

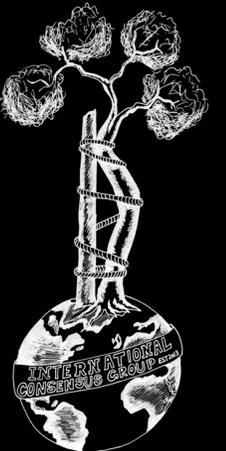
ICM VTE Pediatric

1 - Are the risk factors for VTE following orthopaedic procedures different between children and adults?

Response/Recommendation: Many risk factors for venous thromboembolism (VTE) in pediatric orthopaedic patients are similar to those in adults. These include older age (adolescents), trauma, malignancy, certain infections, clotting disorders and a personal or family history of VTE. However, certain VTE risk factors reported in adult literature (e.g., smoking) may be less prevalent in children, and vice versa (e.g., congenital thrombophilia).

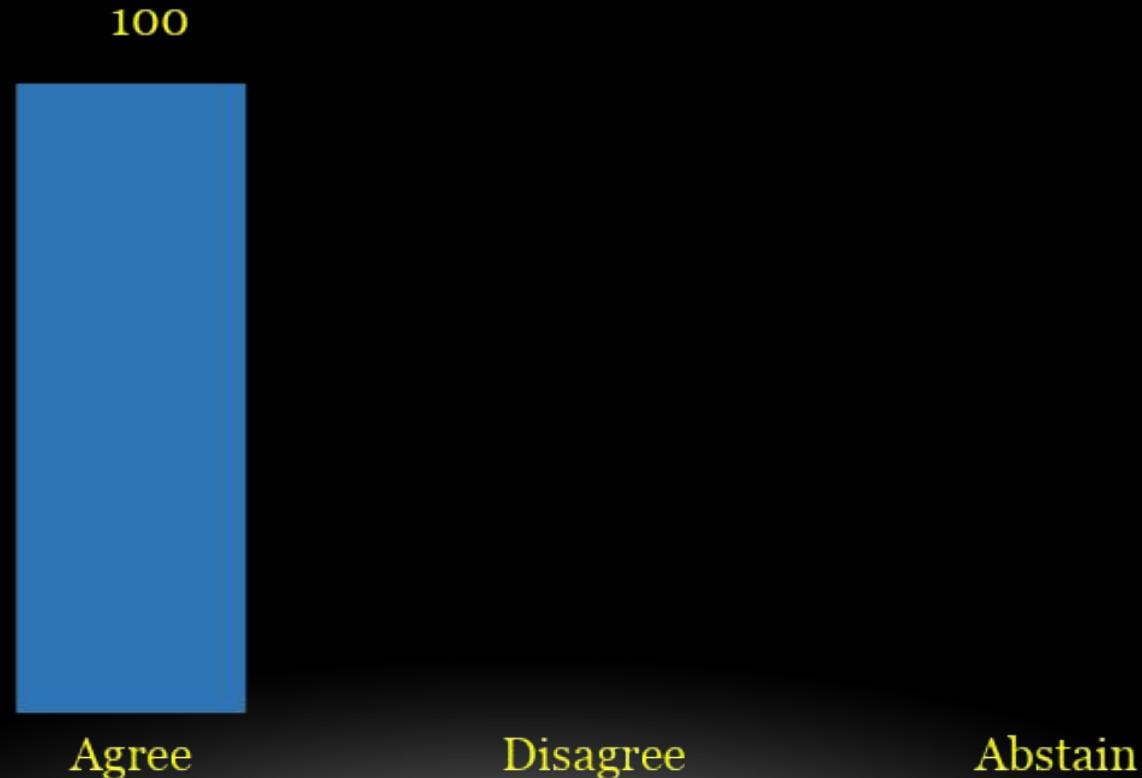
Strength of Recommendation: Moderate.

Graham S. Goh, John J. Corvi, Robert F. Murphy

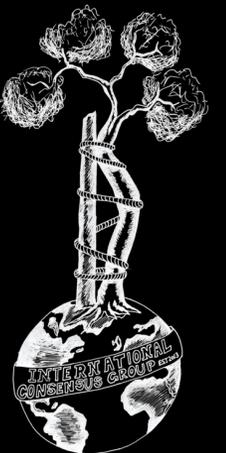


ICM VTE Pediatric

1 - Are the risk factors for VTE following orthopaedic procedures different between children and adults?



