

Briefing Paper

RIPEN & RCN
Policy Workshop

Visualising
and Activating
Nursing Ac-
-tion to Address
Antimicrob
-ial Resistance

Friday 4th October 2019

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20 Cavendish Square
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london

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Arts & Humanities
Research Council

INTRODUCTION

Antimicrobial resistance (AMR) and its consequences pose serious threats to health and welfare globally. Across the world nurses constitute the largest professional healthcare workforce and typically nurses have numerous daily interactions with healthy and ill individuals, family members, community groups and other care professionals. As such nurses have huge potential to make every contact count to reduce inappropriate prescribing and demand for antibiotics, and to enhance the effectiveness of those prescribed. However, evidence on nursing's engagement with AMR indicates that the profession has not yet leveraged its full potential to prevent AMR advancing or to countenance the consequences of failure.

Within this context the invisibility of pathogens and related AMR processes in everyday practice make AMR a relatively abstract issue. Based on our previous cross disciplinary research work involving contemporary visualisations of the pathogens, people and places that constitute practice ecologies, and on our historical research detailing eras of infection control practice in hospital settings, we believe that there is significant opportunity to enhance the meaningfulness of AMR for practicing nurses and their colleagues through expanded application of arts and humanities approaches. This is being taken forward through an AHRC funded project called Re-envisaging Infection Practice Ecologies in Nursing through Arts and Humanities Approaches (RIPEN).

This paper aims to brief participants in advance of the RIPEN Policy Workshop event being held on 4th October 2019 in collaboration with the Royal College of Nursing (RCN). The event brings together nurses from clinical practice settings across the UK with key policy leaders and academics to plan how we can visualise, activate and optimise nursing's power for change. The Policy Workshop draws on RIPEN's processes and findings.

For reasons of space, only a brief selection of RIPEN's findings can be presented here and further insights into aspects such as methodology will be on display at the Policy Workshop event itself. The first section of the briefing paper gives overview of RIPEN. The second section presents selected emergent themes from current practice and priority ideas for developing AMR-related practice. The third shows an example of developing an idea jointly towards policy action and also shows an example of how a priority idea has been developed as a protocol for enactment in a pilot initiative. The fourth shares some themes to emerge from participants envisaging practice in 2030. Section 5 raises a number of related challenging thoughts and questions. The outcomes from the event will inform the update of the RCN's position document on nursing and AMR, and key themes from the previous 2014 document are summarised in the final section.

1.0 RIPEN: AIMS, QUESTIONS & PARTICIPANTS

The main aim of the RIPEN study is to address the question:

How can relevant arts and humanities based approaches help nurses to re-envisage their infection control practice ecologies in response to antimicrobial resistance?

Four research questions are guiding the study, namely

- 1) How do hospital and community- based nurses understand and respond to the priorities and consequences of AMR within the context of their everyday working lives?
- 2) How can co-design and visualisation-based approaches help these nurses to identify and construct sets of meaningful practices that optimise present prevention of AMR?
- 3) How can co-design, visualisation, history and other relevant arts and humanities approaches help nurses to re-imagine and re-envisage their infection control practice ecologies in a future with minimal or no effective antibiotics?
- 4) What priority issues and other questions does this initial enquiry raise, and how can these best inform policy and planning, education and further research?

The study is designed around two practice “Labs”, one in Glasgow with a small group of mainly hospital-based participants and one in London with a small group of mainly community based participants. Over the last year 20 participants have attended four workshops which addressed each of the above questions. In addition to the nurses listed in [Table 1](#), one patient/public representative and one doctor who is also a pharmacist participated.

RIPEN’s methods are primarily structured around the Design Council’s Double Diamond model (discover; define; develop; deliver). This paper focuses on findings relating to practice and policy rather than methods.

