7.3.5 Informing Study Participants of Research Results

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Learning Objectives

1. To examine the moral rationale for the offer of return of research results
2. To examine the potential benefits and harms of returning research results
3. To understand the current practice and attitudes of researchers and participants to the return of research results
4. To understand some of the logistical challenges that arise in offering to provide research results

Case

Natalie, a 13-year-old girl in Grade 8, presents to her family doctor with a one-month history of low-grade fevers, a 10-pound weight loss and a slowly growing lump in her neck. Further history reveals that she also has had recent night sweats and difficulty in lying flat when trying to sleep. Workup at a tertiary care pediatric hospital demonstrates a stage II B Hodgkin's disease with bulky mediastinal mass. She and her parents, who are divorced, consent to her participation in a Children's Cancer Group clinical trial. This trial examines the role of response-based therapy involving the elimination of exposure to radiotherapy for those patients with rapid early responses. There is a voluntary concurrent biology study, which is intended to examine epigenetic changes that predispose patients to chemotherapy-induced toxicity and late effects. She and her family also agree to participate in this correlative biology study.

Natalie has a slow response to chemotherapy and, by protocol, receives radiation to her chest. Her Hodgkin's disease remains in remission, and she and her family move to Alberta. Her care is transferred to a pediatric centre, and she faithfully attends clinic until she moves to Winnipeg to study fine arts. She sees a new family doctor but has no specific oncology follow-up. At 26 years of age, she has her first daughter, and, as part of the postnatal care, is found to have a breast mass. Workup demonstrates a localized but large breast carcinoma.

As part of her discussion with her breast cancer specialist, she learns that the study she participated in as a teenager has identified that radiation therapy predisposes adolescent girls to breast cancer and that all such patients should have mammograms beginning eight years after radiation. She begins to angrily wonder what else she hasn't been told, including the results of the correlative biology studies and what the risk may be to her daughter.

Questions

1. Is there a moral imperative to offer research results to research participants?
2. What are the potential benefits or harms of offering research results?
3. Who should receive results of research if the participant is no longer a minor? Does the person (parent in this case) have the right to receive research results of his or her child?
4. Who is responsible for retaining contact?
5. Should participants be offered individualized results of biology (including genetic) research?

Discussion

Offering results acknowledges the ethical principle of respect for persons, avoids treating research participants as a means to an end and may have direct positive consequences for the participant and indirect benefits to research as a whole.\(^1\) Based on supporting this principle of respect for the dignity of the person, there is increasing recognition of a moral responsibility incumbent on researchers to offer research results to participants.\(^2\) Unfortunately, there is good evidence to suggest that this practice is uncommon and inconsistent, with less than a third of researchers in some series providing results to participants.\(^3,4\)

There are clear potential benefits, which must be balanced against the harms of returning research results.\(^1\) These benefits include direct benefits to the participant of providing information that may enhance the quality of
life or lead to investigations that will reduce future harms. There are less direct benefits of reducing a feeling of exploitation by the participant, emphasizing the central nature of the participant to the research and disseminating accurate results in a different means than is traditionally available. Indirect benefits may include an overall support to scientific endeavours as research participants understand their contribution to the understanding of disease and therapy. There is also the potential to build greater trust in researchers and thus future support or participation in research.

In contrast to the benefits enumerated above, harms may accrue to the participant including distress about increased future risks (such as breast cancer), possible discrimination related to insurance or employment opportunities, and incorrect or even harmful medical decisions based on unvalidated results. Several authors have taken the stand that the sharing of research results should be restricted to participants who request them, restricted to only situations in which there is clear medical benefit or restricted to when the researcher/clinician believes there may be harm to the participant in learning the results. Beyond the participants themselves, there may be distress among family members in revisiting the research setting (especially if the participant has died). Despite these harms, participants have consistently indicated that they wish results to be offered — thus exercising their right to self-determination.

Logistical challenges also have been expressed by researchers, including the maintenance of contact follow-up with participants, the ability of researchers to express their findings in appropriate lay language and the potential costs of return of results, which are predicted to escalate with the anticipated potential for negative consequences to the participant. These incremental costs are based on the expectation and desire of participants to receive distressing results in a face-to-face manner in the context of a well-organized program designed and equipped to support participants. It is felt that simply providing results without informed consent of the participant is neither respectful of the participant nor supportive of the overall moral responsibility to offer results in a way that will address harms. It should be noted that, while an offer of results is morally obligatory, participants are not obliged to receive them, as the autonomy of the individual should be respected. Preliminary evidence suggests that most participants wish to own the responsibility of retaining contact, thus alleviating a major concern of researchers.

A further logistical issue is when and to whom the results should be offered. We believe that a climate of expectation should be created such that participants know their rights and anticipate the offer of results. This climate can be created by regulatory revisions, research ethics board policies and guidelines (which are inconsistent and uncommon in Canada) and regular reinforcement with participants at such times as the original consent and the completion of the study. It would seem appropriate that participants receive results only after peer review, as one would expect the same high degree of standards to be set for the dissemination of results to participants as in the medical literature. The likelihood is that most participants would allow for the sharing of results with erstwhile proxy decision-makers, but respect for privacy should allow now competent participants to make that decision.

While the literature has focused on clarifying the need for a summary of valid and reliable data to be shared with participants in a usable lay format, recent work is also exploring the concept of returning individualized results. The same high standards of reliability and validity certainly need to be applied to research data that may be used for clinical decisions. It is important that the participant be informed of the limitations of the interpretation of the research results and cautioned about undue enthusiasm for acting on them. In the case example, identified epigenetic changes may or may not be at a stage of adequate reliability and validity to apply the findings to the participant herself and certainly not her daughter.

**Conclusion**

In summary, there is a moral imperative to offer to provide results to participants even if those results are not clinically relevant. The interpretation of the results should require peer review before timely dissemination. The researcher is obliged morally to support this process with appropriate safeguards and supports that have practical implications with respect to appropriate grant budgeting of the costs and timelines to return results. Detailed guidance should be available from regulatory agencies, including the research ethics boards that review human research.

**Pragmatic Suggestions for Residents**

1. It is already routine practice to incorporate evidence-based medicine into daily clinical care. Highlighting for patients and families that the information and recommendations being provided arise from health care research will raise their awareness of its utility.
2. In situations where participants are being recruited or are known participants in clinical trials, determine whether there is a plan to offer research results. If so, assist in informing participants of their right to this information and the expected risks and benefits of receiving results. If there is no plan, advocate and raise awareness of the moral obligation to offer results with researchers.

3. In situations where participants are returning for clinical follow-up after research participation, plan to spend part of the clinical consultation discussing the implications of the results with participants who wish to receive them.

4. When designing one's own research, plan to budget time and effort to the offer of results to participants in the operating budget. This should include a means to notify the participants of the availability of the results and the actual dissemination of results. The mode of distribution will be contingent on expected consequences of receiving results.

References

11. MacNeil SD, Fernandez CV. Informing research participants of research results: analysis of Canadian university-based research ethics board policies. Journal of Medical Ethics. 2006(Jan);32(1):49-54