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Keele University

We have a dream

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Disclosure

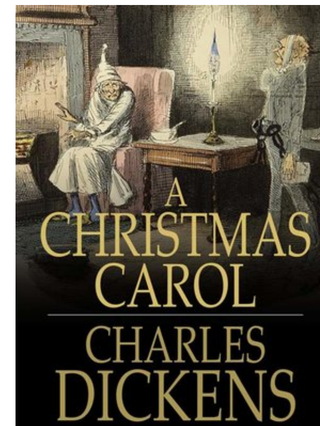
Conflict of interest: Nothing to disclose

KEEP
CALM
AND
ASK YOUR
PHARMACIST

Overview of the Session

Through story telling & role play we will:

- Take you on a journey through pharmacy past, present & future
- Explore hospital pharmacy practice through the statements
- How decision making affects medicines choices
- A model for change



Introduction to our characters

Jonathan is the Chief Hospital Pharmacist

Cheryl is the newly appointed Hospital Manager, she has a nursing background

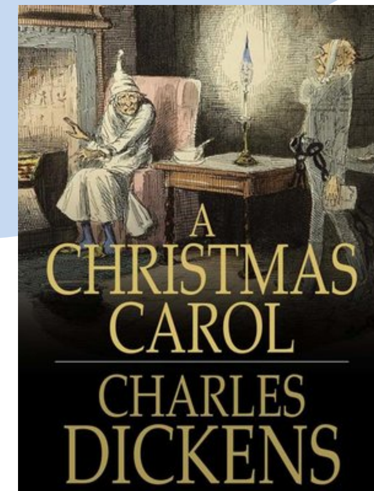
Betty is an 84 year old married lady, with 3 grown up children who live far from her

A Christmas Carol by Charles Dickens

- *A Christmas Carol* is a novella by Charles Dickens about Ebenezer Scrooge, an old man, who is well-known for his **miserly** ways.
- On Christmas Eve, Scrooge is visited by a series of ghosts, starting with his old business partner, Jacob Marley.
- The three spirits which follow are:
  - the Ghost of Christmas Past,
  - the Ghost of Christmas Present, and
  - the Ghost of Christmas future
- They show Scrooge how his mean behaviour has affected those around him.
- At the end of the story he is relieved to discover that there is still time for him to change and we see him transformed into a generous and kind-hearted human being.

So our story begins…

Jonathan is at home, thinking about his day, life as a hospital pharmacist and the new hospital manager. He wonders if she will be more engaged in the pharmacy agenda. He falls asleep while reading Charles Dicken's ' A Christmas Carol'…



The ghost of Pharmacy past

- Pharmacy has a proud and unique heritage
- Protecting the public from unsafe and unproven medicines has always been its prime purpose
- Pharmacy is excellent at procurement and supply
- Dispensing errors are rare

Credits

- **EAHP**
  - www.eahp.eu/press-room/hospital-pharmacists-and-their-role-patient-care
- **Black Adder** series 2 episode 1
  - www.dailymotion.com/video/x5szynb
  - www.bbc.co.uk/comedy/blackadder/epguide/two_bells.shtml
- **Victorian pharmacy**
  - www.bbc.co.uk/programmes/b00t3tl3

The meeting

Cheryl, the new hospital manager comes into Jonathan’s office to introduce herself……….

EAHP Survey Questions	
Section 2: Selection, Procurement and Distribution	
S21 Our hospital has clear processes in place around the procurement of medicines	**94% of responses were positive**
S212 Were hospital pharmacists involved in the development of procurement processes?	**95% of responses were positive**
S22 The pharmacists in our hospital take the lead in developing, monitoring, reviewing and improving medicine use processes and the use of medicine related technologies	**81% of responses were positive**
S23 Do you have a formulary in place in your hospital?	**79% of responses were positive**
S232 The pharmacists in our hospital coordinate the development, maintenance and use of our formulary	**93% of responses were positive**
S24 Procurement of non-formulary medicines in our hospital is done to a robust process	**83% of responses were positive**
S242 Has a written complaint ever been made to your hospital about a patient missing a dose of a critical medicine?	72% of responses were positive
S25 The pharmacy in our hospital has contingency plans for medicines shortages	69% of responses were positive
S252 Have you had reason to contact the medicines authority in your country because of medicines shortages?	**40% of responses were positive**
S26 The pharmacy in our hospital takes responsibility for all medicines logistics, including for investigational medicines	**90% of responses were positive**
S272 Were pharmacists involved in producing this policy?	**83% of responses were positive**

Section 5: Patient Safety and Quality Assurance

S510 Medicines in our hospital are packaged and labelled to assure they are safely optimised for administration	84% of responses were positive
S5103 Hospital pharmacists are involved in processes of secure stocking and dispensing of drugs on wards, including a policy for LASA* drugs and regular inspections	76% of responses were positive
S511 Which best describes the traceability* of medicines dispensed by our pharmacy?	95% of responses were positive

Betty. Aged 84 years

PMH: MIs x2
Heart failure
Hypertension
Type 2 diabetes
Presumed osteoporosis
(#hip, Colles #)
Gout

New presentation of AF

Already on 13 meds:

- Simvastatin
- Digoxin
- Furosemide
- Allopurinol
- Alendronate
- Ca & Vitamin D
- Metformin
- Gliclazide
- Dapagloflozin
- Bisoprolol
- Ramipril
- Aspirin
- Lansoprazole

6 (now 7) separate conditions (some related)
13 medicines

The conversation so far…….

- Hospital pharmacists have supplied medicines safely for many years
- They have unique skills and are the ‘experts in medicines’
- Overcoming perceptions of others to realise this potential

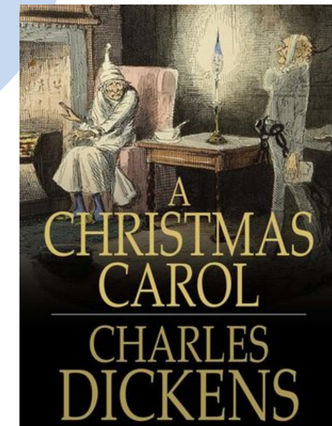
Our story continues…

Jonathan is back at home, thinking about the meeting with Cheryl.

He feels motivated to make a real difference for Betty and others like her - Cheryl seemed to listen and is keen to support him with this.

He looks forward to his next meeting with Cheryl tomorrow.

Once again, he falls asleep while reading Charles Dicken's ' A Christmas Carol'…



The ghost of Pharmacy present

- Medicines optimisation puts people at the centre of medicines use and choice
- Shared decision making is key to this
- Our cognitive biases affect our decision making
- Information overload

The meeting (2)

Cheryl and Jonathan have their follow up meeting to discuss how pharmacy services can help meet the hospital's challenges……….

Challenges in pharmacy and medicines optimisation

Issues include:

- Information overload
- Cognitive biases in decision making
- Problematic polypharmacy
- Shared decision making (risks vs benefits) and consent

Medicines optimisation definition

(NICE guideline NG5, 2015)

- a person-centred approach to safe and effective medicines use, to ensure people obtain the best possible outcomes from their medicines.
- applies to people who may or may not take their medicines effectively.
- Shared decision-making is an essential part of evidence-based medicine, seeking to use the best available evidence to guide decisions about the care of the individual patient, taking into account their needs, preferences and values'

“Medicines Optimisation is about ensuring the right patients, get the right choice of medicine at the right time”

What do we know about how people make decisions?

