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SYMPOSIUM: CROSS-BORDER REPRODUCTIVE CARE ARTICLE

Cross-border reproductive care: a future research agenda

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Abstract Cross-border reproductive care (CBRC) is a rapidly growing phenomenon of interest to governments and regulators, professionals working within the field of assisted reproductive technologies and men and women seeking to use their services. However, to date, discussions have been dominated by media debates and scholarly commentary, with only partial and fragmentary evidence from empirical research studies. This article identifies the pressing gaps in the literature, elucidates the main theoretical and methodological challenges for investigating CBRC and outlines a future research agenda.

KEYWORDS: conceptual and theoretical issues, cross-border reproductive care, empirical research, methodology, research challenges, recommendations

Introduction

The phenomenon of cross-border reproductive care (CBRC) has grown rapidly over the past decade, becoming an integral aspect of assisted reproductive technologies in the 21st century. As such, it is of interest to professionals working within the field of assisted reproduction, men and women seeking to use their services, patients' organizations, governments and regulators and a range of academics interested in the legal, ethical and socio-cultural questions surrounding CBRC. However, to date very little research has been published, and much of the discussion surrounding CBRC has relied upon

investigative journalism on the one hand and scholarly commentary articles on the other. This is problematic for several reasons. First, media coverage may be sensationalized, perpetuating stereotypes and generating a sense of moral panic (Culley and Hudson, 2009). Second, even when factual, individual cases described by the media may nevertheless be unrepresentative, providing an inaccurate or partial portrayal of the CBRC phenomenon. Finally, although scholars have raised a range of important and interesting issues in their published commentaries on CBRC, it remains impossible to assess many of these without the necessary evidence. It is thus crucial to address the empirical deficit in this field and to

provide rigorous data that can illuminate questions surrounding the incidence, experience and outcomes of CBRC.

To that end, this article identifies some of the most pressing gaps in the literature, highlights the various theoretical considerations and methodological challenges facing CBRC researchers and outlines a research agenda for the future. The article also discusses key conceptual and terminological issues facing researchers, as well as sensitive questions surrounding research ethics. Table 1 provides a summary of the key points.

Literature review

Hudson and Culley (2011) have recently conducted a comprehensive literature review of publications on CBRC. Their critical narrative overview includes 54 items, comprised of 36 debate papers and 18 empirical studies. Of these, only nine were published research studies with a central focus on CBRC (Blyth, 2010; Hughes and Dejean, 2010; Inhorn and Shrivastav. 2010: Nygren et al., 2010: Pennings et al., 2009: Pennings, 2010; Shenfield et al., 2010; Smith et al., 2009; Whittaker and Speier, 2010); a further three included CBRC as their secondary focus (McKelvey et al., 2009; Pande, 2009; Whittaker, 2009); and six were unpublished or partially published studies (Bartolucci, 2008; Bergmann, 2007, 2010; Infertility Network UK, 2008; Inhorn, 2009a; Inhorn and Patrizio, 2009). The methodological approaches include quantitative, questionnaire-based surveys with patients (Bartolucci, 2008; Blyth, 2010; Infertility Network UK, 2008; Pennings, 2010; Shenfield et al., 2010), with clinics (Hughes and Dejean, 2010; Pennings et al., 2009) or at the global level (Nygren et al., 2010), as well as a small number of qualitative studies with patients (Bergmann, 2010; Inhorn, 2009a; Inhorn and Shrivastav, 2010; Whittaker and Speier, 2010).

Although empirical work has begun to provide an evidence base for the phenomenon of CBRC, insights remain partial and fragmentary. The central questions addressed by larger studies in the literature pertain primarily to the incidence of CBRC (Hughes and Dejean, 2010; Nygren et al., 2010; Pennings, 2010; Pennings et al., 2009; Shenfield et al., 2010) and provide some estimates for frequency and direction. The questionnaire-based study of Shenfield et al. (2010) encompassing 46 clinics in six CBRC destination countries across Europe (Belgium, Czech Republic, Denmark, Switzerland, Slovenia and Spain) provides the most comprehensive survey to date, estimating that there may be between 24,000—30,000 cycles of CBRC taking place in Europe per year, involving between 11,000—14,000 patients.

Patient motivations for CBRC are another key research area that has begun to attract the attention of researchers. While quantitative studies have sought to establish broad categories that are useful indicators of trends (Hughes and Dejean, 2010; Nygren et al., 2010; Pennings et al., 2009; Shenfield et al., 2010), smaller qualitative studies have focused on exploring patients' own perspectives and revealing in detail the complexities of their decision-making processes (Bergmann, 2010; Inhorn, 2009a; Inhorn and Shrivastav, 2010; Whittaker and Speier, 2010). Scholars have advanced at least 10 different reasons why individuals engage in CBRC: (i) legal and ethical prohibitions; (ii) denial of access to certain categories of persons (based on age, marital status or sexual orientation); (iii) high

costs; (iv) absence of assisted reproduction services in resource-poor countries due to lack of expertise and equipment; (v) long waiting times due to resource shortages; (vi) safety concerns; (vii) low-quality care and/or success rates; (viii) desires for cultural understanding (e.g. language and religion); (ix) proximity to support networks and family members; and (x) concerns around privacy (Blyth and Farrand, 2005; Culley et al., 2011; Deech, 2003; Hudson et al., 2011; Inhorn, 2009a,b, 2011b; Inhorn and Patrizio, 2009; Inhorn and Shrivastav, 2010; Inhorn et al., 2011; Pennings, 2002, 2004, 2008; Pennings et al., 2009; Shenfield et al., 2010).

