Policy on Nurses Role in Anti microbial Stewardship	
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Background

Health care services must engage all relevant healthcare workers, including nurses, in optimal antimicrobial use to address the global threat of drug-resistant infections.

AMS nursing has been deployed in the UK within 'vertical', 'horizontal' or 'hybrid' models.

'Vertical' model

Within this model, the participation of nurses in AMS efforts would be channelled via the implementation of a consultant nurse or advanced nurse practitioner role in AMS. The focus of this novel and often unique position would be AMS. In the UK, 'consultant nurse' roles were introduced 20 years ago structured around four core functions of expert practice of high autonomy; education, training and development; professional leadership to motivate others; service development, research and evaluation. As the service develops and nursing competence grows this model may well become the dominant model.

'Horizontal' model

Within this approach there would not be any specific or dedicated AMS nurse role implemented. Instead, the organisation would engage in a concerted drive to increase optimal AMS behaviours and practices among nurses. Such behaviours may reflect nationally agreed objectives.

In conjunction with Nursing Practice Development, this is the model we need to be moving towards.

'Hybrid model' (vertical-horizontal)

Within this model, organisations would foster and implement expectations about increased AMS tasks, roles, responsibilities embedded within the remit of all clinicians including nurses, underpinning such expectations with the allocation to existing healthcare workers of some expanded

or specialist AMS skills. This approach could benefit from enhancing existing roles, such as infection prevention and control link nurses, or including further skills and responsibilities within existing specialist nursing teams – sepsis specialist nurses, or nurses in vascular access team would appear particularly well placed to embrace these additional responsibilities. Other posts such as ward managers could combine their leadership in infection prevention and control with an emphasis on stewardship.

This is currently the model we are working on in relation to anti-microbial stewardship.

Principles of antibiotic prescribing.

• Antimicrobials should be used after a treatable infection has been recognised or there is a high degree of suspicion of infection. In general, colonisation or contamination should not be treated.

Antimicrobials should be used for the prevention of infection where research has demonstrated that the potential benefits outweigh the risks. Long-term prophylaxis should be avoided unless there is a clear clinical indication (for example, rheumatic fever and post-splenectomy).

• The choice of antimicrobial should be determined by the sensitivity of the identified causative organism when this is known. Empiric therapy, for the likely causative organism (s) should be governed by local guidelines that have been informed by recent information about trends in antimicrobial sensitivities.

• Targeted therapy should be used in preference to broad-spectrum antimicrobials unless there is a clear clinical reason (for example, mixed infections or life-threatening sepsis). The prescription of broad spectrum antimicrobials should be reviewed as soon as possible and promptly switched to narrow spectrum agents when sensitivity results become available. Mechanisms should be in place to control the prescribing of all new broad-spectrum antimicrobials.

• The timing, regimen, dose, route of administration and duration of antimicrobial therapy should be optimised and documented. The indication for which the patient is being prescribed the antimicrobials should be documented in the drug chart and case notes by the prescriber.

• Wherever possible, antimicrobials should be given orally rather than intravenously. Clear criteria should be defined for when intravenous therapy is appropriate. As soon as possible the prescription should be switched to an oral equivalent. The intravenous prescription should be reviewed after 48 hours as a minimum.

• Anti-microbial treatment should be stopped as soon as possible. A stop date or review date should be recorded by the prescriber on the drug chart. In general, antimicrobial courses should be reviewed within five days.

• To ensure rapid treatment and infection control, mechanisms should be in place to ensure that patients receive antimicrobial drugs in a timely manner.

Improving the use of antibiotics in healthcare to protect patients and reduce the threat of antibiotic resistance is a national priority.

Antibiotic stewardship refers to a set of commitments and actions designed to "optimize the treatment of infections while reducing the adverse events associated with antibiotic use.

Antibiotics are among the most frequently prescribed medications in nursing homes, with up to 70% of residents in a nursing home receiving one or more courses of systemic antibiotics when followed over a year. Similar to the findings in hospitals, studies have shown that 40–75% of antibiotics prescribed in nursing homes may be unnecessary or inappropriate. Harms from antibiotic overuse are significant for the frail and older adults receiving care in nursing homes. These harms include risk of serious diarrheal infections from Clostridium difficile, increased adverse drug events and drug interactions, and colonization and/or infection with antibiotic-resistant organisms.

Core Elements for Antibiotic Stewardship in Nursing Homes

Leadership commitment

Demonstrate support and commitment to safe and appropriate antibiotic use in your facility

Accountability

Identify physician, nursing and pharmacy leads responsible for promoting and overseeing Antibiotic stewardship activities in this facility

Drug expertise

Establish access to consultant pharmacists or other individuals with experience or training in antibiotic stewardship for this facility

Action

Implement at least one policy or practice to improve antibiotic use

Tracking

Monitor at least one process measure of antibiotic use and at least one outcome from antibiotic use in this facility

Reporting

Provide regular feedback on antibiotic use and resistance to prescribing clinicians, nursing staff and other relevant staff

Education

Provide resources to clinicians, nursing staff, residents and families about antibiotic resistance and opportunities for improving antibiotic use.

Nurses role in anti microbial stewardship.

To understand the risks posed by antimicrobial-resistant infections

To familiarize yourself with the principles of antimicrobial stewardship (AMS)

To understand how AMS can assist nurses in ensuring the safe and effective use of antibiotics.

