Nurse prescribing:
Integrative and empowering

Dr Joanne Lymn & Dr Dianne Bowskill
Signposting

- How do nurses integrate prescribing
- Personal experiences of prescribing education
- Empowering and integrating student learning
  - Podcasting
  - Audience response systems
  - Buddy system
Are you a prescriber?

1. Yes
2. No
3. Prescribing student

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Nurse Prescribing

- 26 University days and 12 days medically supervised practice over 6 months.
- Independent & supplementary prescribing qualification
- Independent prescribing - nurse takes responsibility and accountability for diagnosis and prescribing
- Access to similar formulary of drugs to Doctors
- Expected to always prescribe only within their area of competence
Can be a little overwhelming ....

“at the beginning (of the course) I thought I wouldn’t be able to prescribe anything and then I thought ‘oh my god’ I can prescribe everything, then ‘no’ I can’t because I am not competent and I know I didn’t need to but I felt pressure and a whole mixture of things”.

(Midwife)
Representative demographics

- 50 years of age and above
- Under 30 years of age
- 40 - 49
- 30 - 39

Years since professional qualification:
- Under 5 years
- 5 – 7 years
- 8 – 10 years
- More than 10 years
How do nurses integrate prescribing?

- Qualitative case study
- 26 nurse prescribers
- 4 successive cohorts.
- Purposeful sampling based on role, primary or secondary care and employer
- Semi structured interviews and field data from practice.
What % of qualified nurse prescribers do not prescribe?

1. Less than 5%
2. Around 20%
3. More than 30%

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## Nurses not prescribing

19% qualified nurses not prescribing

<table>
<thead>
<tr>
<th>Cases</th>
<th>Clinical Area</th>
<th>Not prescribing</th>
<th>Reason given</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Primary Care</td>
<td>2</td>
<td>Incompatible computer system Chooses not to prescribe</td>
</tr>
<tr>
<td>3</td>
<td>Secondary Care</td>
<td>1</td>
<td>Changed jobs now in a management role</td>
</tr>
<tr>
<td>2</td>
<td>Secondary care primary outreach</td>
<td>1</td>
<td>New role, unhappy with employer restrictions to formulary and not established relationship with new doctors.</td>
</tr>
<tr>
<td>2</td>
<td>Primary care Secondary outreach</td>
<td>1</td>
<td>New role, not established relationships with doctors. One practice unhappy about nurses 'interfering' with their patients</td>
</tr>
</tbody>
</table>
Importance of Trust

“because they have worked with you I don’t think it is an issue because they have already built up that trust”

Practice Nurse.

“I don’t prescribe for that practice. I feel less confident with them than other practices. It is about confidence in the GPs to be honest the practice has been operating with locums for quite along time”

District Nurse.
Prescribing agreements

Secondary care

“We have got some limitations on what the Trust will let us prescribe and we are having a few teething problems with that at the moment.” Secondary care specialist nurse.

Primary Care

“he didn’t restrict me he was quite happy as long as I was confident with what I was doing” Practice nurse.
## Prescribing for patients

### 3 Approaches

**As need arises:** Prescribe as and when necessary.

"anything that comes along I first look on our list to see if it is something we can prescribe and if I am happy then I do"  *Children’s nurse.*

**Condition Specific:** Identifies clinics, conditions, patient groups.

"I deal with a lot of minor illness and I decided that the easiest thing to deal with first was the ones from triage"  *Practice nurse.*

**Individual Specific:** Prescribing for patients they know well.

"getting to know my patients and getting used to what drugs they are actually on...it is the worry of interacting that limited me at first"  *Community matron.*
Prescribing nurses ask doctors - why?

66.5% community practitioner prescribers (Rodden 2001)
42% Extended nurse prescribers (Latter et al 2004)
Prescribers less dependent on doctors

Participants showed increased dependence

“they have ultimate responsibility for that patient and I am doing something that may possibly change things.”. Community Matron.

“I check, I actually plan what I would have given them and they did get the antibiotics that I thought.”
Advanced Nurse Practitioner.
For Successful Integration

- Trust in relationships between nurse prescriber and doctor, nurse prescriber and employer.
- New roles present particular problems for establishing trust to support integration. Defined roles and prescribing responsibilities help.
- Permission seeking and doctor checking manage risk and build confidence in competence.
- Nurses adopt different approaches to prescribing to medicine
- Enhances nursing roles, improves job satisfaction.
However

Challenging  Foreign language  Difficult
Demanding  Exhausting

Out of my comfort zone

'It is a packed course, great but all consuming'

'The best course I have ever taken but the workload is crazy'
Impact of prescribing course

- Questionnaire
- 65 non-medical prescribing students
- 3 successive cohorts
- Closed and open questions
Reasons for undertaking course

Motivation for undertaking the NMP course

- Had to take: 51%
- Chose to take: 49%
What % of nurses experience a major life event whilst studying?

1. Less than 5%
2. Around 20%
3. More than 30%
Life events

- 62.5% of all students dealt with a major life event whilst undertaking the course.