- Behavioural economics and cognitive psychology:
  - Bounded rationality (Herbert Simon 1978)
  - Dual process theory (Dan Kahneman 2002)
  - Most decisions are informed by brief reading and talking to other people

Herbert Simon
1978
Economics

Bounded rationality
Satisfycing

How can we keep up?

Sackett D et al BMJ 1996;312:71-72

"The difficulties that **clinicians** face in keeping abreast of all the medical advances reported in primary journals are obvious from a comparison of the time required for reading

- for general medicine, enough to examine 19 articles per day, 365 days per year

with the time available

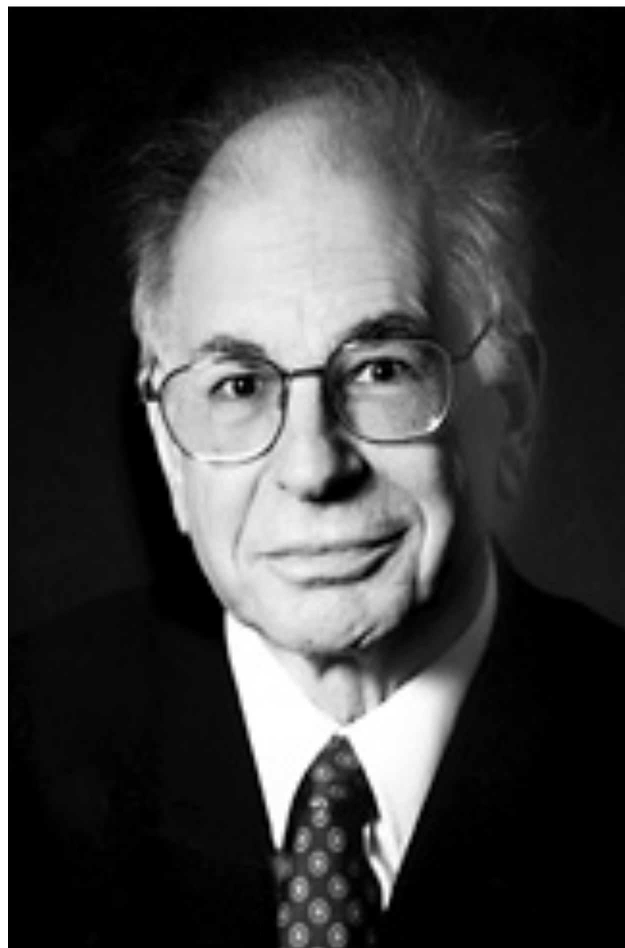
- well under an hour a week by British medical consultants, even on self reports."

How to best use use your *Golden Hour*?

Words of wisdom

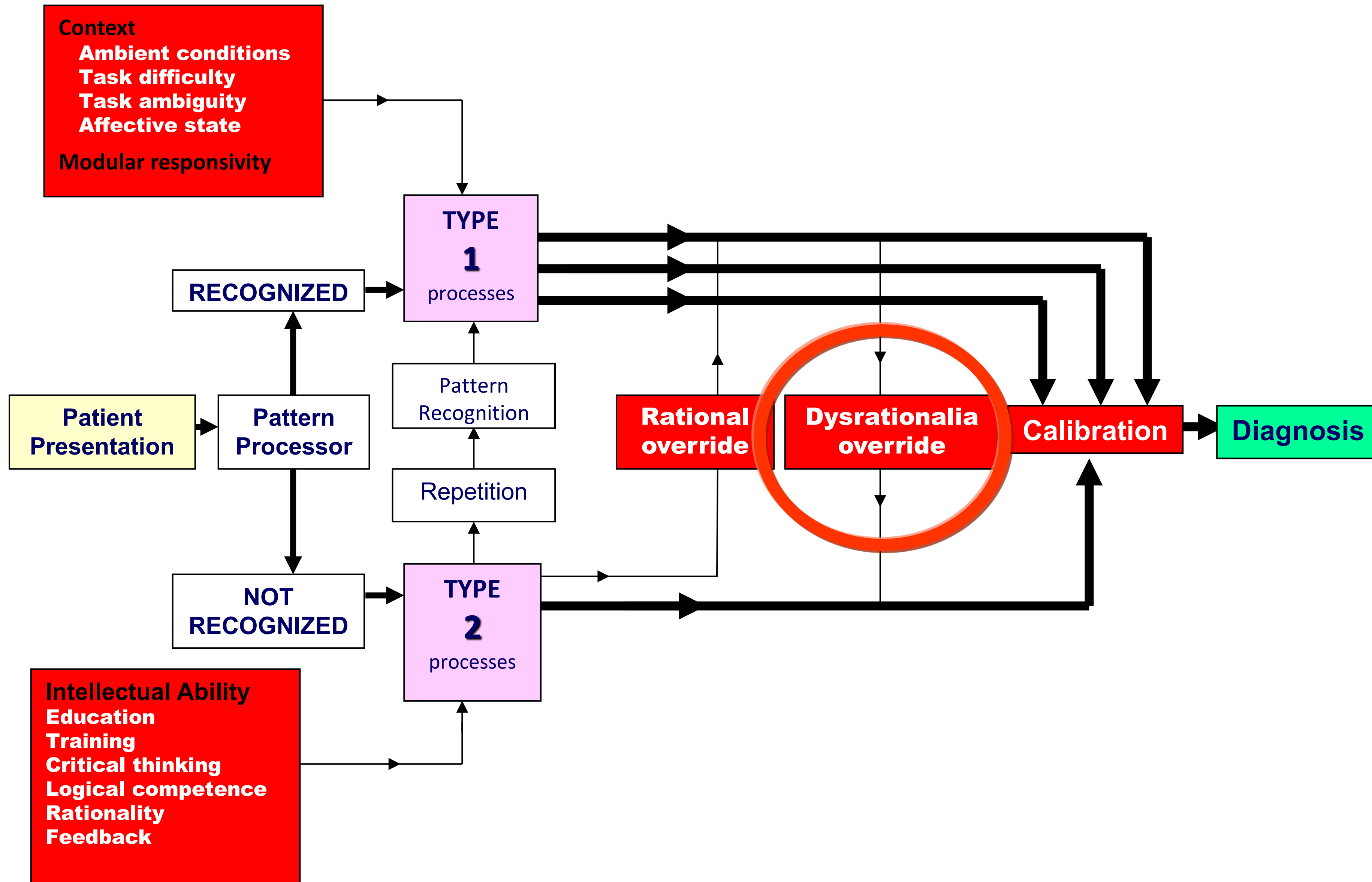
Muir Gray JA: Evidence-based medicine for professionals *in* Edwards A & Elwyn G (eds) Evidence-based patient choice Oxford: OUP 2001

'What is clear is that individuals cannot keep up to date except in the most highly restricted and specialized areas of knowledge. The job of the human being is to become skilled at locating **relevant, valid** data for their needs. In the sphere of medicine, the required skill is to be able to relate the knowledge generated by the study of groups of patients or populations to that lonely and anxious individual who has come to seek help.'



