



UNIVERSITY OF CAPE TOWN
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GAUSS

GLOBAL AIRWAY MANAGEMENT OF
UNSTABLE CERVICAL SPINE SURVEY



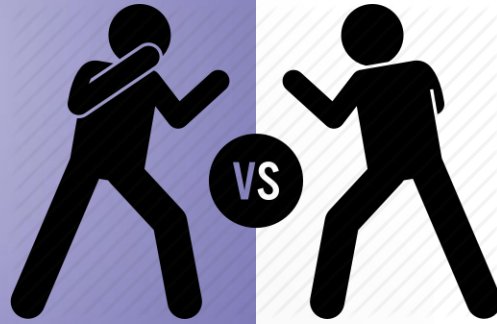
DEPARTMENT OF ANAESTHESIA
& PERIOPERATIVE MEDICINE
UNIVERSITY OF CAPE TOWN

GLOBAL AIRWAY MANAGEMENT OF THE UNSTABLE CERVICAL SPINE SURVEY (GAUSS)

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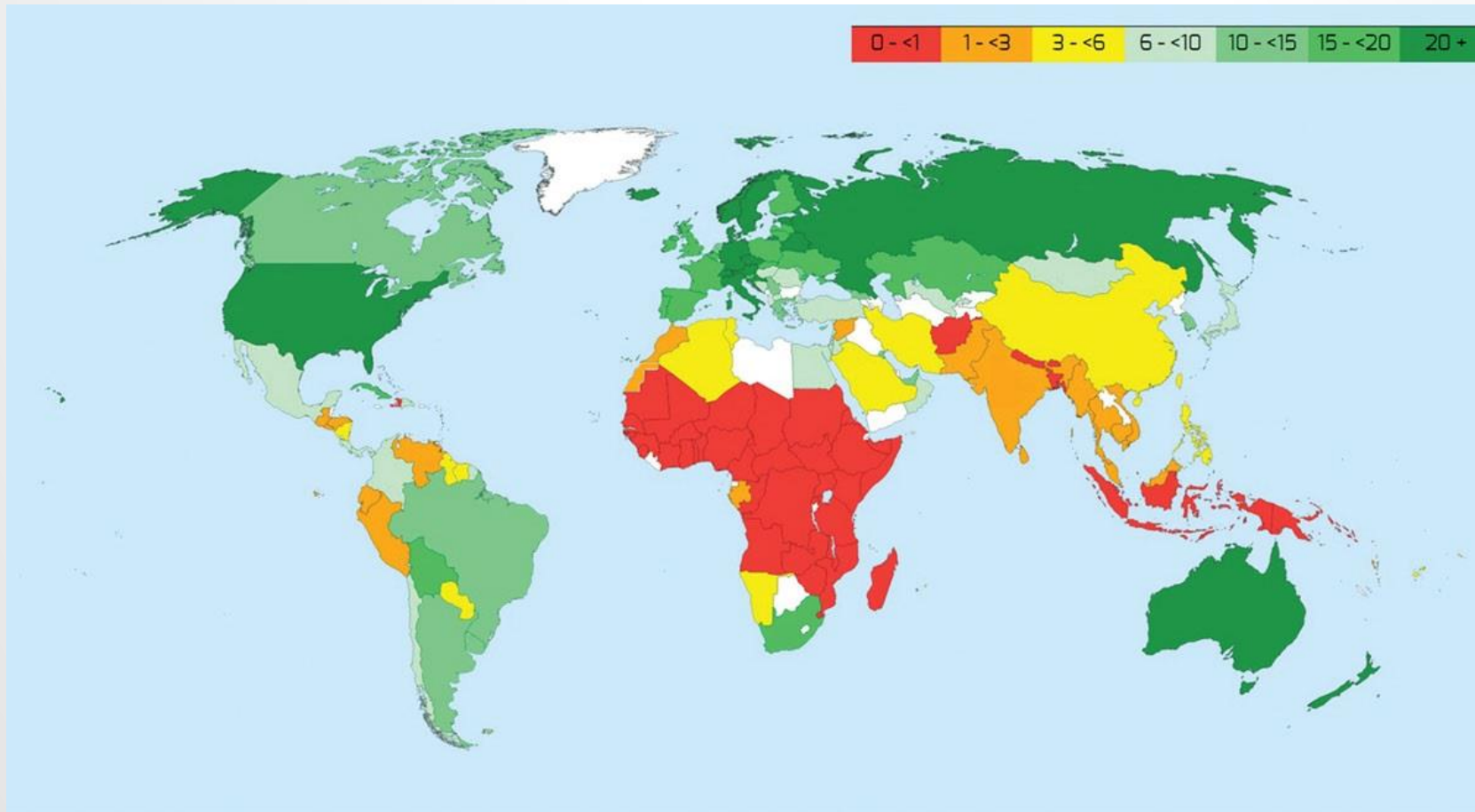
AWAKE FIBRE-OPTIC (AFOI) VS VIDEOLARYNGOSCOPY (VL)