LONDON

District Nurse Team Manager
 Community Mental Health Nurse
 Community Nurse/District Nursing student
 Rehabilitation Nurse Case Manager
 Community Nurse (medical screening)
 Community Occupational Health Nurse
 Health Adviser Nurse
 IPC Consultant Nurse (hospital group)
 IPC Nurse (Ministry of Defence)

GLASGOW

Staff Nurse (acute elderly ward)
 Staff Nurse (various settings, mostly care homes)
 Staff Nurse (respiratory ward)
 Advanced Nurse Practitioner (Emergency Care)
 Advanced Nurse Practitioner (Emergency Care Public Health role)
 Community Mental Health Nurse
 IPC Nurse (hospital & rural community)
 IPC Consultant Nurse (hospital group)
 IPC Nurse (hospital group)

Table 1

RIPEN Participants

2.0 RIPEN: ENVISAGING CURRENT PRACTICE

2.1 DRAWING AMR

Participants' drawings of AMR (see Figure 1 for examples) broadly fell into 3 categories: conceptualising the processes of resistance; explorations of the drivers and consequences of AMR; and, messaging around ideas of an antibiotic apocalypse on the horizon with new beginnings required to stabilise life.



Figure 1
Drawing AMR

2.2 AMR WITHIN THE CONTEXT OF EVERY-DAY PRACTICE

Participants used storyboards to depict and explain key daily work activities (See examples in Figures 2 below) and to identify 'hotspots' where these related to IPC, AMR or both. Emergent themes were:

Relationships between practices related to IPC and AMR:

Some participants felt that IPC practices and practices related to AMR could at times be clearly demarcated while others (often IPC

specialists) felt that IPC and AMR were so closely related that little differentiation was possible.

Routines and the embeddedness of antibiotic use within health care practice: Antibiotic use was deeply embedded in many of the daily activities and routines. Some participants also made the connections between their everyday practice, their home lives, and the wider economic, political and social drivers of AMR.

Importance of how we conceptualise and manage boundaries: Imagined and real physical boundaries were highlighted by a number of the participants, including managing microbial boundaries and managing “macro” boundaries between care settings and among professionals and the public.

In the example below the green dots indicate practices the nurse sees as IPC only. She indicates the priority she tends to give to each issue by marking 1-5 on the relevant coloured dot (1 = consistently very low priority, through to 5 = consistently very high priority). She differentiates between her approach and others in the team. Yellow dots indicate issues where both IPC and AMR are concurrently involved (e.g. where giving Clozapine depot injection carries risk of neutropenia and increased risk of acquiring infection with perceived related implications for AMR). Note a dilemma around hydration v. infection risk and social affirmation v. rejection in the sharing of a cup of tea.



Figure 2
Storyboard by Community Mental Health Nurse

2.3 AMR RELATED PRACTICES PRIORITISED BY INDIVIDUALS FOR DEVELOPMENT

The Glasgow Lab participants identified a wide range of practices related to AMR as meaningful for development. These spanned: **individual professional practices** (e.g. own knowledge; own hydration); **professional team practices** (e.g. cleaning up blood spillages); **own family activities** (e.g. family's hand hygiene); and **community/wider social aspects** (health literacy in deprived areas). Examples of top priorities for individual participants were (Table 2):

Confidence in dealing with risk	Conversations with patients	Public education on hydration	Table 2 Top Priorities for Individual Participants
Accurate diagnosis	Electronic prescribing	Public education on AMR	
Antibiotic monitoring by microbiology	Challenging doctors' antibiotic prescribing	Hand hygiene	
Discussions with Microbiologists	Care of midlines	Targeted AMR healthcare staff education	

Similarly, London Lab participants identified a wide range of practices as meaningful for nurses to develop. Priorities included **community health literacy work** and **improving surveillance and handover processes for people returning from international travel** who have health issues that may increase AMR (see Figure 3).

AMR: What could be done?

