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Editorial: Health technologies and the life course of women

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Women's health issues have in recent years become the focus for an unprecedented degree of sophisticated technologic incursion. While much of rapid technologic advances, confined as it largely is to the richest societies of the globe, has perhaps enabled women to hold their place in the workforce, it has also taken the natural biological processes from the quiet path of individual lives and put them into the hands of expert management. Women's health is now similar to other consumer goods, available for purchase alongside the many commodities of the modern urban lifestyle.

The underlying question addressed in this Special Section is perhaps an obvious one: allowing for the shift toward externalized management of their health, why shouldn't women have access to every new and potentially beneficial service? The popular view, after all, is that (allowing for an occasional undesirable side-effect) technology makes our lives better, happier, and healthier. But while many of these developments are objectively a subject of marvel, and the technology of health care continues to enjoy the same broad credibility as other industrially supported elements of our complex world, hardly anyone in the subject population has a significant level of understanding how it all "works." We simply accept that in biomedical research, all news is good news.

No one can deny that health-technology industries at large are highly productive or that clinicians are eager for their products. Funding agencies are consequently pressed for exponentially increasing resources to make these advances available to meet the demand, which, we might think, emanates from women whose needs ultimately guide the direction of these powerful new forces.

The premise for much of this promotion in the field of women's health is that the phases of their life cycle are the rightful province of science and the medical profession. The biology of women appears to be vertiginously placed on the very precipice of catastrophic collapse and must be medically managed from puberty on if the disease state is to be kept at bay. Under continuous professional vigilance, women can be maintained in a state of wellness and, therefore, free to concentrate on their rightful place in a world of their choice.

Even a cursory examination, however, will show that it is not necessarily, nor even generally, patient need that drives the many elements of the entire health-care industry. The aim of this Special Section of the IJTAHC is to draw attention to the identification of the woman's life cycle as a rich target for development, promotion, and dissemination of profitable technologic interventions.

WOMEN'S HEALTH AS MARKETPLACE

The most heavily targeted domain is, unsurprisingly, the field of reproductive health. A decade ago, the final report of the Canadian Royal Commission on New Reproductive Technologies noted that increasing medicalization of women's reproductive processes should be of concern, not only because it signifies a woman's loss of autonomy over her body and reproductive functions, but also because this process is simultaneously promoting a narrowly defined medical view of the highly complex social conditions in which reproductive health is rooted (3).

In any given instance, however, it is not easy to elucidate clear lines of control, because medical research and changing practice involve more than "simple" health concerns. The introduction of technologies in obstetrics may have as much to do with a medical profession anxious to defend itself against claims of malpractice as it has to do with protecting the interests of mother and child. The debate over the unborn infant as the "patient" has served to blur the lines of obligation. Is clinical responsibility properly exercised to serve the mother, or the fetus? And if caught somewhere in the middle, does the practitioner adopt a self-serving course of action aimed at deflecting a ruinous lawsuit rather than benefiting either "patient"?

This uncertain territory provides fertile ground for "testing" and "screening" technologies. The big growth industry, it need hardly be emphasized, is in genetics-based testing. What was previously a vaguely discernible continuum from

Each study was reviewed internally and by one or more external reviewers. Grateful appreciation is extended to Patricia Baird, The University of British Columbia; Maria Corral, The University of BC; Marilynne Hebert, The University of Calgary; Jochen Moehr, The University of Victoria; Donna E. Stewart, The University of Toronto; and Rebecca Warburton, The University of Victoria.

"characteristic" through "abnormality" to "disease" is now definable in terms of exact genetic profile. More new tests to identify genetic disposition for more conditions are becoming commonplace. The ensuing issues for pregnant women, for practitioners, for funding agencies, and for society at large are, on the other hand, particularly complex.

Are technologies offered for the benefit of individuals (or individual interests), or are they necessary to serve the benefit of the healthier population we might hope to become? A contribution in this issue (Bassett et al.) examines one such testing regimen already widespread, triple-marker screening of pregnant women for the detection of Down syndrome and fetal spinal conditions.

Although it is valid to examine the private interests that exist behind proposed technologies, it should not be doubted that women have specific health care needs that deserve investigation. Consequently, an important issue in the debate pursued in the Special Section is to consider to what degree health needs are specific to women and may legitimately call for targeted approaches.