METHODS

- **Worldwide questionnaire** targeting Physician Anaesthetic Providers (PAPs)
- Presents **2 hypothetical cases** to elicit airway management strategy
- **HREC approved**
- **31 point pilot questionnaire** in REDCap[®] sent to 20 airway experts from around the world
- Thereafter developed **final 29 point questionnaire**

WFSA GLOBAL WORKFORCE SURVEY



TARGET SAMPLE SIZE

Krejcie and Morgan formula

$$s = \frac{\chi^2 NP(1 - P)}{d^2 (N - 1) + \chi^2 P(1 - P)}$$

N = population size = 500 000

P = proportion of population = 0,5

χ^2 = 3,841 (95% CI and 1 degree of freedom)

d = 0,05 (degree of accuracy +/-5%)



384

of 500 000 PAPs globally for degree of accuracy of $\pm 5\%$

TARGET SAMPLE SIZE PER COUNTRY

Country	WFSA GWS	Membership
South Africa	8814	1144
Pakistan	3100	160
Venezuela	690	1260

TARGET SAMPLE SIZE PER COUNTRY

- Degree of accuracy = $\pm 5\%$

Target sample size for 153 countries in WFSA = 25 090 responses

- Degree of accuracy = $\pm 10\%$

Target sample size for 153 countries in WFSA = 8 536 responses

GAUSS MARKETING



Actively marketed on twitter & facebook anaesthesia groups