It is important to note that while the number of published studies on CBRC is small, there are some biases emerging. For example, most studies are clustered in Europe and North America (Bergmann, 2007, 2009; Blyth, 2010; Hughes and Dejean, 2010; Pennings et al., 2009; Shenfield et al., 2010). Therefore, while little is currently known about CBRC, even less is known about CBRC outside Euro-American settings. The few exceptions involve recent research on CBRC to and from the Middle East (Inhorn, 2009a, 2011a,b, in press; Inhorn and Patrizio, 2009: Inhorn and Shrivastav, 2010: Inhorn et al... 2011) and Asia (Pande, 2009; Rudrappa, 2010; Whittaker, 2009; Whittaker and Speier, 2010). In each case, these empirical studies focus attention on CBRC patients, so there is a lacuna of research concerning the identity, demographics and experiences of donors whose eggs and spermatozoa are used in CBRC treatment cycles (Inhorn, in press).

In addition, there is little information on the specific challenges faced by practitioners referring or receiving CBRC patients (cf. De Sutter, 2011; Hughes and Dejean, 2010; Pennings et al., 2009), the activities and organization of brokers and other middle agents, or on the longer term outcomes and implications for families created through reproductive travel. Moreover, although CBRC is most often interpreted as concerning the border-crossing of patients seeking services, the movements of clinicians, donors or surrogates across borders and the importing and exporting of gametes between different jurisdictions also constitute varieties of the CBRC phenomenon. The growing global demand for gametes has spurred not only myriad medical markets for sperm and eggs organized according to different principles, but also translates to different embodied experiences for 'donors' within these markets (Almeling, 2011). Details regarding these permutations, both at the local level and in terms of their global impact, are largely unknown and remain in need of rigorous academic investigation.

Given the relative paucity of empirical studies of CBRC, the empirical articles published in this special issue make a remarkable addition to this nascent body of literature. In particular, five of the studies provide much-needed qualitative insights regarding the motivations of patients and their experiences (Bergmann, 2011; Hudson and Culley, 2011; Inhorn, 2011b; Speier, 2011; Zanini, 2011), while four others provide ethnographic reflection on CBRC choreographies of transnational travel (Gürtin, 2011; Nahman, 2011; Pande, 2011; Whittaker, 2011).

Theoretical and conceptual issues

Interestingly, almost all of the empirical studies included in this special issue are the work of anthropologists (and to a lesser extent, sociologists), who have taken the disciplinary lead in studying CBRC. This is probably a reflection of anthropology's global scope; indeed, no other social science discipline has been as concerned with local-level empirical research in non-Euro-American settings. Furthermore, anthropology's main methodological strategy is ethnography, involving qualitative interviewing and participant observation in local communities and clinical settings.

A number of leading anthropologists have forwarded theoretical frameworks useful for studying CBRC. Appadurai (1996, 2001), for one, has famously outlined five 'global scapes' characteristic of modern globalization. According to Appadurai, these are ethnoscapes (movements of peoples), technoscapes (movements of technologies), financescapes (movements of capital), mediascapes (movements of images), and ideascapes (movements of ideas). All of these scapes are part of contemporary CBRC, although 'bioscapes', or the movement of biological substances (e.g. gametes, embryos, hormonal medications), might be usefully added to this list. Indeed, anthropologist Cohen (2005) has coined the term 'bioavailability' to signify the selective disaggregation of persons' cells or tissues for reincorporation into another body, as in gamete donation or kidney transplantation. According to Cohen, bioavailability is 'selective', in that some persons, particularly in resource-poor settings, are more 'bioavailable' than others.

Indeed, in recent years, anthropologists have pointed to the inherent unevenness of globalization and the ways in which some parties may be disadvantaged, wronged or even physically harmed in transnational processes. Globalization and transnationalism - or the movement of people and things across international borders - invariably involve 'disjunctures' (Appadurai, 1996, 2001) and 'frictions' (Tsing, 2005) when global movements do not occur smoothly or as planned. Speaking of Africa, Ferguson (2006) has coined the term 'global shadows' to focus attention on places and spaces located on the receiving end of global transfers. In a somewhat different vein, Ong and Collier (2005) examine the broad structural transformations and new configurations of society and culture accompanying globalization. Calling these 'global assemblages', Ong and Collier point more specifically to 'technoscience, circuits of licit and illicit exchange, systems of administration or governance, and regimes of ethics or values' (2005, p. 4). Based on this definition, CBRC could certainly be thought of as a 'global assemblage', involving the global spread of assisted reproduction technologies, international circuits of travelling people and body parts, systems of clinical and tourism administration, increasing regulatory governance and growing concern about ethics and values.