(Unanimous Strong Consensus)



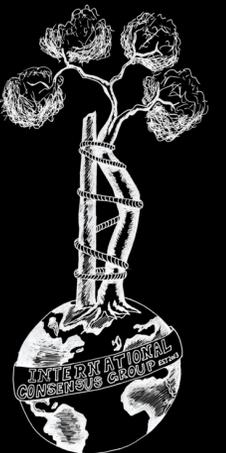
ICM VTE Pediatric

2 - Are there specific risk stratification methods for VTE in pediatric patients undergoing orthopaedic procedures?

Response/Recommendation: Adolescence, central venous catheter (CVC) placement, obesity, trauma, and oral contraceptive use are the most commonly reported risk factors for venous thromboembolism (VTE) in pediatric patients undergoing orthopaedic surgery. Currently, there are no standardized tools that are well-developed enough to capture all these factors. Due to the low incidence of VTE in the pediatric population, VTE chemo- prophylaxis should not be routinely used except in high-risk individuals who can be identified with the use of simple screening questions.

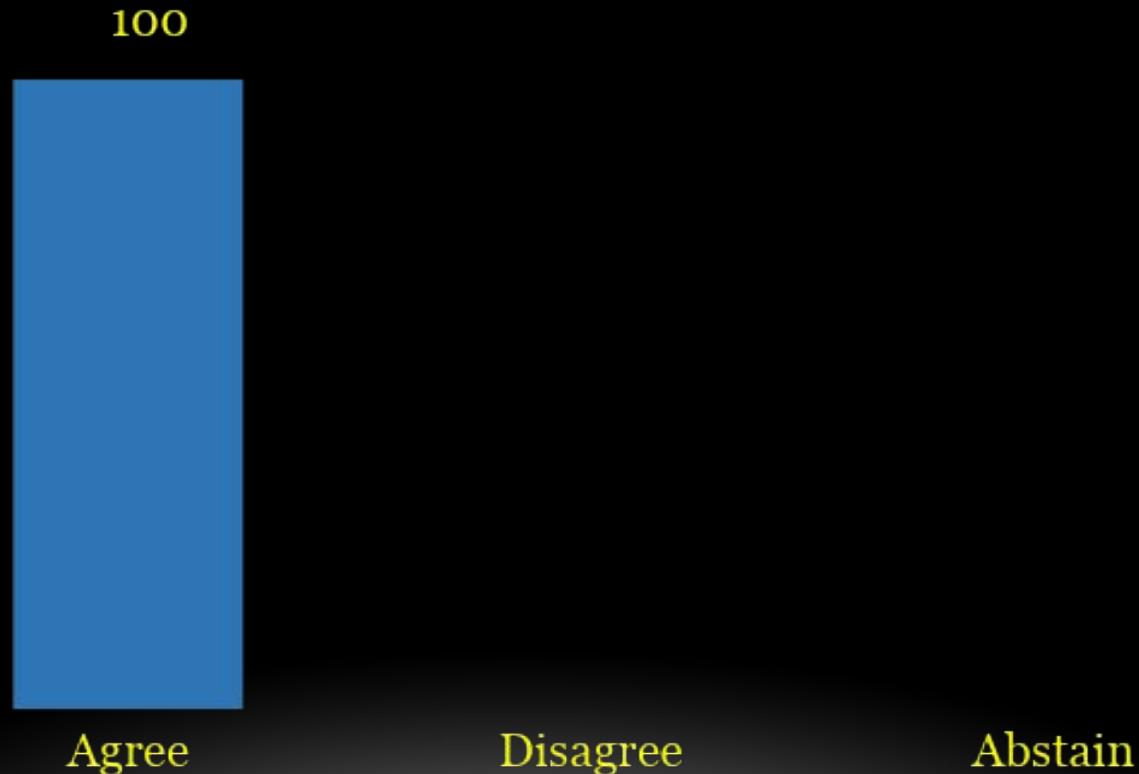
Strength of Recommendation: Moderate.

Frederick Mun, Arjun Gupta, Manjeera S.B. Rednam, Ashok N. Johari, Amit Jain

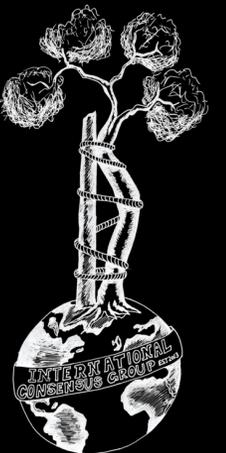


ICM VTE Pediatric

2 - Are there specific risk stratification methods for VTE in pediatric patients undergoing orthopaedic procedures?