Daniel Kahneman
Economics
2002

Dual Process theory


Context
Ambient conditions
Task difficulty
Task ambiguity
Affective state
Modular responsivity
TYPE
1
processes
RECOGNIZED
Patient Presentation
Pattern Processor
Pattern Recognition
Repetition
Rational override
Dysrationalia override
Calibration
Diagnosis
NOT RECOGNIZED
TYPE
2
processes
Intellectual Ability
Education
Training
Critical thinking
Logical competence
Rationality
Feedback

So we all make decisions based on the following……

- System 1 dominates
- System 2 takes effort
- Once we have a system 1 pattern it takes a lot to shift it
- We don’t like using system 2
- Even if we are trying really hard, affective and cognitive biases will beat our best efforts - sometimes.

>100 cognitive biases

- Anchoring bias – early salient feature
- Ascertainment bias – thinking shaped by prior expectation
- Availability bias – recent experience dominates evidence
- Bandwagon effect – we do it this way here
- Omission bias – natural disease progression preferred to those occurring due to action of physician
- Sutton's slip – going for the obvious
- Gambler's fallacy – I've seen 3 recently; this can't be a fourth
- Search satisficing – found one thing, ignore others
- Vertical line failure – routine repetitive tasks leading to thinking in silo
- Blind spot bias – other people are susceptible to these biases but I am not

Information and decision making

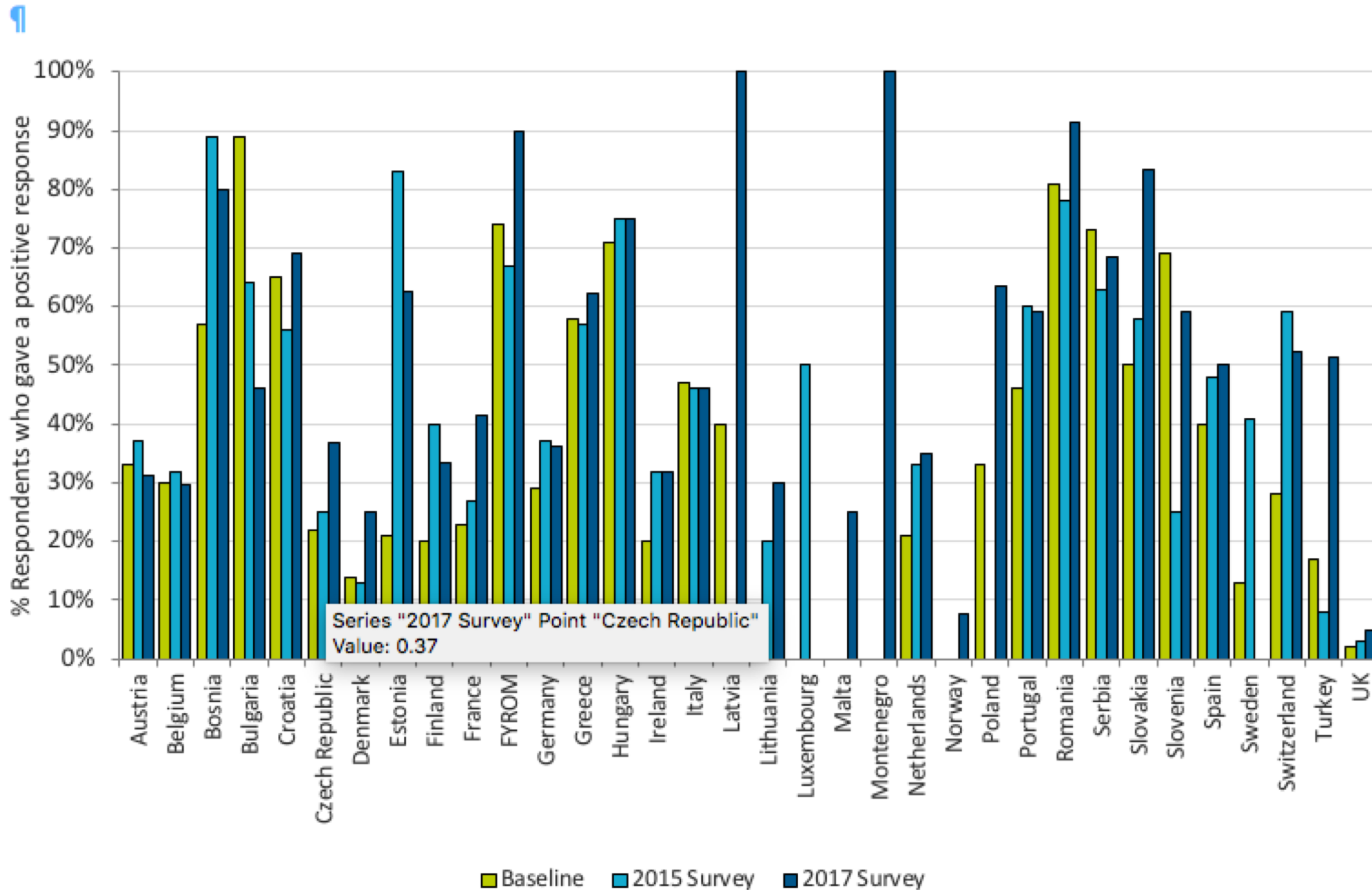
- Most decisions are based on what we think is the evidence, not what we know is the evidence
- No one has time to appraise all of the evidence on everything, and even if that were possible the human brain can’t recall and compute it, and certainly not in a 10 minute primary care consultation
- We use brief reading and talking to other people as our information sources
- We use patterns and we create mindlines of what to do in common situations
- These patterns can be very difficult to disrupt once they are hard-wired

A movement has started!

PHARMACIST'S

I1 The pharmacists within our hospital are aware of the 44 European Statements for Hospital Pharmacy.

