shea *et al*, these are complex interventions often involving an interdisciplinary practice, educational activities, and the use of electronic processes and systems to increase efficiency.[39] Thus, even when not described by the authors as such, interprofessional collaboration[42] appears to be a key element to the success of mainstreaming[34 43] and of other innovative oncogenetic service delivery models (ie, collaborative models).[23 41]

Indeed, while not necessarily a distinct category, 'collaborative models' were proposed as a potential solution to address the supply–demand imbalance in oncogenetic services.[23 41 44 45] These innovative models allow optimal use of each professional's time and expertise and take advantage of the expected synergies that can result from interprofessional collaboration to foster ongoing support, education and training of non-genetics trained healthcare professionals, ultimately allowing patients to access high-quality risk assessment and testing.[41] As described by Stoll *et al*, collaboration can involve linking genetics providers with other healthcare professionals to facilitate the ordering of genetic tests to ensure their appropriateness, tandem referral (ie, patients receive initial education and counselling by an oncology nurse, and then meet with a genetic counsellor for care management recommendations after genetic testing is complete), collaborative triage, or peer-to-peer consultation.[23] Collaboration in cancer genetics can also include linkages between services (eg, cancer clinics with counselling services), or settings (eg, primary, secondary and tertiary care) to decrease geographical barriers to access.[36] In the USA, for example, Cohen *et al* used a collaborative triaging process whereby certified genetic counsellors (CGC) from a large cancer centre trained and supported nurse navigators in a small community hospital to act as genetic counsellor extenders (GCE), providing local access to oncogenetics for individuals with inherited cancer susceptibility.[45 46] In this model, the GCE triaged patients, provided basic risk assessment, and offered BRCA1/2 genetic testing for straightforward hereditary breast and ovarian cancer cases.[45 46] In turn, the CGC conducted monthly visits to the hospital for follow-up and assessment of complex cases.[45 46] This intervention has proved to be feasible and effective for increasing access to appropriate genetic services, and provided critical information on the time expend by different professionals in collaboration activities.[45 46] While this is just one of many collaborative interventions available,[23 47–55] variability in the terminology used (eg, hybrid models,[52–54] partnership models[55]) and lack of a clear definition and typology of collaborative models currently constrains the development of a robust evidence base on the value of collaboration for increasing timely access to high-quality oncogenetic services.

To our knowledge, no literature review has formally investigated the nature and extent of the interprofessional and/or inter-organisational collaboration proposed by these models (or by similar interventions not using the same terminology) in a rigorous, systematic and reproducible manner. It is also unclear how collaborative models are being evaluated, and what is the evidence available on their effectiveness (at least in the short term) and economic impact. Indeed, how collaboration is operationalised by the different interventions remains to be fully unpacked. This is not surprising, as collaboration in healthcare is often variably understood, poorly implemented and/or described, and hard to demonstrate in the field.[56] The work initiated by O'Shea *et al*, systematising implementation strategies related to interprofessional practices within the context of their systematic review of mainstreaming models[39] rigorously synthesised the roles of different healthcare professionals in the care pathway. Although this information is highly valuable, and points out some mainstream interventions

with clear collaborative features, O'Shea's review did not aim to identify and examine collaborative models per se. A deeper analysis of the nature and extent of collaboration between different healthcare professionals and organisations involved, is thus still needed.

To fill this gap, we propose a scoping review to systematically identify collaborative models of oncogenetic service delivery available (irrespective of the terminology used to label these models), unpack the nature and extent of collaboration proposed by these interventions, and synthesise the evidence available on their implementation, effectiveness and economic impact. This scoping review is part of a larger mixed-method multiple case study, the C-MOnGene study, designed to examine the results and potential transferability of a collaborative oncogenetic model implemented in the province of Quebec, Canada.[57] Details on the C-MOnGene study protocol have been published elsewhere.[57] Results of our scoping review are expected to provide critical information to guide the implementation and economic evaluations to be conducted as part of the C-MOnGene study.

