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New and Emerging Roles for Pharmacy Staff

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Pharmacy Technicians Support the Administration of I.V's

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There is no conflict of interest with respect to financial relationships to disclose in this presentation

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QUESTIONS

- Could Pharmacy Technicians partner Nurses to prepare, second check IV medicines for administration?
- Does the introduction of a Checklist for the IV medicine process improve patient safety?
- Could this be the start of a defined clinical support role for Pharmacy Technicians?

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INTRODUCTION

- A project was planned to explore the practicality of using pharmacy technicians to support the workload of nursing teams, to release nursing time to care
- A new approach to medicines administration was needed
- Time to rethink how we work as pharmacy technicians
- It was time for innovation and to challenge traditional working practices of pharmacy technicians.

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BACKGROUND

- Busy, complex oncology ward, increasing activity, high acuity, high risk medicines, time pressures on nurses
- Paediatric practice, Two nurses each required to independently check medicines, a double check
- Medicine workload is time consuming, resulting in less patient facing time
- Project planned to focus on the partnership of a nurse and Pharmacy technician to prepare and second check I.V medicines for administration

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Project Goals and Objectives

- Introducing 'lean strategies', review tasks and skill mix to release nursing time to care for their patients
- Improve patient safety by introducing a quality system approach to medicines administration
- Improve medicines management on the ward
- Integrate the Technician role into the ward team

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What roles do Pharmacy Technicians have now in the U.K?

- Dispensing
- Accuracy Checking, national accreditation
- Ward Based Service, national accreditation
- Medicines Information, national accreditation
- Clinical Trials
- Purchasing of Medicines, including Unlicensed
- Aseptic Preparation

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Pharmacy Technician Profession Reviewed

- A 2 year qualifying period
- A competency and knowledge qualification
- Many technicians now have degrees/ masters
- Registration with General Pharmaceutical Council
- Skilled in medicine management systems and processes
- Willing to engage
- Costs similar to a nurse

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RISK ASSESSMENT

- The Project team was clear that as a minimum, the project would need to demonstrate that the involvement of a Pharmacy technician was equally as safe as the current service
- A detailed Risk Assessment was carried out
- Contacted interested organisations

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STANDARD OPERATING PROCEDURES

- To be written for each process, approved by a pharmacist
- To be reviewed regularly, due to anticipated changes within the project
- Essential that staff work to approved drug monographs

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CHECKLIST

An innovative approach at ward level and in health service delivery

- Regularly used in the aviation industry
- A visual cue, outlining the process, focus on task
- An audit trail
- A critical tool at times of high demands and interruptions, offering reassurance

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Checklist based on the 5 RIGHTS

- RIGHT PATIENT
- RIGHT DRUG
- RIGHT DOSE
- RIGHT ROUTE
- RIGHT TIME

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Checklist

ISS DRUG	DOSE	Patient initials
Date & Time due	Nurse	Technician
BRIEF (Includes specific risks /considerations for patient, drug, staff)		

PROMPTS	Prescription	Preparation	Administration	5 RIGHTS CHECK
Right Patient	○ Patient details on prescription chart complete		○ Patient ID matches prescription chart	☐ RIGHT PATIENT
Right Drug	○ Prescription is complete ○ Not contraindicated for allergies ○ Prescribed drug is selected & is in date	○ Drug is labelled with name & dose ○ Appropriate flushes / diluents used	○ Labelled drug selected ○ (Burette) Correct Diluent attached to burette	☐ RIGHT DRUG
Right Dose	○ Dose is within range referenced in BNFC or Oncology Guidelines for route & indication for age / weight of child ○ Calculations of dose volume match	○ Reconstitution volume appropriate ○ Calculated dose volume drawn up ○ Calculated Diluent volume added	○ (Burette) Correct Diluent volume added	☐ RIGHT DOSE
Right Route	○ Route correctly prescribed	○ Equipment & technique appropriate for route	○ Right Route selected	☐ RIGHT ROUTE
Right Time	○ Prescribed time matches & has not previously been signed as administered ○ Administration time (device rate) calculations match	○ Administration time appropriate for dose or volume	○ Due now ○ Administration time (device rate) correctly set up	☐ RIGHT TIME