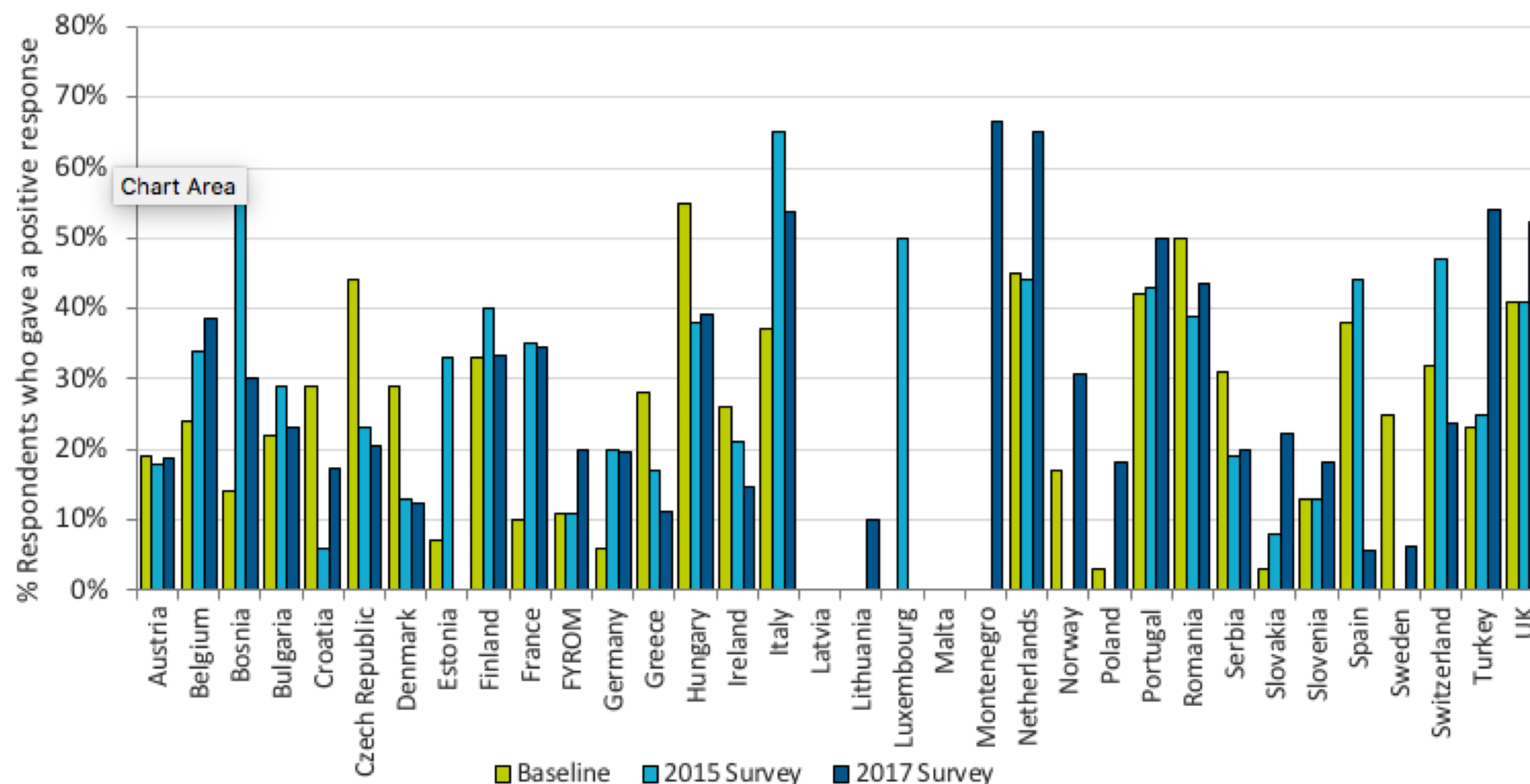
A paired samples t-test indicated that the mean percentage of positive responses for countries has significantly increased from the baseline survey ($M = 0.398$, $SD = 0.251$) compared to the 2017 survey ($M = 0.485$, $SD = 0.244$), $t(27) = -2.859$, $p = 0.008$, $d = -0.540$. Compared to the baseline survey, awareness has increased in 26 countries.



I3 Our hospital has the capability* to implement all of the Statements now.

**Capability: Does the organisation have staff with the right skills and experience to support the change effort?*

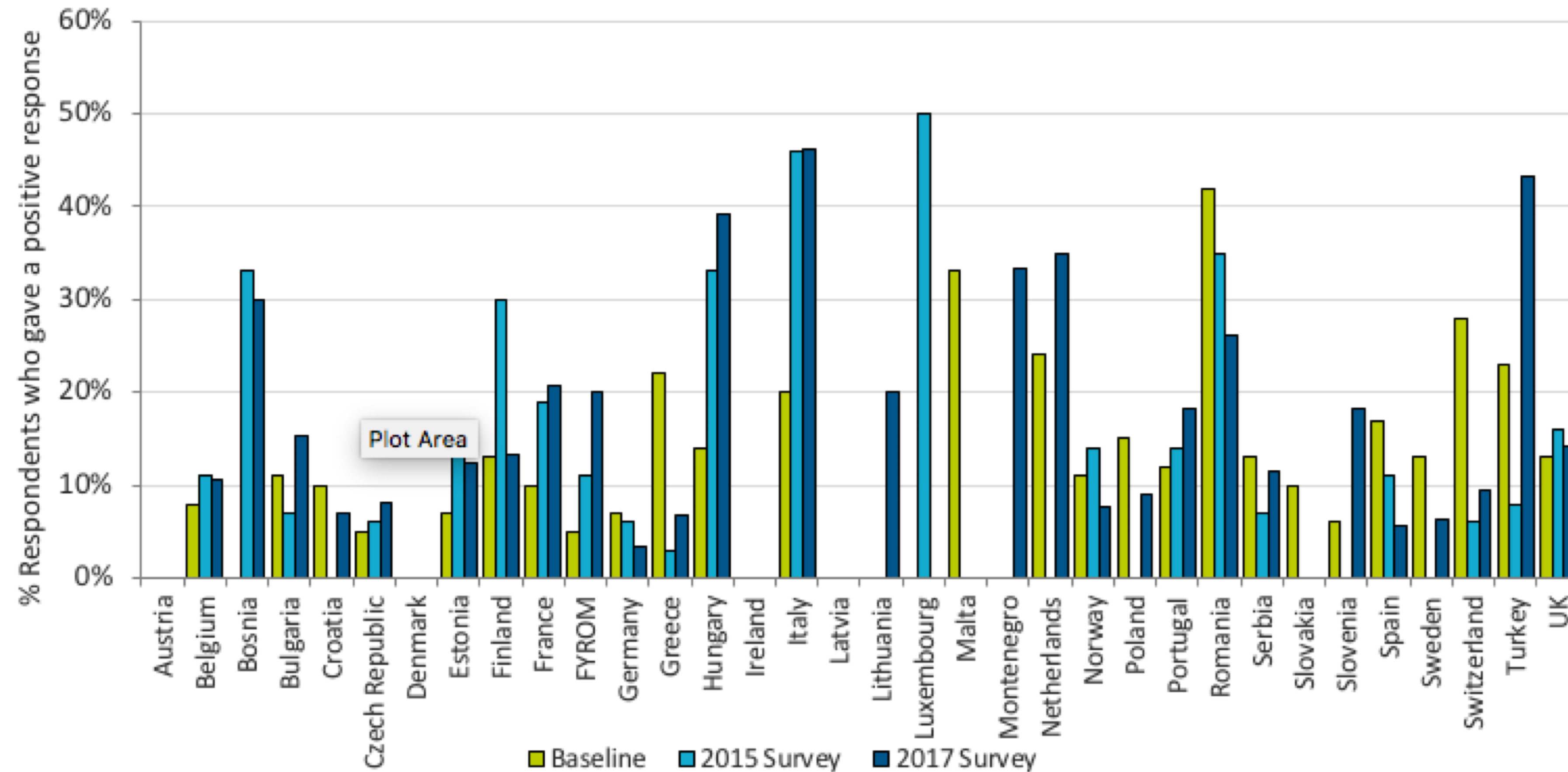
A paired samples t-test indicated that the mean percentage of positive responses for countries was not significantly different for the baseline survey ($M = 0.269$, $SD = 0.139$) compared to the 2017 survey ($M = 0.278$, $SD = 0.165$), $t(27) = -0.281$, $p = 0.781$, $d = -0.0531$.



I4 Our hospital has the capacity* to implement all of the Statements now.