To ensure the pertinence of conducting a scoping review on this topic, we searched the literature to determine whether a similar study, as comprehensive as proposed here, was already available. Our pilot review of key databases and websites conducted on May 2022 resulted in identifying only a few review articles and commentaries analysing the features and results of collaborative models available,[23 41 44 54] but without using a systematic and comprehensive approach to their identification and examination. Indeed, a key challenge to this type of undertaking appears to be that most innovative interventions are developed out of necessity[23] and their features (and outcomes) are often poorly described in the literature.[23 58–60] Hence, to determine the feasibility of successfully conducting a scoping review in this topic, we also examined if oncogenetics models reported in the literature had collaborative features that could be easily identified by a reviewer, even if its characteristics were poorly described. While this process is not without limitations, and may require additional time and resources to contact authors, we considered that—if conducted in a systematic fashion—a scoping review that rigorously maps the characteristics, evaluation and results of interprofessional collaborative interventions in oncogenetics could serve to strengthen the knowledge base on these interventions.

## Scoping review objectives and question

The aim of this scoping review is to synthesise the knowledge around collaborative models of genetic service delivery used for adult patients with, or at increased risk of, hereditary cancers. Given that the vast number of hereditary cancers identified so far can make this endeavour quite complex, we will be focusing on interventions targeting the most common hereditary cancers (which remain the main target of pathogenic variants testing in oncogenetic services), namely, hereditary breast, ovarian, colorectal and prostate cancers. Consistent with the methodological recommendations for conducting a scoping review from the Joanna Briggs Institute (JBI), a research question was made explicit during the design stage.[61] Accordingly, this scoping review will answer:

What collaborative models of genetic service delivery are available for adult patients with, or at increased risk of, hereditary breast, ovarian, colorectal and prostate cancers, and what is the evidence available on the theory of change, implementation evaluation, effectiveness and economic impact of these models?

Specific objectives for this review were also identified beforehand, these include:

1. To identify collaborative models in oncogenetic service delivery available.
2. To examine how collaboration is operationalised in these models of care and to characterise the nature and extent of collaboration proposed, including the key features of the service delivery structure, process, outputs, and outcomes, and the roles and responsibilities of each healthcare professional and/or organisation involved.
3. To identify and describe the types of evaluations conducted on these models and the outcomes used to assess their implementation, effectiveness and cost-effectiveness.
4. To synthesise the evidence available on the effectiveness and economic impact of these models.
5. To propose a definition and typology of collaborative models to advance the conceptualisation of these interventions.

## Methodology

A scoping review of the literature will be conducted guided by the JBI methodological approaches for a scoping review, as described by Peters *et al*[61] and recently updated experts' recommendations.[62] A scoping review was deemed the most suitable type of review method due to its exploratory nature, which allows researchers to map the literature on a specific topic. This approach can be valuable to examine how research is conducted on a topic, identify the types of evidence available, clarify key concepts and/or identify knowledge gaps.[61 62]

To guide this scoping review, we will adapt Reeves *et al*'s definition of interprofessional collaboration[42] and use their categorisation of interprofessional interventions (ie, interprofessional education, interprofessional practice and interprofessional organisational interventions)[63 64] as a preliminary framework to assist in developing an overarching typology of collaborative models in oncogenetics. This will allow us to identify and categorise collaborative strategies implemented at different levels.

Accordingly, by collaboration, we mean the process by which different healthcare professionals and/or organisations work together to provide appropriate timely high-quality genetic service (ie, risk assessment, counselling and testing) to patients with hereditary cancer (adapted from Reeves' 2010).[42] For this review, any intervention

providing a genetic service for individuals with inherited cancer susceptibility that self-identifies as collaborative or includes collaboration within an interprofessional team that includes genetics providers and other healthcare professionals at any stage of the care pathway and/or level (eg, interorganisational collaboration) will be considered a collaborative oncogenetic model of care. This is a working definition to determine the eligibility of a paper, since an objective of our review is to characterise all collaborative models of oncogenetic service delivery available and put forward a clear definition and typology to advance the conceptualisation of these interventions.