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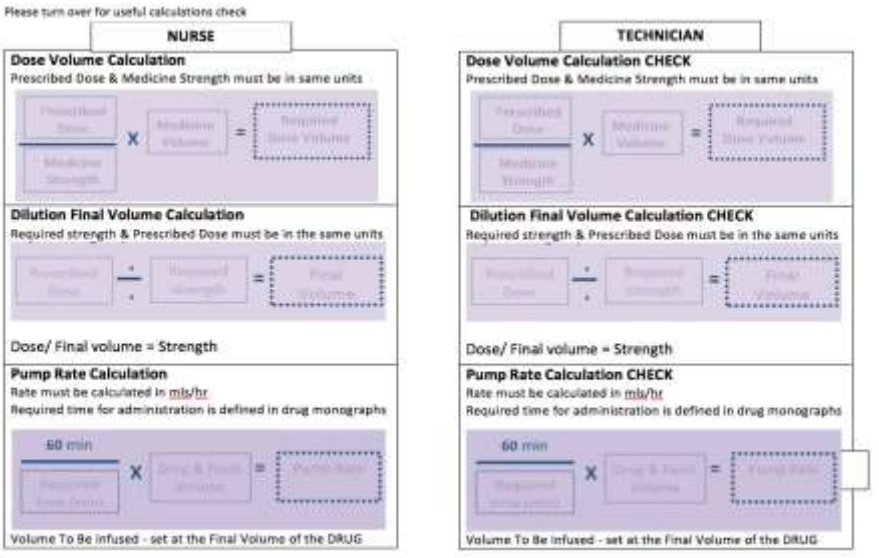
Please turn over for useful calculations check

NURSE

Dose Volume Calculation
Prescribed Dose & Medicine Strength must be in same units

Dilution Final Volume Calculation
Required strength & Prescribed Dose must be in the same units

Dose/ Final volume = Strength

Pump Rate Calculation
Rate must be calculated in mls/hr
Required time for administration is defined in drug monographs

60 min

Volume To Be Infused - set at the Final Volume of the DRUG

TECHNICIAN

Dose Volume Calculation CHECK
Prescribed Dose & Medicine Strength must be in same units

Dilution Final Volume Calculation CHECK
Required strength & Prescribed Dose must be in the same units

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60 min

Volume To Be Infused - set at the Final Volume of the DRUG

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TECHNICAL CHECK

- Medicines administration requires clinical decision-making. Pharmacy Technicians do not have the clinical assessment skills to be able to make decisions.
- To ensure each professional, both Technician and Nurse, was clear of the boundaries of their practice, professional responsibilities were defined

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Criteria for Pharmacy Technician Check

- Within check of RIGHT DRUG

- Prescription is complete
- Allergy status, Drug not contraindicated
- Right Drug selected, in date
- Calculation check
- Drug name label added
- Appropriate flushes/ diluents
- Right Drug & flush, diluent selected
- Correct pump rate selected

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Teamwork, working in partnership

It was vital to get the engagement of nurses :

- Technicians spent time shadowing nurses in order to gain an understanding of their role
- Ongoing discussions between Senior Nurses, Pharmacists and Technicians on joint working practice
- Posters in the Treatment Room and ongoing communications with nurses

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HUMAN FACTORS

- Staff attended training to understand how human factors impact on day to day practice and the potential for error
- To integrate key human factor learning points within the project to improve safety
- Emulating the air line industry on safe working practice, where two staff went to visit easyJet

easyJet

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- SoPs and preparation
- Situational awareness
- Visual cues and aids
- Teamwork
- Flattening of hierarchies
- Professional decision making
- A set language, giving clarity and understanding

let's make it better

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TRAINING FRAMEWORK

Development of a training programme:

- Identify gaps in knowledge and skills
- Develop a training plan
- Nurse trainers identified
- Person specification for role, technicians with the right qualities and skills