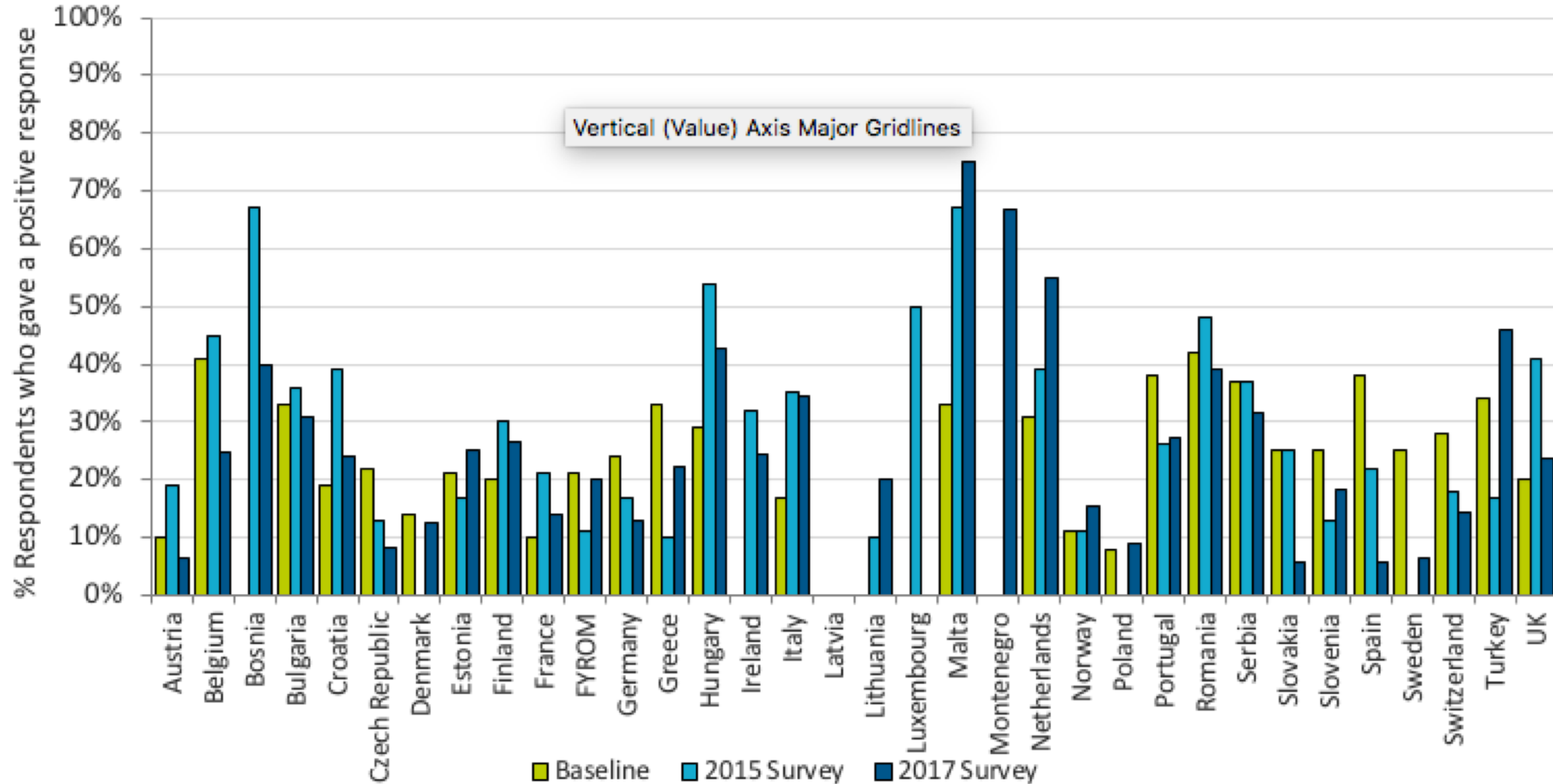
**Capacity: Does the organisation have the sufficient number of people or time to undertake the change?*

A paired samples t-test indicated that the mean percentage of positive responses for countries was not significantly different for the baseline survey (M = 0.123, SD = 0.0944) compared to the 2017 survey (M = 0.153, SD = 0.131), $t(27) = -1.276$, $p = 0.213$, $d = -0.241$.



I5 My hospital is committed to help the pharmacy department implement the Statements.

A paired samples t-test indicated that the mean percentage of positive responses for countries was not significantly different for the baseline survey ($M = 0.239$, $SD = 0.113$) compared to the 2017 survey ($M = 0.235$, $SD = 0.131$), $t(27) = 0.135$, $p = 0.894$, $d = -0.0255$.



Sweden: The Board of the Swedish association has decided to focus on a selection of Statements
Italy: A committee has been established to check the level of compliance between the Statements and their national standards and guidelines.
Bulgaria: Statements adopted as national guidelines
Romania: expressed their commitment to use the European Statements when updating their standards.
Greenland Sea
Reykjavik
ICELAND
Trondheim
NORGE
NORWAY
Oslo
Sundsvall
Gulf of Bothnia
Gavle
Stockholm
Goteborg
Malmö
Copenhagen
Baltic Sea
FINLAND
Tampere
Helsinki
St. Petersburg
UNITED KINGDOM
Cardiff
London
Celtic Sea
English Channel
NETHERLANDS
Amsterdam
BELGIUM
Bruxelles
LUXEMBOURG
Hamburg
Hannover
Rostock
Berlin
DEUTSCHLAND
GERMANY
Cologne
Leipzig
Frankfurt
Gdansk
Poznan
Warsaw
POLSKA
POLAND
Krakow
БЕЛАРУСЬ
BELARUS
Kiev
УКРАЇНА
UKRAINE
Lviv
Prague
ČESKÁ REPUBLIKA
CZECH REPUBLIC
SLOVAKIA
Bratislava
Vienna
Österreich
Austria
Munich
Budapest
HUNGARY
MAGYARORSZÁG
Pecs
MOLDOVA
Chisinau
Odessa
Cluj-Napoca
ROMÂNIA
ROMANIA
Constanta
Bucharest
Varna
Black Sea
Belgrade
Zagreb
CROATIA
SLOVENIA
Ljubljana
BOSNIA AND HERZEGOWINA
Sarajevo
Le Havre
Paris
Strasbourg
Nantes
FRANCE
Bern
Switzerland
Geneva
Lyon
Bordeaux
Bay of Biscay
Milan
Venice
Marseille
MONACO
ANDORRA
Florence
ITALIA
ITALY
Rome
Naples
CORSICA (FR)
SARDINIA (IT)
Cagliari
Tyrrhenian Sea
Palermo
Valletta
Mediterranean Sea
Bilbao
Porto
PORTUGAL
Lisbon
Madrid
ESPAÑA
SPAIN
Barcelona
Valencia
Sevilla
Malaga
AFRICA
250 Km
250 Mi.

Spain

sescam

GERENCIA DE ATENCIÓN INTEGRADA DE ALBACETE

EMERGENCY DEPARTMENT PHARMACY ROTATION, WHAT IS A PHARMACY RESIDENT DOING HERE?

N Monteagudo Martinez N, A Valladolid Walsh , G Romero Candel , E Domingo Chiva, J Marco del Rio, M Diaz Rangel, F Sanchez Rubio.
Clinical Pharmacy Department. Complejo Hospitalario Universitario de Albacete. Área de Gestión Integrada de Albacete.
Calle Hermanos Falcó nº 37, 02008, Albacete; SPAIN

- **WHAT WAS DONE?**

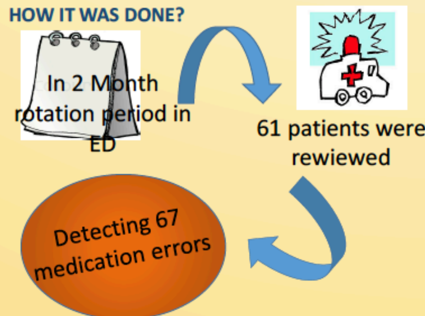
Hospital pharmacy specialization programs include one year of rotations in clinical areas. The emergency department (ED) was chosen in order to develop a program to detect and prevent medication errors as a part of a multidisciplinary team.