(Unanimous Strong Consensus)



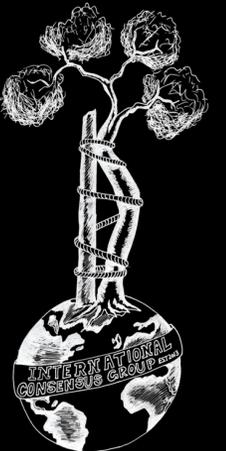
ICM VTE Pediatric

3 - In pediatric patients undergoing orthopaedic procedures, does skeletal maturity and gender influence the choice of VTE prophylaxis?

Response/Recommendation: Gender does not influence the choice of venous thromboembolism (VTE) prophylaxis. However, high-risk pediatric patients ≥ 13 -years old, may benefit from the administration of VTE prophylaxis.

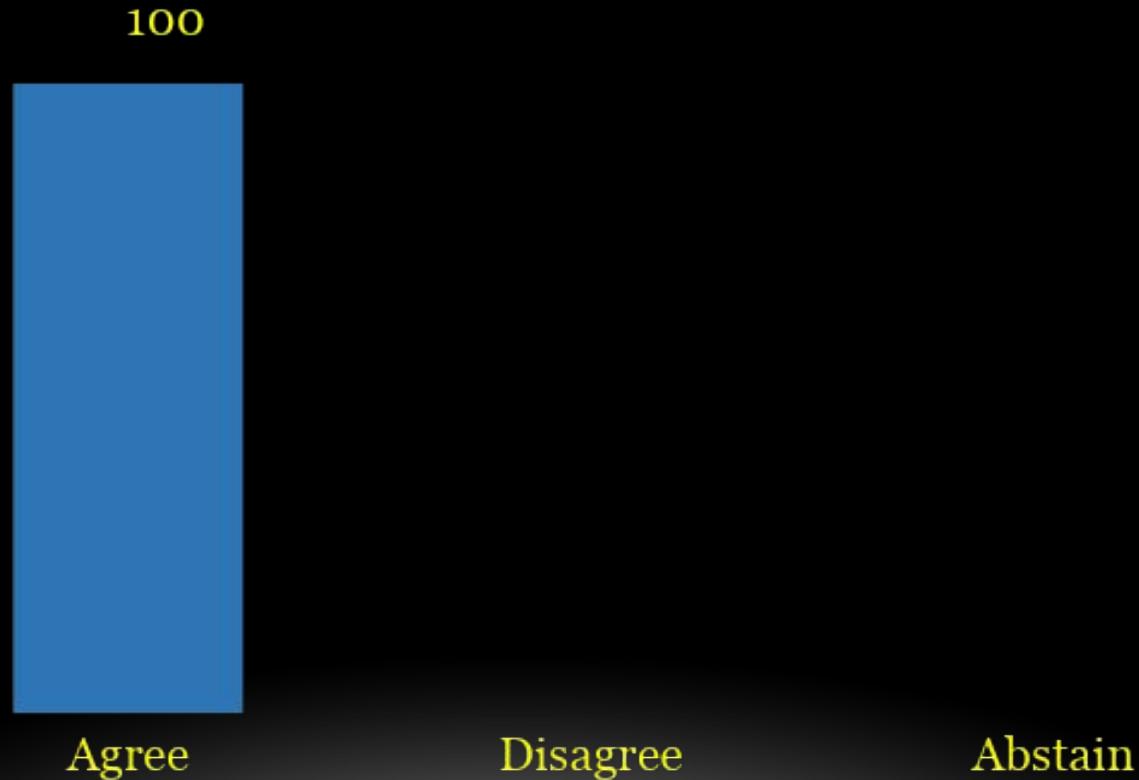
Strength of Recommendation: Strong.

Enric Castellet, Míriam Basagaña-Farrés

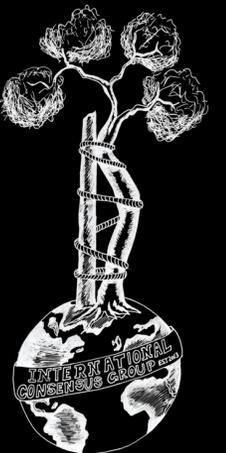


ICM VTE Pediatric

3 - In pediatric patients undergoing orthopaedic procedures, does skeletal maturity and gender influence the choice of VTE prophylaxis?



