

Impact of Perineal Protection Interventions to Reduce Obstetric Anal Sphincter Injuries

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OBJECTIVES

- Obstetric anal sphincter injury (OASI) has been proposed as a key performance indicator in maternity medicine, given it has potentially preventable long-term consequences for women (e.g., anal incontinence). Decisions about mode of subsequent birth following an OASI are complex and dependent on various factors.
- The incidence of OASI in a northern Sydney hospital was 3.6% in 2019, higher than national incidence for Australian women in the same year (2.9% as reported by the Australian Institute of Health & Welfare).
- The maternity unit convened a working party in 2020 to implement perineal protection interventions that covered six themes: *antenatal education on perineal trauma, episiotomy, manual perineal protection, instrument choice and recognition and diagnosis of tear*.

DESIGN & AIMS

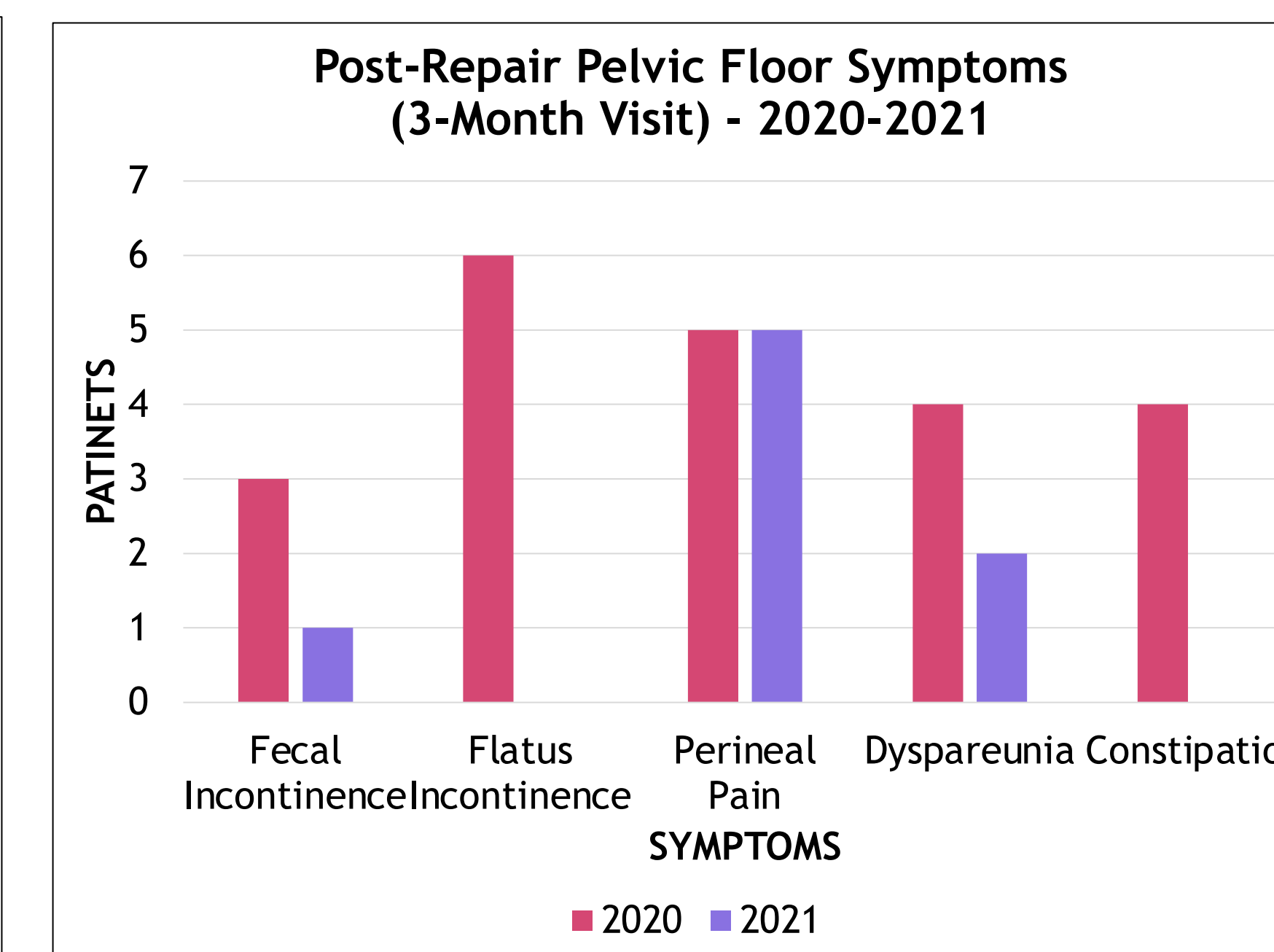