Moreover, D'Amour *et al*. 2008 framework[65] will be used to examine the level of collaboration proposed by the different interventions. This framework suggests a three-level typology of collaboration (ie, active collaboration, developing collaboration and potential collaboration) based on 10 indicators,[65] and it has been successfully used to guide the examination of the process of integrating a genetic counsellor into a multidisciplinary primary care setting in Canada.[66] Accordingly, availability and details on four dimensions of the collaboration intervention will be examined in the documents selected, including: (1) the existence of *shared goals and vision* (ie, goals and client-centred orientation vs other allegiances); (2) internalisation (ie, mutual acquaintanceship and trust); (3) formalisation of procedures and their outputs to clarify expectations and responsibilities (ie, formalisation tools and information exchange); and (4) *governance* (ie, centrality, leadership, support for innovation and connectivity).[65]

### Population, concept, context and type of evidence to be included

We will use the PCC mnemonic (population, concept, and context) to define the focus of the literature review, and clarify the inclusion and exclusion criteria.[61] Details on these elements are outlined in table 1.

### Information sources and search strategy

A structured and comprehensive literature search will be conducted using two separate search strategies to identify documents in journal-indexing databases and in the grey literature. Following guidelines from the JBI framework for scoping reviews,[61] elements of the population/participants, concept, context and type of sources will be used to develop the search strategy and define the inclusion and exclusion criteria (see table 1).

For the peer-reviewed published literature search, five journal indexing databases will be examined, namely: Medline (OVID), Embase (Embase.com), CINAHL (Cumulative Index to Nursing and Allied Health Literature), Cochrane and Web of Science. By searching in these five databases, we expect to identify a wide range of relevant literature, covering different disciplines and methodological approaches. To this end, we developed and tested a comprehensive search strategy on 13 June 2022, using a combination of Subject Headings and textwords related to cancer, genetics, collaboration, outcomes and evaluation terms (see online supplemental file 1). A librarian at Université Laval was consulted during this process and the PRESS (Peer Review of Electronic Search Strategies) service at this institution was used for validation. To map *all* studies available, no geographical location or language limits were applied, but only studies published after January 1971 will be considered for inclusion. This date was selected because, as explained by Stoll *et al*, 1971 marks the beginning of the profession of genetic counselling, even when it was in the 1990s that discoveries in cancer genetics lead to the specialisation of genetic counsellors in this field.[23] For texts not in English, French, Spanish, Portuguese and/or German, Google translation will be used, and validation of the translated text will be sought among colleagues of the study team, when possible.

For the grey literature, a search will be conducted in Google search engine, using filters to capture websites from North America, Europe, Australia and Asia, and limited to the examination of the first 10 pages of results. A grey literature template designed for systematic reviews[67] will be adapted and used to track the search strategies used, number of items retrieved, and number of items screened and uploaded to EndNote for citation management (see online supplemental file 2). Additional material will be identified through a manual search in selected websites from public health and health technology assessment agencies, medical expert societies, and other key organisations (see online supplemental file 3). Results of this process will also be tracked using a separate template[67] adapted to this end (see online supplemental file 4). This approach towards the examination of the grey literature is justified because most interventions, research and guidelines in this field still seem to be conducted by a limited number of organisations, to be subsequently considered and/or adapted elsewhere.

For all selected documents, bibliographies will also be reviewed to identify additional documents for inclusion. The completeness of the bibliographic and grey literature reviews will be verified with key experts from the C-MonGene Study team and with other oncogenetic experts identified through the review, with the aim of obtaining information on additional collaborative models implemented and/or additional documents not captured by our literature search. Authors whose publications indicate that additional studies are underway will also be contacted to retrieve any additional relevant documents on the publication pipeline. A template[67] will be used to track information on experts contacted, number of items recommended, and number of items retrieved, screened and uploaded to EndNote for citation management (see online supplemental file 5). All citation records identified will be subsequently imported to Covidence to remove duplicates and subsequently conduct the screening and selection process against predefined inclusion and exclusion criteria (see table 1).

