

Background

- Mass gatherings are planned or spontaneous events where the number of people attending could strain the planning and response resources of the community or country hosting the event¹. It is reported that approximately 0.1% of such attendees will require emergency department care, often involving ambulance transport and services^{2,3}. The 2022 FIFA World Cup Football competition in Qatar, with an expected 1.5 million visitors will cause mass gatherings at 8 designated stadiums nationwide, each seating 45,000 people. One, the Al Janoub Stadium is located within walking distance of the Al Wakra Hospital (AWH).
- Re-admission after childbirth is an important obstetric complication with adverse maternal and family health effects often used as a key indicator of healthcare quality and its local and national cost implications.
- A pre-event impact assessment of the influences of postpartum re-admissions and additional workload from this mass gathering on obstetric emergency room (OBER) services will assist in preparedness and resource management.

Objectives

- a) To calculate OBER postpartum re-admissions. b) Based on the calculated monthly rates and the anticipated numbers of attendees, to compute prospective projections of the effect on Al Wakra Hospital workload during the FIFA 2022 World Cup and c) Assess impact on service delivery to enable adequate planning for the event.

FIFA World Cup Events	Attendees
Germany 2006	3.2 Million
Brazil 2014	5.2 Million
Russia 2018	7.7 Million



Methods

- A retrospective 3-year analysis of OBER postpartum readmissions in AWH and computed projections based on the anticipated numbers of FIFA World Cup 2022 attendees. Annual workload trends were evaluated to assess the impact of both parameters on clinical services to develop a risk reduction strategy (Figure 2).

Expected number of attendees	1,500,000
Expected number of women	375,000
Number of Stadia	8
OBER annual episodes	28,000
Deliveries (2017-2019)	16,302

Results

- The average OBER inpatient admission rate was 8.33% (8.19 - 8.74%) during the 3-year study period. An added influx of visitors for the 2022 Football World Cup based on stadium size and proximity³ would increase the OBER admission rate from 8.33% to an approximate 9.18% during the 28-day event. This rate will be partly reduced by reducing postpartum re-admission rates and enlisting community healthcare support (Figure 2)

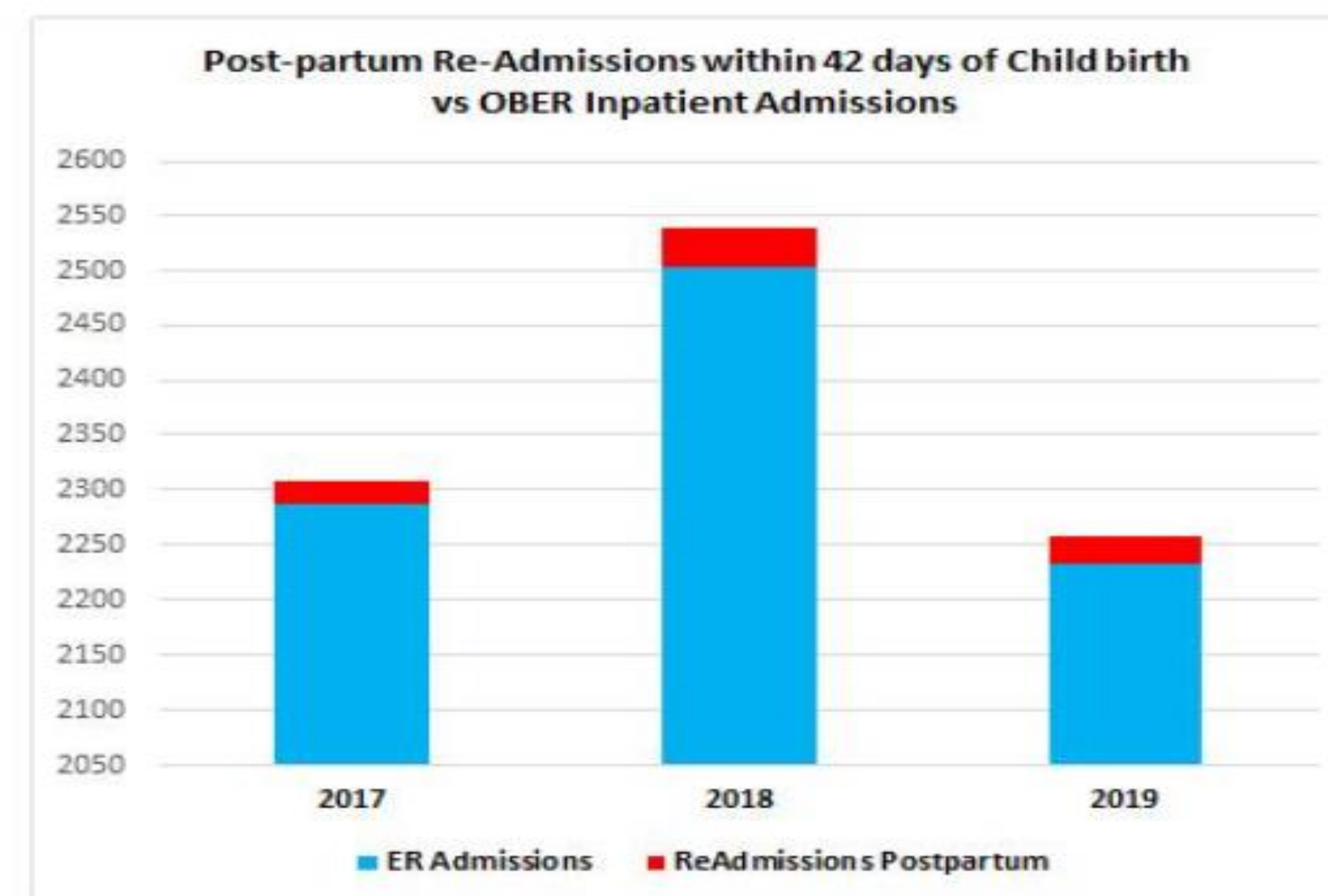


Figure 1: OBER Activity; Post-partum Re-Admissions as a proportion of Admissions to the Wards



Figure 2: Strategies to reduce post-partum Re-Admission

Conclusions

- Mass gatherings increase demands for clinicians' attention and stretch emergency medical services. We estimated an average 10% increase in OBER emergency inpatient admission rates that can be mitigated by reducing the postpartum admissions which constitute a sizeable proportion of OBER inpatient admissions. Reducing the postpartum re-admissions will offset the added workload from the FIFA 2022 World Cup mass gathering.

References:

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