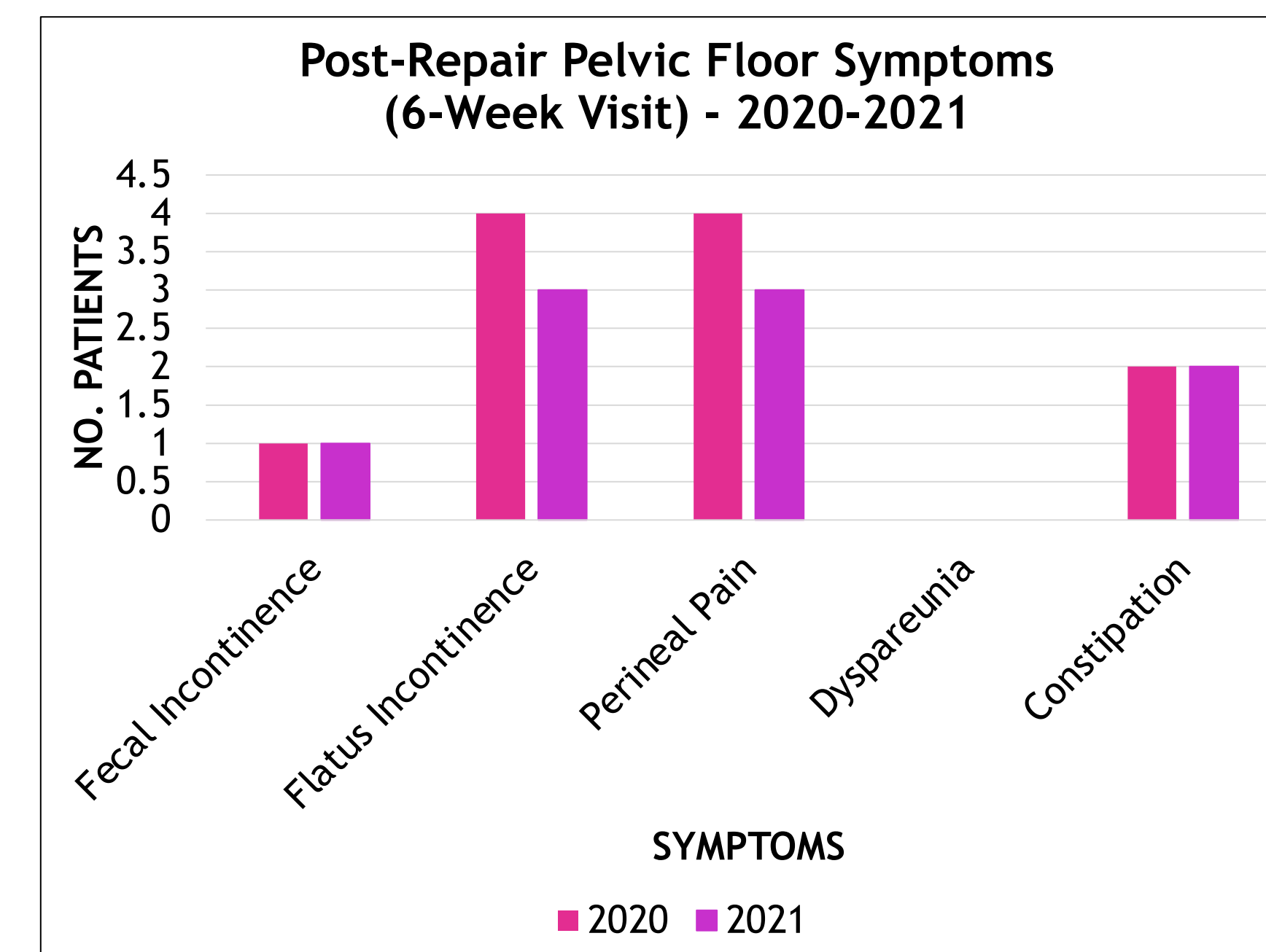
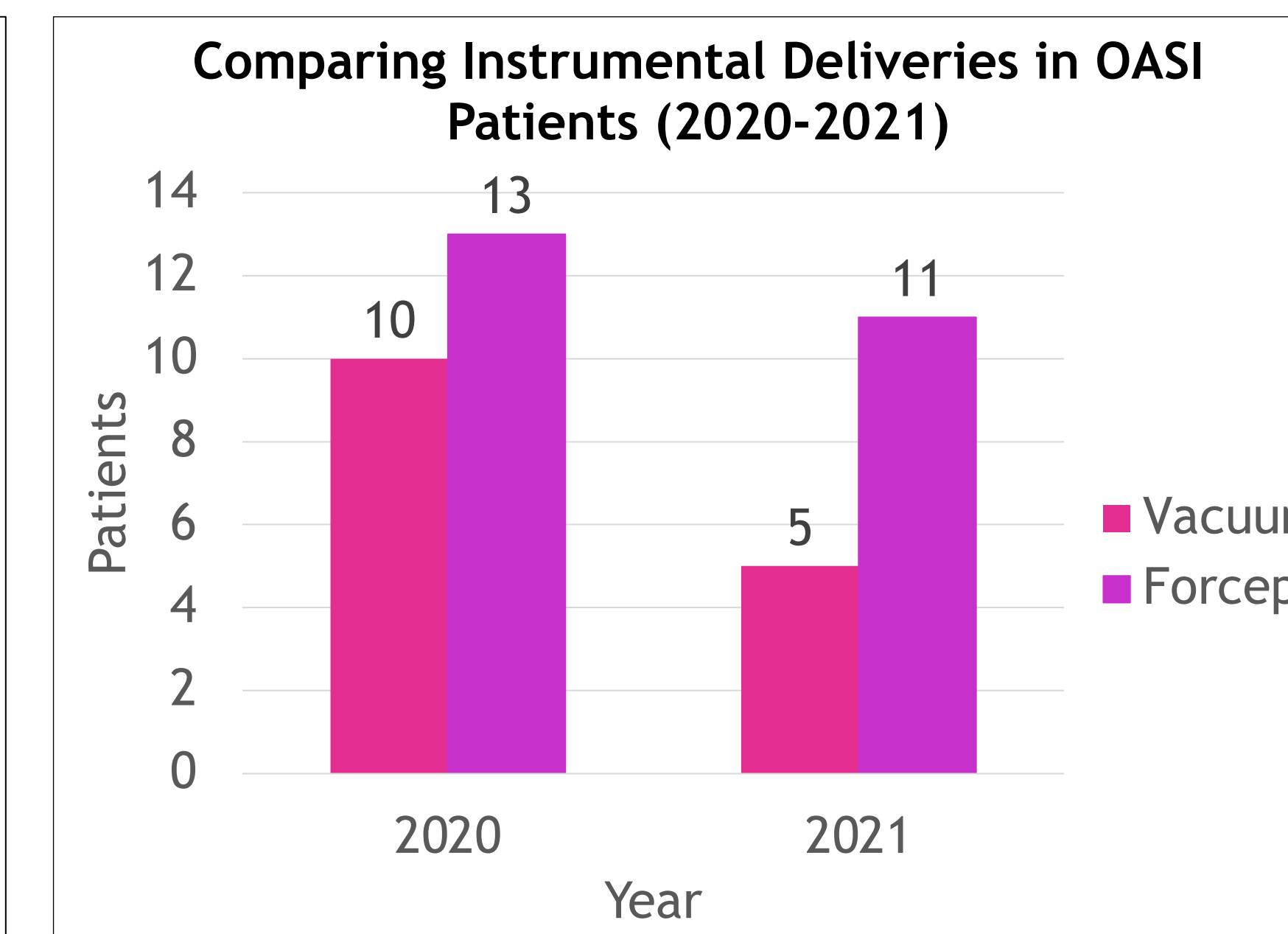
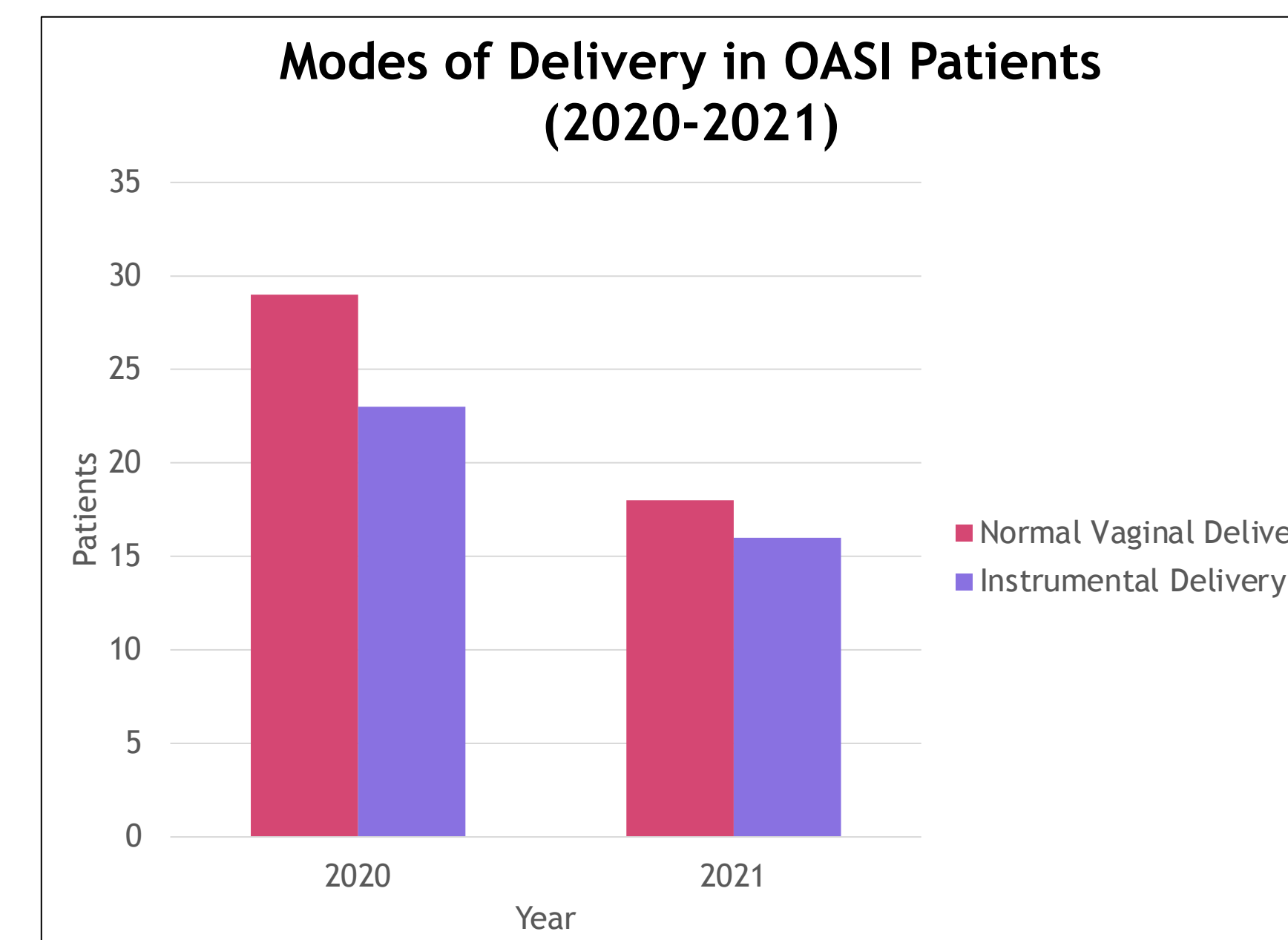
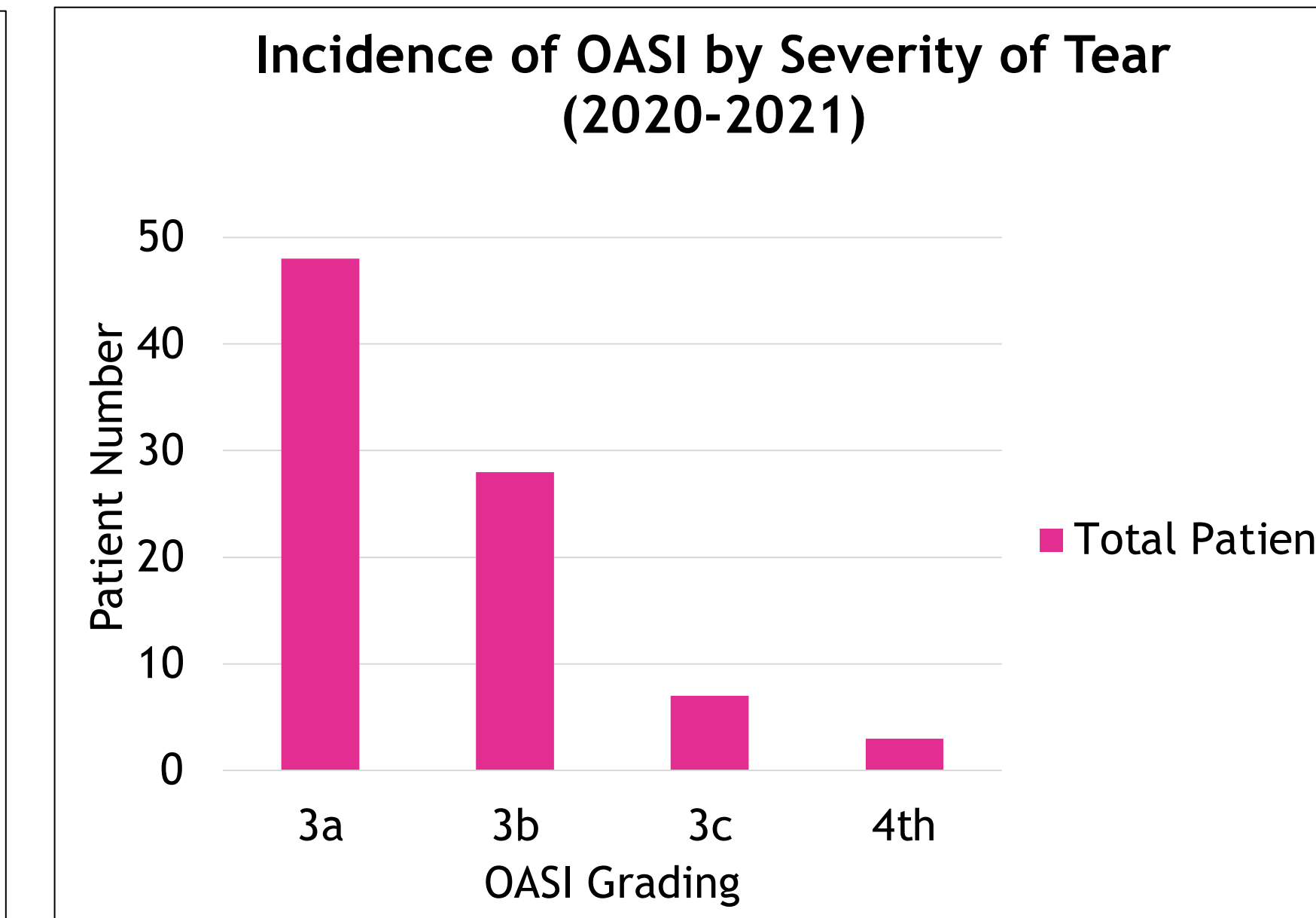
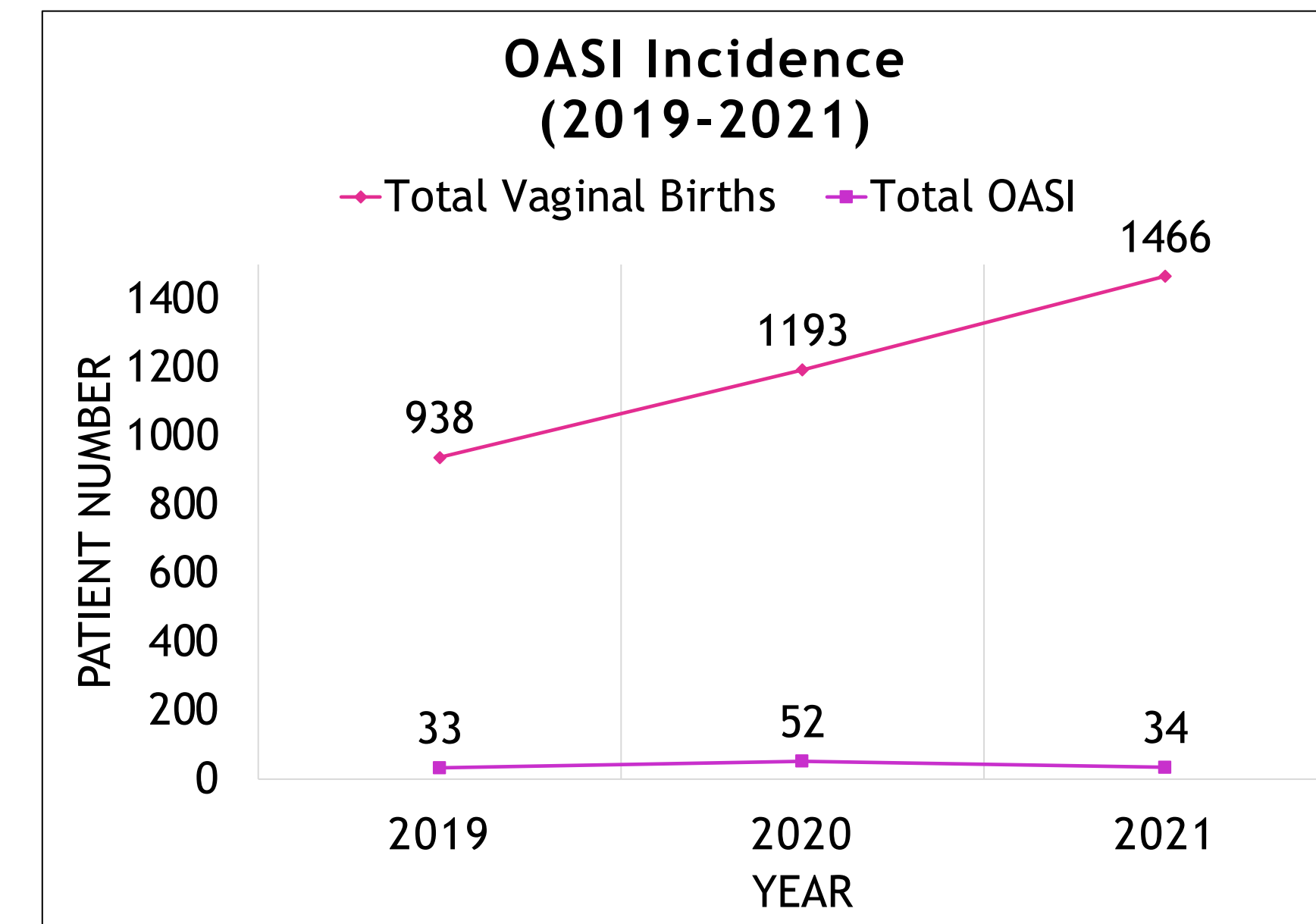
- Retrospective observational case study
- Primary Aim:** Compare the incidence of OASI in two-time periods, before and after implementing these interventions.
- Secondary Aim:** Review the compliance to college and local guidelines for management of OASI and to assess early complications following OASI.