(Unanimous Strong Consensus)



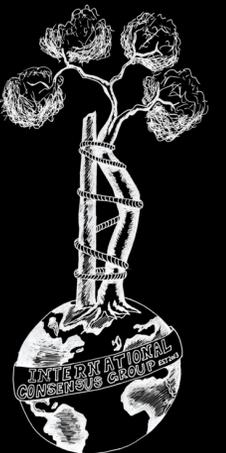
ICM VTE Pediatric

4 - Is routine VTE prophylaxis necessary in children with chronic neuromuscular conditions?

Response/Recommendation: The overall risk of venous thromboembolism (VTE) in children with chronic neuromuscular conditions is very low. Routine VTE prophylaxis in children with chronic neuromuscular conditions is not necessary, unless additional VTE risk factors are identified.

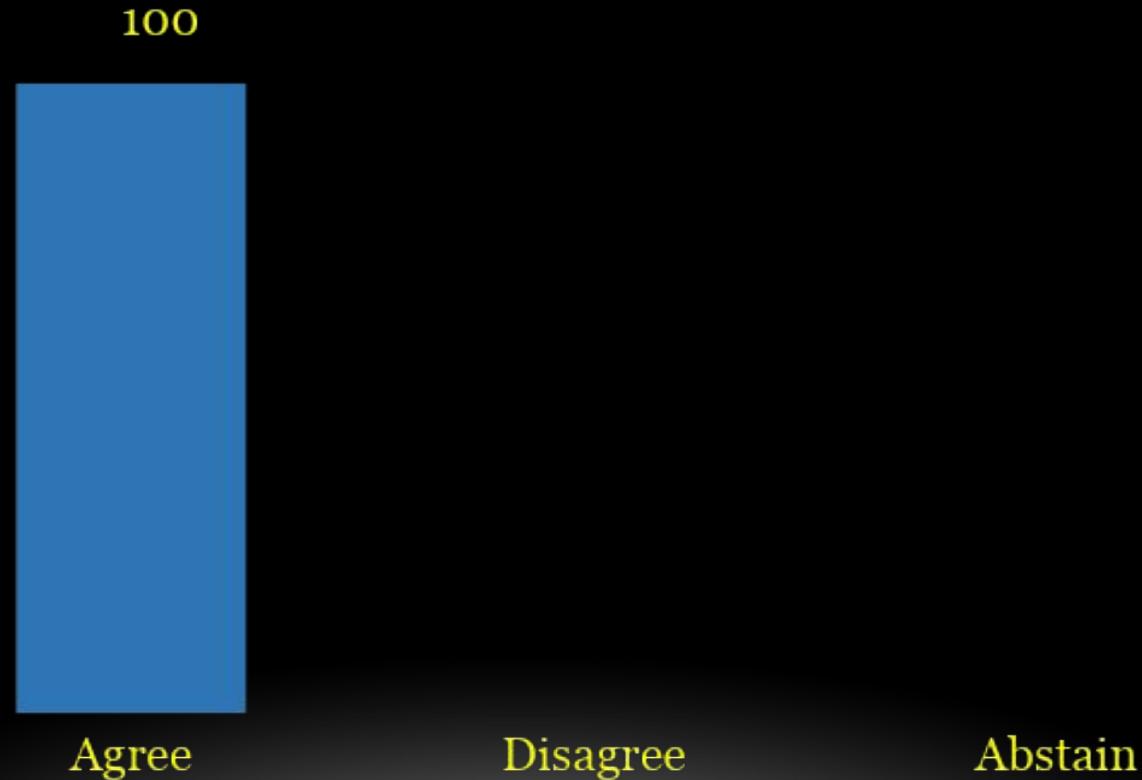
Strength of Recommendation: Moderate.

Benjamin J. Shore, Syeda Mehwish, Muhammad A. Chinoy

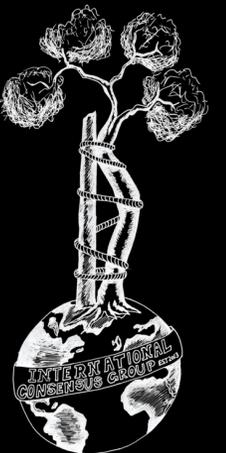


ICM VTE Pediatric

4 - Is routine VTE prophylaxis necessary in children with chronic neuromuscular conditions?



(Unanimous Strong Consensus)



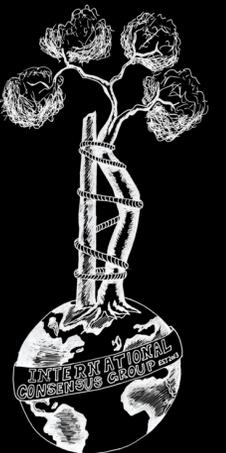
ICM VTE Pediatric

5 - Do pediatric patients placed in a lower extremity cast immobilization require routine VTE prophylaxis?