Table 1 Population/participants, concept, context, type of sources—inclusion and exclusion criteria

| | Inclusion criteria | Exclusion criteria |
|---|---|---|
| Type of participants | **Intervention/model participants:**<br>Healthcare professionals (non-genetic and genetic specialists) involved in collaborative oncogenetic service delivery interventions (as defined below).<br>**Target population:**<br>Adult population (≥18 years old) with, or at high risk of, hereditary cancers (ie, breast, ovarian, colorectal and prostate cancer). | **Intervention/model participants:**<br>Healthcare professionals (non-genetic and genetic specialists) involved in traditional and/or non-collaborative alternative oncogenetic service delivery.<br>**Target population:**<br>Paediatric population (<18 years old) with, or at high risk of, hereditary cancers.<br>Patients with, or at high risk of, cancers other than hereditary breast, ovarian, colorectal and prostate cancer. |
| Concept | Oncogenetic service delivery interventions self-identified as collaborative or including collaboration between an interdisciplinary team of non-genetic healthcare professionals and genetic specialists at any stage of the care pathway and/or level (eg, interorganisational collaboration).<br>Note that this is a working definition to determine the eligibility of a paper, since an objective of our review is to characterise all collaborative models of oncogenetic service delivery available and put forward a clear definition and typology to advance the conceptualisation of these interventions. | Interventions following the traditional model of oncogenetic service delivery (a.k.a. usual care) or alternative models not including a collaborative feature, at any stage of the care pathway and/or level.<br>Collaborative genetic services not intended for hereditary cancer-related counselling and/or testing.<br>Interventions only using Multidisciplinary Tumor Boards (or similar experts' groups) to provide recommendations based on a review of cases, but where no additional collaborative features during the delivery of oncogenetic services is provided to these patients. |
| Context | This scoping review is intended to map evidence on collaborative models of oncogenetic services that emerges from any context, without limits on geographical location, setting (eg, community-based, hospital-based interventions) or language, to provide findings that can support the development of a conceptual framework that is applicable to any context. | No exclusion criteria |
| Type of sources | Any documents describing at least one of the following elements: the theory of change (logic model), planning, implementation process, and/or evaluating the adoption, acceptability, satisfaction, appropriateness, cost, feasibility, fidelity, penetration, sustainability, quality, effectiveness and/or economic impact of these interventions will be included. | Documents published before 1 January 1971<br>Any documents (editorials, letters, commentaries, Conference Abstracts, posters, and reviews) not describing the theory of change (logic model), planning, implementation process, and/or evaluating the adoption, acceptability, satisfaction, appropriateness, cost, feasibility, fidelity, penetration, sustainability, quality, effectiveness and/or economic impact of these interventions will be included.<br>Documents where no full text is available |

## Evidence selection

Titles and abstracts of all publications identified will be screened and included for full text review if they describe one or more of the following elements pertaining to a collaborative oncogenetic model: the theory of change (logic model), planning, implementation process, and/or evaluation of the adoption, acceptability, satisfaction, appropriateness, cost, feasibility, fidelity, penetration, sustainability, quality, effectiveness and/or economic impact of these interventions. We will exclude documents not describing those components, as well as those focused on the paediatric population, or for hereditary cancers other than breast, ovarian, colorectal and prostate cancer (see table 1). The screening process of titles, abstracts and full-texts will be conducted in parallel by two reviewers and any disagreement will be resolved by consensus, or by a third reviewer, in case consensus cannot be reached.

A narrative description and a Preferred Reporting Items for Systematic Reviews and Meta-Analyses Flow Diagram will be used to provide an overview of the study selection process, including details on any article excluded after full-text review, and on the specific reasons for exclusion.[61 62]

## Quality assessment

While scoping reviews do not require a formal evaluation of the quality of the studies included,[61] an examination of the quality of economic evaluations will be conducted to guide the design of our future study of the economic impact of Quebec's Collaborative Oncogenic Model (part of the C-MonGene study),[57] but not to identify studies to exclude from the review. Two reviewers will independently apply the Critical Appraisal Skills Programme Economic Evaluation Checklist[68] to assess quality of the economic

evaluations included. This instrument was chosen because it is the one used by the health technology assessment organisation in Quebec, Canada (ie, The *Institut national d'excellence en santé et en services sociaux*).[69] Any discrepancies between the reviewers' quality assessment will be discussed and resolved by consensus, or by a third reviewer.

