



THE AMS APP FACTS

THERE'S AN APP FOR THAT...

BY 2050,

10 MILLION PEOPLE WILL DIE EVERY YEAR DUE TO ANTIMICROBIAL RESISTANCE¹



HUNTER NEW ENGLAND LHD DISTRICT PHARMACY SERVICES and HEALTH ANALYTICS AND BUSINESS SUPPORT

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ANTIMICROBIAL RESISTANCE HAPPENS WHEN MICROORGANISMS CHANGE WHEN THEY ARE EXPOSED TO ANTIMICROBIAL DRUGS SOMETIMES REFERRED TO AS "SUPERBUGS"²

TOP REASONS FOR DRUG RESISTANCE³

1. INAPPROPRIATE USE OF MEDICINES
2. LACK OF QUALITY MEDICINES
3. ANIMAL INDUSTRY
4. POOR INFECTION PREVENTION AND CONTROL
5. WEAK SURVEILLANCE SYSTEMS
6. PIPELINE FOR NEW DRUGS IS ALMOST DRY

THE APP IMPACT?

THE IMPLEMENTATION OF AN AUTOMATED APPLICATION WITH THE CAPACITY TO **DRILL DOWN TO WARD STOCK USAGE LEVEL** FOR ANTIMICROBIALS HAS HAD A

POSITIVE IMPACT ON PRESCRIBER BEHAVIOUR

THE WORLD HEALTH ORGANISATION-APPROVED ANTIMICROBIAL STEWARDSHIP MEASURE OF DEFINED DAILY DOSE (DDD) PER 1000 PATIENT DAYS IS USED TO REPORT ANTIMICROBIAL STEWARDSHIP PRACTICES ACROSS THE DISTRICT

THE APP OUTCOME

THE IMPLEMENTATION OF THE NEW APPLICATION RESULTED IN TIME AND COST SAVINGS FOR THE DISTRICT DUE TO THE AUTOMATED PROCESS OF THE APPLICATION ACCESSING BOTH THE DISPENSING SOFTWARE DATABASE AND THE BED DAY DATABASE NEGATING THE NEED FOR A TRAINED STAFF MEMBER TO ASSEMBLE INFORMATION MANUALLY.

THERE WAS A CLEAR DECREASE IN THE DDD PER 1000 BED DAY TREND LINE SEEN ACROSS THE HEALTH SERVICE FOR BOTH 3RD GENERATION CEPHALOSPORINS AND QUINOLONES HOWEVER A SLIGHT INCREASE WAS SEEN IN 4TH GENERATION CEPHALOSPORINS.

**50%
REDUCTION**

IN 3RD GENERATION CEPHALOSPORINS AND QUINOLONES ACROSS HNELHD

THE AUTOMATED PROCESS HAS **INCREASED THE OUTPUT** OF THE LIMITED ANTIMICROBIAL STEWARDSHIP RESOURCES AVAILABLE WITHIN THE HEALTH SERVICE ENSURING THE DELIVERY OF A BETTER SERVICE WITHOUT INCREASING COSTS

6 SPREADSHEETS
16 HOURS
VS
1 AUTOMATED APP
INSTANT

THE APP APPROACH

TO PROVIDE **AUTOMATED**, MEANINGFUL AND **TIMELY** ANTIMICROBIAL STEWARDSHIP DATA TO **42** FACILITIES WITHIN THE HEALTH DISTRICT VIA AN ONLINE APPLICATION TO ENABLE PRESCRIBERS AND DRUG COMMITTEES TO VIEW DATA TO AFFECT **PRESCRIBER BEHAVIOUR CHANGE**

AN AUTOMATED SOLUTION IN THE FORM OF AN ONLINE APPLICATION WAS DEVELOPED BY THE HEALTH ANALYTICS AND BUSINESS SUPPORT TEAM AT HNELHD TO ACCESS THE DATABASE WHICH HOLDS INFORMATION FROM THE PHARMACY DISPENSING SOFTWARE.

THIS APPLICATION WAS MADE AVAILABLE TO ALL STAFF AND PROMOTED DISTRICT WIDE.

REFERENCES

1. DE KRAKER, M. E. A., STEWARDSON, A. J., & HARBARTH, S. (2016). WILL 10 MILLION PEOPLE DIE A YEAR DUE TO ANTIMICROBIAL RESISTANCE BY 2050? *PLOS MEDICINE*, 13(11), E1002184. [HTTP://DOI.ORG/10.1371/JOURNAL.PMED.1002184](http://doi.org/10.1371/journal.pmed.1002184)
2. ANTIMICROBIAL RESISTANCE, WORLD HEALTH ORGANISATION, SEPTEMBER 2016, RETRIEVED 03/07/2017 FROM [HTTP://WWW.WHO.INT/MEDIACENTRE/FACTSHEETS/FS194/EN/](http://www.who.int/mediacentre/factsheets/fs194/en/)
3. 10 FACTS ON ANTIMICROBIAL RESISTANCE, WORLD HEALTH ORGANISATION, APRIL 2015. RETRIEVED 03/07/17 FROM [HTTP://WWW.WHO.INT/FEATURES/FACTFILES/ANTI-MICROBIAL_RESISTANCE/EN/](http://www.who.int/features/factfiles/antimicrobial_resistance/en/)



Health
Hunter New England
Local Health District