We would like to understand your perspective on what things could be done to tackle some of the most pressing issues around AMR that were unveiled during our first workshop. Please use this template as a guide to help you develop some initial ideas that may be developed as interventions. These will be further discussed, explored and developed during our next co-design group session.

1. THEMES (choose 1):

- Overuse/misuse of Abx
- International travel
- Lifestyle/wellness
- Inconsistencies in AMR practice
- Compliance issues

2. CONTEXT (choose 1):

- Hospital environment
- Community environment

3. ROLE OF NURSES (choose as many as appropriate. You can also add other roles):

- Primary carer
- Supporter
- Ombudsperson
- Intermediary/mediator
- Educator
- Designer
- Co-participant
- Policymaker
- Decision-maker
- Other role(s): _____

4a. YOUR PROPOSAL'S VISUALISATION

4b. YOUR PROPOSAL'S DESCRIPTION

Due to ↑ in International travel due to work/pleasure - more people are being hospitalised abroad - poor handover / ↓ surveillance can lead to ↑ in AMR → through better comm/handover & surveillance alongside initial admission screening → this could be improved → EDUCATE & COMMUNICATE

Figure 3
Individual Intervention Idea, Outlining Theme, Context and the Roles of Nurses

2.4 AMR RELATED PRACTICES THAT GROUPS PRIORITISED FOR DEVELOPMENT

The London Lab participants jointly prioritised four ideas and collectively developed these considering: the respective target populations for the interventions; how they would work; and what changes they would promote. These intervention ideas developed in response to emerging issues arising from the participants' work were:

1. A “My Health App/Health Passport”. This idea would make use of technology and data to support patients and carers. The app would integrate electronic prescribing, patient data, educational materials (such as links, pdfs, videos etc), as well as telemedicine functions (like videoconference).

2. An electronic prescribing and prompt system. This idea builds on the difficulties experienced by some of the participating community nurses concerning accessing and consulting the patients' ABx prescribing status and history. The idea is to streamline information between all levels of care, with detailed information about the healthcare providers actions, and, principally, the patient presentation, background and history of prescriptions.

3. A disposal antibiotic record. Aiming to address broader concerns around the correct disposal of antibiotics, this idea would also make use of integrated patient data to build a historical record of the patient's antibiotics intake. Furthermore, the concept would include a service/system solution whereby collection and correct disposal of ABx (and other drugs) is controlled and accounted for.

4. A Home Starter Health Kit. The Kit, targeted at older patients and patients with chronic conditions in homecare, would include a number of materials (such as a cup, a medicine/ABx calendar, activity books) to facilitate and increase active participation of patients, families and carers. The Kit would also have some features to facilitate monitoring and communication, serving as a form of mediator for the interactions with health staff during routine visits and when patients go to GP appointments or social/mental care clinics and A&E.

The joint ideas prioritised in the Glasgow Lab were:

1. Improving knowledge and usage of antimicrobial products. This educational initiative would aim to improve perceptions and knowledge around the appropriate use of antimicrobial cleaning products. It would aim initially to engage healthcare workers, particularly nurses and cleaners, to consider both their work and home environments and to act as social influencers in their related communities.

2. Improving antibiotic prescribing consistency. This would be a multi-faceted initiative involving work with the public to improve health literacy, influence expectations of antibiotic prescriptions and to create a “unique selling point” in relation to prevention and control of AMR. Work with professionals would customise workshops to different fields of practice (e.g. mental health).

3. Improving AMR education. This would be a funded national initiative to ensure a basic educational package on AMR was undertaken by all professional NHS workers. Packages could be customised to need with a recognition that one size does not fit all. The emphasis would be on interacting with colleagues while learning rather than solo on-line activities.

4. Implementing a “Prescribing Pause”. Conceived initially for emergency department or GP surgery based prescribing, this would formalise prescribing protocols to take some of the risk out of not prescribing. The key for enacting this idea would be organising infrastructure and processes (“safety netting”) to enable swift transfer of information and clinical authority, primarily to community pharmacists.

