

# Minimizing length of hospital stay for women's reproductive care

Innie Chen MD MPH, Abdul Jamil Choudhry MBBS MSc, Shi Wu Wen MB PhD

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In research published in *CMAJ Open*, Hardy and colleagues evaluate outcomes for a novel model of postpartum care — the Monarch Centre model — designed to reduce postnatal length of stay in hospital for new mothers and their offspring, after its implementation at one Canadian hospital.<sup>1</sup> The authors used time series analysis to show reduced postpartum length of stay after both cesarean and vaginal deliveries at the Ottawa Hospital once the model was introduced. Reductions in length of stay were most marked for women undergoing cesarean delivery.<sup>1</sup>

Many factors have driven development of novel health care models that encourage demedicalization, promote self-management, improve community supports and reduce hospital-based care. Although there has always been pressure to reduce health care spending, the Triple Aim framework proposed by the Institute for Healthcare Improvement also highlighted the importance of patient experience and population health.<sup>2</sup> How does early discharge after admission for obstetric procedures affect both the health system and patient experience?

Attempting to decrease hospital length of stay for obstetric patients is not novel. For many years, obstetricians and health administrators have focused on minimizing postnatal hospital stay to reduce health care costs while improving mother and neonate's health care experience, and at the same time seeking to optimize overall population health. Several Canadian studies have documented decreasing lengths of stay, from 5.3 days in the 1980s, to 3.0 days in the 1990s, to 2.3 days in the most recent publications.<sup>3,4</sup> But staffing and financial models have shown that the reduction in postnatal stay results in less than proportionate saving in hospital cost, owing to maintenance of contingent bed and staff capacity.<sup>5</sup> However, the model of care presented in the linked study does not address only in-hospital factors to promote early discharge; it also includes measures to ensure ongoing monitoring of postoperative safety in patients undergoing cesarean delivery and to promote continuity of standard postpartum care in outpatient clinics.

Women's reproductive care, including vaginal deliveries, cesarean deliveries and hysterectomies, accounts for a large proportion of admissions to hospital in Canada. Childbirth is the most common reason for hospital admission, and cesarean

## KEY POINTS

- Canadian hospitals have reduced the length of postnatal hospital stay in recent decades.
- Women's reproductive care accounts for a large proportion of admissions to hospital and reducing post-procedure length of stay can lead to substantial savings, but good patient experience remains important.
- Mixed-methods approaches that incorporate quantitative and qualitative evaluation of health care use and patient experiences may help to optimize the strategies employed in early discharge for reproductive care.

delivery and hysterectomy are the first and fourth most common surgeries, respectively.<sup>6</sup> As such, any measures to reduce length of hospital stay for this group of patients translate to high impact for the health care system.

The advent of minimally invasive surgical techniques has been accompanied by substantial reductions in postoperative lengths of stay for gynecologic surgery. For example, women undergoing laparoscopic hysterectomy have a median length of stay of one day, compared with three days for women undergoing abdominal hysterectomy.<sup>7</sup> For women who require larger abdominal incisions, such as in the case of cesarean delivery or enlarged pelvic masses, measures to promote enhanced recovery through multimodal analgesia, including the use of regional abdominal blocks, have led to further decreases in lengths of stay.<sup>8</sup> Other novel approaches include using videoconferencing and cellular phone-based apps for patient support post-discharge.<sup>9</sup> Taken together, these interventions promote the normalization of early discharge for both patients and health care providers.

However, improving the quality of health care is not only about decreasing costs through efficiencies. It is important to know if patient experience of care before and after early discharge is good. Being discharged too early after a procedure can worsen experience, and it is not yet clear what the limits are on early discharge. Hardy and colleagues measured return to hospital and readmission and found no difference in these outcomes before and after the introduction of the Monarch Centre model.<sup>1</sup>

It is likely that the continuity of care provided by the Monarch Centre helped to prevent patient concerns that would have led to a return to hospital. Research suggests that some subgroups may be more vulnerable to readmission, however. Mothers of late preterm infants and primiparous mothers in particular seem to require additional postpartum support.<sup>10</sup> Because it is likely that the limits of early discharge will depend on the specific circumstances of each mother and infant, the study of the hospital stay needs of particular subgroups may enable more personalized and tailored algorithmic approaches to early discharge.

Although outcomes such as postoperative lengths of stay and return to hospital are important from a health systems perspective, qualitative and survey studies have been able to assess outcomes related to patient experience and satisfaction. Women were found to be generally less satisfied with their postnatal care than with either antenatal or intrapartum care, but it was not associated with postnatal length of stay.<sup>5,11</sup> Health care providers may be more concerned about the cost and quality of care in terms of complications and readmissions avoided, but mothers may have quite a different perspective. Mothers, especially first-time mothers, are often anxious and afraid about the safety of their new babies and lack confidence in their ability to take care of them. Under the circumstances, mothers may prefer to have professional care providers physically available, as ensured by longer postnatal hospital stay.<sup>11</sup> Therefore, focus on maternal mental health should be part of the evaluation of programs that aim to reduce length of postnatal hospital stay. Fortunately, early discharge appears to be associated with positive patient experiences; in particular, parental experiences of responsibility, security and confidence in their new role as parents are positively influenced by the opportunity to be together as a family

soon after birth.<sup>12</sup> Mixed-methods approaches that incorporate quantified and qualitative analyses of health care utilization and patient experiences may help to optimize the strategies employed in early discharge for reproductive care.

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**Affiliations:** The Ottawa Hospital Research Institute (Chen, Choudhry, Wen); Department of Obstetrics and Gynecology (Chen, Wen), University of Ottawa, Ottawa, Ont.

**Contributors:** All of the authors contributed to the conception and design of the work, drafted the manuscript, revised it critically for important intellectual content, gave final approval of the version to be published and agreed to be accountable for all aspects of the work.

**Correspondence:** Innée Chen, [ichen@toh.ca](mailto:ichen@toh.ca)