

Colistin in the home for bronchiectasis: Patient experiences and addressing knowledge gaps

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INTRODUCTION

- Colistin (colistimethate sodium) inhalation is an effective treatment for bronchiectasis with a *Pseudomonas aeruginosa* admission exacerbation phenotype¹.
- Colistin inhalation reduces hospital admissions and improves quality of life^{2,3}.
- Effective use relies on correctly following steps before, during and after inhalation.
- Community nursing Riskman[®] reports raised concerns with colistin use in the home prompting this study.
- Barwon Health spent \$106,000 supporting colistin in the home therapy in 2020/1.

OBJECTIVES

To explore bronchiectasis patients' experiences using colistin in the home

To identify knowledge gaps and address these through an instructional video.



METHOD

- Participants were interviewed at home using a semi-structured questionnaire. Declining participants could opt for a phone interview.
- The Morisky-4 scale measured adherence and the SF-8 questionnaire assessed quality of life.
- An instructional video was developed with Barwon Health Media and Communications and assessed by a sample of participants.
- Human Research and Ethics Committee approval was obtained.



RESULTS

Of 34 potential participants, 19 consented (13 home visits, six telephone interviews). Reasons for non-participation included participants being too unwell, not interested, or unavailable.

Median age was 74.5 years [66.75, 84.30] and 63% (12) were female. Median length of colistin use was 8 years [2.75, 12.59].

Experiences of bronchiectasis patients:

- 79% (15) reported using physical lung clearance techniques before colistin therapy (recommended)
- 84% (16) appropriately used sterile water as diluent
- Bronchiectasis reduced tidal intermittent deep breathes (required for colistin inhalation) to 11% (2)

Knowledge gaps:

- Cleaning knowledge was limited with 26% (5) participants undertaking weekly sterilisation.
- Adherence was assessed as high (74%, 14) and intermediate (16%, 5). There was a trend towards participants who reported missing doses having a higher quality of life.

Instructional video:

All seven participants viewing the video strongly agreed or agreed an increased understanding of colistin setup, use and equipment care was gained. It was strongly recommended for new patients.

DISCUSSION

- How patients manage and adhere to medications in the home is problematical. In this patient cohort varying knowledge gaps and practices were demonstrated for colistin inhalation therapy.
- Additional educational measures should support best practice. All patients commencing colistin through Barwon Health are now provided with a link to the video as part of their medication counselling, and a follow-up phone call to address concerns or questions.
- The small sample size limited statistical analysis.

CONCLUSION

While patients generally managed colistin therapy well some knowledge gaps existed. The instructional video was positively received and can support best practice when commencing colistin.

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