Introduction to CASPPER and Clinical Pharmacy

Jane Hough on behalf of Judith & Ian COOMBES and the 2019 CASPPER Teaching Team

CASPPER

Collaboration of Australians and Sri Lankans for Pharmacy Practice, Education and Research

CASPPER

Collaboration of **A**ustralian and **S**ri Lankan **P**harmacists for **P**ractice **E**ducation and **R**esearch

Started in 2009 by Judith and Ian Coombes

Teaching UofP in 2009, 2010, 2011, 2013, 2014, 2016, 2018 and 2019
Train the trainers for clinical pharmacy tutors in 2010 and 2016

Research – studies demonstrating the impact of clinical pharmacy in Sri Lanka

Now includes some colleagues from the UK

Teaching at UP2016

Cathy –"Big Red"

Who am I?

Retired clinical pharmacist with background in General Medicine, Care of the Aged, Diabetes

Seconded lecturer to University of Qld in Quality Use of Medicine

What bought me here for 6th visit?

To share my knowledge of Clinical Pharmacy

To enjoy more curry

To see more of Sri Lanka

What do I want to learn from you?

Your ideas of healthcare in SL

How you are going to make a difference

Bridget

Who am I?

- Antimicrobial Stewardship pharmacist at Mackay Hospital.
- Part time potter and bush walker.

What brought me here?

- The food, beaches, mountains and people (!!)
- Sharing my passion for hospital pharmacy and antimicrobial stewardship.

What do I want to learn FROM YOU?

- Experience how pharmacists contribute to patient care in Sri Lanka.
- Take recommendations on best places to eat in Kandy.

My Home:

Brisbane Pop: 2.5million (2018)

Mackay Pop: 127,000 (2018)

My Work:

Bhabitha

Who am I?

- I was born in Jaffna and grew up in Colombo, and moved to Australia when I was 8 years old.
- I am a hospital pharmacist in Brisbane.

What brought me here?

- My desire to give back some of my knowledge and experience
- Visit the university where a lot of my family members studied

What do I want to learn FROM YOU?

- About Pharmacy Practice in Sri Lanka
- How to make yummy Sri Lankan dishes
- How to speak Sinhala.


©RB-DESKKART www.welt-atlas.de
GREAT BRITAIN
United Kingdom
of Great Britain and Northern Ireland
GREAT BRITAIN
political
ENGLAND
political
SHETLAND ISLANDS
Lerwick
North Sea
ORKNEY ISLANDS
Kirkwall
Stornoway
Lewis
OUTER HEBRIDES
Skye
Inverness
Aberdeen
SCOTLAND
SCOTLAND, political
Mull
EDINBURGH
Glasgow
Islay
ACTIVITY
Londonderry
Donegal
NORTHERN IRELAND
Belfast
Newcastle upon Tyne
Carlisle
Middlesbrough
NORTHERN ENGLAND
Isle of Man
Irish Sea
Manchester
Liverpool
Sheffield
DUBLIN
ARAN ISLANDS
IRELAND
IRELAND, political
Birmingham
Norwich
Cambridge
WALES
Oxford
LONDON
Cardiff
SOUTHERN ENGLAND
CENTRAL LONDON
Atlantic Ocean
Southampton
CORNWALL
Plymouth
Isle of Wight
Penzance
English Channel
ISLES OF SCILLY
CHANNEL ISLANDS
Guernsey
Jersey
FRANCE
250 km

Jane – the Freckly one!

Who am I?

Retired hospital pharmacist with background in management, clinical pharmacy, governance and medication safety

Last worked for a national NHS organisation (Specialist Pharmacy Service) included developing for the English response to the WHO's Third Global Patient Safety Challenge on Medication Without Harm.

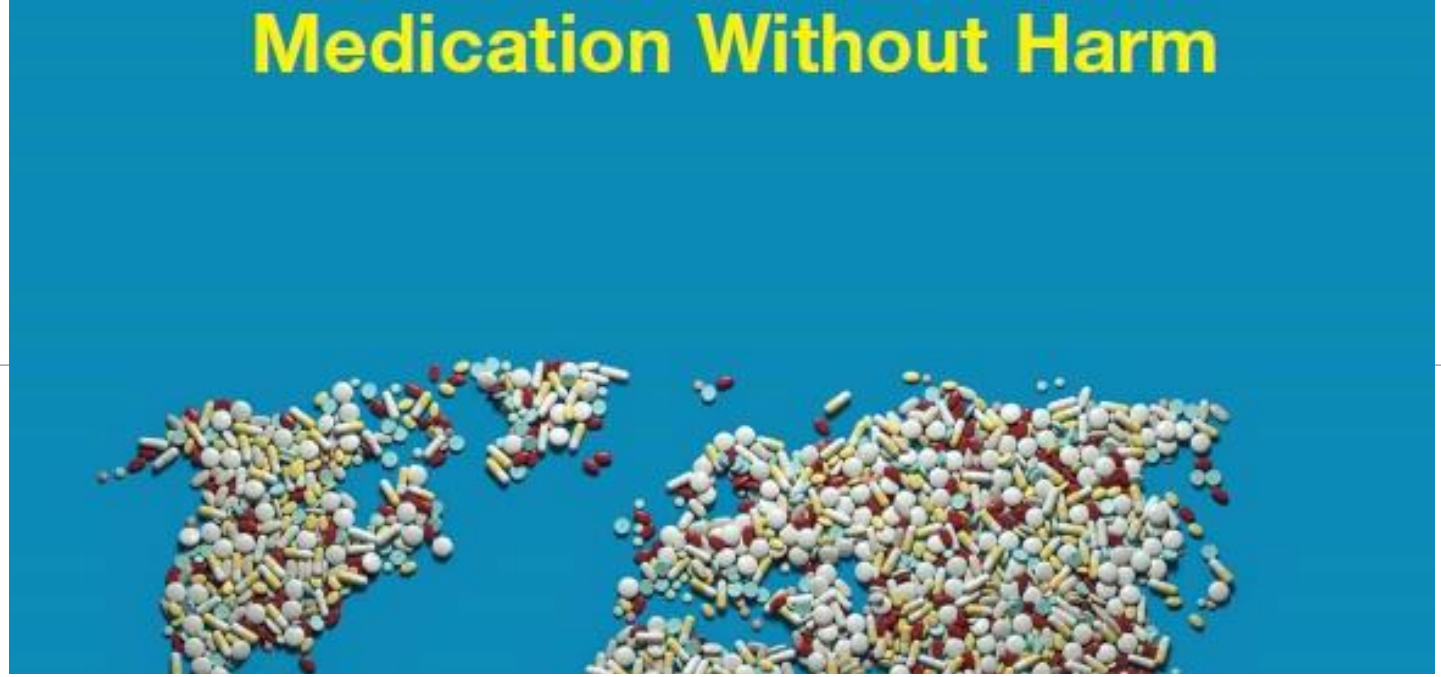
What bought me here

The Coombes whom I employed in the 1980s in London, UK

To share my experiences of Clinical Pharmacy

What do I want to learn from you?

How pharmacy contributes to healthcare in SL



Goal to reduce harm from medicine Related Problems by 50% by 2022

Sri Lanka (7 degrees N of equator)	Australia (14 degrees S of equator)	UK (55 degrees N of equator)
66,000 Km^2	7,600,000 Km^2	242,495 Km^2
20 million people	24.3 million people	65.5 million people
8.5% > 65 years	13.3% >65 years	18% > 65 years 2.4% > 85 years
3.7% GDP on healthcare	9.5% GDP on healthcare	9.8% GDP on healthcare
$160m/year on free healthcare	$123BN/year on healthcare	$140BN/year on NHS (plus private spend)
2 hospital beds /1000 people	3.6 hospital beds/1000 people	2.3 hospital beds/1000 people
Lack of free primary healthcare	Government subsidised primary health care	Government subsidised primary health care

Objectives of the program

- To learn about clinical pharmacy and its application in clinical settings
- To apply clinical pharmacy knowledge to patients: both in tutorials and during hospital visits
- To build skills in preparing and presenting a case study

Objectives of this session

- Define clinical pharmacy
- Understand the need for clinical pharmacy globally and locally
- Identify the core roles and activities of clinical pharmacists
- Discuss key knowledge, attributes, skills and responsibilities of clinical pharmacists
- Share experiences of clinical pharmacy in Australia, UK and Sri Lanka
- Connect to local application in Sri Lanka