Two of the included studies examine responses to depressive conditions. The first study (Savoie et al.) looks at how use of hospital services by women is affected by gender-related factors: sex, age, family structure, and other influences. The second submission (Lumley et al.) focuses on the specific series of depressive conditions connected with pregnancy and childbirth, which for the individuals and families involved are indisputably a source of much anguish. Several remedial interventions have been examined, and a critical review of the available research is included here.

There are many examples of technologic innovations developed to serve a (mass) market niche. A case in point is the promotion of bone densitometry for the prevention of the "disease" of low bone density. Bone mineral density testing has been promoted as a powerful weapon in the "war against osteoporosis." Once the science is examined, however, it can be shown that not only is this technology unable to predict which women will go on to suffer major fractures, its widespread promotion and adoption has had the effect of transforming low bone-mass from a risk factor into a disease entity. Bone densitometry is a technology marketer's dream—a capital-intensive testing regimen able to identify a mass-population "treatable condition," spawning a huge spin-off demand for drugs.

It may be argued that where differing and novel interventions are on offer, it is the issue of patient choice that underpins treatment options. In some respects, the clinical expert must become something akin to a skilled knowledge broker whose advice is presented as a selection of possibilities from which the patient may choose. Whether freedom to make such choices affects outcome is a significant question for study. A study included in this Section (Sampietro-Colom et al.) aims to characterize the study of women's preferences about health care and to examine the factors that influence choice.

On the other hand, women increasingly look for information from sources other than their health-care professionals to make an independent health-care decision. Greater access to Web-based information on health-care interventions might result in better self-care decisions, but only if the information is accurate and unbiased. A contribution in this issue (Green et al.) evaluates the quality of the information content on bone mineral density testing posted on consumer health Web sites.

FINDING THE PATH BETWEEN HARM AND BENEFIT

Allowing for the importance of freedom of the individual, is modern health care nothing more than a crude market process of supply, demand, and profit? It is perhaps no very great insight to conclude that, with so many powerful forces at work, the totality of influences in the generation and adoption of technologies in health care is wide and extremely complex.

As a starting point, it might reasonably be expected that promoters of technologies should justify any claims of benefit with scientific evidence. Regrettably, it is largely a misconception that Western medical procedures are founded on strict scientific foundations. Indeed, huge financial market potential depends on a public inability to discriminate.

Returning to our original question, namely why should women not be the untrammeled recipients of multitudinous health-care offerings, there is one clear answer: because of the degree of harm.

The harm potential from health-care interventions can be direct or indirect. In the latter instance, if scarce resources are allocated to expensive technologies with no (or only marginal) benefit, then harm results because funding, both in public and private systems, is being denied for interventions elsewhere. But far too often there is risk of serious direct harm when a rigorous assessment of benefits and harms is undertaken.

There are two approaches to tackling these issues. The first is to ensure that proposed health technologies are subjected to proper comprehensive assessment. It is important to question why, for example, new technologies have been introduced into the health-care system and become part of clinical standards of practice without being based on scientific evidence or even without showing scientifically proven positive outcomes.

In this light, a second approach is needed to forestall the tide of dubious promotions, one that goes beyond the biology of sex differences and seeks to examine how technologic interventions are guided and affected by fundamental gender-related issues.

It has been remarked how an analysis of gender should involve looking at the way, "illnesses and treatments are diagnosed, experienced, and treated based on normative notions of maleness and femaleness" (2). Another commentator has pointed out that technology development may take masculine

values for granted, unless gender differences are a central element of technology assessment (1).

No stakeholder can be more aware of the complexities than the decision-makers in a publicly funded system. They are tasked with balancing competing demands from all sides of the equation and to do so within tight budgetary constraints. How is the impartial investigator to differentiate—how to enhance useful interventions able to meet genuine population needs, while discouraging the more commercial interests that exist in the health technology sectors? The current Section includes an essay presenting an epidemiologic model that serves to make such seemingly impossible equations a practical decision-making goal (Kazanjian).

CONCLUSION

While the proffered interventions are increasingly dominating services related to menstruation, pregnancy, and childbirth, the reality is that women experience health conditions differently from men not just because of biological dissimilarity but also because of social disparities related to gender-based inequities.

As long as health-care technologies continue to reflect gender bias, women will face potential harm in a health-care system under an onslaught of commercializing and profiteering interests. Scientifically based health technology assessment, which incorporates an analysis of gender, will help lessen this potential by making the issue more transparent than it currently is. To eliminate such bias will remain unattainable until women's health is included in system performance report cards and incorporated into decision-making at the clinical, operations, and public policy levels.

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