Response/Recommendation: Routine thromboprophylaxis is not recommended in pediatric patients with cast immobilization. Furthermore, young age is protective against deep venous thrombosis (DVT) in children. Unlike the adult population, the association between lower extremity cast immobilization and venous thromboembolism (VTE) risk has not been established in children. As development of acute DVT is unusual in children, routine prophylaxis is not recommended. However, there are also no clear recommendations for children with more than 3 risk factors for the development of VTE.

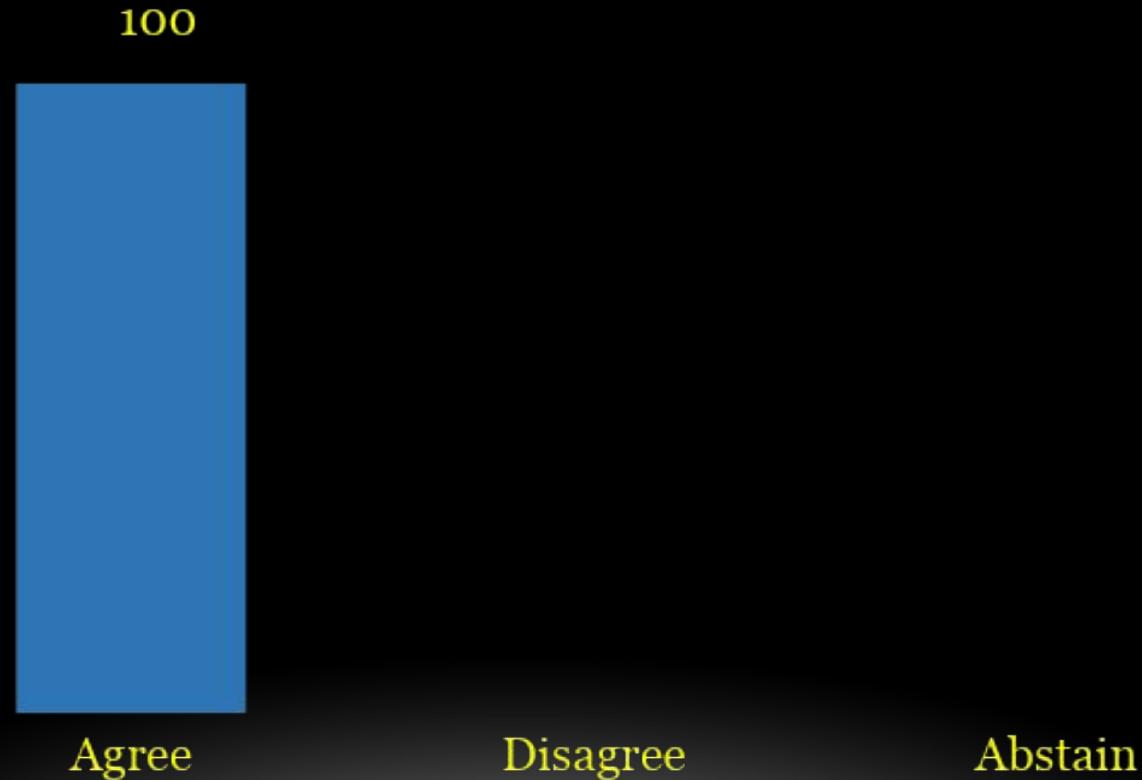
Strength of Recommendation: Weak.

Manjeera S.B. Rednam, Ashok N. Johari, Sanjeev Sabharwal

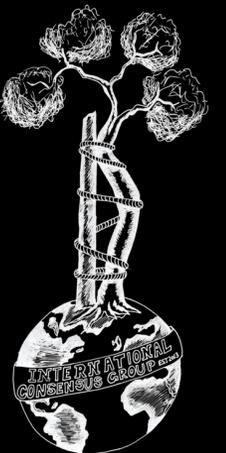


ICM VTE Pediatric

5 - Do pediatric patients placed in a lower extremity cast immobilization require routine VTE prophylaxis?