Conceiving of CBRC as a global assemblage places the phenomenon within the new interdisciplinary field of globalization studies. Indeed, there is a dire need for a range of disciplines, beyond anthropology and reproductive medicine, to engage with this growing global phenomenon. The conceptualization of CBRC as an interdisciplinary research problem within the larger study of globalization may help to reveal how CBRC is tied to larger political and economic structures, legacies of socialism and post-socialism, the underdevelopment of medical systems in some parts of the world and consumerism in health care and how travel trajectories may be tied up with ongoing post-colonial relations between certain countries (e.g. the UK and India). In

addition, conceiving of CBRC as a global assemblage sheds light on the convergence of two industries — the global IVF industry and the global tourism industry — with practices, profit motives and ethical values that may or may not be convergent.

The importance of tourism to global IVF clearly requires further analysis. CBRC is, in fact, part of a large global phenomenon known as 'medical tourism' (Jones and Keith, 2006). Medical tourism has been defined as 'the practice of patients traveling outside of established cross-border care arrangements to access medical services abroad, which are typically paid for out-of-pocket' (Crooks et al., 2011). Additionally, 'engaging in tourist activities, such as recovering in resorts in destination countries, is a common part of the medical tourism experience' (Crooks et al., 2011). According to researchers, orthopaedic, cardiac and plastic surgeries are among the most common types of medical care sought abroad, with India, Singapore and Thailand leading the way in the promotion and delivery of medical tourism services.

The movements of people seeking assisted reproduction services are similar in many respects to the movement of those seeking other medical services abroad. Three recent anthropological special issues have been dedicated to the topic of medical tourism, under the titles, 'Healing Holidays? Itinerant Patients, Therapeutic Locales and the Quest for Health' (Naraindas and Bastos, 2011); 'Patients without Borders: Understanding Medical Travel' (Whittaker et al., 2010); and 'Medical Migrations' (Roberts and Scheper-Hughes, 2011). Various empirical studies included in these special issues focus on transplant tourism, plastic and sexual reassignment surgery, therapeutic stem cell 'pilgrimages' and vacation travel to various healing spas. Reproductive tourism is covered in two of these issues (Inhorn, 2011a; Whittaker et al., 2010), but not in the issue focusing on 'medical migrations'.

The relative dearth of CBRC-themed articles in these recent special issues points to two major problems. First, scholars studying CBRC and scholars studying other forms of medical tourism may have little intellectual interaction. Indeed, only rarely are CBRC and other forms of medical tourism explicitly compared (e.g. Pfeffer, 2011) and they are usually not studied together. The CBRC scholarly community remains largely in a separate sphere, publishing mainly in reproductive medicine and public health journals. Second, the acronym 'CBRC' seems oddly out of sync with the language being used by other medical tourism scholars. CBRC, which stands for 'cross-border reproductive care', is a relatively new addition to the scholarly lexicon, coined within the past 2 years to replace the term 'reproductive tourism', which is seen as inaccurate or pejorative. However, is CBRC a terminological improvement? In order to understand this neologism, a brief history of scholarship bears mentioning.

Knoppers and LeBris (1991) introduced the term 'procreative tourism' in a law article comparing the regulatory structures and principles governing assisted reproductive technologies around the world. The first empirical attempt to describe travel for infertility treatment, including newly introduced technologies in Egypt, was by Inhorn (1994), who coined the term 'quest for conception'. Eventually, journalists began reporting on this new phenomenon of transnational movements for assisted reproduction treatment. They used

the terms 'reproductive tourism', 'procreative tourism' or 'fertility tourism', which were subsequently adopted by scholars (Blyth and Farrand, 2005; Cohen, 2006; Deech, 2003; Pennings, 2002, 2004). However, these same scholars began to critique the notion of 'tourism' as an appropriate trope for reproductive travel. Because the term 'tourism' connotes pleasure, freedom and choice of destination, as well as the luxury of a 'holiday', it was criticized for misrepresenting patients' difficult experiences in seeking treatment across borders. Suggested alternatives have include 'reproductive exile' (Inhorn and Patrizio, 2009; Matorras, 2005), a critical term highlighting the 'forced' travel of patients who cannot pursue their dreams of conception within their home countries, as well as the more neutral terms 'transnational reproduction' (Whittaker, 2009) and 'reproductive travel' (Inhorn and Patrizio, 2009; Gürtin, 2011; Whittaker and Speier, 2010).

In this symposium issue, the term CBRC has been used, as this is currently the most widely accepted terminology (Pennings et al., 2008; Shenfield et al., 2011). However, it must be acknowledged that 'care' may not be part of the cross-border reproductive experience of all participants (Blyth et al., 2011). Furthermore, some CBRC scholars insist on retaining the term 'tourism' as a critical analytic reflection on the broader economic infrastructures that underpin the global fertility market (Ikemoto, 2009; Martin, 2009; Pfeffer, 2011), which functions much as the tourism industry. Within such a market, those seeking assisted reproduction services may be conceptualized as 'consumers' (Culley and Hudson, 2009; Speier, 2011), 'reproductive agents' (Bergmann, 2011) or even 'reproductive opportunists' (Whittaker, 2011), leading some scholars to also critique the default term 'patient'.

