**Table 1: Summary of all patients surveyed stratified by hospital funding-base**

|  |  |  |  |
| --- | --- | --- | --- |
|  | All, n=1486 | Government funded hospitals, n=1312 | Privately funded hospitals, n=174 |
| Bed capacity | 2301 | 1929 | 372 |
| Bed occupancy (%) | 64 | 68 | 47\* |
| Female | 785 (52.8) | 703 (53.6) | 81 (47) |
| Age, IQR in yrs | 40 (25; 60) | 39 (24; 57) | 16 (1; 58) |
| Unable to speak to patient/parent, (%) | 303 (20.4) | 264 (20.1) | 40 (23) |
| BLA reported, (%) | 48 (3.2) | 37 (2.8) | 11 (6.3) |

\*The low bed occupancy in these hospitals was the result of COVID19 restrictions at the time of the survey

Abbreviations: BLA: Beta lactam allergy, IQR: interquartile range

**Table 2: Summary of all patients surveyed stratified by hospital funding-base and age group**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Age | All, n=1486 | Reported BLA | Government funded hospitals, n=1312 | GSH, n=721 | VWH, n=107 | RXH, n=189 | MPDH, n=99 | NSH, n=200 | Privately funded hospitals, n=174 | CBH, n=129 | UCTPAH, n=45 |
| < 1 year | 147 (9.9) | 0 | 124 (9.5) | 0 | 8 (7.5) | 81 (42.9) | 10 (10.1) | 25 (12.5) | 23 (13.2) | 23 (17.8) | 0 |
| 1- 5 years | 89 (6) | 0 | 84 (6.4) | 7 (1) | 7 (6.5) | 63 (33.3) | 7 (7) | 0 | 5 (2.9) | 3 (1.7) | 2 (4.4) |
| 6-11 years | 43 (2.9) | 0 | 39 (3) | 5 (0.7) | 0 | 34 (18) | 0 | 0 | 4 (2.3) | 0 | 4 (8.8) |
| 12-18 years | 29 (2) | 0 | 26 (2) | 12 (1.7) | 0 | 11 (5.8) | 0 | 3 (1.5) | 3 (1.7) | 2 (1.1) | 1 (2.2) |
| > 18 years | 1166 (78.5) | 48 (3.2) | 1027 (78.3) | 685 (95) | 92 (86) | 0 | 78 (78.8) | 172 (86) | 139 (79.9) | 101 (78.3) | 38 (84.4) |
| Unknown | 12 (0.8) | 0 | 12 (0.9) | 12 (1.7) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Abbreviations: BLA: Beta-lactam allergy; CBH: Christiaan Barnard Memorial Hospital; GSH: Groote Schuur Hospital; IQR: Interquartile range; MPDH: Mitchell’s Plain District Hospital ; NSH: New Somerset Hospital; UCTPAH: University of Cape Town Academic Hospital; VWH: Victoria Wynberg Hospital

**Table 3: Summary of self-reported beta-lactam antibiotic allergy stratified by hospital funding-base and age group**

|  |  |  |  |
| --- | --- | --- | --- |
|  | All, n=48 | Government funded hospitals, n=37 | Privately funded hospitals, n=11 |
| Female, (%) | 29 (60.4) | 22 (59.4) | 8 (72.7) |
| Age, years (IQR) | 59 (38; 68) | 59 (38; 68) | 58 (52; 63) |
| PENFAST, % |  |  |  |
| * Low risk | 31 (64.6) | 24 (64.9) | 7 (63.6) |
| * Moderate risk | 11 (22.9) | 8 (21.6) | 3 (27.3) |
| * High risk | 5 (10.4) | 4 (10.8) | 1 (9) |
| * Unknown | 1 (2) | 1 (2.7) | 0 |
| Questions from PENFAST |  |  |  |
| * Penicillin allergy reported | 48 (100) | 37 (100) | 11 (100) |
| * Five years or less since reaction | 9 (18.8) | 5 (13.5) | 4 (36.3) |
| * Anaphylaxis or angioedema | 10 (20.8) | 7 (18.9) | 3 (27.2) |
| * Severe cutaneous adverse reaction | 7 (14.6) | 6 (16.2) | 1 (9) |
| * Required treatment | 30 (62.5) | 24 (64.9) | 6 (54.5) |
| Reaction >10 years | 35 (72.9) | 28 (75.7) | 7 (63.6) |
| Patient can recall event | 31 (64.6) | 22 (59.5) | 9 (81.8) |
| Family history only | 6 (12.5) | 4 (10.8) | 2 (18.2) |
| Required adrenaline | 10 (20.8) | 8 (21.6) | 2 (18.2) |
| Hospital admission and re-admission details |  |  |  |
| Duration of admission, days (IQR) | 6 (4; 15) | 6 (4;15) | Unknown |
| Duration of admission not known | 12 (24.5) | 1 (2.6) | 11 (100) |
| Number of re-admission in following 6 months | 0 (0;2) | 0 (0;2) | Unknown |