Recruitment email sent to WFSA and 127/136 member societies



12 societies responded, 10 forwarded it to their members

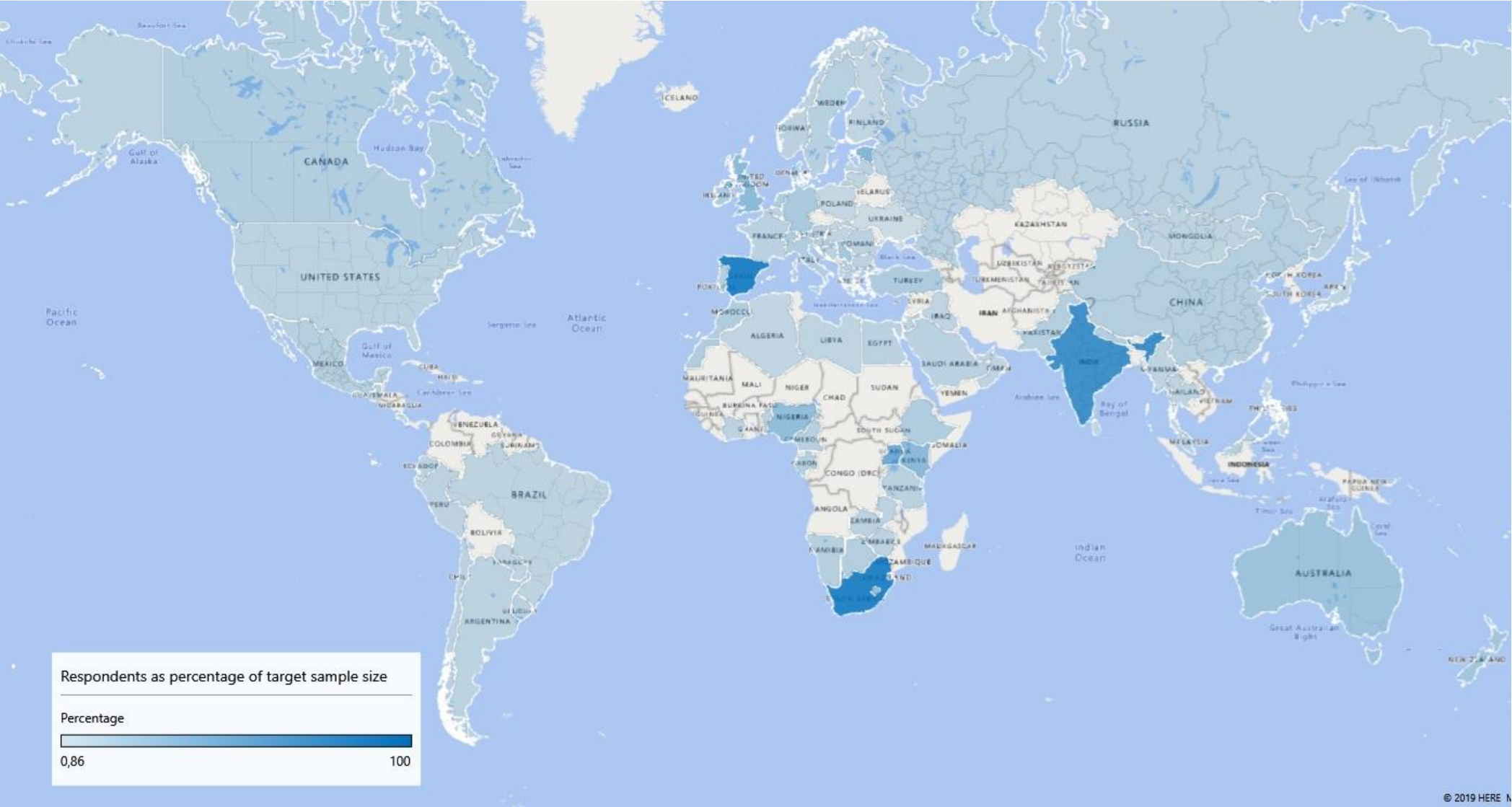


Of those that did not respond, at least 3 forwarded it to their members

RESULTS

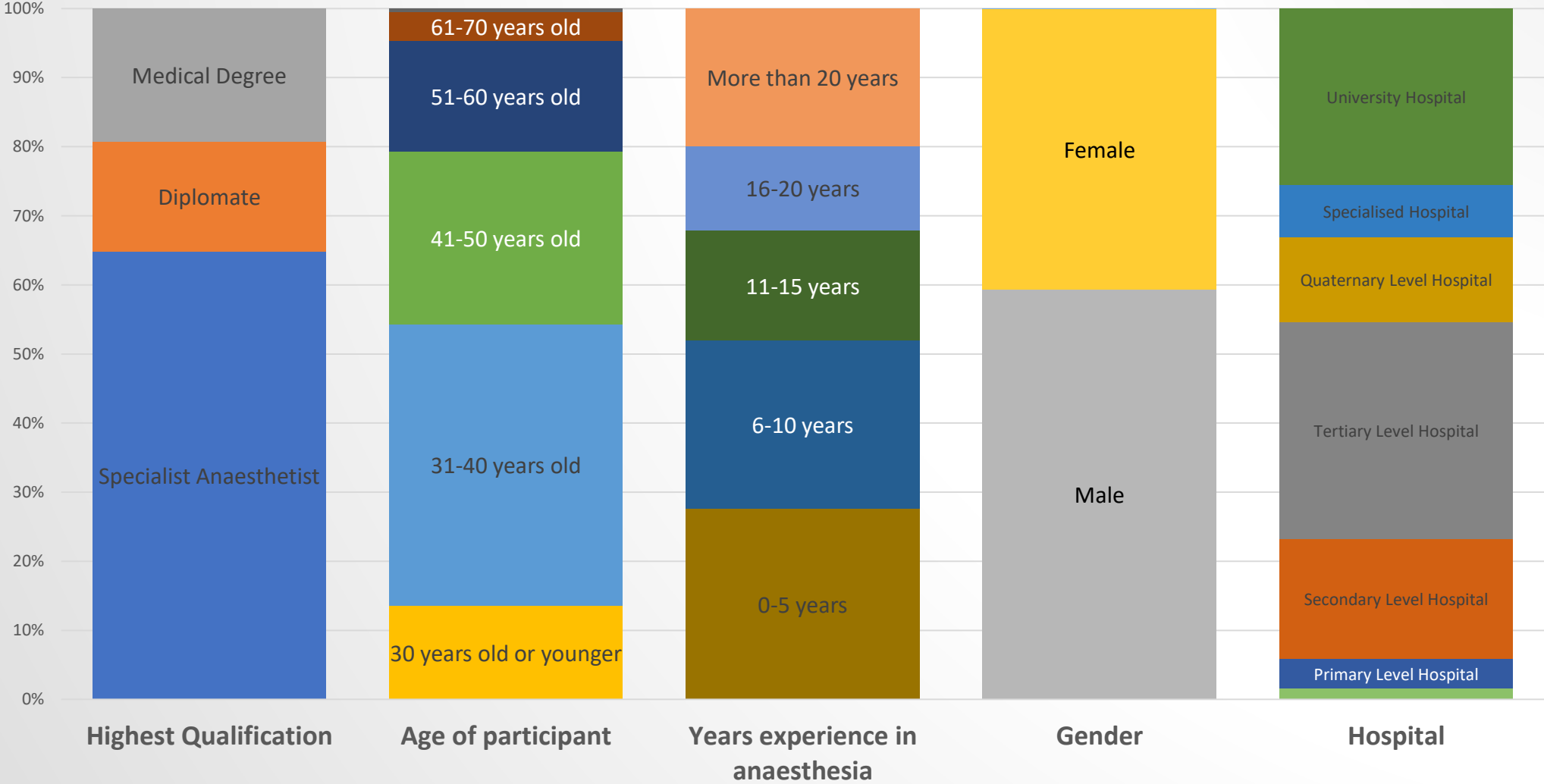
- 1287 responses from 98 countries and regions
- 852 responses deemed suitable for analysis
- Excluded:
 - 24 Nurse anaesthetists and technicians
 - 5 respondents completed the survey more than once
 - 6 respondents indicated “they don’t administer anaesthesia”
 - 400 “empty” responses