(Unanimous Strong Consensus)



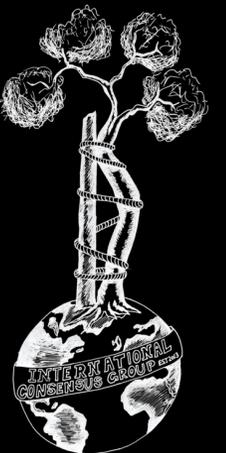
ICM VTE Pediatric

6 - Is early ambulation and/or mechanical intermittent devices sufficient for VTE prophylaxis in otherwise healthy pediatric patients undergoing orthopaedic procedures?

Response/Recommendation: Considering the rarity of venous thromboembolism (VTE) events in healthy pediatric and adolescent patients undergoing elective orthopaedic procedures, early ambulation and/or mechanical intermittent devices are sufficient for the prevention of VTE. However, pediatric orthopaedic patient undergoing surgery following major trauma, as well as patients undergoing major reconstruction resulting in prolonged immobilization, require critical care. Additionally, they exhibit other risk factors for VTE and prophylaxis with a supplementary pharmacologic agent should be considered.

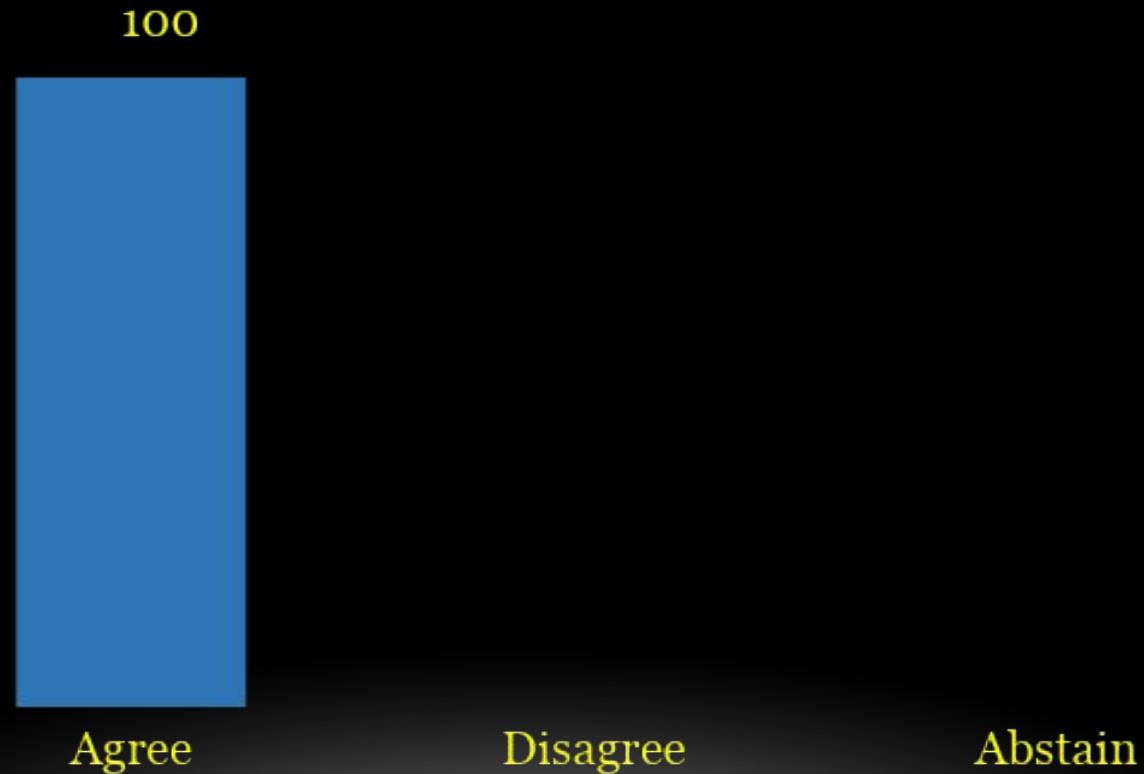
Strength of Recommendation: Moderate.

Robert F. Murphy, Chadi Tannoury

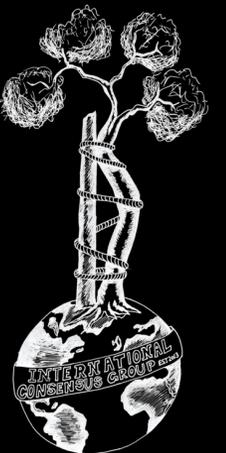


ICM VTE Pediatric

6 - Is early ambulation and/or mechanical intermittent devices sufficient for VTE prophylaxis in otherwise healthy pediatric patients undergoing orthopaedic procedures?