In short, CBRC generates a multitude of novel circumstances and relationships, which require a new vocabulary. Some scholars have found the existing themes and theoretical frameworks insufficient to analyse and communicate their findings. Consequently, new conceptual tropes have been introduced to better capture and convey emerging insights. Within this symposium issue alone, terms being introduced include 'return reproductive tourism' (Inhorn, 2011b), 'reverse reproductive traffic' (Nahman, 2011), 'seriality' (Hudson and Culley, 2011), 'transnational circumvention' and 'reproductive projects' (Bergmann), 'infertility journeys' (Speier, 2011), the 'global egg trade' and 'eggs-ploitation' (Pfeffer, 2011) and 'reproductive opportunism' and 'the new sex trade' (Whittaker, 2011). Most of this vocabulary is intentionally critical, suggesting that the more neutral term of CBRC fails to capture completely the complicated, nuanced and variable aspects of reproductive travel. Thus, the very terminology used to describe this phenomenon remains open to debate and negotiation.

Research objectives

As has been discussed, the empirical evidence for CBRC is currently limited to a few studies, providing only partial and preliminary insights into the phenomenon. Objectives for future research include both quantitative and qualitative elements, engaging a wider spectrum of stakeholders and providing broader global coverage. There is a need for better estimates of the numbers of patients partaking in CBRC, details of their origins and destinations, and explanations of

their reasons and motivations for travelling. While quantitative research is necessary in order to provide information about the incidence and frequency of CBRC, qualitative research is essential for appreciating the perspectives of stakeholders and communicating what they feel to be the important and relevant aspects of their experiences. Although research into all aspects of CBRC is essential, here are suggested four pressing research objectives that should be prioritized as part of a future agenda.

Reveal the organization of CBRC

The organization and co-ordination of CBRC by referring and receiving professionals in different locations, and the role played by brokers and other middle agents who may also facilitate such travel, needs to be better understood. Although it is known that CBRC may take many different forms of organization - from independent travel and self-referrals at one end of the spectrum to intricately connected shared-care arrangements on the other, with a myriad of combinations in between — there is no reliable information regarding the prevalence and market proportion of these different types, nor any systematic comparison of outcomes, experiences and patient satisfaction. Although business interests undoubtedly constitute a crucial aspect of the global assisted reproduction market (Spar, 2006), there is very little transparency about how this business functions and manifests in CBRC arrangements. The specifics of CBRC organization, particularly as they pertain to 'hub' destinations and clinics, are essential in assessing the relevance of ethical and practical concerns raised by critical commentaries on CBRC, for developing adequate guidelines for professionals and patients and for directing policy strategies at the national and international level.

Provide the perspectives of gamete donors and surrogates

To date, the experiences of patients have been the main focus of studies on CBRC. A few studies have probed the experiences of healthcare providers (Hughes and Dejean, 2010; Pennings et al., 2009). An increasing number of studies (Pande, 2009, 2011; Rudrappa, 2010) and film documentaries (Google Baby, Made in India) explore the experiences of gestational surrogates in India. Almost nothing is known about the demographics, views and experiences of egg and sperm donors whose gametes are used in CBRC treatment cycles. This is a particularly glaring deficit, considering that much of the ethical worry around CBRC concerns the treatment, consent and potential exploitation of donors, and of egg donors in particular (see Pfeffer, 2011; and the film documentary Eggsploitation).

Investigate CBRC in new geographical locations

As already pointed out, knowledge regarding CBRC is clustered in Europe and North America and little is known about how this global phenomenon is enacted in other locations. Inhorn's studies of CBRC in the Middle East and its diaspora (for example Inhorn, 2009a, 2011a,b, in press; Inhorn and Shrivastav, 2010; Inhorn et al., 2011) indicate that a range of context-specific factors, including, among others, religion, migration histories, political and economic factors in home and host countries and gender considerations, influence the incidence, delivery and directionality of CBRC and

impact the motivations and experiences of patients. Thus, the few studies conducted outside Euro-America warn against extrapolating from one location or population to another. Furthermore, there are major regions of the world including Latin America, sub-Saharan Africa and post-socialist Asia — where little, if anything, is known about CBRC. There are several reasons for these major lacunae. In Latin America, where an assisted reproduction industry has existed for many years (Nicholson and Nicholson, 1994) and a CBRC industry is now emerging (Smith et al., 2009), no scholars have yet emerged to publish empirical studies in English-language journals. In other parts of the world, such as sub-Saharan Africa or central Asia, access to assisted reproduction treatment may be severely limited or simply non-existent (Nachtigall, 2006). In such places, most infertile people have absolutely no access to treatment and only the elite may travel abroad in an attempt to overcome their fertility problems (Inhorn, 2009a). For example, in Inhorn's 2007 study carried out in the Arab Gulf country of United Arab Emirates, mostly middle- and upper-class couples from 50 countries, including resource-poor Sri Lanka, Diibouti, Somalia, Sudan, Nigeria, Pakistan and Afghanistan, had obtained tourist visas to 'global Dubai' in order to carry out single cycles of treatment as CBRC patients (Inhorn, 2011a; Inhorn and Shrivastav, 2010).