RESULTS



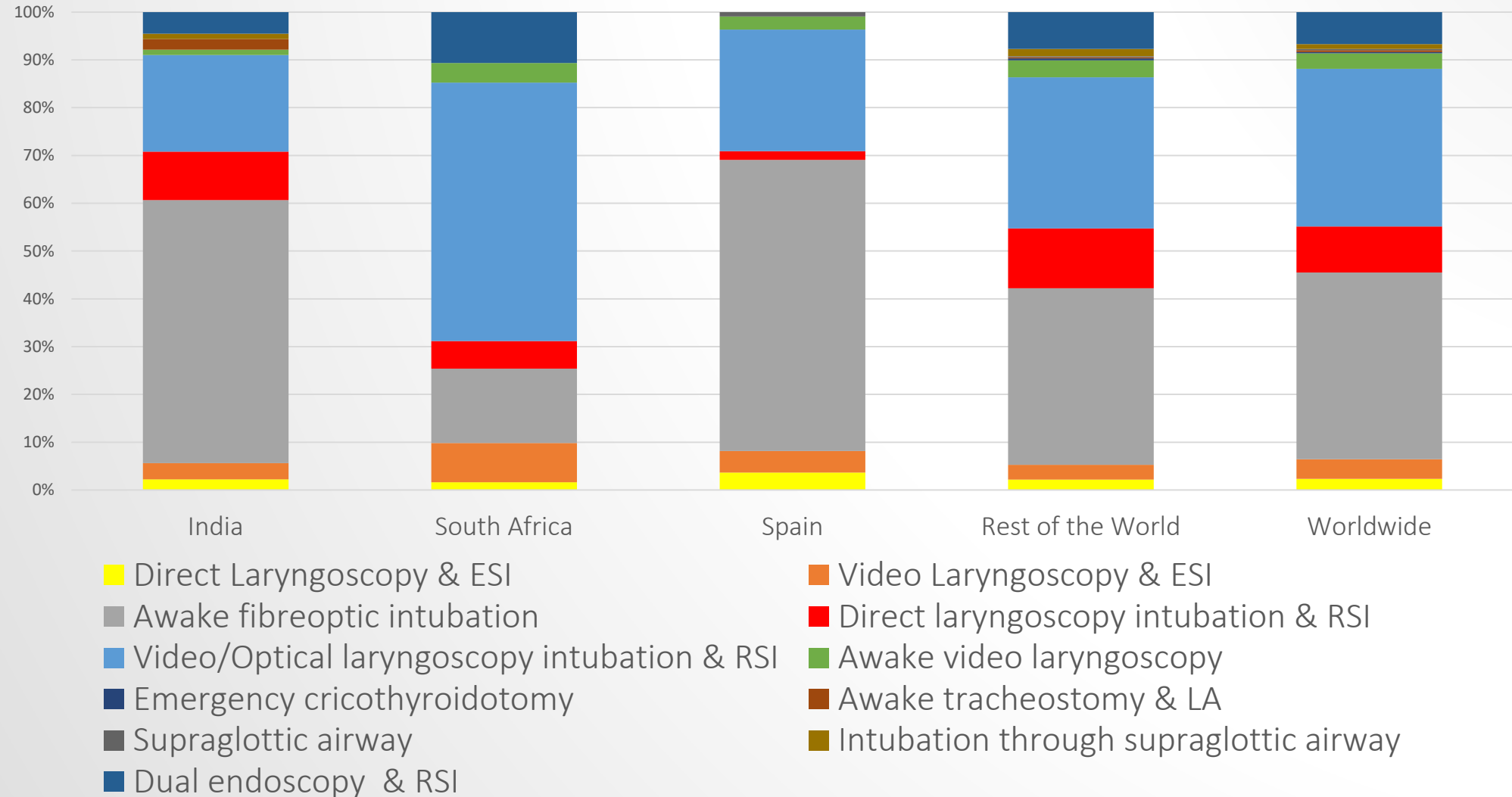
RESULTS

Demographics of respondents



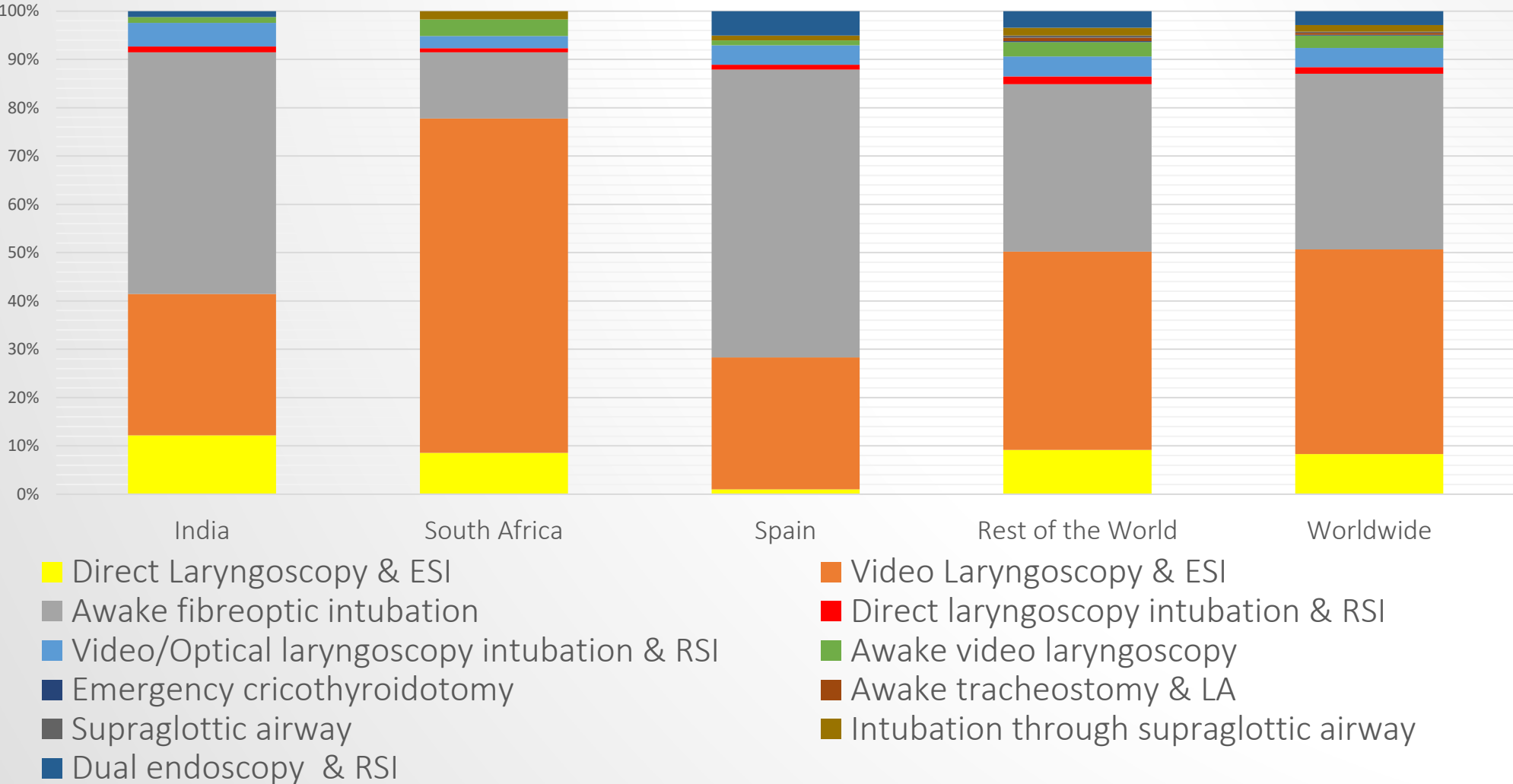
RESULTS

Preferred Airway Strategy for Emergency Case



RESULTS

Preferred Airway Strategy for Elective Case



LIMITATIONS

- Validity:
 - Instrument – questionnaire not validated
 - Measurement - some respondents may have given the “correct” answer instead of recording their clinical practice
- Bias:
 - Society members, WFSA member states
 - English speaking PAPs
 - PAPs using social media
 - Some airway management options not available in questionnaire

DISCUSSION

- AFOI surprisingly no longer automatic choice in elective cases
- VL starting to become at least as popular as AFOI
- Surprisingly – more VL usage in elective cases
- Study still recruiting
- Correlations between choices and other variables still to be studied

REFERENCES

- Kreijchie RV, Morgan DW. Determining Sample Size for Research Activities. Educational and Psychological Measurement. 1970;30:607-10.
- Kempthorne P, Morriss WW, Mellin-Olsen J, Gore-Booth J. The WFSA Global Anesthesia Workforce Survey. Anesthesia & Analgesia. 2017;125(3): 981-990.