Student or immediate family health problems occurring during the course

<table>
<thead>
<tr>
<th>Category</th>
<th>Students (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sickness</td>
<td>30</td>
</tr>
<tr>
<td>Injury</td>
<td>5</td>
</tr>
<tr>
<td>Hospitalisation</td>
<td>20</td>
</tr>
<tr>
<td>New Diagnosis</td>
<td>10</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
</tr>
</tbody>
</table>
## Support

<table>
<thead>
<tr>
<th></th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module team</td>
<td>98.4</td>
<td>1.6</td>
</tr>
<tr>
<td>Managers</td>
<td>69.8</td>
<td>30.2</td>
</tr>
<tr>
<td>Colleagues</td>
<td>77.0</td>
<td>23.0</td>
</tr>
<tr>
<td>Medical Supervisors</td>
<td>76.6</td>
<td>23.4</td>
</tr>
</tbody>
</table>
Lack of Support

- ‘Not all independent study days have been given’

- ‘Managers lack of understanding of how in depth course is and required amount of study’

- ‘Managers and colleagues expectation of undertaking the same workload’

- ‘Uncooperative regarding study time and clinical time’
The best & worst of the course

- Most enjoyable aspects of course
  - New knowledge and understanding
  - Pharmacology
  - Group interactions
  - Relevance to practice / increasing confidence

- Most difficult aspect of course
  - Pharmacology
## Differs from other courses

<table>
<thead>
<tr>
<th>Emerging themes</th>
<th>Students (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensity of course - workload volume</td>
<td>41.2</td>
</tr>
<tr>
<td>Difficulty of course - level of study</td>
<td>22.2</td>
</tr>
<tr>
<td>Assessments - number and types of assessment</td>
<td>20.6</td>
</tr>
<tr>
<td>Positive (interest, relevance to practice)</td>
<td>15.9</td>
</tr>
</tbody>
</table>
Have you ever thought this course could be the straw that breaks the camels back?

How many students said yes?

1. 15-20%
2. 25-30%
3. 50-60%
4. >70%

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The road to empowered learning

- Course presents particular problems for this group of students

- Importance of trust and support in clinical and academic context

- Pharmacology originally ‘area of weakness’
How can we help?

- Empower student learning
  - Podcasts
  - Audience response units (KeePads)
  - Buddy system

- Encourage integration of knowledge into clinical context
  - Audience response systems
  - Buddy system
Podcasts

- Audio recordings of pharmacology lectures made available to students through WebCT
- Questionnaire data from two cohorts of students (n=69)
- Students found podcasts helpful as a learning tool, as a revision aid and in promoting understanding of the subject
- Exam marks significantly improved in students who had access to podcasts

Meade, Bowskill & Lymn (2009) BMC Medical Education 9:74
Impact of Podcasts on learning

- Qualitative study
- Semi-structured interviews (n=7)
- Purposive sampling (low, medium & high users)

- Three major themes
  - Enhanced control over learning
  - Adding value
  - Building understanding
Interview Themes

- Enhanced Control

'I remember sitting in the lecture and thinking yep I understand that and you know but remember thinking but stop there because I need to just focus on that bit that I’ve just understood before you’ve gone on to that so...I knew that downloading it I’d be able to just listen and listen and listen again.

'I’m working on the basics at the minute and...... as that level of knowledge grows and I feel more comfortable with it...I add in another one (podcast).’

'I just found that it was another way of being able to learn without having to be sitting at a desk doing it...so you could get on with your life as well while you were learning.'
Interview Themes

- **Adding value to course materials**
  
  "I did find them (podcasts) useful especially when I started putting them together with the handout."

  ‘That extra work that I was doing I wouldn’t have done...because I would be still having to do those things I was doing outside of the house...but it was like an extra learning opportunity’

- **Building Understanding**

  ‘Pharmacology is very new and very it’s very complex. It’s very high tech so...I think the podcasts really helped me in that.’

Meade, Bowskill & Lymn (2011) BMC Medical Education 11:2
How does this help?

- Empowering Learning ✓
- Integrating knowledge into clinical context ✗
KeePads

- Audience response technology (‘Who wants to be a millionaire?’)
- Incorporate questions throughout pharmacology lectures
- Results shown on screen immediately
- Anonymous use
- Questionnaire data (n=33)
- Focus group feedback

Lymn & Mostyn (2010) BMC Medical Education 10:73
## Student perceptions of KS

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>The KS helped me identify my learning needs</td>
<td>76</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>Using the KS stimulated my interest in the lectures</td>
<td>50</td>
<td>33.3</td>
<td>16.7</td>
</tr>
<tr>
<td>I found the repetition of key concepts in different sessions useful</td>
<td>91.3</td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td>The KS was useful in promoting my understanding of concepts</td>
<td>54.2</td>
<td>45.8</td>
<td></td>
</tr>
<tr>
<td>I think the KS would be useful in other pharmacology lectures</td>
<td>95.8</td>
<td>4.2</td>
<td></td>
</tr>
</tbody>
</table>
Enhancing Learning

'I felt comfortable with the KeePads .... It did not matter whether you got it right or wrong, but you did learn from it, so if you got a question wrong you thought oh OK, well I need to look that up and make a little note'

'It does allow you to assess where your weaknesses are without making you feel like a complete idiot in front of the whole class or tutors or whatever'

"It’s not only nice to know not only what you are bad at but yes actually I can do this because that gives you the confidence".