(Unanimous Strong Consensus)



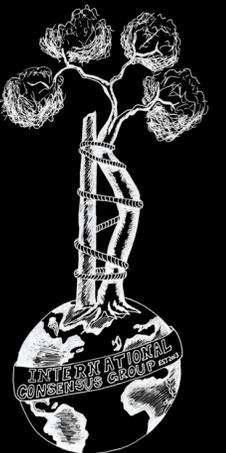
ICM VTE Pediatric

7 - Concerning VTE risk, which surgeries can be considered major, and which surgeries can be considered non-major in pediatric orthopaedics?

Response/Recommendation: The overall risk of venous thromboembolism (VTE) in pediatric patients undergoing orthopaedic surgery is low. Pediatric orthopaedic patients undergoing surgery for the management of certain severe musculoskeletal infections (Methicillin-resistant *Staphylococcus aureus* [MRSA] with Pantone-Valentine Leukocidin [PVL] 1) are an increased risk of VTE. Additionally, hip, spine, and sports surgery have been identified as risk factors of VTE. Furthermore, the risk of VTE after pediatric orthopaedic surgery appears to be greatest in adolescents. Moreover, coagulation disorders (such as familial thrombophilia), as well as the presence of indwelling central venous catheters (CVC), were found to increase VTE risk substantially more than any specific orthopaedic surgical procedure. In conclusion, adolescents with identifiable confounding VTE risk factors in this setting would benefit greatly from the utilization of perioperative VTE screening tools and risk stratification models.

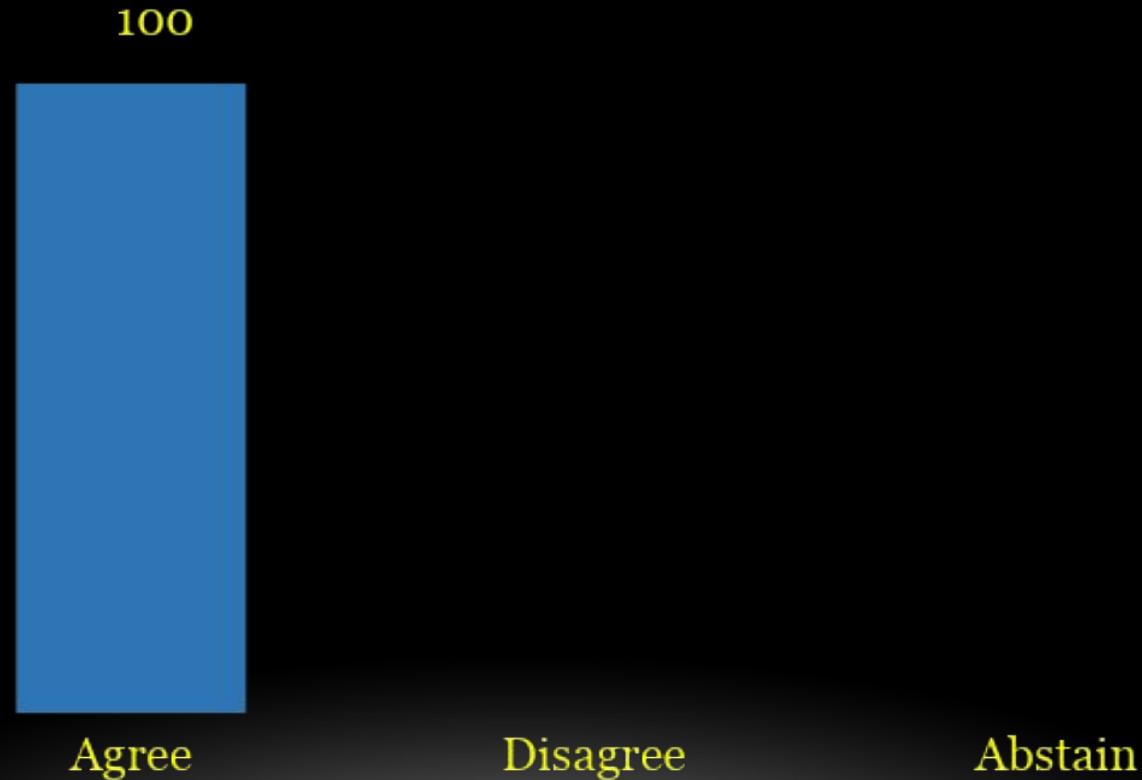
Strength of Recommendation: Moderate.