Abbreviations: IQR: interquartile range

**Table 4: summary of antibiotic use in self-reported beta-lactam antibiotic allergy patients divided by government funded vs privately funded hospitals**

|  |  |  |  |
| --- | --- | --- | --- |
|  | All, n=48 | Government funded hospitals, n=37 | Privately funded hospitals, n=11 |
| BLA documented on antibiotic script, % | 25 (52.1) | 16 (43.2) | 9 (81.8) |
| On antibiotic, % | 34 (71) | 27 (73) | 7 (63.6) |
| Indication for antibiotics on script (% of patients on antibiotics) | 15 (44.1) | 10 (37) | 5 (71.4) |
| * Not defined | 5 (33.3) | 2 (20) | 3 (60) |
| * Pneumonia | 4 (26.6) | 3 (30) | 1 (20) |
| * Blood stream | 2 (13.3) | 2 (20) | 0 |
| * Gynecological / obstetric | 1 (6.7) | 1 (10) | 0 |
| * Abdominal infection | 1 (6.7) | 0 | 1 (20) |
| * Urinary tract infection | 1 (6.7) | 1 (10) | 0 |
| Type of antibiotics, % |  |  |  |
| Beta-lactam antibiotics | 22 (64.7) |  |  |
| * Beta-lactam / beta-lactamase inhibitor (Coamoxiclav or Piptazobactam) | 6 (17.6) | 4 (14.8) | 2 (18.2) |
| * Aminopenicillin | 5 (14.7) | 4 (14.8) | 1 (14.2) |
| * Carbapenam | 2 (5.9) | 1 (3.7) | 1 (14.2) |
| * Cephalosporin | 9 (26.5) | 8 (29.6) | 1 (14.2) |
| Non beta-lactam antibiotics | 14 (41.2 |  |  |
| * Fluroquinalone / Quinalone | 2 (5.9) | 2 (7.4) | 0 |
| * Glycopeptide | 1 (2.9) | 0 | 1 (14.2) |
| * Lincosamide | 5 (14.7) | 2 (7.4) | 3 (42.9) |
| * Macrolide | 2 (5.9) | 2 (7.4) | 0 |
| * Metronidazole | 1 (2.9) | 1 (3.7) | 0 |
| * Aminoglycoside | 3 (6.3) | 2 (7.4) | 1. (14.2) |
| Antibiotic Unknown, % | 5 (14.7) | 5 (18.5) | 0 |
| More than one antibiotic, % | 9 (26.5) | 5 (18.5) | 4 (57.1) |

Abbreviations: BLA: Beta lactam allergy

**Table 5: BLA de-labeling efforts at the tertiary Groote Schuur hospital allergy clinic**

|  |  |  |  |
| --- | --- | --- | --- |
|  | All, n=48 | Government funded, n=37 | Privately funded, n=11 |
| Uncontactable, % | 21 (43.8) | 16 (43.2) | 5 (45.4) |
| Contacted but now living in a different province, % | 5 (10.4) | 5 (13.5) | 0 |
| Contacted and declined testing, % | 5 (10.4) | 3 (8.1) | 2 (18.2) |
| Deceased, % | 2 (4.2) | 1 (2.7) | 1 (9) |
| BL antibiotic given in ward, % | 12 (25) | 9 (24.3) | 3 (27.2) |
| Intradermal testing and SPT negative, declined oral challenge, % | 2 (4.2) | 2 (2.7) | 0 |
| Intradermal testing and SPT negative, declined oral challenge, % | 1 (2.1) | 1 (2.7) | 0 |

Abbreviations: BL: Beta lactam, SPT: skin prick testing