'I thought what was useful was it showed you how they structured the questions in the exam'.
Enabling Teaching

'I think it allows the tutor to reflect on whether or not they have pitched that information in a way that a majority of people have understood. Because that is the most important thing isn’t it, if you have a lecturer who explains the same concept to you three times in exactly the same way you are no more likely to get it on the third time than you were on the first I don’t think. So I think it is invaluable really’

‘And they could gauge how well we were doing, and if a lot of people got it wrong they didn’t just re-explain it, they would re-word what they were saying and try and explain it in a different way.’
How does this help?

- Empowering Learning
- Integrating knowledge into clinical context

Limitations due to anonymity of system
Individual Feedback

1) Only the ionised fraction of a drug will cross the cell membrane  **False**
2) Albumin, acid glycoprotein and beta-globulin are examples of drug targets  **False**
3) Partial agonists have a similar potency to full agonists  **True**
4) A drug with a large volume of distribution can be removed from the body by dialysis  **False**
5) Lipid solubility is important in determining drug absorption and distribution  **False**
6) Drug metabolism occurs mainly in ...  **The liver**
7) Oxidation, reduction and conjugation are all phase I metabolism reactions  **False**
8) Phase I metabolites are always more polar than the parent drug  **True**
9) First pass metabolism affects drugs given IV  **False**
10) An increase in first pass metabolism results in an increase in bioavailability  **False**
11) Rifampicin speeds up the metabolism of the oral contraceptive pill  **True**
12) Drugs bound to plasma proteins are filtered through the glomerular capillaries  **False**
13) Drugs which are excreted unchanged have which chemical nature  **Non polar**
14) The half-life of polar drugs is increased in renal failure  **True**

**Correct %** 64.29%
**Total Points** 900
Perceived value of feedback

Student Response (%)

- Promoting Learning
- Identifying Learning Needs
- Directing independent study
- Revision Tool

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree
Emerging Themes

- **Objective reminder of knowledge level**
  
  “The email feedback really drew it all together and reminded you ok we did this in the class, we had fun but actually here is the bits that you did well and didn’t do so well and I think that was nicely done because you had a little time gap between the two as well. It wasn’t sent out straight away. It was a week or two later it appeared in your inbox oh yes so that’s how I did.’

- **Revision Tool**
  
  “I got my husband to read them out and see which ones I got right and the ones I didn't get right I went away and looked at and saw what I got wrong and used it that way”.

- **Adult Learning**
  
  ‘If the same question came up and I was still getting them wrong I obviously realised that I was either not reading the question right, which I am a devil for doing, or else I just had a mental block and I just needed to ask somebody.’
How does this help?

- Empowering Learning ✔
- Integrating knowledge into clinical context ✔
Buddy System: pilot study

Beginning of the course –
- Buddies qualified prescribers attended an afternoon or evening briefing session.
- Each student is allocated a buddy

At the end of the course –
- Students complete a questionnaire
- Buddies complete a postal questionnaire
Who supports students in practice?
Students contact Buddies.

- Email was the most common form of buddy contact.
- Face the next most popular form.
- Needing moral support and help organising study time were the most common reason for contacting buddies.
- Students strongly agreed that contact with their buddy had been useful.
Students said.....

“It is reassuring to know there is someone to contact who is willing to help and understands the content of the course and the difficulties that arise”.

“Buddy understood what I was going through and what the course entailed”.

“My buddy was a member of my team which I think was helpful as she was easily accessible and could relate to shared issues”.

Buddies valued the opportunity.

“Felt pleased to be able to offer help to another student undertaking the course as from experience I know it can be tough but the end rewards are worth it.”

“Although the contact with my student was brief being able to offer moral support felt positive and it also made me examine my own practice.”

“Recent experience of the transition to ‘new prescriber’ I was looking forward to undertaking this role it is a shame I wasn’t contacted.”
Did buddies help students integrate prescribing?

- 67% agreed the buddy had helped them to contextualise prescribing in practice.

- 78% agreed the buddy had helped them to integrate prescribing in practice.
How does this help?

- Empowering Learning
- Integrating knowledge into clinical context
Integrative and Empowering?

- Together these teaching and learning resources provide this unique group of students opportunities to take control of their own learning in both classroom and in practice settings.

- They empower students to make the most of the time available for study and to tailor their studies to meet their individual learning needs.

- They promote vertical and horizontal integration of knowledge and into clinical context.
Where do we go from here?

- Consultation skills (medical & medication histories)

- Accountability, confidence & competence

- Raising awareness of correlation between support and success with managers
Thank you for listening

Questions?