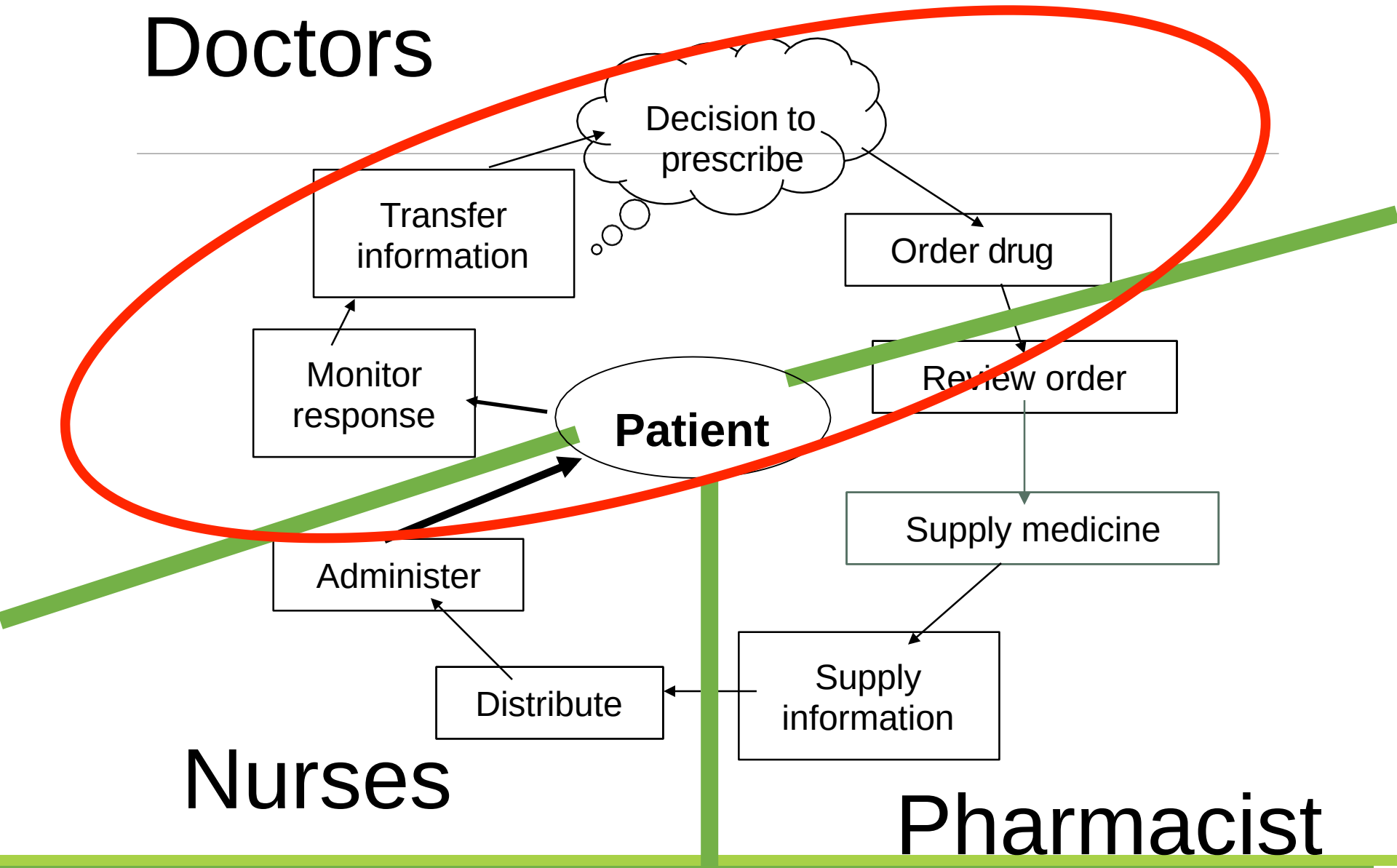
What is clinical pharmacy?

There are numerous definitions - Best one is probably the delivery of pharmaceutical care

“ Pharmaceutical Care is a practice in which a practitioner takes responsibility for a patient’s drug related needs and holds him or herself accountable for meeting these needs”

Linda Strand 1997

The Medicines Management Cycle



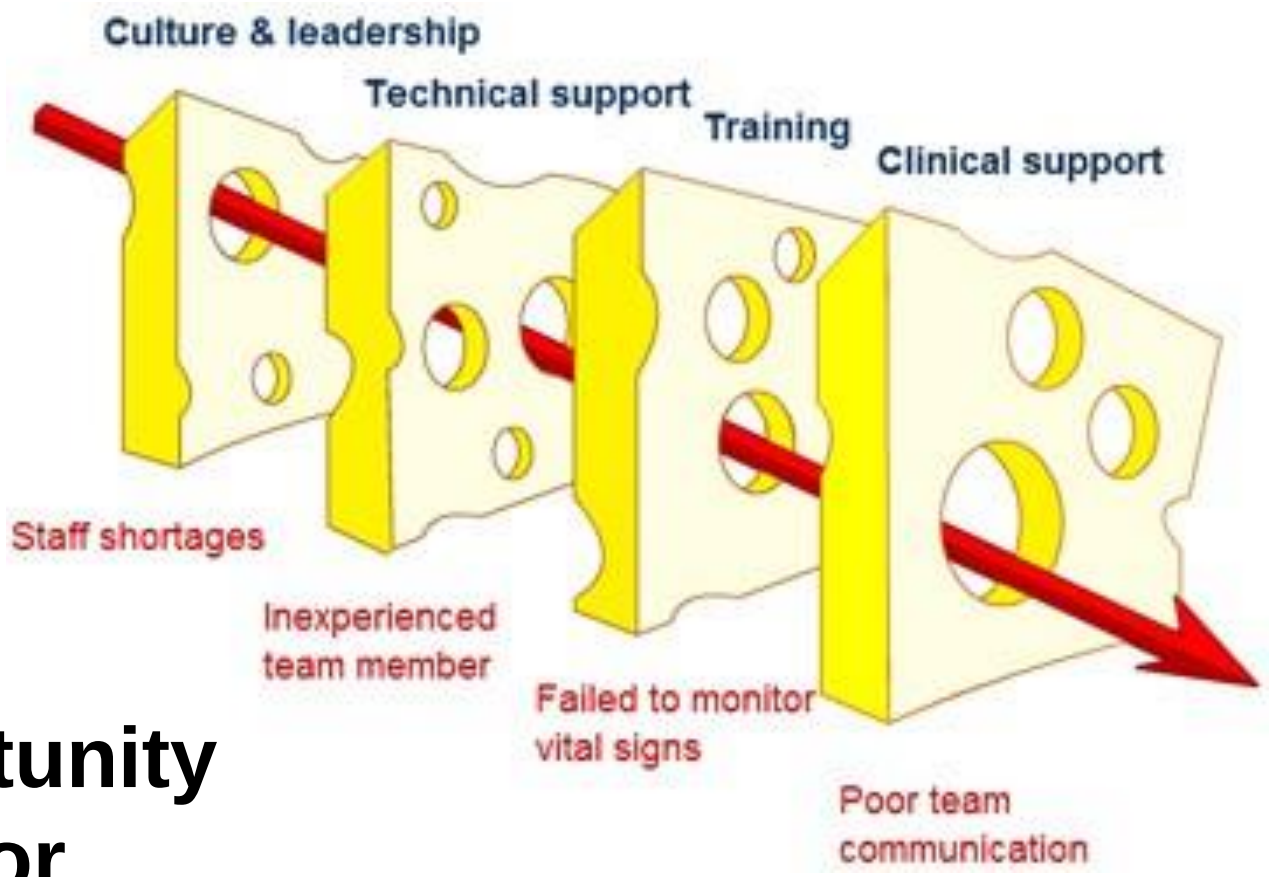
Adapted from Bates et al 1995

Pharmaceutical care includes:

- Taking a medication history on admission**
- Reconciling the medicines with prescription**
- Identifying pharmaceutical care issues **
- Regular monitoring of inpatient prescriptions
- Developing formulary/prescribing policies
- Advising prescribers on medication choices
- Advising on administration of medicines
- Participating in ward rounds
- ADR management
- Medication Handover
- Discharge Counselling
- Preadmission clinics
- Clinic participation