Nurses are essential to the success of AMS programmes. They are increasingly prescribers of antibiotics (American Nurses Association 2017, Courtenay et al 2017), and are directly involved in resident-related and medicine-related stewardship activities, such as timely antibiotic administration, specimen collection, and monitoring treatment and adverse events (WHO 2018).

Nurses also facilitate inter professional collaborative working – whereby multiple healthcare workers from various professional backgrounds work together with residents, families, caregivers and

communities to deliver high quality care (WHO 2010) – which is necessary for optimal AMS practice (Courtenay et al 2018). For example, nurses have an important role in communicating messages about antimicrobial resistance to the general public; health care assistants and nurses are well placed to educate older people about antimicrobial resistance.

Antimicrobial stewardship (AMS) competency framework for nursing practice.

Infection prevention and control

All qualified healthcare professionals must understand the core knowledge underpinning infection prevention and control, and use this knowledge appropriately to prevent the spread of infection.

Antimicrobials and antimicrobial resistance

All qualified healthcare professionals are required to understand the core knowledge underpinning the concept of antimicrobial resistance and use this knowledge to assist in the prevention of antimicrobial resistance.

Diagnosis of infection and the use of antimicrobials

All qualified healthcare professionals are required to demonstrate knowledge of how infections are diagnosed and the appropriate use of antimicrobials, and use this knowledge appropriately to support the accurate diagnosis of infection and the appropriate use of antimicrobials.

Antimicrobial prescribing practice

All qualified healthcare professionals must be aware of how antimicrobials are used in practice in terms of their dose, timing, duration and appropriate route of administration, and apply this knowledge as part of their routine practice.

Person-centered care

All qualified healthcare professionals must seek out, integrate and value the input and engagement of the resident/carer as a partner in designing and implementing care.

Interprofessional collaborative practice

All qualified healthcare professionals are required to understand how different professions collaborate in relation to how they contribute to AMS.

Knowing what residents have resistive bugs.

All nurses need to know what residents have resistant organisms, and in a collaborative way ensure that all members of the multi disciplinary team are aware of this diagnosis of each resident.

What's New on Antibiotic Prescribing. This will continue to be developed.

https://www.hse.ie/eng/services/list/2/gp/antibiotic-prescribing/conditions-and-treatments/whats-new-on-antibiotic-prescribing.html.

Recently updated content on the website

New content to support deprescribing UTI prophylaxis, Nov 2020 All UTI prophylaxis should be reviewed at 3-6mths with a view to stopping as many patients can stop without a return of symptoms.

There is no evidence of additional benefit beyond 3-6 months but there is significant evidence of harm.

UTI in Long Term Care Residents over 65, Nov 2020 Diagnosis & Management of Urinary Tract Infection (UTI) in Residential/Long Term Care/Nursing Home Residents (non-catheter associated) Nitrofurantoin now first choice for uncomplicated UTI (Trimethoprim removed), or Cefalexin if nitrofurantoin unsuitable. non catheter image

Recommended duration for uncomplicated UTI is 3 days for females, 7 days for males

Cefalexin now recommended first choice for acute pyelonephritis (duration 7-10 days)

Diagnosis & Management of Catheter-Associated Urinary Tract Infection (CA-UTI) in Residential/Long-Term Care/Nursing Home Residents Non-specific signs & symptoms of

CA-UTI in elderly residents included (but consider COVID-19) catheter image

- Cloudy urine or foul-smelling urine do not indicate an infection in absence of signs and symptoms of infection.
- CA-UTI to be treated like an upper UTI, with cephalexin 1st choice (unless guided otherwise by culture). Use of nitrofurantoin or trimethoprim for CA-UTI removed.

- Green/Red antibiotic quality improvement initiative. Nov 2020 Includes background information and a summary of positive key trends observed with this important quality improvement initiative.

- Videos on safe Antibiotic use - Nov 2020
- Antibiotic Awareness Week 2020
- Protecting antibiotics – a message for prescribers
- Keep antibiotics working for the future

whatsnew

- Renal Impairment Summary Sept 2020 Medicines list expanded to include anti-fungals and anti-helmintics
- Advice on Fosfomycin updated (avoid if CrCl <10ml/min)
- Advice on Nitrofurantoin updated (contraindicated if CrCl <30ml/min, caution in use if CrCl 30-45ml/min)

- Animal and Human Bites Sept 2020 Content of both pages merged
- Expanded advice on general management and antibiotic prophylaxis
- Duration of prophylaxis 5 days, duration of treatment 7 days

- COVID-19 acute respiratory infection May 2020

COVID-19 is a viral infection.

Antivirals or agents with antiviral properties for COVID-19 should not be prescribed for treatment or prophylaxis in the community, unless as part of a clinical trial.

Secondary bacterial infection appears uncommon in COVID-19 patients.

- Key messages from AMRIC to community prescribers March 2020
- Tips on safe us of clarithromycin , and important safety concerns for fluoroquinolones especially moxifloxacin are just some of the items covered

- Recurrent UTI in Adult, Non-Pregnant Females March 2020

This guideline refers to symptomatic culture-proven recurrent urinary tract infection (UTI)

It covers non antimicrobial measures, antibiotic prophylaxis. It is important to remember that recurrent or persistent lower urinary tract symptoms are not always due to recurrent UTI. Other conditions such as STI, postmenopausal atrophic vaginitis and dermatological conditions often cause similar symptoms.

Antimicrobial prophylaxis should be reviewed after 3-6 months with a view to stopping