3.0 DEVELOPING IDEAS JOINTLY TOWARDS POLICY ACTION AND ENACTMENT IN PRACTICE

Participants worked together to analyse selected historical images pertaining to key eras of infection prevention and control¹. This enabled subsequent consideration of key implications at **policy (macro) systems (meso)** and **practice (micro)** levels for moving current priority ideas towards policy (Figure 4).

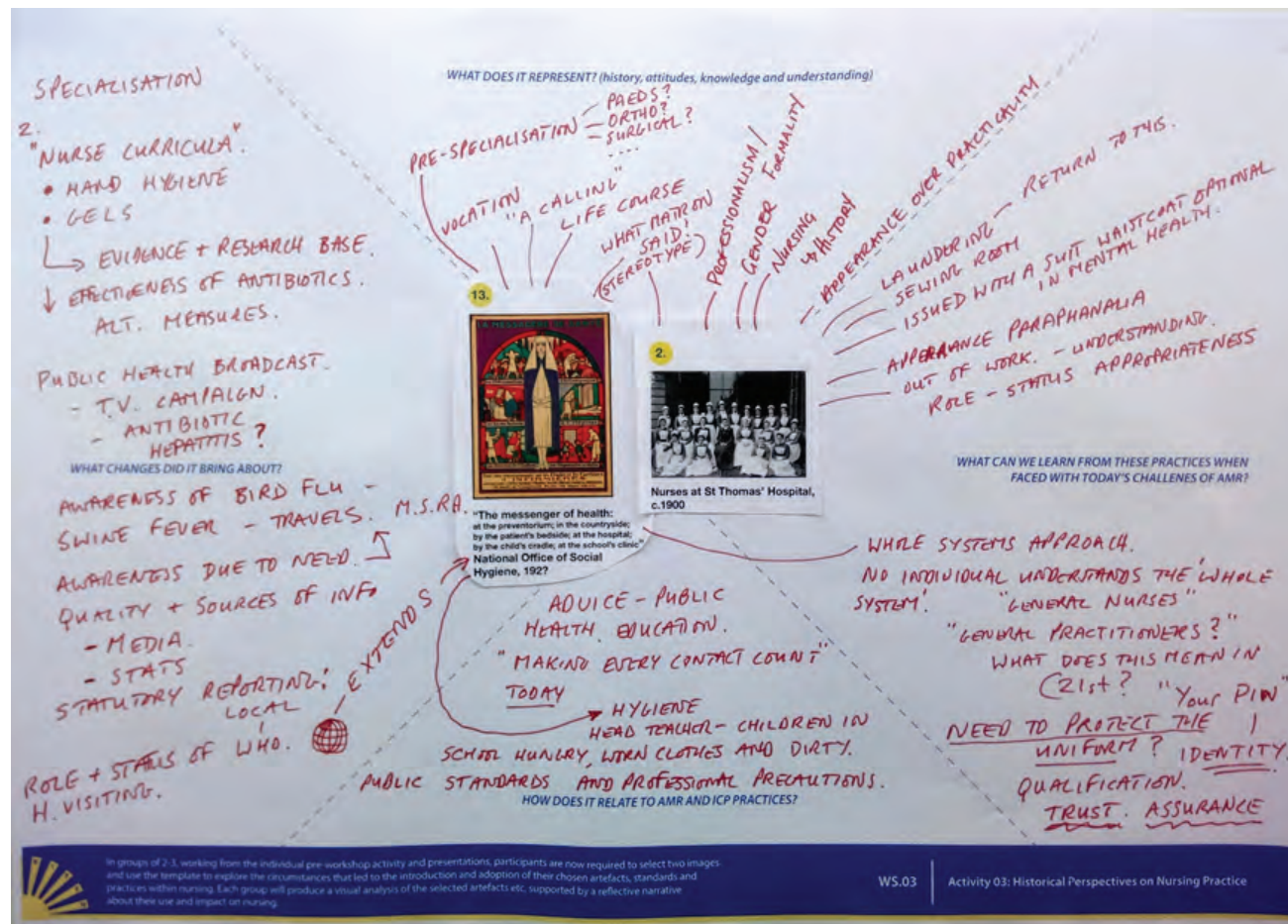


Figure 4
Analyses of Selected Historical Images

¹ To see the images, access: <https://kingscollections.org/exhibitions/archives/from-microbes-to-matrons/matrons-nurses-and-nursing/nursing-kings-college-hospital>

London participants further combined, defined and developed their priority ideas through a process designed to identify key considerations and to produce a