Research the outcomes of CBRC

Questions concerning psychological outcomes, child welfare and family functioning in families with offspring conceived via assisted reproduction technologies have spurred a wide and rigorous body of social science literature, particularly from the field of developmental psychology (e.g. Golombok et al., 1996, 2002, 2006). Empirical findings from wide-scale and longitudinal studies investigating, among other issues, children's relationships with their parents, gender identity and development, transition to adolescence and the bearing of all these aspects on children's wellbeing have provided crucial evidence necessary for assessing concerns surrounding these technologies and debating policy alternatives. Recently, families formed through the use of donor gametes and the specific dilemmas they face, including issues around disclosure of donor conception, experiences of searching for donors and donor siblings and subsequent contact with donor relations, have become a focus for research, yielding important insights into real-life choreographies made by these 'new family forms' (Blake et al., 2010; Freeman et al., 2009; Jadva et al., 2009, 2010, 2011; Readings et al., 2011). However, currently there is no information regarding longer-term outcomes for families created through CBRC. This is an important empirical gap to address since the specific circumstances of these 'CBRC families' may translate into specific challenges or dilemmas, particularly where donor gametes and surrogates are involved in conception. It is already known, for example, that some CBRC families face difficulties in gaining legal recognition of parenthood (Gamble, 2009; and as shown in the documentary film Made in India), although very little is known about whether and how these difficulties affect parents, offspring and other family members. CBRC conception, especially with the use of donor gametes, may place offspring in a different legal and social situation vis-à-vis their peers conceived via assisted reproductive technologies in the home country; for example, in the UK, offspring conceived using donor gametes since 2005 will have access to the identity of their donors upon reaching the age of 18, unlike their peers conceived in Spain via anonymous donors. Although it will be some time before offspring are faced with these dilemmas, such differences may already have a bearing on parental attitudes and decisions, for example, regarding whether, when and how to disclose donor conception.

The research site

As well as the more traditional locations encountered in assisted reproduction research, such as hospitals and fertility clinics, CBRC also engages a range of novel spaces, including guest hostels, hotels, tourism firms, brokerage agencies, maternity waiting homes and the internet. These emergent spaces are becoming increasingly important sites yielding unique forms of information about this global phenomenon. While empirical researchers seeking to enter these new and multiple settings face many traditional challenges, particularly in relation to gaining access and trust in protected spaces (Inhorn, 2004), their research may also generate novel considerations and consequences.

Guest hostels, for example, allow an opportunity to observe how CBRC patients interact with one another, how they occupy their time outside their clinical appointments and how they negotiate a balance between patient-hood and 'tourism' in foreign locations (Speier, 2011). Furthermore, surrogate maternity homes are emerging as a new CBRC space, in which both providers and commissioning couples interact with their gestational surrogates (Pande, 2011). Both of these settings, however, may prove to be particularly challenging spaces in which to conduct research. In addition to the problem of research access and potential gatekeeping by wary providers, the researcher may find it difficult to keep an appropriate distance from research subjects, to report upon unethical practices within these facilities or to find personal space for disengagement and reflection.

The internet has become not only the primary space in which clinics advertise their services and a key source of information for patients planning CBRC (Shenfield et al., 2010; Hudson and Culley, 2011), but also a convenient meeting place for virtual communities of CBRC patients, enabling them to seek guidance from, offer support to and exchange personal stories with each other (Bergmann, 2011; Gürtin, 2011). The anonymity offered by the internet is particularly important in enabling communication on what may be stigmatized or even illegal activities and offers a productive avenue for accessing research populations that may otherwise be impossible to reach. However, it is also very important for researchers to consider the ethical implications of internet-based research, particularly on forums where participants may imagine communication to be exclusively with others in a similar situation. Ethical codes in this area are still developing and it is the responsibility of pioneering researchers to establish strict groundrules adhering in particular to standards of consent, care and confidentiality.

Given the multiple locations and spaces - virtual and real - in which CBRC interactions and transactions take place, it seems imperative that CBRC researchers engage

fully in so-called 'multi-sited research'. Anthropologist George E Marcus (1995) was the first to coin the term 'multi-sited ethnography' to describe qualitative research that 'moves from its conventional single-site location... to multiple sites of observation and participation that cross-cut dichotomies such as the "local" and the "global", the "lifeworld" and the "system" (Marcus, 1995, p. 95). According to Marcus, such multi-sited research is particularly useful when examining 'the circulation of cultural meanings, objects, and identities in diffuse time-space' (Marcus, 1995, p. 96). Given this definition, CBRC would seem to lend itself especially well to multi-sited ethnographic approaches, including what Marcus calls 'tracking' through space and time. Tracking routes of CBRC circulation could include, for example: (i) following the global spread of assisted reproductive technologies into new sites, such as when IVF physicians open new clinics across borders; (ii) accompanying infertile patients from their home countries to 'host' countries in search of treatment and then following them back home again; (iii) moving with the embryologists, couriers and other CBRC intermediaries as they obtain gametes and embryos and transport them across borders; (iv) tracking the CBRC internet chat rooms and the global patterns of participation and diffusion; and (v) attempting within one study to triangulate a variety of these methodological sites and strategies, thereby breaking out of single-sited, clinic-based studies. To date, such explicitly multi-sited CBRC research is still in an inchoate stage of development, but at least a few of the authors in this symposium issue are attempting multi-sited approaches (e.g. Bergmann, 2011; Gürtin, 2011; Inhorn, 2011b; Nahman, 2011).