### Evidence extraction

Data extraction will also be conducted independently by two reviewers using a standardised data extraction form (see online supplemental file 6). This template will be pilot tested with a small sample of studies prior to the beginning of the data extraction phase to familiarise with the tool, assess the quality and consistency of the data collection conducted by the two reviewers, verify any missing information and/or discrepancies, as well as to examine if any further refinement to the data extraction form is required at this point.[61] From each selected article/document, we will extract information related to the document/article, details pertaining to the intervention (including elements of the collaborative intervention, as per D'Amour *et al* 2008 framework),[65] as well as key methodological aspects and results of evaluation studies (when applicable). Authors will be contacted for additional information, if required. To enhance the reliability of the overall process, each reviewer will extract the data for half of the studies included and then exchange their work to review the other reviewer's data for accuracy and completeness. Any discrepancies will be solved by consensus or by a third reviewer, if consensus cannot be reached.

### Evidence charting and summarising

In the scoping review manuscript, study characteristics will be summarised narratively in the text and compiled in tables. A descriptive analysis is justified because our aim is to map the body of literature available on collaborative models of oncogenetic service delivery to clarify the nature and extent of the collaboration proposed by these models, examine how they have been implemented and evaluated, and synthesise the results of those assessments. After a thematic analysis is conducted on the different features of collaboration proposed by each model, a table will be used to summarise the following elements: (1) the country and setting of the intervention (eg, hospital based); (2) the target population (including age group and type of hereditary cancer); (3) timing or point in the service delivery process when collaboration occurs (eg, risk assessment); (4) formal interprofessional collaborative interventions (ie, education, practice, organisational or interorganisational strategies) and/or informal collaboration; and (5) roles and responsibilities of the actors/organisations involved, as well as the four dimensions of D'Amour *et al* framework (ie, shared goals and vision, internalisation, formalisation and governance)[65], when available. This information will allow us to build a comprehensive cartography of collaborative models in oncogenetics (and of the key collaborative features present or not in each model) to develop a preliminary typology and put forward a working definition that could be subsequently revised and validated by our team of experts. Similarly, tables will also be used to compile information on the types of evaluations that have been conducted on these interventions, the outcomes examined, and to synthesise evidence on their effectiveness and economic impact, when available.

### Stakeholders consultation to inform and validate study findings

We will be using an end-of-project knowledge translation approach[70] to gather key stakeholders' feedback on the completeness and validity of our findings and interpretations. Accordingly, preliminary findings of this review will be shared with C-MOnGene project stakeholders (ie, collaborative oncogenetic model implementers, managers, evaluators, public health officials, and provincial policy-makers)[57] so that they can suggest additional references and/or insights on collaborative models, beyond those available in the literature. At the end of the project, we will also conduct focus groups discussions with the C-MOnGene project team and other key stakeholders (ie, patients, practitioners and policy-makers). Feedback gathered will be used to improve the analysis and conclusions of the scoping review, and to validate the proposed definition and typology of collaborative models of oncogenetic service delivery.

### Patient and public involvement

Patients and the public will not be involved during the development of this review. However, key stakeholders (including patients and other members of the public) will take part in focus group discussions to be conducted once the results of this review are available.

### Ethics and dissemination

While scoping reviews do not require ethics approval, this work is part of a larger study, the C-MOnGene study.[57] This study was reviewed by the Research Ethics Board of the CHU de Québec-Université Laval, who waived the ethics approval requirement because of the quality improvement nature of the programme evaluation proposed.[57] Results of this scoping review will be disseminated through peer-reviewed articles and conferences.

## CONCLUSION

To the authors' knowledge, the proposed study represents a first attempt to systematically map these innovative interventions to unpack the nature, extent and value of collaboration in oncogenetic service delivery. By making publicly available this review protocol, we aim to enhance methodological quality and to increase transparency of our study process and results. Findings from this scoping review are expected to strengthen the knowledge base on these models by providing a clearer understanding

of the key collaborative features proposed, the way they have been implemented and evaluated, and synthesise the results of those assessments. This work is expected to further improve the conceptual base on these interventions and to contribute to the development of a clearer definition and typology of collaborative models of oncogenetic service delivery for hereditary cancers.

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