related policy statement. Policy statements were conceived within a patient-centred care approach, and under the idea that they would reflect the priorities and ambitions in relation to the relevant stakeholders previously identified.

The resulting policy statements were focused on:

1. AMR is everybody's business and everybody's responsibility
2. AMR: National/local priority and emergency plan

Figure 5 below shows an example based on the priority of enacting patient-centred care via awareness and action from cradle to grave.

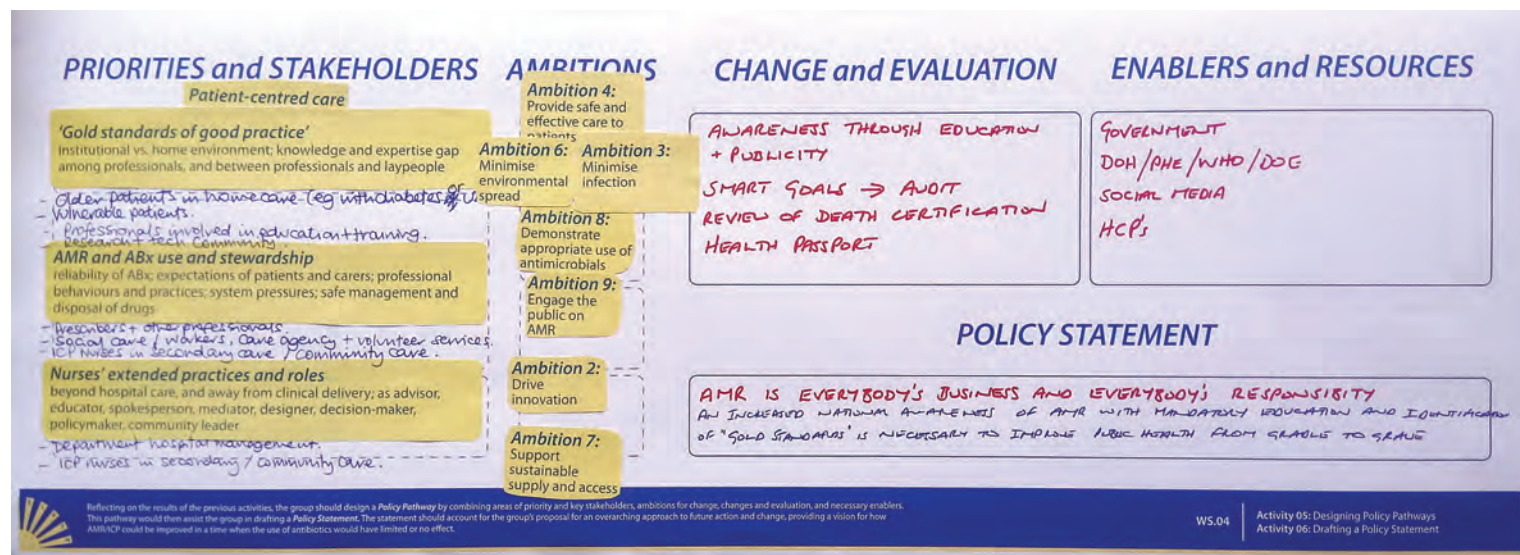


Figure 5
Developing a Policy Pathway and Statement Focused on Priorities, Stakeholders, Enablers and Resources

The above example shows how earlier ideas like a Health Passport are incorporated into a more generic overall priority idea.