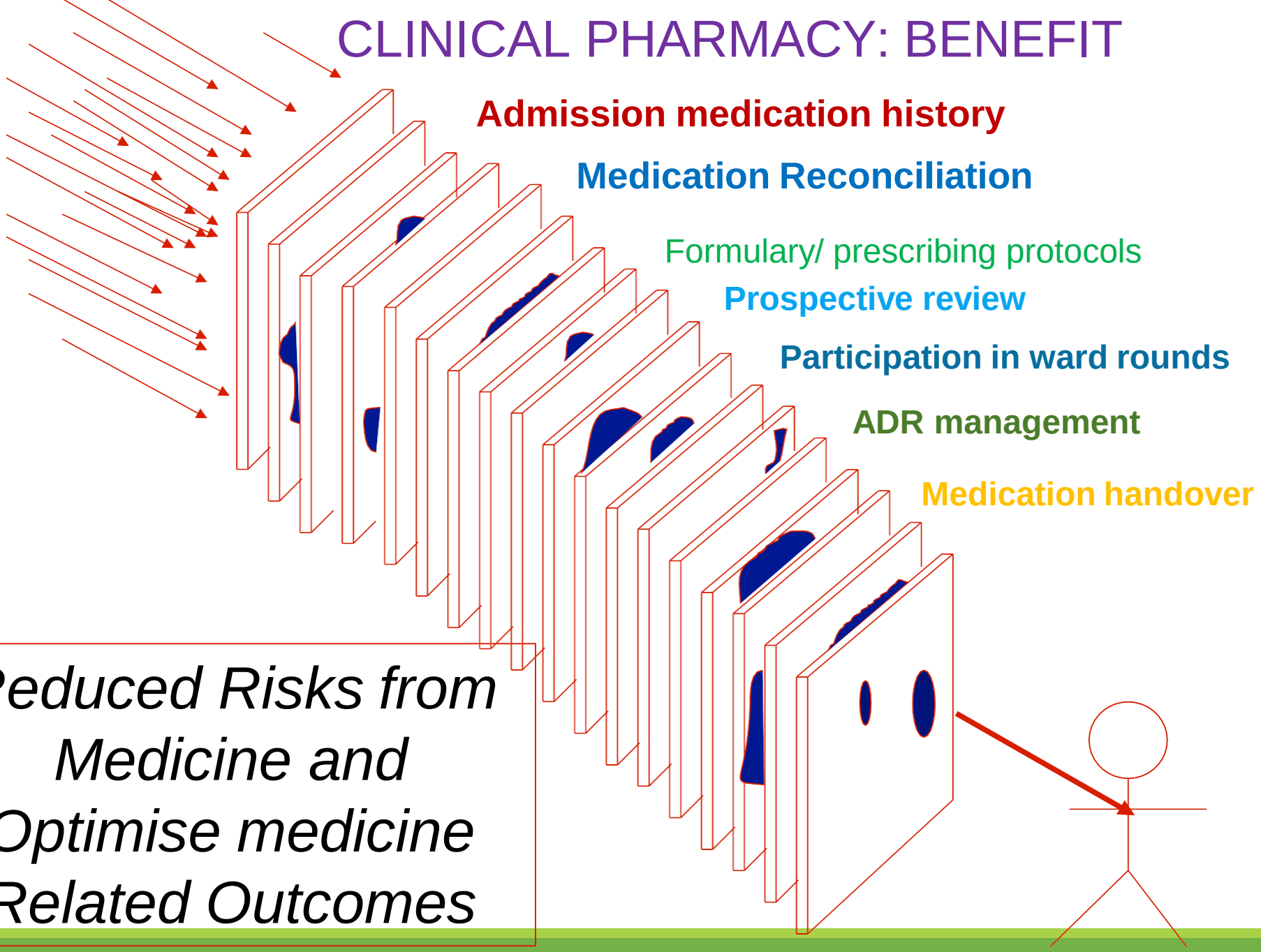
Some drivers of why we need Clinical Pharmacy

Human Error



Opportunity for error

CLINICAL PHARMACY: BENEFIT



Reduced Risks from Medicine and Optimise medicine Related Outcomes

Bond CA et al. Pharmacotherapy 200

WHO Medication Safety Early Priorities

1. High Risk medications:
   - Potassium and concentrated electrolyte
   - Insulin and diabetes
   - Narcotics and other analgesics
   - Cytotoxics and cancer care
   - Heparin and anticoagulants
   - Antibiotics and ADRS
2. Polypharmacy:
3. Transitions of care:

ADEs on admission and during admission at RBWH. Study: 154 consecutive medical admissions

RESEARCH ARTICLE

The type and incidence of adverse drug events in ageing medical inpatients and the effect on length of hospital stay

Chariclia Paradissis, B.Pharm (Hons)[1], Ian D. Coombes, B.Pharm (Hons), MSc, PhD[1,2], Peter Donovan, B.App.Sci, FRACP, MSc, MBBS[3,4], Elizabeth Doran, M.Pharm[2], Mitchell Mckean, MBBS[3], Michael A. Barras, B.Pharm, Grad Dip Clin Pharm, PhD[1,2]

1 School of Pharmacy, University of Queensland, Brisbane, Queensland, Australia
2 Pharmacy Department, Royal Brisbane and Women's Hospital, Brisbane, Queensland, Australia
3 Department of Internal Medicine, Royal Brisbane and Women's Hospital, Brisbane, Queensland, Australia
4 School of Medicine and Biosciences, University of Queensland, Brisbane, Queensland, Australia

- 15.2% medical patients admission associated with an Adverse drug event
- 7.3% patients during stay had a further adverse event
- LOS associated with ADE = 6.5 (3 – 11) days, no ADE 4 (2-7) days

The objectives of the Sri Lankan National Medicinal Drug Policy are

1. To ensure the availability and affordability of efficacious, safe and good quality medicines relevant to the health care needs of the people in a sustainable and equitable manner.

2. To promote the rational use of medicines by healthcare professionals and consumers.

3. To promote local manufacture of Essential Medicines.

27 July 2006

JOURNAL OF Pharmacy Practice and Research
Official Journal of the Society of Hospital Pharmacists of Australia
shpa

RESEARCH ARTICLE

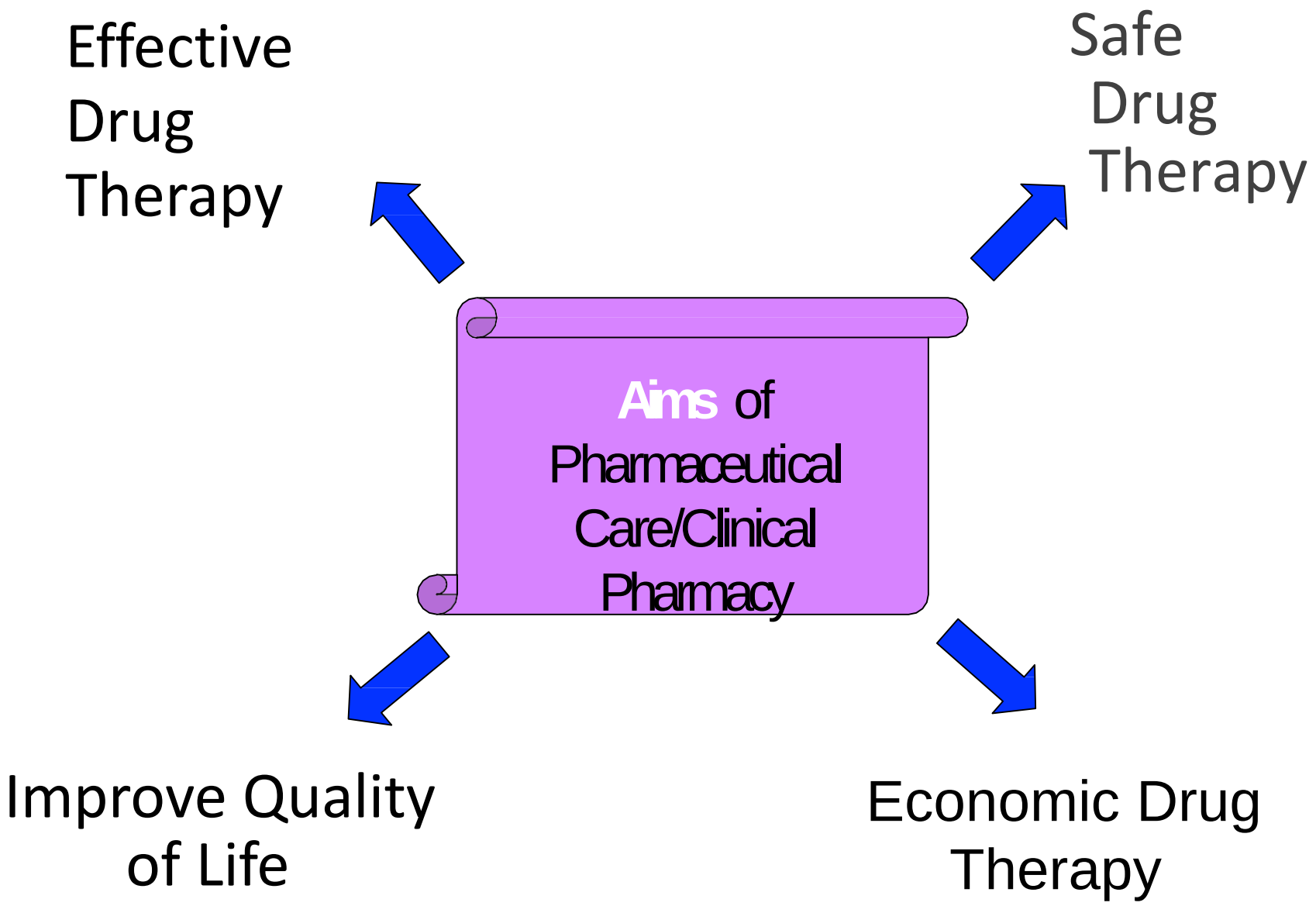
Opportunities for pharmacists to optimise quality use of medicines in a Sri Lankan hospital: An observational, prospective, cohort study

Dhineli M. P. Perera BPharm (Hons), BComm, MPharmPrac[1], Judith A. Coombes MSc Clin Pharm[2,3,4], Lelwala G. T. Shanika BPharm[5], A. Dawson MB BS FRACP[6,7,8,9], C. Lynch BPharm[10], F. Mohamed PhD[11,12], Hithanadura A. De Silva DPhil (Oxon), FRCP (Lond)[13], Shaluka F. Jayamanne MD[14], Nimali B. Peters MClinPharm[15], B. Myers DipClinPharm[16], Ian D. Coombes PhD[2,4,17,*]

- N = 478 patients, 22 weeks, 2 medical wards
- 1274 opportunities for medicine optimisation (2.7/patient)
- 212 (13%) resolved by treating team
- 43% patients no recollection of questions or directions about changing medicines

PSSLGOAL

Enhancing health through pharmaceutical care


Effective Drug Therapy
Safe Drug Therapy
Aims of Pharmaceutical Care/Clinical Pharmacy
Improve Quality of Life
Economic Drug Therapy

Key Responsibilities of Clinical Pharmacists

1. Act in the best interests of patients and seek to provide the best possible health care for the community
   - Treat all with courtesy, respect and confidentially
   - Respect patient's rights to participate in decisions about their care
   - Provide information that can be understood
2. Must ensure their knowledge, skills and performance are of high quality, up to date, evidence based and relevant
3. Behave with integrity
   - Adhere to accepted standards of personal and professional conduct


Clinical Teams- where is the pharmacist?