Other tasks such as organizing drug storage, drug labelling and conservation, nurse counselling and education on issues related to medication were developed.

- **WHY IT WAS DONE?**

To acquire clinical skills in this setting and detect and prevent medication errors. It is also an area in which pharmacists had previously never participated in our hospital and it was an opportunity to integrate in this multidisciplinary team.

- **HOW IT WAS DONE?**



Other tasks:
-organized and labelled drug storage
-listed and identified thermolabile drugs
-participated in a protocol design

- **WHAT WAS ACHIEVED?**

The resident was able to **improve care in acute patients in the ED**.

The most common errors found and prevented were:

Missed doses: 25,3 %	Drug interaction/incompatibility: 8,9%
Incorrect form to administer the drug: 13,4%	Others

The resident was able to organized refrigerator drug stored and developed a protocol to explain how to act in case of fridge failure

- **WHAT IS NEXT?**

To try to implement an **ED-based clinical pharmacist program** in order to detect and manage medication errors to **improve safety** in drug therapy, as well as to contribute to patient care with a **different point of view** from clinicians.

Acknowledgements: ED staff

eahp european association of hospital pharmacists
making the difference in medication

Ireland

Patient-centred clinical pharmacy and medicines information service on a psychiatric intensive care unit

What was done?

A liaison pharmacist was assigned to the psychiatric intensive care unit (PICU) at Saint John of God Hospital to provide both a clinical pharmacy service including regular medication chart review and development of patient-centred clinical guidelines, and to provide medicines information and support directly to patients.

ST. PETERS SUITE WEEKLY GROUP TIMETABLE

Authors:

Caroline Hynes & Dolores Keating
Pharmacy Department
Saint John of God Hospital
Stillorgan
Co. Dublin

How was it done?

The main obstacle to the introduction of this initiative was establishing a relationship with patients, as visible pharmacist interventions were new to patients on the PICU. In order to overcome this obstacle, the pharmacist was required to be present on the unit and regularly meet patients to enquire about their experience of taking medicine for their mental health and provide information as required.

- The pharmacist hosts a weekly medicines information group on the unit where; medicines are discussed openly, patients are provided with medicines information leaflets and medication charts detailing all of their current medicines and what they are for, and those taking antipsychotics are systematically assessed for side-effects using validated rating scales

- The pharmacist develops new patient-centred guidelines for use on the PICU, such as the guidelines on the pharmacological prevention and management of violence or aggressive behaviour
- The pharmacist carries out a regular clinical pharmacy review where medication charts are clinically assessed and any interventions are relayed to the relevant consultant psychiatrist and registrar

What was achieved?

A liaison pharmacist was assigned to the psychiatric intensive care unit (PICU) at Saint John of God Hospital to provide both a clinical pharmacy service including regular medication chart review and development of patient-centred clinical guidelines, and to provide medicines information and support directly to patients.

Why was it done?

Psychiatric intensive care is for patients who are in an acutely disturbed phase of a serious mental disorder. Psychotropic medicines play a pivotal role in the treatment of these disorders which is why the pharmacist is a key part of the patient care team. The introduction of a designated pharmacist to address not only the clinical needs of the PICU team but also the medicines information needs of the patient was essential to optimise patient outcomes. As positive experience with psychotropic medicine has implications for adherence and outcome, the role of the pharmacist in maintaining or improving this experience is of high importance.

3.2.26. All patients should have access to independent education and advice about medicines, preferably from a specialist mental health pharmacist in the PICU.
3.2.23. All prescriptions for medicines should be 'clinically screened' by a pharmacist to ensure suitability, safety, and that the relevant legal requirements are followed.

napicu
national association of psychiatric intensive care & low secure units

What next....

Now that the pharmacist is a well-established member of the patient-care team on the psychiatric intensive care unit, future research will look at the impact this has on patient experience with psychotropic medicine and whether patient-centred pharmacist interventions improve attitude, adherence and ultimately outcome.

Austria

A PHARMACIST IN THE MULTIDISCIPLINARY ONCOLOGY TEAM

U. Guger-Halper[1], C. Weber[1], M. Alt[1], W. M. Stangl[2]

A. ö. KH Oberwart, Austria [1]Pharmacy [2] Internal Department, Oncology and Palliative Care

What was done?

The pharmacy of the hospital supplies four hospitals with cytotoxic infusions. In the past it was found that the integration of a pharmacist in the oncology team brings benefits.

Why was it done?

The aim was to evaluate the participation of a pharmacist in the multidisciplinary oncology team. The team consists of the clinical pharmacist, medical oncologists, residents, oncology nurses, dieticians, medical documentation assistent and a clinical psychologist.

How was it done?

All chemotherapy protocols were electronically prescribed in CATO® (computer aided therapy for oncology) and included cytotoxic drugs and concomitant medications.

In addition to production in the cytostatic unit the pharmacist participated in the daily morning meetings, the two-week tumor boards and bimonthly team meetings.

Pharmacist interventions (PI) took place during the meetings and were also communicated by phone and mails.

Data were collected from May 2014 to September 2015.

What was achieved?

3335 cycles of chemotherapies were prescribed and 914 interventions were recorded.

Medication errors occur despite electronic prescription of standardized protocols.

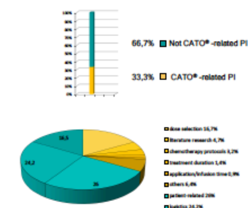
In this observational study we demonstrated the significant role of the clinical pharmacist as a part of the multidisciplinary oncology team.

What is next?

A pharmacist will continue to be part of the multidisciplinary oncology team in the future.

Pharmaceutical Interventions (PI)

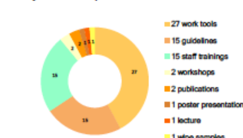
May 2014 - September 2015



Clinical pharmacists with special experience in oncology play an important role to identify errors in oncology.

Pharmaceutical cooperation

May 2014 - September 2015



The supply by a pharmacist means to optimize treatment protocols and procedures and improving patient safety.

Acknowledgements:

I would like to thank my colleagues at the pharmacy department and the oncology team.

References:

Sessions J. K. et al., Role of Oncology Clinical Pharmacists in Light of the Oncology Workforce Study, J Oncol Pract. 2010 Sep; 6(5): 270-272

GPI number: CPS4877
22nd EAHP congress 2017

eahp european association of hospital pharmacists

KRAGES BURGENLÄNDISCHE KRANKENANSTALTEN GESELLSCHAFT M.B.H.

Norway

Making clinical pharmacy essential in a large university hospital

J. Kutschera Sund[1, 2], M. Grotnes[1], I. Klevan[1], L. Lilleås[1], J.F. Skomsvoll[3]

[1]Central Norway Hospital Pharmacy Trust, Trondheim, Norway, [2]Norwegian University of Science and Technology, Trondheim, Norway, [3]St. Olavs Hospital, Trondheim, Norway

What was done?

A dialog based process involving hospital management, clinicians and the pharmacy led to a large increase in clinical pharmacy services in St.Olavs Hospital. For geographical and organisational overview, see Fig. 1 and 2.