Glasgow participants also developed policy proposals around their priority ideas, considering how problems, politics and existing policies would influence agenda setting. Following on from this work one of the core ideas has been worked up as a proposed clinical protocol, as illustrated below in Figure 6.

As indicated, the key for enacting this idea will be organising infrastructure and processes (“safety netting”) to enable swift transfer of information and clinical authority. There is already local support for developing systems to enable pilot implementation and the is ripe for funding support. The lead clinician and research team would be happy to discuss this further with potential funders/collaborator.

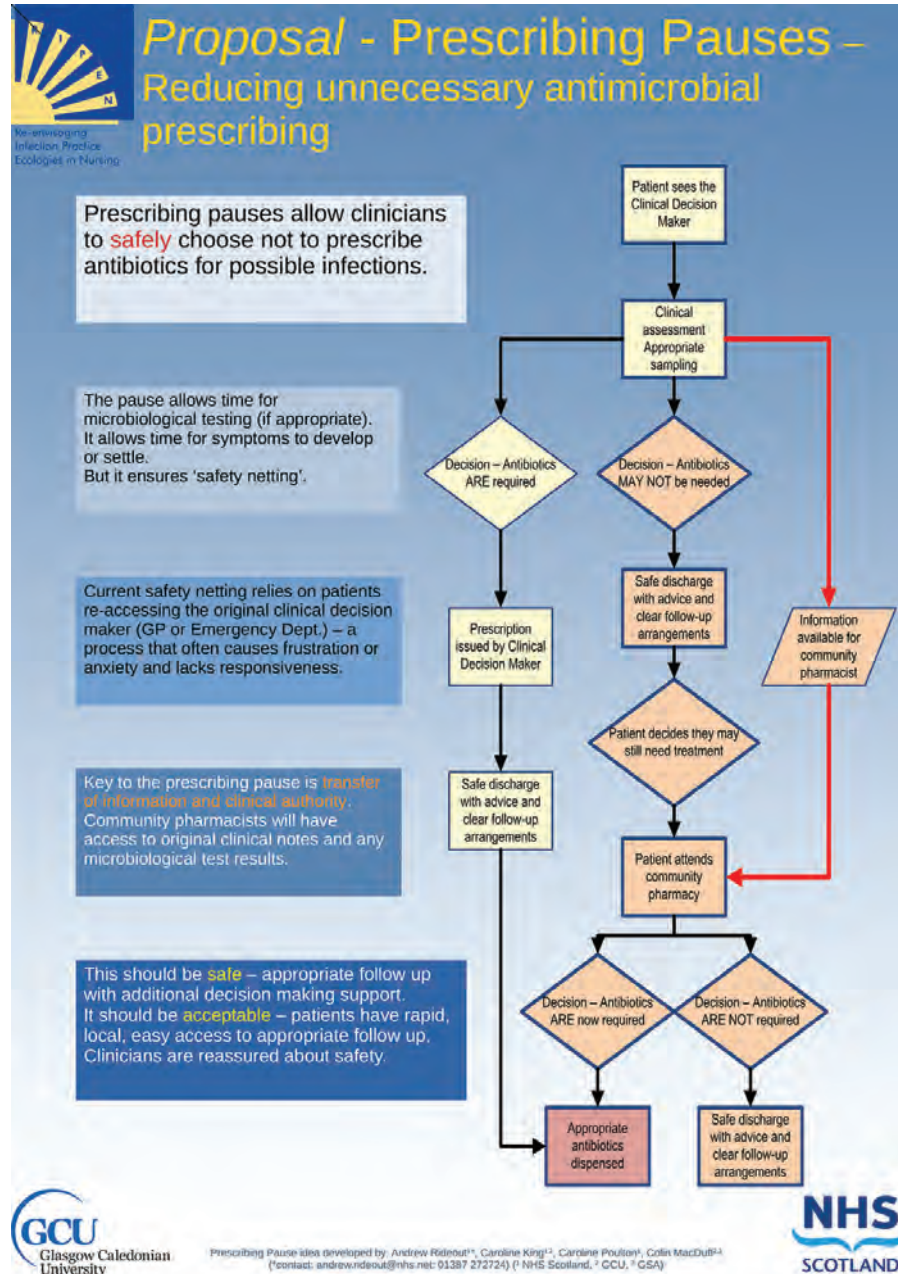


Figure 6
**Proposal of a Protocol for
 a Prescribing Pause**

4.0 RE-ENVISAGING PRACTICE ECOLOGIES: 2030

Building from extensive analyses of historical images relating to five eras of IPC/AMR from 1870 onwards, participants considered how their practice might manifest in 2030 and any related implications for current practice. Their related storyboards detailed many issues and opportunities including:

- a need to re-consider contexts for care, with much more prevention and treatments in the community;
- hospitals being used more for complex cases and isolation;
- changes in hospital architecture to support IPC;
- the need for changing our health care workforce composition and skills set accordingly (e.g. more community Advanced Nurse Practitioners using motorbikes; developments in cleaning roles so this is recognised as a professional role);
- the “pharmaceuticalisation” of products aimed at promoting a ‘healthy’ microbiome and advancement of technology around related transplantation (e.g. faecal transplants);
- more use of technology to facilitate patient care (e.g. televisual communications);
- changes in how we relate to other species e.g. having domestic cats may no longer be possible if antibiotics are not available to treat cat bites.

In the following page, [Figure 7](#) shows an example of a 2030 storyboard produced by an Advanced Nurse Practitioner from an A&E setting.



Figure 7
A 2030 Storyboard
Completed by an
Advanced Nurse
Practitioner (Emergency
Care Context)

5.0 CHALLENGING THOUGHTS/QUESTIONS TO EMERGE FROM RIPEN