Working as part of the clinical Team to optimise patient's medication

Australian pharmacy intervention study

- Impact of clinical pharmacists interventions (significance and %)
- 8 public sites (361-955 beds)
- Intervention = Action by a pharmacist that directly resulted in a change to a patient management or therapy
- Independent physician-led panel
  - 1399 interventions
  - 26.2% major significance (15 life saving)
  - Savings in
    - Procedures and laboratory monitoring
    - Reduction in length of stay (ICU and wards)
    - Avoidance of readmission
- $1 spent on pharmacy = $23 savings

BMJ open

Perioperative medication management: expanding the role of the preadmission clinic pharmacist in a single centre, randomised controlled trial of collaborative prescribing

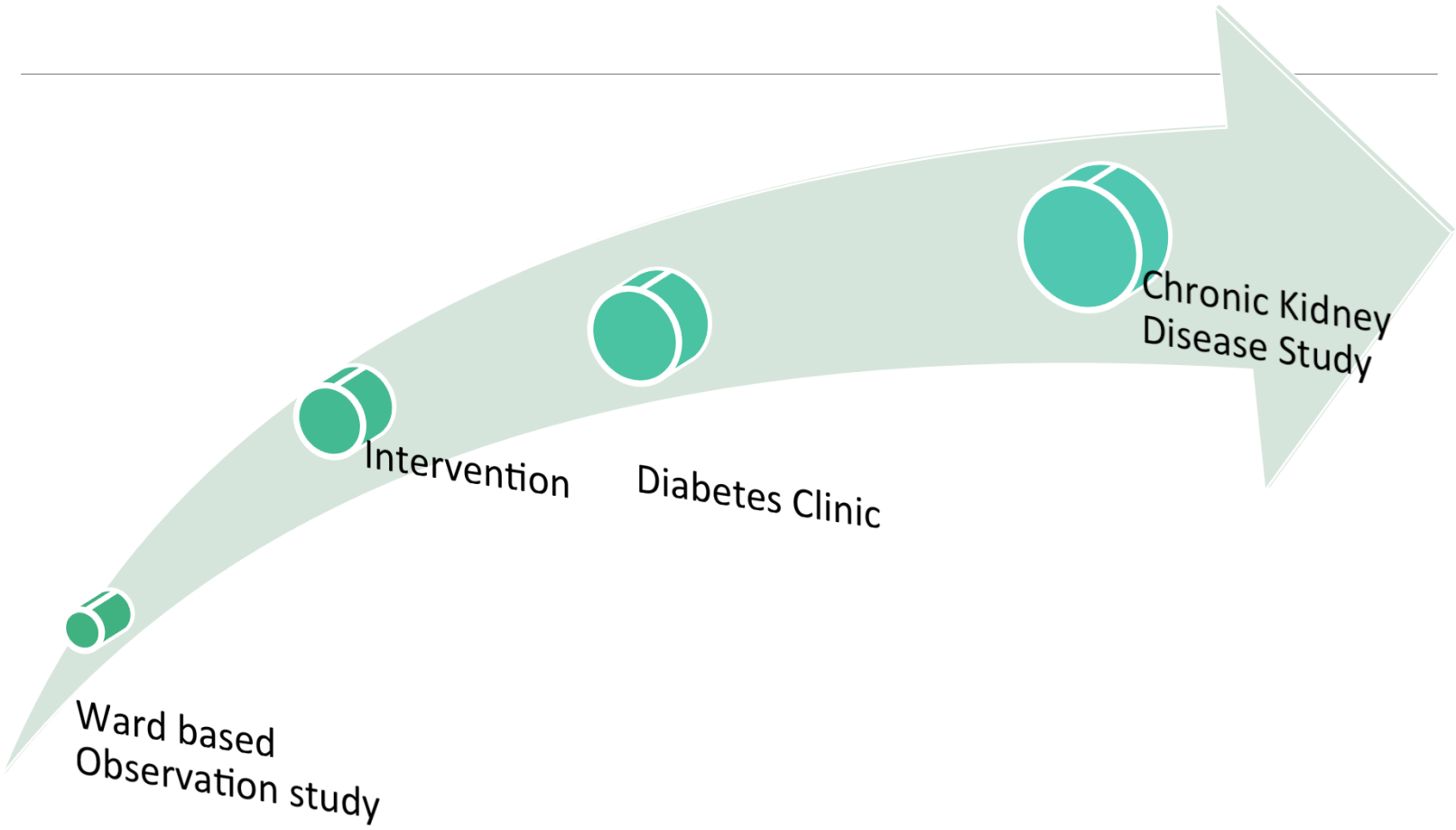
A R Hale,[1] I D Coombes,[2] J Stokes,[3] D McDougall,[1] K Whitfield,[4] E Maycock,[5] L Nissen[6]

- N=400 patients
- Pharmacist took medication history
- Discussed medication plan with medical staff and patient completed medication order

	Intervention	Control
Omission reg. med	31.5%	1.2%
Prescribing error	0.2%	6.2%
VTE prophylaxis	93%	90%

Your local evidence of impact

Healthcare team research



University of Kelaniya and Ragama Teaching Hospital 2012-14

Medication History taking

Medication reconciliation and review

Patient Counselling

Discharge medication Record

INTERVENTION STUDY

Ward-based clinical pharmacists and hospital readmission: a non-randomized controlled trial in Sri Lanka

Lelwala Guruge Thushani Shanika,[a] Shaluka Jayamanne,[b] Chandrani Nirmala Wijekoon,[c] Judith Coombes,[d] Dhineli Perera,[e] Fahim Mohamed,[f] Ian Coombes,[d] Hithanadura Asita De Silva[g] & Andrew Hamilton Dawson[h]

"Impact of a ward based clinical pharmacist on improving quality use of medicines in patients with non-communicable diseases, **compared with standard care** in a Sri Lankan teaching hospital "

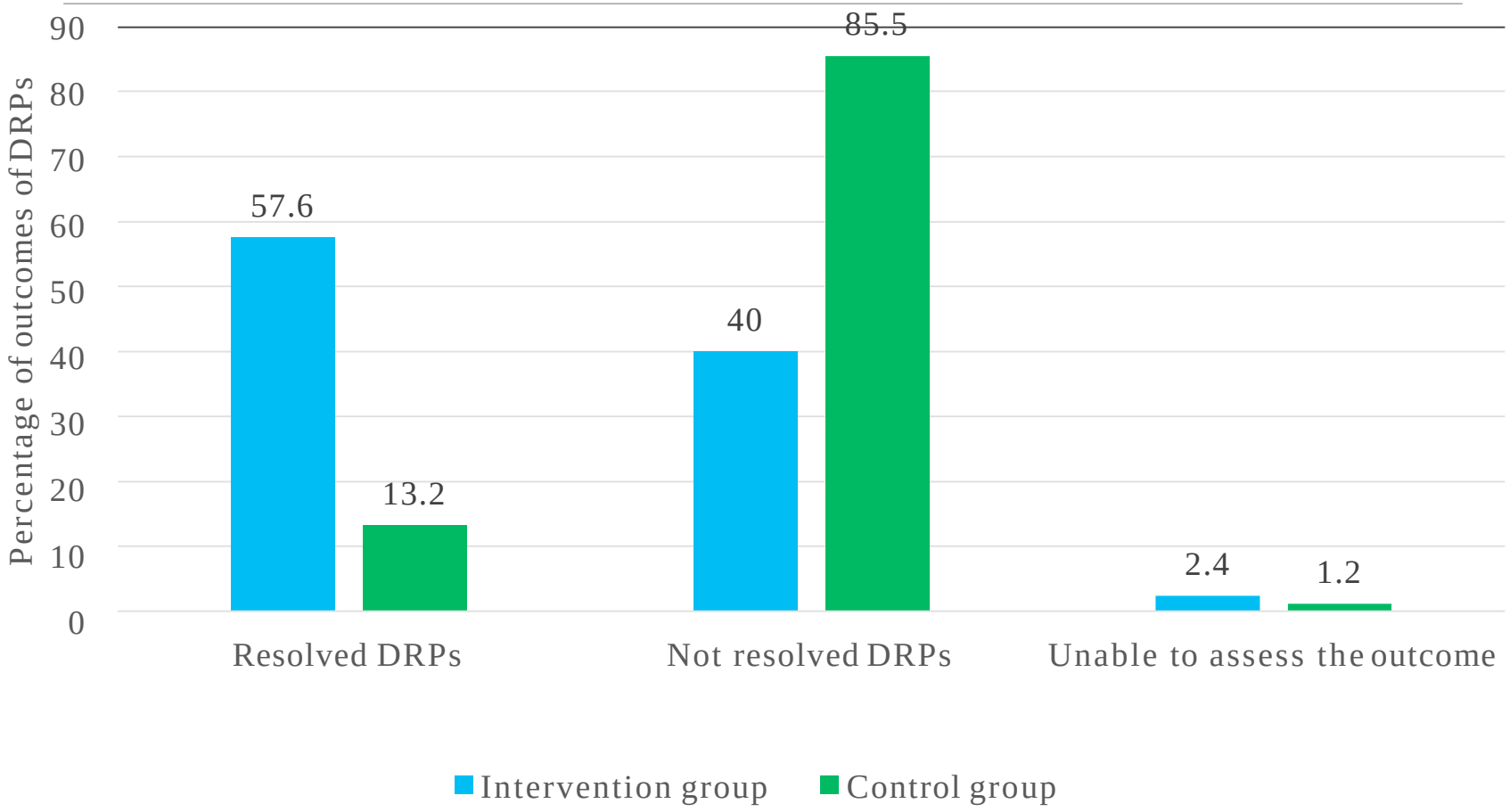
- Recruited 800 patients
- Funded by NHMRC via SACTRC