Benjamin J. Shore, Samir Sabharwal, Sanjeev Sabharwal

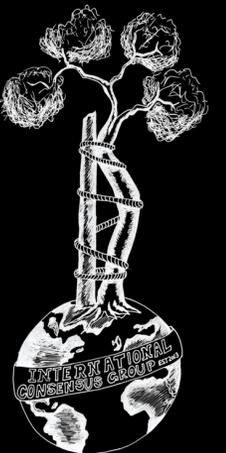


ICM VTE Pediatric

7 - Concerning VTE risk, which surgeries can be considered major, and which surgeries can be considered non-major in pediatric orthopaedics?



(Unanimous Strong Consensus)



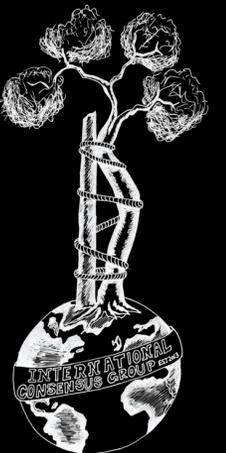
ICM VTE Pediatric

8 - What pediatric procedures require routine administration of VTE prophylaxis?

Response/Recommendation: In the absence of other identifiable risk factors of venous thromboembolism (VTE), chemoprophylaxis for VTE should not be routinely pre- scribed in patients younger than thirteen undergoing orthopaedic procedures.

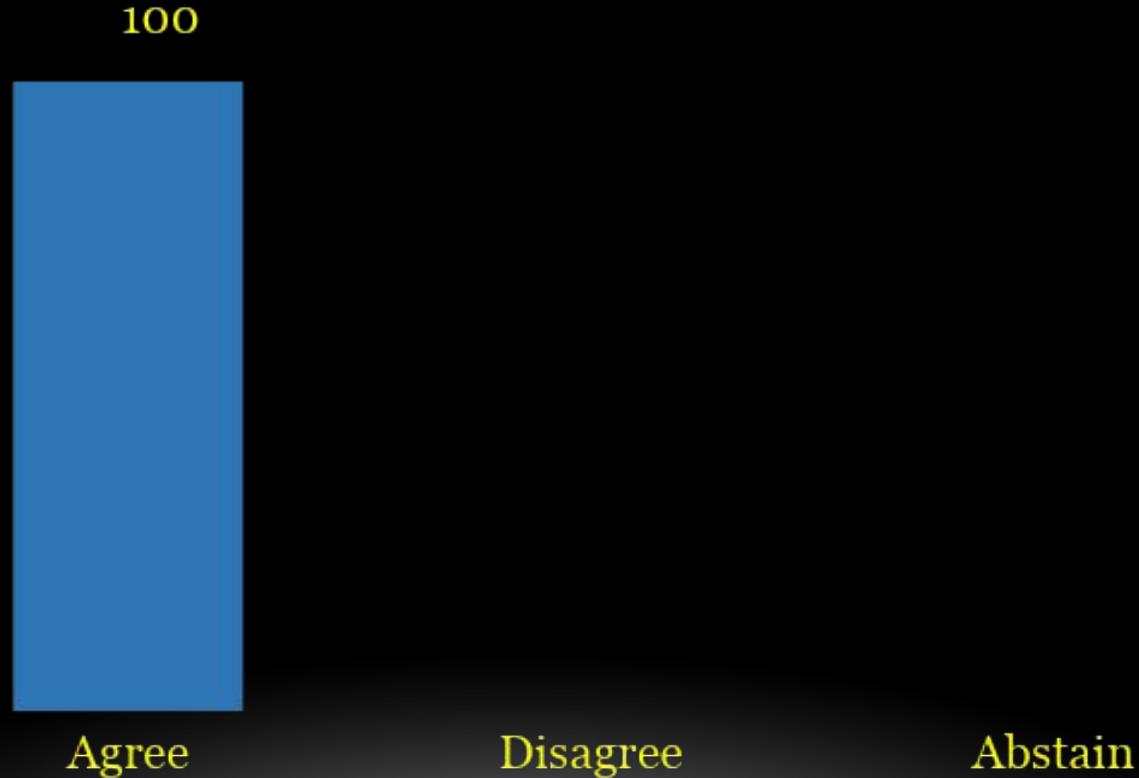
Strength of Recommendation: Weak.

Cecilia A. Méndez, Juan M. Del Castillo, Eduardo I. Vilensky, Muhammad A. Chinoy, Syeda Mehwish



ICM VTE Pediatric

8 - What pediatric procedures require routine administration of VTE prophylaxis?



(Unanimous Strong Consensus)