1. Knowledge and creativity: It is clear that nurses (and allied health service colleagues) have an abundance of implicit knowledge and creativity that they use to negotiate the demands of daily practice. How can this be better highlighted and harnessed to enable practices to prevent and control AMR that are meaningful to nurses, patients and the public? What related support for nurses and other health professionals can be implemented/improved within practice, education and policy?

2. IPC and AMR: RIPEN's initial exploration of nurses' conceptualisations of AMR suggests that some see it as distinct at times from general IPC while others tend to see it as embedded and integral. Is there a need to distinguish? Is this reflected in organisational structures? Would further research be useful?

3. Agency and stewardship: Many of the practices recommended in government and professional bodies' AMR stewardship guidelines/toolkits are recognised as desirable by nurses but they feel limited (e.g. by time demands and lack of power) to enact them. What needs to be done to improve this situation and how can it be meaningfully progressed?

4. Scope of role and the concept of stewardship: However, perhaps paradoxically, RIPEN has concurrently highlighted that "stewardship" itself can be a limiting concept with passive connotations. Is "stewardship" the right concept or is a wider/more radical approach needed? Should nurses also be encouraged to engage and contribute to AMR prevention and control in their lives outside work, and should nursing policies include the related individual, family and community dimensions of this? i.e. nursing citizenship? How can we better foster grass roots engagement and creativity? Do we need a Greta Thunberg type agitator/leader rather than an establishment figure?

5. Envisaging the future and re-envisaging practice ecologies accordingly: RIPEN shows how nurses can think through how possible future scenarios could evolve and their practice implications. They have plenty creative ideas to prevent or mediate negative consequences, and particularly to consider any possible opportunities. Notably these ideas go beyond an exclusive focus on antibiotics themselves. Nursing as a profession, however, has shown limited engagement in thinking about futures in which antibiotics are very limited or not available at all e.g. around ethical aspects. How can we better enable this future focused creative thinking so that threats and opportunities are considered and preventative actions are progressed jointly?