Bull World Health Organ 2018;96:155–164

IMPACT: INTERVENTION VS CONTROL

	Intervention (n=361)	Control (n=354)	p
Drug related problem resolved	592 (57.6%)	161 (13.2%)	<0.01
Medical staff Acceptance	82.8%	NA	
MAI per medicine at discharge	0.2 +/J1.2	0.7 +/J2.7	<0.01
%Pts with appropriate DC meds	56%	29.7%	<0.01
Drug related reJadmission (6/12)	12.2%	26.3%	<0.01
Cost benefit 1 Pharm/30 bed/yr	1.8 M SL Rupees/yr		

Resolution of Drug related problems- alone or in partnership



Shanika et al. BMC Health Services Research (2017) 17:46
DOI 10.1186/s12913-017-2001-1

BMC Health Services Research

RESEARCH ARTICLE Open Access

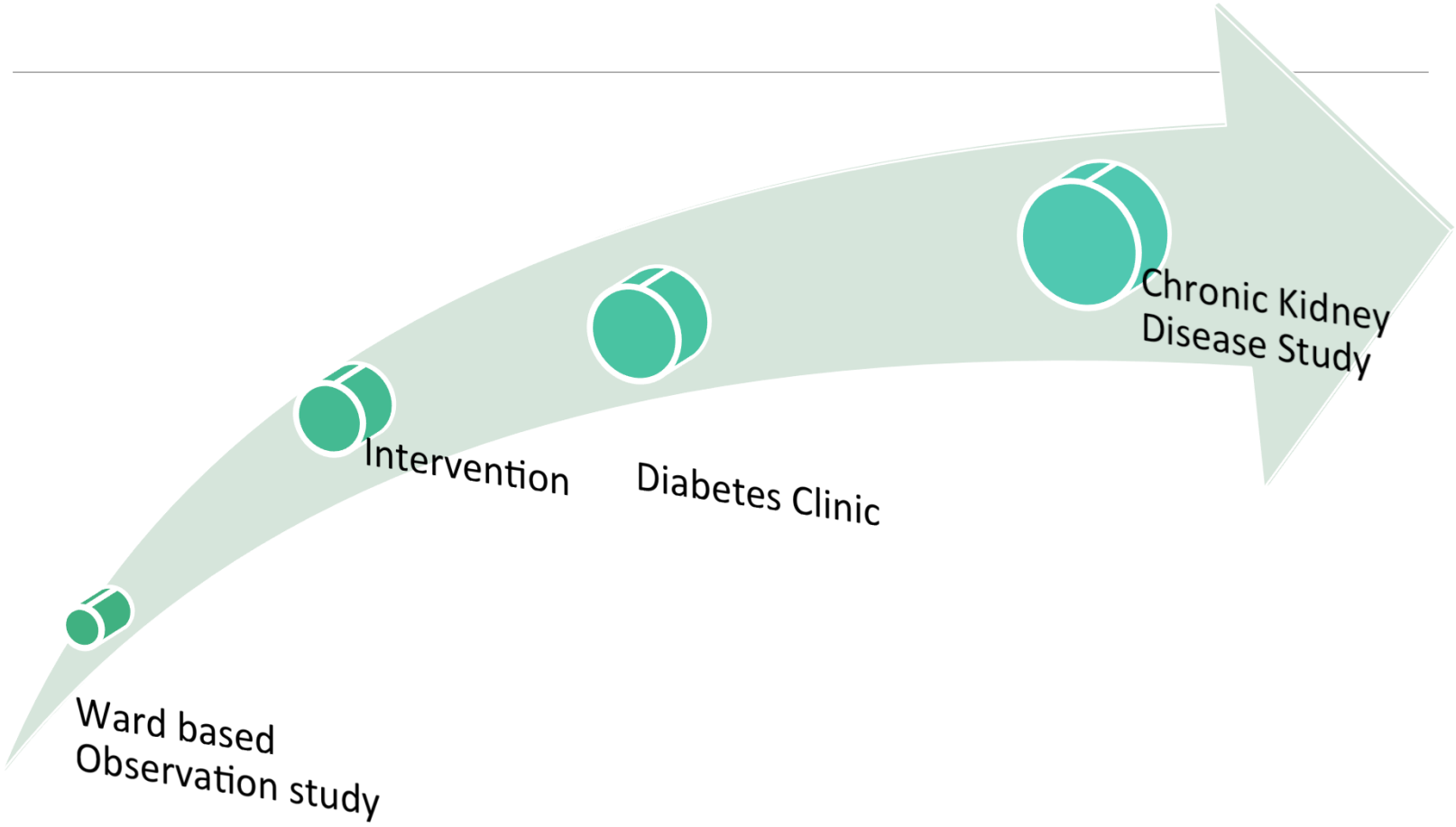
Acceptance and attitudes of healthcare staff towards the introduction of clinical pharmacy service: a descriptive cross-

Conclusions: There was high acceptance and implementation of clinical pharmacist's recommendations regarding DRPs by the healthcare team. The doctors' views and attitudes were positive regarding the inclusion of a ward-based pharmacist to the healthcare team. However there is a need to improve liaison between clinical pharmacist and

in Sri Lanka

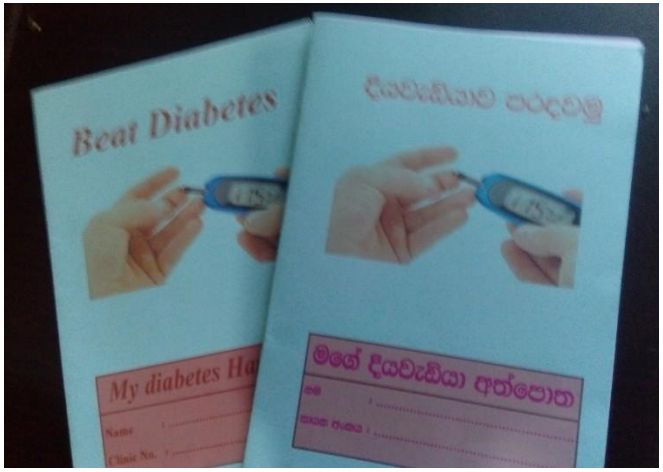
Lelwala Guruge Thushani Shanika[1,2*], Chandrani Nirmala Wijekoon[3], Shaluka Jayamanne[4,2], Judith Coombes[5,6], Ian Coombes[6,7], Nilani Mamunuwa[2], Andrew Hamilton Dawson[8,2] and Hithanadura Asita De Silva[9]

