

# Short- and long-term effectiveness of coral disease treatments

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## Supplemental Information

Table S1. Number of parameters (K), AICc,  $\Delta$ AICc, and AICc weights (w) for the candidate set of mixed effects logistic regression models assessing the probability of lesion-level treatment success. Variables are: Days (number of days since treatment), Treatment (amoxicillin or chlorine), Region (upper Keys, middle Keys, lower Keys), and Species.

| Model   | K  | AICc   | $\Delta$ AICc | w    |
|---|----|--------|---------------|------|
| Days + Treatment + Region + Species + (Days*Treatment) + (Region*Treatment) + (Species*Treatment) | 17 | 1855.1 | 0.00          | 0.91 |
| Days + Treatment + Region + Species + (Days*Treatment) + (Species*Treatment)                      | 15 | 1859.8 | 4.73          | 0.09 |
| Days + Treatment + Species + (Days*Treatment) + (Species*Treatment)                               | 13 | 1874.5 | 19.37         | 0.00 |
| Days + Treatment + Region + Species + (Days*Treatment) + (Region* Treatment)                      | 13 | 1919.1 | 64.01         | 0.00 |
| Days + Treatment + Region + Species + (Days*Treatment)  | 12 | 1934.9 | 79.77         | 0.00 |
| Days + Treatment + Region + (Days*Treatment) + (Region*Treatment)                                 | 9  | 1949.7 | 94.62         | 0.00 |
| Days + Treatment + Species + (Days*Treatment)   | 10 | 1951.9 | 69.84         | 0.00 |
| Days + Treatment + Region + (Days*Treatment)  | 7  | 1964.3 | 109.15        | 0.00 |

Table S2. Number of parameters (K), AICc,  $\Delta$ AICc, and AICc weights (w) for the candidate set of mixed effects logistic regression models assessing the probability of a colony being without disease. Variables are: Days (number of days since treatment), Habitat (inshore or offshore), Region (upper Keys, middle Keys, lower Keys), and Species.

| Model   | K  | AICc    | $\Delta$ AICc | w    |
|---|----|---------|---------------|------|
| Days + Habitat + Region + Species + (Habitat*Species) + (Region*Species)                    | 34 | 9660.74 | 0.00          | 0.69 |
| Days + Habitat + Region + Species + (Habitat*Region) + (Habitat*Species) + (Region*Species) | 36 | 9664.67 | 3.93          | 0.10 |
| Days + Habitat + Region + Species + (Habitat*Region)  | 15 | 9664.98 | 4.24          | 0.08 |
| Days + Habitat + Region + Species + (Region*Species)  | 27 | 9665.75 | 5.01          | 0.06 |
| Days + Habitat + Region + Species + (Habitat*Region) + (Region*Species)                     | 29 | 9666.76 | 6.02          | 0.03 |
| Days + Habitat + Region + Species + (Habitat*Region) + (Habitat*Species)                    | 22 | 9667.27 | 6.53          | 0.03 |
| Days + Habitat + Region + Species   | 13 | 9671.20 | 10.47         | 0.00 |
| Days + Habitat + Region + Species + (Habitat*Species)                                       | 20 | 9671.06 | 10.32         | 0.00 |

Figure S1: Distribution of assessment dates for lesion and colony assessments. Lesion effectiveness (A) was assessed by photographs taken within 140 days after treatment. The largest circles represent 75 lesion assessments. Colony health status (B) was assessed up to 710 days after initial treatments. The largest circles represent 96 colony assessments.