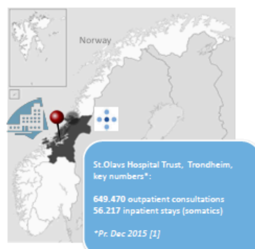


Figure 1: Map of Norway showing the Central Norwegian Region and St.Olavs Hospital in Trondheim (red pin).

Why was it done?

Clinical pharmacy according to the Integrated Medicines Management (IMM)-model (Fig. 3) [2,3] was introduced in hospitals in the Central Norwegian Health region in 2010. Since 2012 the IMM-model has been the chosen national method in Norway. However, lack of comprehensive strategies and funding has made it difficult to develop and implement extensive clinical pharmacy services in our region. A new financial model securing long term funding from the Central Norway Regional Health Authority gave predictability and made way for a new joint approach at St.Olavs Hospital, securing hospital involvement.

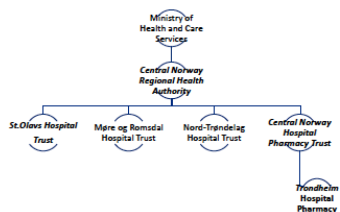


Figure 2: Organisational chart of the Central Norway Regional Health Authority depicting the involved divisions.

How was it done?

A literature review was conducted. Based on this, a multidisciplinary project group decided that all clinics and wards were eligible for clinical pharmacy services and should receive extensive information on the topic. The funding from the Regional Health Authority was also based on the IMM-model. As there were limited resources allocated, all clinics were asked to apply for the service. The hospital management received applications three times the number of funded clinical pharmacists.

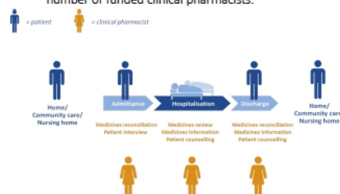


Figure 3: Illustration of the IMM-model in a standard patient care pathway, depicting roles, settings and tasks.

Prioritizing was based on the following criteria;

- Clinical pharmacy services using the IMM-model with the clinical pharmacist as a part of the multi disciplinary team
- Patient care pathways facilitating a defined role for the pharmacist
- Planned research projects or evaluation of the clinical pharmacy services
- In-patient clinics
- Continuation of already established services
- Geographical localization and time schedules allowing optimal use of the available resources

Departments	2013	2017
Gastrointestinal surgery and urology		1.2
Admittance/Emergency		1.7
Orkdal (decentralised general hospital)		0.8
Orthopaedics	1.8	1.4
Rheumatology	0.7	0.5
Neurology	0.5	0.5
Internal Medicine		1.8
Cardiology		0.7
Pulmonary diseases		0.5
Oncology		0.7
Old age psychiatry service		0.3
Paediatrics		0.6
Gynaecology		0.3
Implementation of e-prescription (project)		0.4
Sum	*3*	*11.4*

Table 1: Development (from 2013 to 2017) in total clinical pharmacists yearly funded, wards having clinical pharmacy service implemented and their parts of the total

What has been achieved?

The long term funding of clinical pharmacy in the health region enabled the hospital pharmacy to recruit and educate highly competent clinical pharmacists.

The number of clinical pharmacists (reported activity) has increased from 2 to 12 over a four-year period, see Fig. 4. The number of wards receiving clinical pharmacy services has grown from 3 to 14 and there are still plans for further implementation, see Table 1.

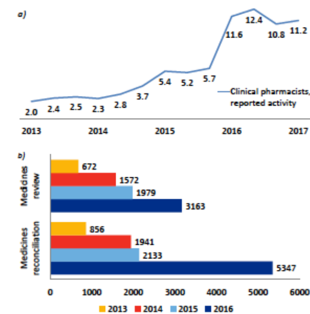


Figure 4: Development in reported activities in the time period 2013-2016 (*)Jan.17) a) Number of clinical pharmacists and b) number of medicines reviews and reconciliations performed in the period.

The hospital and the ward managements are much more involved in evolving a common patient safety strategy with focus on medication. Specific quality indicators for each patient population and ward are being developed, and clinical pharmacists are now important members of multidisciplinary teams all over the hospital. Pharmacists are integrated in ongoing clinical research projects and publishing.

User surveys show that clinical pharmacy is assessed as a highly beneficial service (rated 5,5 on a scale from 0-6) by both nurses and physicians [4]. All clinics with implemented clinical pharmacy wish to continue the service, and 6 of the remaining 7 clinics would like to introduce the service.

What next?

- Develop the IMM-model to include the clinical pharmacists in standard patient care in every clinic and department
- Follow-up studies on the effects of clinical pharmacy services in different settings

References

1. St.Olavs Hospital official website, approached 20th feb.2017, https://stolav.no/om-oss
2. Scullin C, Scott MG, Hogg A, McElnay JC. An innovative approach to integrated medicines management. J Eval Clin Pract. 2007 Oct;13(5):781-8.
3. Bergkvist A, Midlöv P, Höglund P, Larsson L, Eriksson T. A multi-intervention approach on drug therapy can lead to a more appropriate drug use in the elderly. LIMM-Landskrona Integrated Medicines Management. J Eval Clinc Pract. 2009 Aug;15(4):660-7
4. Klevan I, Sund JK. Evaluation of hospital ward-based clinical pharmacy. Assessment of value by collaborating health professionals. Poster at 45th European Society of Clinical Pharmacy (ESCP) Symposium; 2016 Oct.

SYKEHUSAPOTEKENE I MIDT-NORGE
ST. OLAVS HOSPITAL
TRONDHEIM UNIVERSITY HOSPITAL

England

- 580 clinical pharmacists in post & funding for 580 more. 40% of all GP practices (34 million) will have access to the expertise that clinical pharmacists
- Ambition to increase Consultant Pharmacist posts to 600
- November 2015, 3944 annotated prescribers = about 8% of the total number of pharmacists on GPhC register. Of those, there were:
  - 2567 independent prescribers
  - 425 supplementary prescribers
  - 952 both independent and supplementary prescribers

What is a... Consultant Pharmacist?

A "consultant" or "senior care" pharmacist is a medication therapy management expert who provides advice on the use of medications by older adults, whether they live in the community or in long-term care facilities.

- The elderly consume approximately 34% of total prescriptions.
- On average, individuals 65–69 years old take nearly 14 prescriptions per year, individuals aged 80–84 take an average of 18 prescriptions per year.

The American Society of Consultant Pharmacists (ASCP) is the international professional association representing consultant and senior care pharmacists, providing leadership, education, advocacy, and resources to advance the practice of senior care pharmacy.

How can a consultant pharmacist help?

A consultant pharmacist can:

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- Make it easier for seniors to take their medication properly by labeling, packaging, and organizing prescription drugs better
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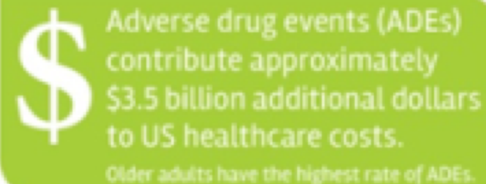
- Advocate healthy living and disease prevention for seniors



Learn more at www.ascp.com.