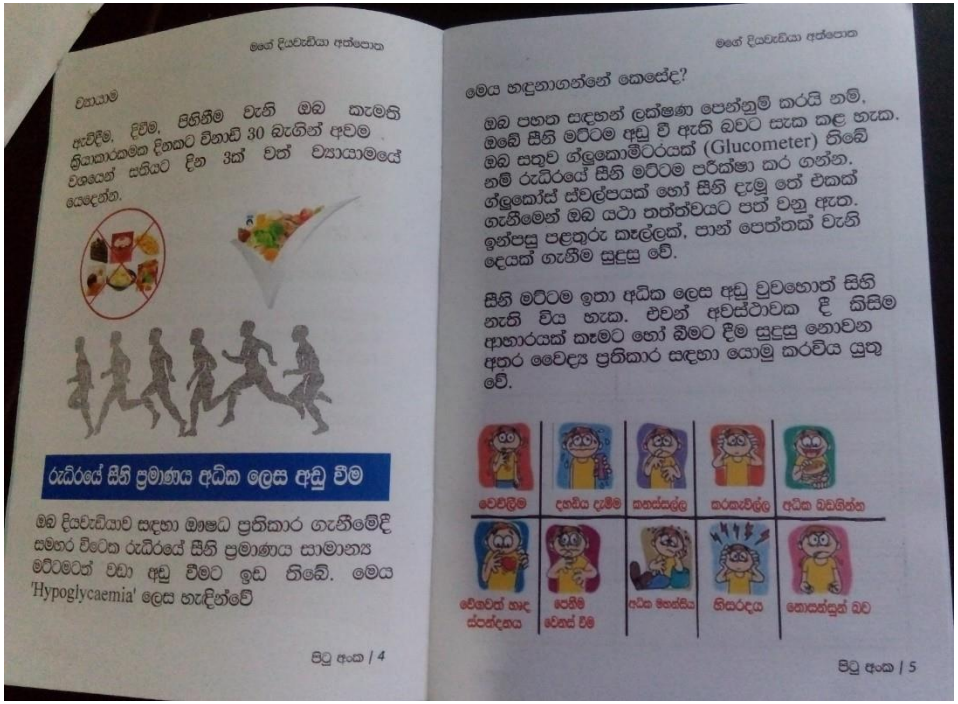
Healthcare team research



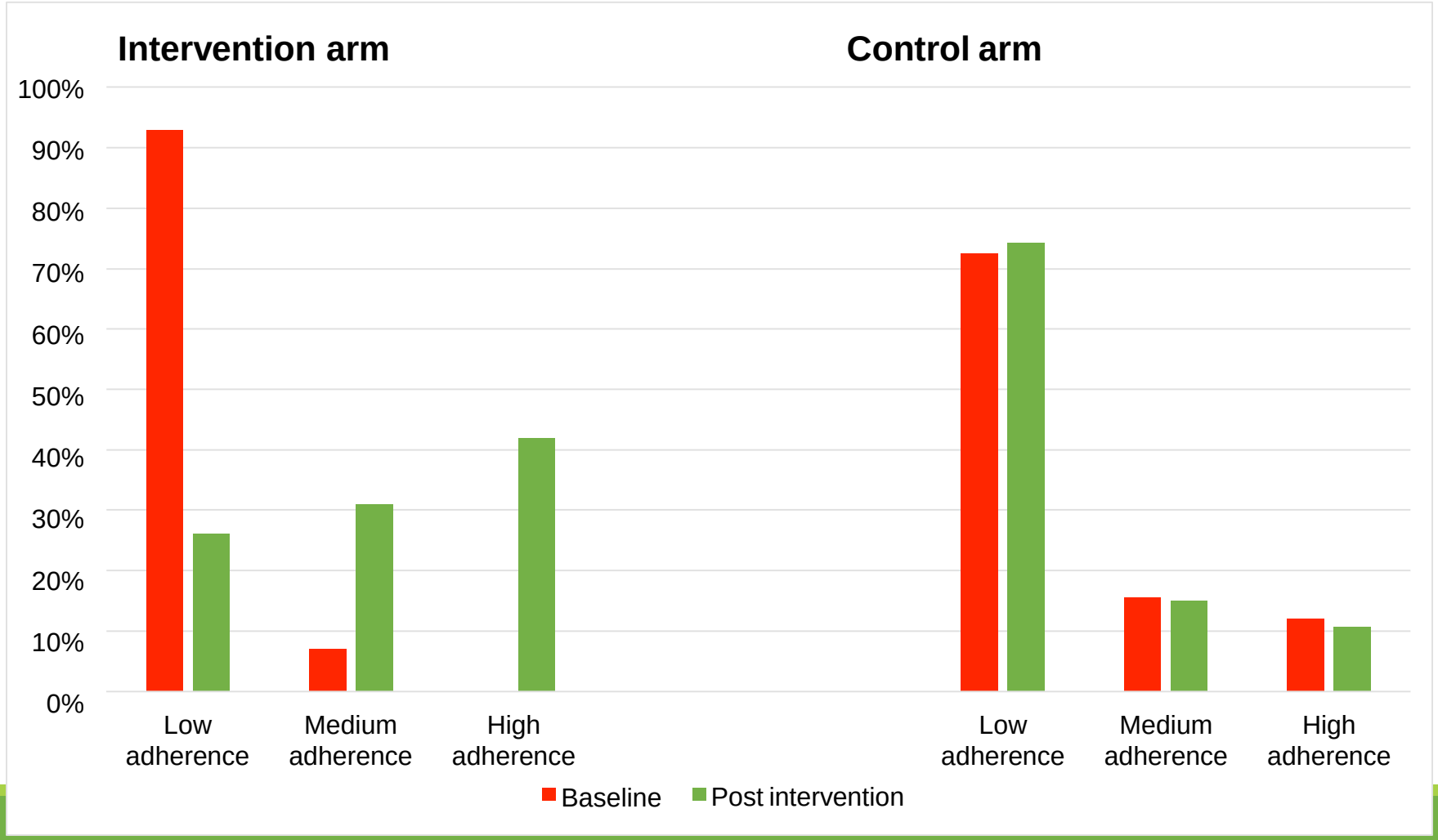
Intervention

Pharmacist counselling for 4 consecutive monthly diabetes clinic visits

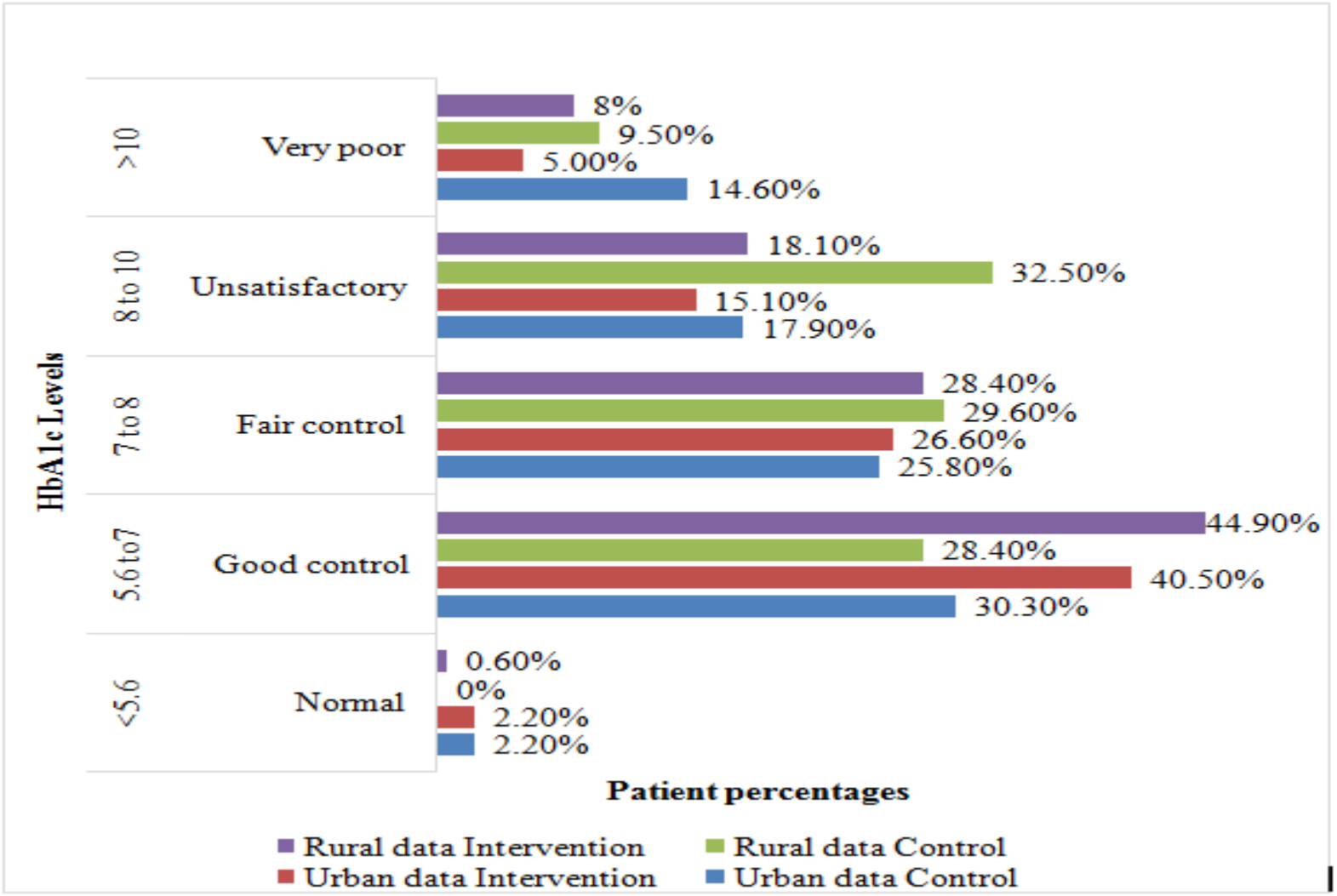




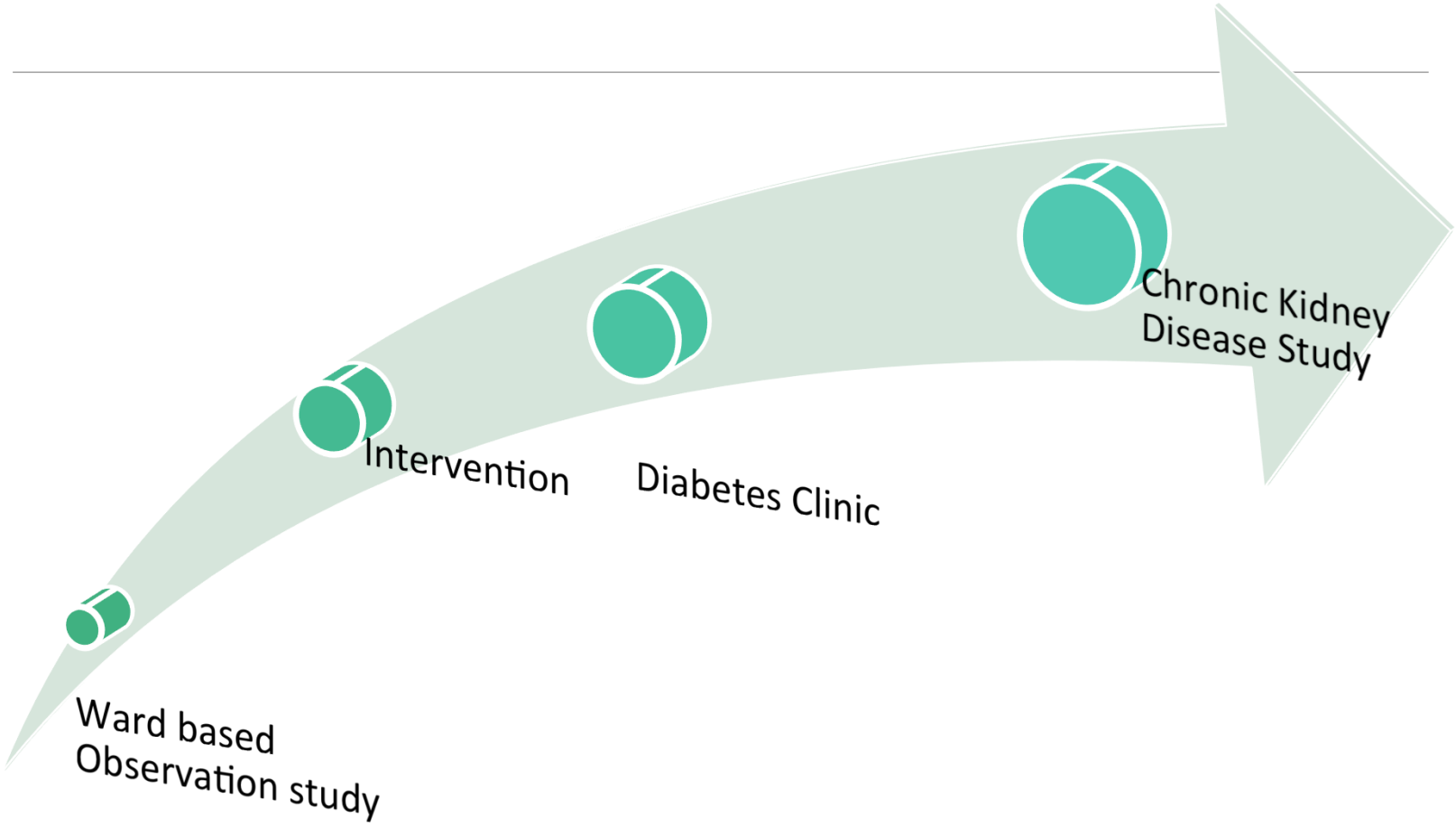
Adherence results of urban cohort



Disease control - HbA1c



Healthcare team research



A study to assess the improvement of management outcomes in Chronic Kidney Disease of Uncertain etiology by introducing clinical pharmacy services to out-patient renal clinic -RCT

Wickramasinghe N.D.D.[1], Lynch C.B.[2], Coombes J.[2,3,4], Jayamanne S.F.[1], De Silva S.T.[1]

[1]Faculty of Medicine, University of Kelaniya, Sri Lanka

[2]Collaboration of Australians and Sri Lankans for Pharmacy Practice, Education and Research (CASPPER)

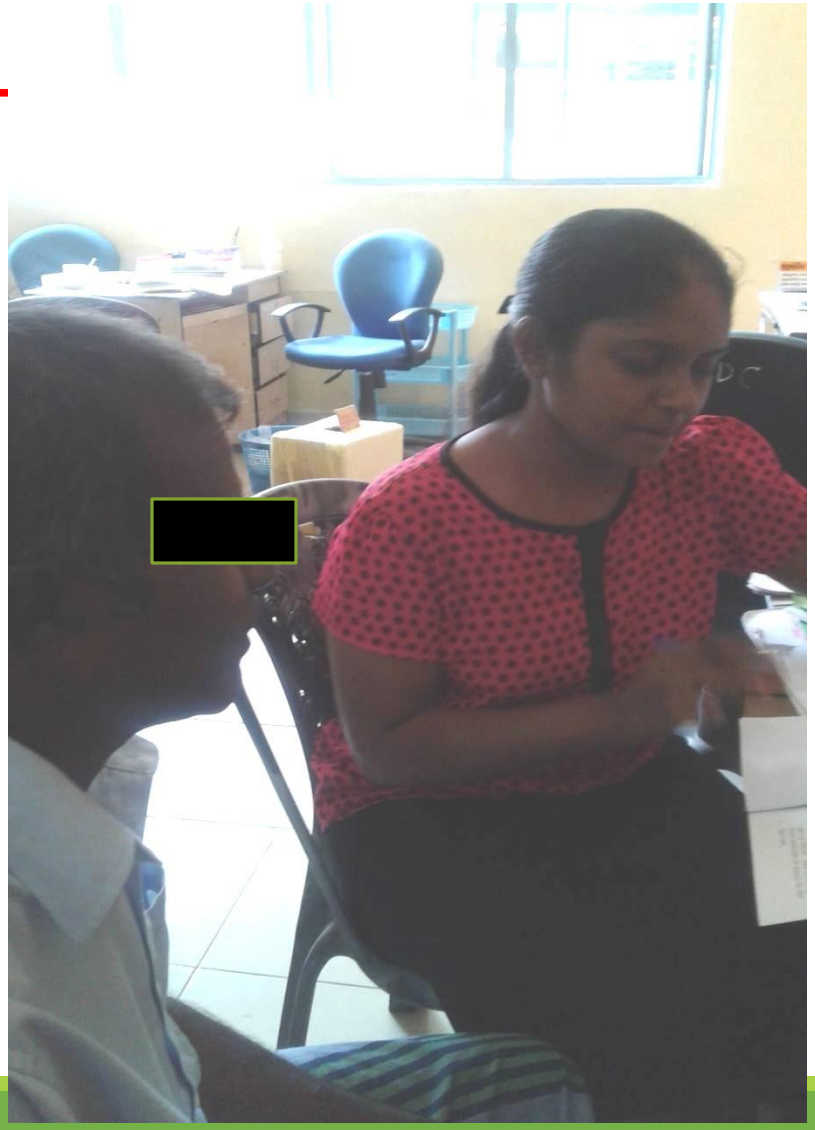
[3]Princess Alexandra Hospital, Australia

[4]University of Queensland, Australia

FUNDED by National Research Council

Objective

To determine whether intervention by a clinical pharmacist (CP) leads to improvement of management in patients with CKDu.



Methodology

The study was conducted at the Renal Clinic, Teaching Hospital, Anuradhapura from January 2016 to December 2017

Inclusion criteria:

- Pre-dialysis patients in CKD stage 4 or 5
- 253 patients were recruited
- All participants met criteria for diagnosis of CKDu*

* N. Janakan, L.J. Dissanayake, S. Hewawasam. "Research programme for chronic kidney disease of unknown aeitiology in Sri Lanka". Weekly Epidemiological Report, 36(49), 2009.

Chronic Kidney Disease

- Information provision includes details about disease condition, weight management, dietary modification, life style modification, importance of blood pressure monitoring, individualized drug regimen and importance of proper drug adherence.

- The drug name, dose, dosing frequency, indication, and possible side effects will be explained to the patients.

- Information is provided to patients using a checklist.

- Drug related problems are discussed with the prescribing team

- The intervention arm patients will receive four information sessions for a period of one year. At recruitment and at clinic visits aVer 2, 6 and 10 months.