A common thread going through the above thoughts and questions is the need to support nursing's existing engagements with AMR to be more **visible**, and the need to **foster, activate and articulate** more nursing work in the field of AMR.

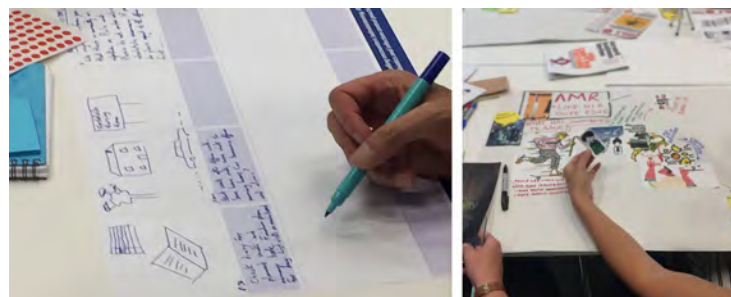


Figure 8
RIPEN Participants
Working With Multiple
Codesign Tools and
Methods

6.0 MAIN ELEMENTS OF EXISTING RCN POSITION STATEMENT (2014)

The RCN's position statement on the nursing contribution to preventing and controlling antimicrobial resistance, published in 2014, identified four main themes as a basis for action:

1. Reducing the demand for antibiotics. This focuses on prevention of infection and includes actions such as:

- making every nursing contact count to influence public and patient knowledge and expectations of antibiotic prescribing through every day interactions;
- leading and implementing public health strategies to support the public to 'live well' and prevent or reduce the burden of long-term conditions;
- lead and implement immunisation programmes across all age groups to prevent avoidable infection;
- lead and contribute to quality improvement strategies to reduce the development of HCAs;
- obtain specimens only where clinical need is clearly indicated and support the timely transfer to laboratories.

2. Enhancing the effectiveness of prescribed antibiotics. This focuses on:

- raising awareness of existing campaigns in community and hospital settings to improve prescribing practices and compliance with antibiotic policies/guidelines, for example, Start SMART then FOCUS (DH, 2011), TARGET antibiotic toolkit (RCGP, online) and influencing their implementation;
- ensuring that process elements of antibiotic prescribing relevant to nursing are clearly communicated, implemented and monitored (for example, ensuring prescription charts are correctly completed with drug, stop date and IV to oral switch information);

- dispensing antibiotics at the right time and under the optimal circumstances required to maintain therapeutic levels;
- educating patients and their carers on how to take antibiotics as prescribed in the home setting and when to report unresolved or worsening symptoms.

3. Provision and availability of specialist infection prevention advice. This focuses on the role of specialist nurses in supporting multidisciplinary engagement. Although these roles vary across the country in relation to NHS structures these nurses typically lead implementation of guidance documents and standards

4. International collaboration and action. This focuses on nursing being visible as a major contributor to the inherently international problem of AMR, emphasising that nursing is key to the success of World Health Assembly and World Health Organisation strategies and initiatives
grass roots engagement and creativity? Do we need a "Greta Thunberg" type agitator/leader rather than an establishment figure?

7.0 CONCLUSION

Despite its life altering consequences, AMR can often be an abstract concept that struggles to gain traction and priority within the very busy world of professional healthcare practice. This paper has given a flavour of a qualitative project that has aimed to start from where nurses are in terms of their practice and explore what can help make AMR meaningful and manifest as a practice priority. In turn it has started to engage with how these priorities might articulate with the worlds of policy, both locally and nationally. The Policy Workshop event with RCN on 4th October will take this further by considering emergent ideas from RIPEN in the light of existing policies and envisaged future ecologies of practice. We look forward to meeting and working with you there!

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