METHODS

- The study was conducted from January 2020 to December 2021 at a metropolitan hospital in Northern Sydney.
 - Women with singleton term vaginal delivery who sustained OASI
 - OASI incidence in two time periods (2020, 2021)
 - Maternal, obstetrical and fetal risk factors for OASI
 - Perineal repair characteristics
- Univariate & multivariate analyses were performed with *p-values* <0.05 reported as significant.

RESULTS

- 2,659 vaginal deliveries in the audit period - 86 women with OASI.
- Overall OASI incidence decreased to 3.2%.
- There was no significant difference in patient characteristics or OASI risk factors during the study years.
- OASI incidence was significantly reduced by 50% ($p < 0.001$), from 4.4% (52/1193) in 2020 (pre-intervention) to 2.3% (34/1466) in 2021 (post-intervention).
- The unit's adherence to college and local guidelines for management of OASI is rigorous.



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RESULTS (cont.)

- The majority of OASI occurred during normal vaginal delivery (55%).
- Of the instrumental deliveries ($n = 39$), 62% women had forceps delivery.
- 43% of women had OASI with episiotomy, and 85% women with instrumental delivery had an episiotomy ($p < 0.05$).
- 63% women attended post-partum follow-up (six weeks OR three months).
- Key concerns at six weeks - *flatus incontinence* (24%), *perineal pain* (24%).
- Key concerns at three months - *perineal pain* (24%).
- Most women remained asymptomatic of anal incontinence at three months following OASI.

LIMITATIONS

- Retrospective design limits possible variables for evaluation - case control study with increased sample size would be more robust.
- Analysis requires exploration of multiple associations between variables but limited by the small study sample & inaccurate or inconsistent documentation (regarding tear or repair).
- Lack of standardized reporting form for OASI & missing data due to inconsistent or inaccurate documentation.

CONCLUSION

- A distinct reduction in the incidence of OASI during the audit period was evident after implementing perineal protection interventions - a drop that could not be explained by the changes in the population characteristics.
- Modifiable risk factors of note were instrumental delivery & episiotomy - importance of effective & appropriate implementation of these practices.
- The quality measures taken not only increase the awareness on maternal somatic trauma but also improve clinical practice in reducing severe perineal trauma during childbirth.

RECOMMENDATIONS

- OASI must continue as a key performance indicator with ongoing review.
- Development of a standardized OASI reporting method would support clinical research & performance review.
- Consistent OASI patient education resources to assist women with recovery and importance of follow-up.
- Establish referral pathways (pelvic floor physiotherapists, pre- and post-partum education).
- Increase educational sessions on OASI prevention - episiotomy, perineal repair and perineal protection workshops for doctors & midwives.