Extract from Information sheet for Renal Clinic Patients

Symptoms of CKDu

Results

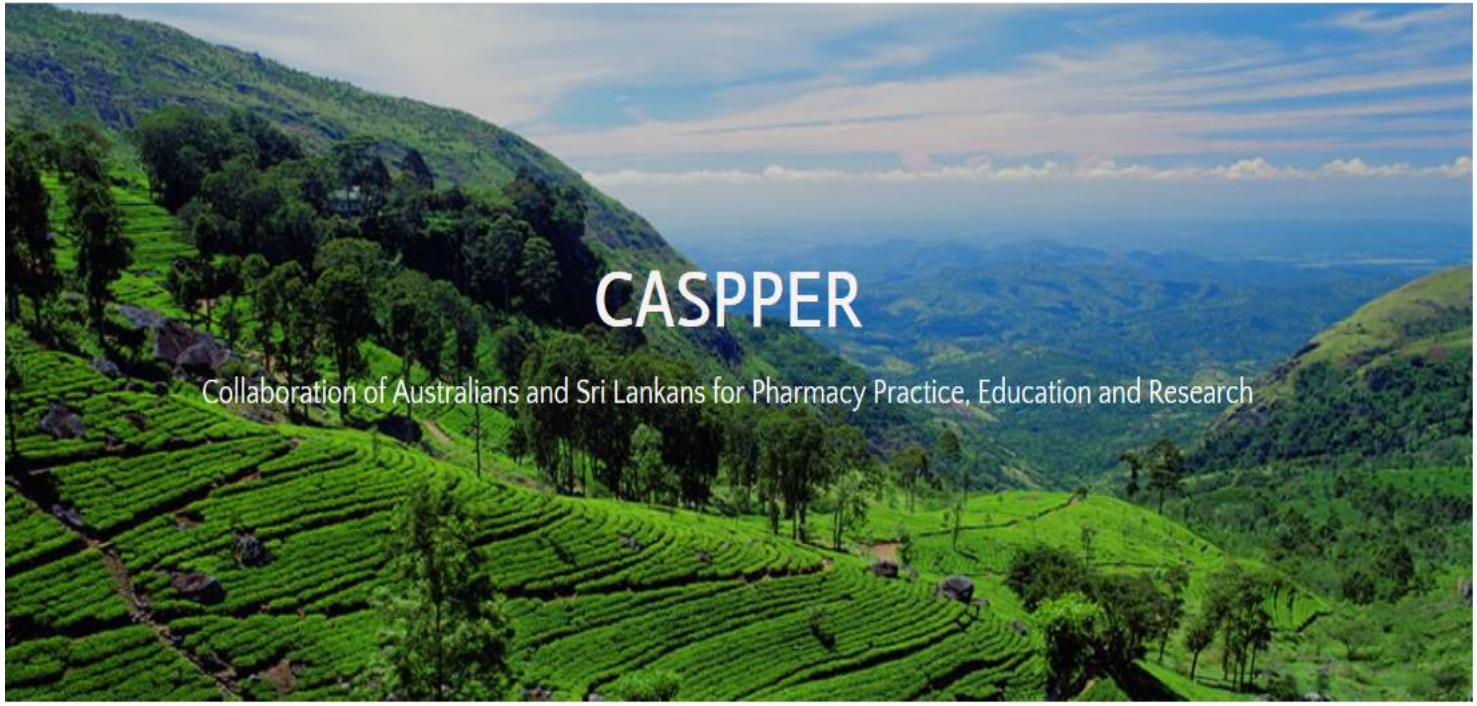
Mean hemoglobin levels-One year later

Time period	Intervention group	Control group	p-value
Baseline (g/dL)	10.72	11.1	0.355
One year later (g/dL)	11.41	11.18	**0.049**

Society needs medicine management experts = pharmacists

https://caspper.weebly.com

HOME WHO WE ARE EDUCATION AND TRAINING RESEARCH PROJECTS PUBLICATIONS MORE...



CASPPER (Collaboration of Australians and Sri Lankans for Pharmacy Practice, Education and Research) is an international partnership of clinicians, educators and researchers mainly from Australia, Sri Lanka, and UK. We aim to develop clinical pharmacy services through education and research, in order to enhance health outcomes in Sri Lanka. The group started in 2009. We have taught in the University of Sri Jayawardenapura, and the University of Peradeniya and supported research at the University of Kelaniya

https://caspper.weebly.com/education-and-training.html

HOME WHO WE ARE EDUCATION AND TRAINING RESEARCH PROJECTS PUBLICATIONS MORE...

Teaching and Training

CASPPER members regularly deliver teaching sessions for both Sri Lankan students and staff. Members have taught at the University of Sri Jayawardenapura, in 2010, and University of Peradeniya in 2009, 2011. 2012, 2013, 2014,2016 and 2018 and have supported research at the University of Kelaniya, and University of Peradeniya.

CASPPER is also supporting clinical pharmacists to develop their research capability by providing supervision to complete their MPhil Research Higher degree studies.

Teaching material for students from August 2019 at the University of Peradeniya can be found below the pictures

Education and Training - CASP | Large Photo Prints | High Quali | Weebly

https://caspper.weebly.com/education-and-training.html

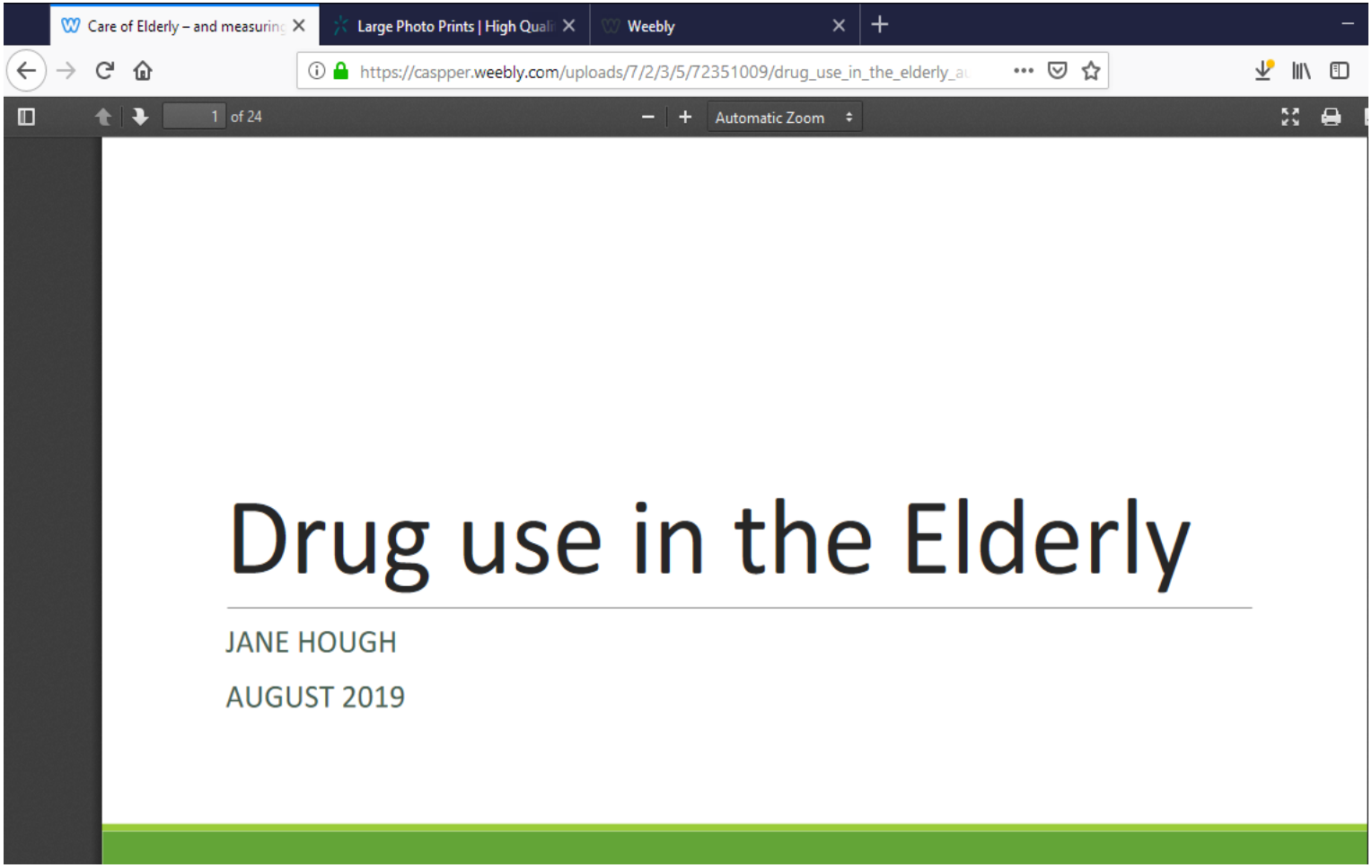
HOME WHO WE ARE EDUCATION AND TRAINING RESEARCH PROJECTS PUBLICATIONS MORE...

DRUG USE IN ELDERLY

DRUG USE IN STROKE

RESPIRATORY

DRUG USE IN INFECTIOUS DISEASES


Care of Elderly – and measuring
Large Photo Prints | High Quali
Weebly
https://caspper.weebly.com/uploads/7/2/3/5/72351009/drug_use_in_the_elderly_a
1 of 24
Automatic Zoom
Drug use in the Elderly
JANE HOUGH
AUGUST 2019

ANY QUESTIONS?