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TRAINING PROGRAMME - underpinning

- Attend IV clinical skills & drug admin study day
- Complete e learning modules
- Attend Human Factors Training Day
- Read Trust Policies & SOP's, Trust, Ward and Pharmacy

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Training Programme - practical

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TRAINING PROGRAMME – Supervised Practice on Ward

- Observation and supervised practice of dose checking, IV preparation, checking & administration including pump checking
- Completion of Checklist
- Reflections on practice and weekly 1:1's
- Complete a log & Competency assessment
- Sign off

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Day to Day – Initial Visit

- Planning and preparation – key part of the process
- Identify workload and priorities
- Review prescriptions:
  - weight, allergy status, dose, dilutions, infusion fluid, calculations
  - Liaise with pharmacists
- Checklist

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Day to Day - IV Round

- Identify role
- Clarify and confirm process
- Patient status
- Dilution options
- Flow rates
- Calculations
- Checklist
- Mutually agreed process

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Day to Day - Administration

- Accompany nurse to the bedside
- Confirm patient ID
- Checks, pump rate, correct fluid, timings of bolus injections
- Checklist
- Nurse administers
- Records complete
- Getting to know the patient

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Feedback

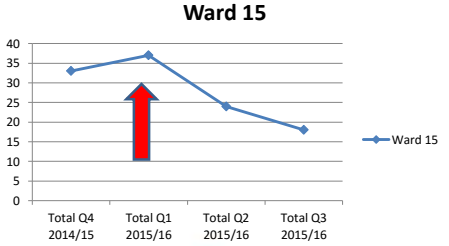
- **Patients and Parents** – They have shown a real interest in the project and think that it is a 'good idea'
- **Nursing Staff –** Technicians offer reassurance and confidence particularly to junior staff when faced with complex calculations. Protocol-driven approach is welcomed. The team are well integrated
- **Technicians** – 'Working on the IV project has been at times scary, exciting and eye opening. I have gained new skills and developed my knowledge. Working with the nurses so closely has increased collaboration and a deeper understanding of the important roles we all carry out on the wards to help to achieve an outstanding level of patient care'.

Outcomes

- A Grant awarded to study the project over the next 12 months, after a review of the initial data collected
- Enhanced Safety
  - Clinical screening pre dose increased
  - A reduction of interruptions observed
  - Additional cohort of medicines related errors trapped
  - A significant reduction in Medication Safety Incidents

Medication Safety Incidents

The arrow indicates the start of the project. You can see that there has been a noticeable reduction in Medication Safety Incidents since that time on the project ward. It is too soon to draw conclusions. Nevertheless the data is dramatic.



Outcomes

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- New Approach
  - Protocol driven
  - Controlled environment
  - Calculations finalised at onset, not at the bedside
  - A transferrable model to other wards
- Timely administration of medicines, a collaboration of the Team
- A truly multi professional skill mix approach to patient care
- Improved medicines management on wards
- Technician skills broadened

What next?

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- To extend the project to Oral Medicines
- To manage and co-ordinate the treatment room
- Patient counselling, preparing for discharge
- To further extend the project to surgical wards

Conclusion

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- Technicians can safely partner a nurse in the I.V medicine process, releasing time to care
- Improving patient safety by introducing a quality systems approach
- Benefit of inter professional skill mix
- Potential to adopt across all ward areas
- Improved Medicines Management on the ward
- Uniquely a pharmacy technician development

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With Special thanks to the Nurse/Pharmacy Team

- Heather Petts Lead Oncology Nurse
- Dawn Forbes Nurse trainer
- Jo Correa Senior nurse, Medicines Management
- Anthony Sinclair Chief Pharmacist
- Jason Patel Lead Oncology Pharmacist
- Ruth Shuard Lead Pharmacy technician
- Maya Patel Senior Pharmacy technician
- Katie Mudd Pharmacy technician
- Daniel Pygall Pharmacy Technician
- Debbie Butler Quality lead Technician

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