HOW TO ORGANIZE ANTIMICROBIAL STEWARDSHIP IN LONG-TERM CARE FACILITIES

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RECENT REVIEWS ON THE TOPIC


THE CHALLENGES
Specificities of LTCFs for elderly

- Residents are clustered
- Residents usually cognitively impaired, unable to follow basic hygiene measures
- Caregivers often inadequately trained
- Poor adherence of staff to infection control measures
- Frequent understaffing (& sometimes young doctors/nurses in training with high turn-over)

1. Difficult decision-making process: high level of diagnostic uncertainty

- Difficulties in getting relevant clinical information (hearing loss, dementia…)
- Clinical findings often atypical and non-specific
- Lack of onsite diagnostic facilities
- And difficulties in getting good quality samples/investigations
- Colonisation / infection
2. Healthcare organisation / culture

Medical staff

- Multiple doctors
- Lack of onsite doctors to provide immediate clinical assessment
- Unfamiliarity with patients
- Half of antibiotics are prescribed over the phone

Nursing staff

- Shortage of staff
- Rapid staff turnover
- Insufficient training on infection
- Nurses are the cornerstone of care in LTCFs, and doctors rely on the information they provide to prescribe antibiotics

Antibiotics are sometimes prescribed to avoid hospitalisation or a revisit
3. Lack of local resistance data

- < 20% of the cases in European LTCFs

The same is true for antibiotic use data
4. High prevalence of bacterial colonisation

- Wounds
- Urine
  - 100% if catheter
  - No catheter: 25%-50% (women) and 15%-40% (men)
- RTI if COPD
- Systematic samples = driver for unnecessary antibiotic use
5. AB use and end-of-life care

- Controversial topic
- ABs are largely prescribed in that situation (mostly RTI and dementia)
- Positive clinical impact not proven
- Advance care plans might be helpful
6. Prolonged antibiotic treatments

- Retrospective study
- 66,901 Residents of Ontario, Canada, 630 LTCFs in 2010
- 50,061 received antibiotics (78%)
- 2,601 different physicians
  - 1/5th responsible for 4/5th of prescriptions
- Short, average, long duration prescribers had similar characteristics
- Residents had similar characteristics

**Duration of Antibiotic Treatment**

- Long durations appear to be influenced by prescribers’ preference more than patients’ characteristics

7. Patients’ and families’ expectations

• Same problems as in primary care practice
8. Guidelines

• Often not available in LTCFs

• Concern that the usual guidelines are generally not applicable to the older LTCF population

• ‘Frailty’ concept

• ‘Better safe than sorry’ => overprescription
9. Lack of awareness

- Bacterial resistance is invisible
- Impact overlooked
- Short life expectancy
- AMS is not a priority compared to other topics
SOME STRATEGIES
1. No AB prescription without a clinical examination

- Association between absence of clinical examination and:
  - Increased AB use
  - More AB misuse

- Important to document indication (and duration) in the medical record
2. Education

• All **healthcare professionals**
  • **Doctors**: CME, audits and feedback, AB prescribing profiles
  • **Nurses**:
    • When is a bacterial infection likely?
    • When should AB not be prescribed
    • Indications for microbiological investigations

• **Patients** and their families: bacterial resistance, situations when an AB is not needed

3. Where to start?

Global strategy

- Target situations where AB misuse is frequent
- And where improving prescribing will be easier
- Stepwise approach
- Change the system

Situations where misuse is frequent

- AB prophylaxis (UTI)
- Colonisation
- No guidelines
- Broad-spectrum AB
- Topical AB
- Durations of treatment
Antimicrobial stewardship in LTCFs

- Relatively new
- Stepwise approach recommended, same general principles of AMS programs in hospitals/primary care
- Initial steps
  - Least costly and intrusive
- Additional steps
  - Measures that target the prescribing practices of providers
  - Real-time feedback

Establishing an ASP in LTCFs

- Create an antimicrobial stewardship team
- Assess baseline practices
- Identify 1-2 areas for intervention
- Set goals
- Implement strategies to reach the goals (quick wins as the first step)

4. Microbiological investigations

- Urine dipsticks
- Urine cultures
- Wound swabs

- Only if prescribed by a doctor, after a clinical examination
5. Reassess AB prescriptions around day 3

Especially if:
- Potentially severe infection: pyelonephritis, prostatitis, pneumonia…
- Diagnosis uncertainty
- Adaptation to microbiology results
6. Major role of microbiology lab

• Reporting:
  • Educational messages
  • Restrictive reporting (no reporting or limited number of antibiotics)
7. Rapid diagnostic tests?

• Ideally Point-Of-Care (POC)
• CRP?
• Influenza?
8. Innovative strategies need to be tested!

- Infection champion
- AMS team
- ID advice available on the phone
- Computerised decision support systems
- ...

- Process and outcome indicators to monitor your program

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9. Regulatory measures

- Certification/accreditation
- LTCF medical coordinator
- Integrate AMS in existing quality/safety/infection prevention and control programmes
- Should be part of regulatory requirements