Methodological challenges

All empirical research presents challenges that must be overcome. These are even more pronounced in the case of research involving sensitive topics (e.g. infertility) among medical patients (e.g. those seeking assisted reproduction treatment). The specifics of CBRC add further layers of methodological complexity for researchers. Here are discussed four broad categories that require the explicit and intentional attention and negotiation of CBRC scholars.

Study population and sampling strategies

CBRC is a phenomenon that is only partially visible. There are no overarching obligations for clinics to report details about patients they receive or refer for CBRC, nor for patients to make themselves known at any level. This numerical uncertainty is exacerbated in cases where local stigmatization or prohibitions set strong pressures to ensure secrecy around CBRC activities (Gürtin, 2011). It is thus almost impossible to generate accurate figures for the populations of patients, providers and professionals involved, to ensure that research samples are representative or to assess research coverage. Since there are no censuses or sampling frames for CBRC from which to select subjects in a random fashion, and because large-scale population-based studies are difficult to carry out, the study of CBRC will likely never

achieve the epidemiological precision of population-based random sampling, with case—control or longitudinal cohort designs that ensure representativeness and generalizability. Without accurate knowledge about overall populations, risks of selection bias among samples may be difficult to recognize, let alone to counter. However, this does not mean that CBRC studies can abandon sampling rigour; quite the contrary, researchers are compelled to think critically and justify their sampling strategies.

A practical response to these difficulties of sampling by larger quantitative studies has been to gather information about CBRC directly from clinics at the point of delivery (Hughes and Dejean, 2010; Nygren et al., 2010; Pennings et al., 2009; Shenfield et al., 2010). However, even with such designs, it remains difficult to ensure the co-operation of all treatment centres, leaving substantial gaps in data collection. Moreover, certain types of information cannot be gathered in the necessary depth by quantitative approaches and require insights from qualitative research involving in-depth studies with relatively small populations of patients. Such qualitative CBRC research, using ethnographic interview methods, must also be systematic, employing purposive sampling and a range of methodologies designed to elicit meaningful patterns of behaviour, thought and action. Where appropriate and possible, researchers should: recruit through a variety of different channels; remain attentive to social, practical or other factors that may generate selection biases, particularly among samples of 'volunteer' participants; and persist with data collection until the point of saturation has been reached. In certain situations, for example in clinics catering to foreign patients from a selected number of countries, quota sampling of a particular number of patients from each country may be a useful and appropriate means to ensure that the study sample reflects the relevant population.

Research continuity and coverage

In addition to its partial visibility, CBRC presents methodological challenges that derive from its characteristic as a phenomenon 'in motion'. Unlike patients receiving care 'at home', the experiences of CBRC patients span different locations, which make them difficult both to capture in situated statistics and to convey through comprehensive narratives. The geographical and temporal challenges to research continuity complicate the ability of researchers to provide holistic representations of CBRC. Most research with patients engages them at a particular space and in a particular moment, for example at the receiving clinic in which they are being treated or back 'home' after the end of their treatment cycle, providing only a snapshot of their broader experiences. The possibilities afforded by multi-sited research, particularly for qualitative researchers (as discussed above), present a promising and exciting avenue for tackling these challenges. However, researchers seeking to trace the pathways of patients' journeys across time and space will undoubtedly face a range of economic, practical and ethical considerations, including in some cases patients' desires for privacy surrounding their treatment. These challenges are of particular relevance for researchers seeking to build detailed case studies of patients' experiences from beginning to end or for efforts at longitudinal data collection.

Practical obstacles

CBRC presents a range of practical research challenges, including the multiplicity of languages, religions and cultures that researchers are likely to encounter. For example, statistics collected in different countries regarding cycle outcomes may be subject to different guidelines or levels of precision, making it difficult to generate meaningful comparisons. Similarly, large-scale quantitative research involving structured surveys of patients or professionals in multiple centres across different countries will need to be attentive not only to accurate translation into different languages, but also to the application of similar protocols regarding the administration of research. Small differences in the approach of research administrators may invalidate the comparability of data across settings and ultimately jeopardize the entire research endeavour.

Oualitative researchers are also faced with a range of practical obstacles. For example, researchers wishing to provide ethnographic accounts of CBRC 'hub' clinics will need to communicate with both local professionals and providers, as well as with 'foreign' patients, and may therefore need to use different languages or interpreters. For example, in Inhorn's 2007 study conducted in the United Arab Emirates, English was the lingua franca in the very international clinic site on the border of Dubai and Sharjah, a neighbouring Emirate. However, staff members' first languages were Arabic, Hindi, Urdu and Tagalog and patients coming to the clinic spoke hundreds of different languages, with English being a second, third or fourth language for many couples. Although both English and Arabic were used in the study (Inhorn, 2011a,b; Inhorn and Shrivastav, 2010), many of those interviewed were likely much more comfortable in their native languages, which spanned a geographic spectrum from West Africa through Southeast Asia. It is possible that language barriers may have hindered the quality and richness of the ethnographic data in some cases. In general, both linguistic proficiency and cultural understanding and sensitivity would seem crucial to the qualitative study of CBRC. Thus, researchers working in CBRC will need to develop unique research profiles as multi-lingual, multi-cultural analysts.

