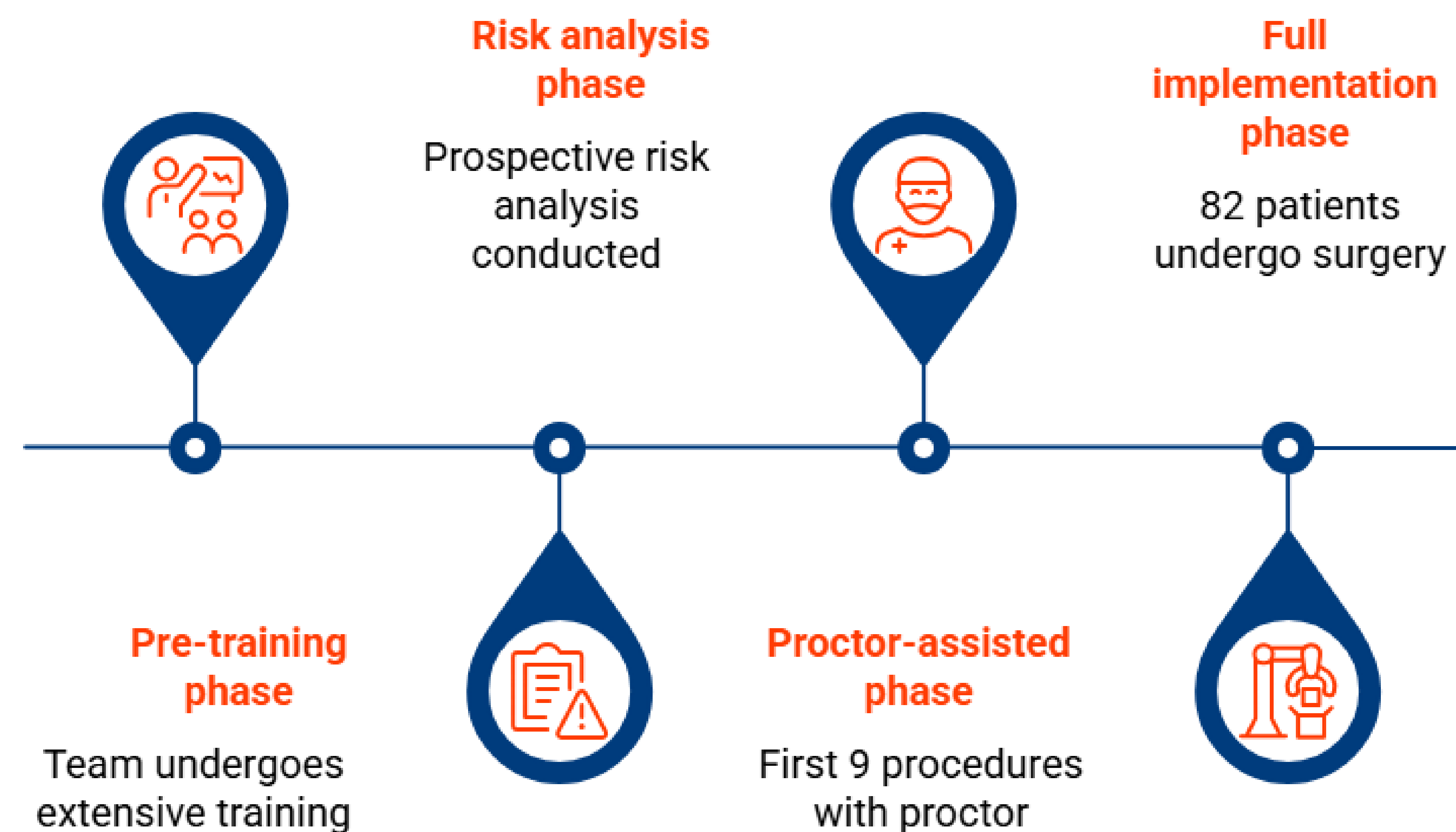


Objective

Robotic mitral valve surgery aims to reduce surgical impact on patients while preserving safety and surgical outcome.

To ensure optimal outcomes and maintain efficacy for a safe implementation of this program, the entire surgical team has to master the mandatory learning curve.

Methods



Postoperative outcome

	Early robotic (41)	Late robotic (41)
Conversion rate, n (%)	1 (2.4)	0
Operating time, min (median + SD)	399 (103.6)	252 (67)
Postoperative atrial rhythm disturbances, n (%)	14 (34.1)	12 (29.3)
Postoperative transfusion, n (%)	6 (14.6)	1 (2.4)
Postoperative reoperation, n (%)	4 (10.0)	3 (7.3)
Mortality (early and late), n (%)	0	0
Postoperative mechanical ventilation duration (median + SD)	4.0 (50.3)	0 (15.0)
Days on rhythm monitoring, days (median + SD)	6.0 (3.9)	5.0 (2.7)
ICU length of stay, days (median + SD)	1.0 (2.4)	1.0 (1.7)
Hospital length of stay, days (median + SD)	6.0 (4.3)	6.0 (4.6)

Results

- Initial repair rate was 100% with no mortality, postoperative stroke or myocardial infarction.
- Comparing the first and last 20 cases, there was a decrease in:
 - Cardiopulmonary bypass time (299 min. vs. 204 min.)
 - Aortic cross clamp time (184 min. vs. 122 min.)
 - Total operating time (415 min. vs. 270 min.)
- At mid-term follow-up, repair rates were excellent (MR < 1+ 95%, MR < 2+ 98%)

Conclusions

A robotic mitral valve repair program can be safely implemented in a high-volume mitral valve repair center with no port-access experience showing with excellent short- and mid-term results.