Legal and ethical dilemmas

Perhaps the most taxing of challenges for CBRC researchers will derive from the various legal and ethical dilemmas associated with following such a phenomenon. The 'legal patchwork' (Spar, 2006) governing treatments and the movements of patients between different jurisdictions give rise to a range of complex situations (Storrow, 2005a,b).

Although researchers have identified many drives for CBRC, in many cases the desire to escape legal or religious prohibitions in the home country is an important motivator for men and women engaging in reproductive travel (Shenfield et al., 2010). The legal and ethical status of such

patients is not always clear (see Storrow, 2011; Van Hoof and Pennings, 2011) and their social realities may involve high levels of secrecy and fears of stigmatization (Gürtin, 2011). Qualitative researchers in particular must be very sensitive when reporting data from such populations, where sometimes revealing or articulating the sheer existence of certain practices may have unintended outcomes. On the other hand, researchers who as a part of their investigations encounter illegal, 'borderline' or problematic practices must also think critically about their responsibilities and obligations (see Nahman, 2011). Indeed, exposing illegal, exploitative or even harmful practices, and writing about them in a critical way, may be required of researchers, even when it jeopardizes research access for oneself and future scholars. In this regard, researchers must assess their own position vis-à-vis those who grant them access to research sites (e.g. providers) and those who are the subjects of their study (e.g. patients and donors).

Often, CBRC research will require the demands of multiple stakeholders — including professionals who have voluntarily granted research access to 'closed' spaces, middle agents who have acted as gatekeepers and patients who have generously shared their stories under difficult circumstances — to be skilfully negotiated. Researchers need to clearly define and communicate what their role is — and is not — to these different constituencies from the outset. For example, although qualitative researchers based in clinics may engage in long and detailed conversations with patients, which are regarded by participants as useful or cathartic, research is not and must never be viewed as a substitute for counselling or psychological services. Similarly, independent researchers based in clinics should make their impartiality clear to all research participants.

Finally, it is a part of researchers' ethical commitments to reflect on their role as part of broader academic communities. Pioneering researchers in new fields in particular owe it to their colleagues, as well as their research participants, to judge how their actions in both conducting and reporting their studies will impact future research in similar areas, whether by themselves or by other researchers.

Concluding remarks

Despite the many challenges outlined in this article, CBRC is definitely a cutting-edge topic of global significance in the new millennium. CBRC is a prime example of contemporary 'technological transnationalism', with infertile couples and other would-be parents ardently pursuing treatment across international borders in the hopes of conception. It is extremely important to understand their dreams, their motivations for travel, their struggles and the outcomes of their quests, alongside the structural and statistical realities of this phenomenon. Information gathered from CBRC patients themselves may yield changes in the CBRC landscape that will smooth patients' journeys, improve the quality of their care and increase their success rates. Furthermore, penetrating the now secret worlds of those who 'assist' these patients - particularly gamete donors and commercial gestational surrogates - will possibly lead to an evidence base from which global standards of appro-

 Table 1
 A future research agenda for cross-border reproductive care (CBRC).

Review agenda	Issues	Recommendations
Literature review	Deficit of empirical data	Quantitative and qualitative research studies are required to provide a rigorous empirical base to discussions around CBRC. Research should provide data on a variety of areas, including incidence, direction, drives and
	Emerging biases in empirical study	motivations, and the views and experiences of various stakeholders Researchers need to be aware of these biases and counter them by studying new locations and new populations
	Narrow conceptualization	Conceptualizations of CBRC should not be confined to the travel of assisted reproduction patients across borders. The movements of clinicians, donors and surrogates, and the importing and exporting of gametes, should also be regarded as variations of this phenomenon
Theoretical and conceptual issues	Useful theoretical frameworks for study	The field of globalization studies offers some useful frameworks that can be utilized by CBRC researchers
	Interdisciplinary engagement	CBRC should be conceived of as an interdisciplinary research problem: a range of disciplines, beyond anthropology and reproductive medicine, need to engage with this global phenomenon in order to reveal its different facets
	Better understanding of the importance of tourism to the global IVF industry	CBRC should be situated within the broader field of 'medical tourism', and scholars should engage with one another to generate theoretical and empirical comparisons of reproductive medicine with other medical fields (e.g. transplant tourism, plastic surgery, gender reassignment surgery)
	Situating CBRC within broader academic discussions and critically reflecting on the use of terminology	Scholars should think critically about the terms they use and what these connote. CBRC, although currently the most accepted terminology, may not be the most accurate way to describe this phenomenon. New tropes derived from the analysis of empirical data can prove conceptually illuminating.
Research objectives	Exploration of how CBRC is organized	Research should explore and articulate the economic infrastructures organizing the global CBRC industry, including the roles of clinics, brokers, advertisers, tourism and travel agencies and other middle agents
	Investigation of the perspectives of gamete donors and surrogates	Research should address the lacuna regarding the views and experiences of surrogates, and particularly of egg and sperm donors involved in CBRC
	Development of a more comprehensive global picture of CBRC	Research of CBRC should be expanded to new locations, seeking to reveal global links and similarities, as well as local variations and particularities
	Assessment of the outcomes of CBRC	Research should address psychological outcomes, child welfare and family functioning and elucidate any specific issues faced by CBRC families
The research site	Assessment of the specific opportunities and challenges of emergent research sites	CBRC researchers should develop methodological and ethical guidelines for working in emerging research sites (e.g. the internet, guest hostels, surrogate maternity homes)
	Understanding of the multiplicity of spaces within which CBRC interactions take place	CBRC researchers, particularly those engaged in qualitative research, where possible and appropriate should employ multi-sited research methodologies

Methodo	logical	chal	lenges

Difficulties of defining the study population and sampling strategies

Difficulties of ensuring research continuity and coverage

Practical obstacles

Legal and ethical dilemmas

Both quantitative and qualitative researchers should think critically about their data collection and sampling strategies in CBRC research, striving to minimize bias and achieve rigour in the most appropriate way for their methodology

Researchers should address the challenges of geographical and temporal continuity that arise with studying a phenomenon 'in motion'. If research is providing only a 'snapshot', then efforts should be made to contextualize this moment

Multi-sited research is a means to strive for continuity across different spaces. Longitudinal research of CBRC is also much needed Both quantitative and qualitative researchers should think about how to address the practical difficulties of CBRC research, including the multiplicity of locations, languages and cultures that are likely to be encountered and the additional resources that may be required to overcome these Some CBRC choreographies may present ethical dilemmas to researchers based on the legal status of the various practices or stakeholders encountered. Researchers must be prepared for such dilemmas and develop strategies

Researchers should think critically about their positionality and how to negotiate the demands of various stakeholders

Researchers should be clear in defining and communicating their role to all study participants

Researchers, particularly pioneers in new fields, should reflect on their role within the academic community

priate care and compensation can be discussed and eventually set.

CBRC is of growing interest to a range of professionals working in the assisted reproduction industry and its regulators (Blyth and Auffrey, 2008; Collins and Cook, 2010; Mainland and Wilson, 2010; Shenfield, 2011; Shenfield et al., 2011; Thorn and Dill, 2010). Yet, only by considering the mounting empirical evidence from a broad variety of global sites will professional organizations and regulatory bodies be able to set appropriate ethical guidelines and formulate effective policy. Good governance of the CBRC industry cannot be formulated on a weak empirical base, nor can individuals make informed decisions without recourse to such knowledge. The developing field of empirical ethics, seeking to combine empirical insights with ethical analysis, seeks to provide thorough and sustained examinations of difficult terrain and is an apt approach to employ in the investigation of CBRC. It is only through the insights that remain to be offered by quantitative and qualitative studies alike - regarding, for example, accurate figures for the incidence of CBRC and its directions, the experiences and attitudes of the involved parties and the outcomes for families that are created - that one can engage with the theoretical and ethical issues around CBRC that are currently being raised by scholars and regulators. Thus, there is a fairly urgent need for more researchers to enter this field in the second decade of the new millennium.

Clinicians, bioethicists and anthropologists have dominated the CBRC research enterprise to date. However, it is imperative that scholars from a number of other disciplines join in this research effort. In particular, the study of CBRC requires: (i) economists, who can examine the financial contours of this global market, estimate industry profits and calculate the actual costs of CBRC to couples; (ii) psychologists, who can investigate the psychological, developmental and emotional impact of CBRC on families and family relationships; (iii) gender studies scholars, who can assess the impact of CBRC on women and men, alone and as couples, and can critically assess the consequences of CBRC on reproductive bodies and wellbeing; and (iv) legal scholars, who can provide comparative studies of relevant laws and regulations around the world and how different countries are dealing with CBRC and its legal consequences (e.g. defining parentage and issuing birth certificates in cases of commercial surrogacy). Such knowledge is crucial, given efforts by law makers to ban assisted reproductive technologies and CBRC in some countries (e.g. Costa Rica and Turkey, respectively), as well as international efforts to generate standards of 'good practice' (Shenfield et al., 2011).

Only through studies by scholars from multiple disciplines, working in numerous global sites, using a variety of research designs and methodologies, will the full scope of CBRC be revealed. It is hoped that the research agenda outlined in this article will serve as a call to others to join in the study of CBRC. By joining the CBRC community of scholars, researchers may help to improve not only the evidence base and influence policy making in this cutting-edge area, but also to promote the wellbeing of countless men and women, their offspring and those who assist them in their dreams of conception.

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Films

Eggsploitation, 2011. Dirs. Jennifer Lahl, Justin Baird. Google Baby, 2009. Dir. Zippi Brand Frank. Made in India, 2010. Dirs. Rebecca Haimowitz, Vaishali Sinha.

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