Possible ways of releasing pharmacist time……..automation

NHS Greater Glasgow and Clyde Hospitals

Pharmacy Distribution Centre

NHS
Greater Glasgow and Clyde

- *Fully operational replaces 14 stores*
- *Single point of purchase*
- *MHRA Wholesale Dealer License*
- *Home office license for handling controlled drugs*
- *100,000 packs of medicines per week*
- *2,500 destinations*
- *9 days stock (£2M)*
- *98% items supplied first time*

Pharmacy Distribution Centre
Other Benefits Realised so Far

NHS
Greater Glasgow and Clyde

- **41wte staff for MMyM service**
- **10wte pharmacists released from traditional roles**
- **Revenue cost neutral**
- **Cash releasing efficiency >£2m**

So, how would this help Betty?

Betty. Aged 84 years

PMH: MIs x2
Heart failure
Hypertension
Type 2 diabetes
Presumed osteoporosis
(#hip, Colles #)
Gout

New presentation of AF

Already on 13 meds:
- Simvastatin
- Digoxin
- Furosemide
- Allopurinol
- Alendronate
- Ca & Vitamin D
- Metformin
- Gliclazide
- Dapagloflozin
- Bisoprolol
- Ramipril
- Aspirin
- Lansoprazole

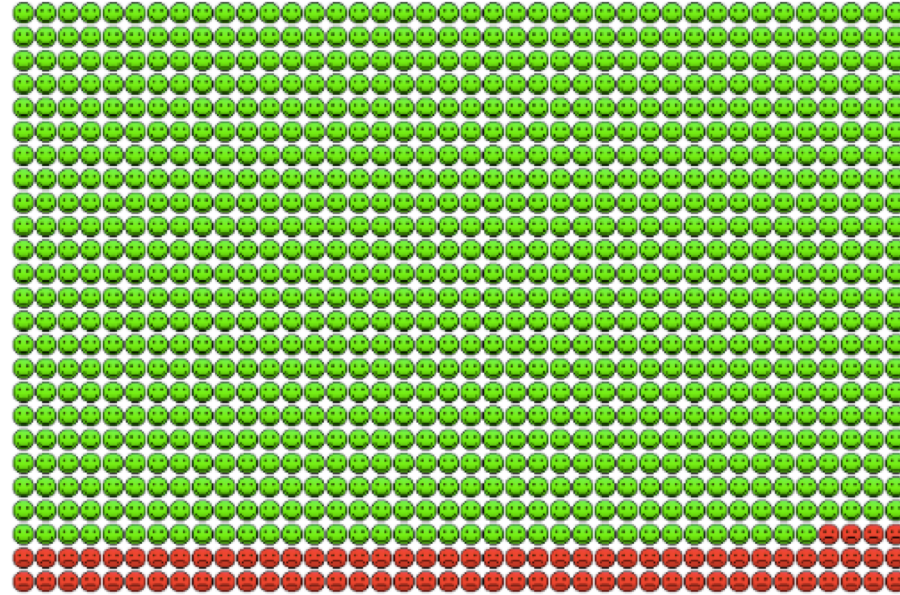
6 (now 7) separate conditions (some related)
13 medicines

Atrial fibrillation

$Chad_2Vasc_2$ score 5
Has-Bled score 3

In the next year, if there were 1000 people with a Chad2vasc2 score of 5, how many would have a stroke?

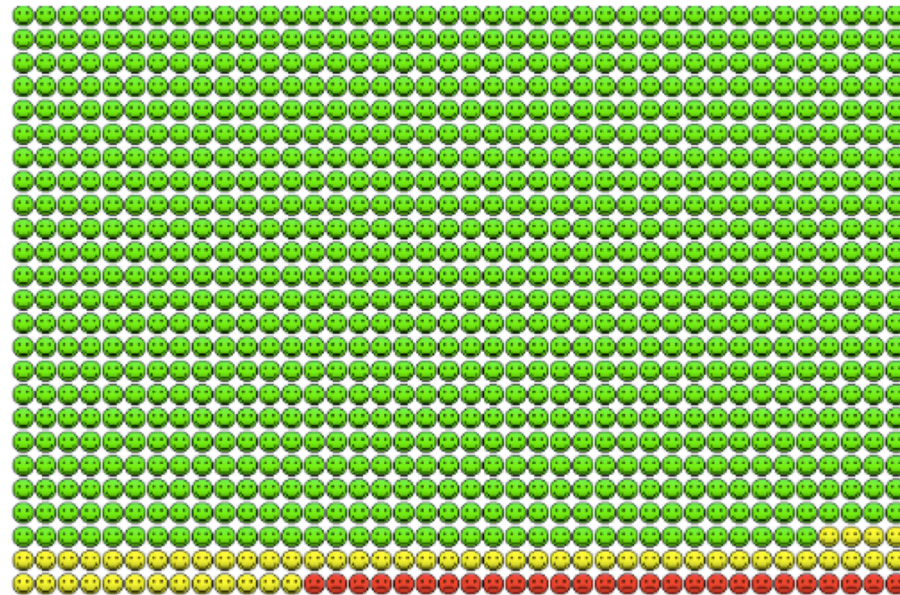
No treatment: CHA_2DS_2-VASc score 5



If 1000 people with AF and a CHA_2DS_2-VASc score of 5 take no anticoagulant, over 1 year on average:

- 916 people will not have an AF-related stroke (the green faces)
- 84 people will have an AF-related stroke (the red faces).

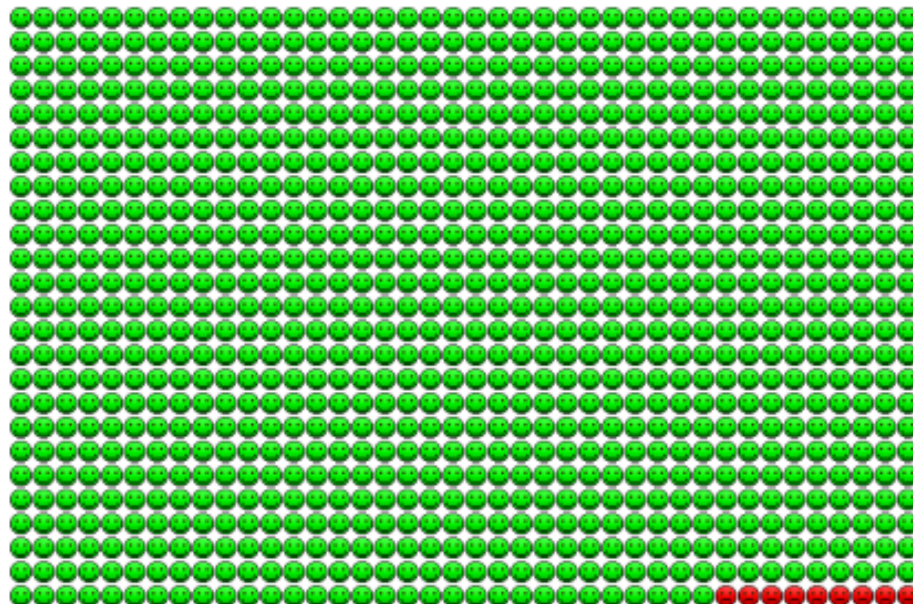
Anticoagulant: CHA_2DS_2-VASc score 5



If all 1000 people take an anticoagulant, over 1 year on average:

- 916 people will not have an AF-related stroke (the green faces), but would not have done anyway
- 57 people will be saved from having an AF-related stroke (the yellow faces)
- 27 people will still have an AF-related stroke (the red faces).

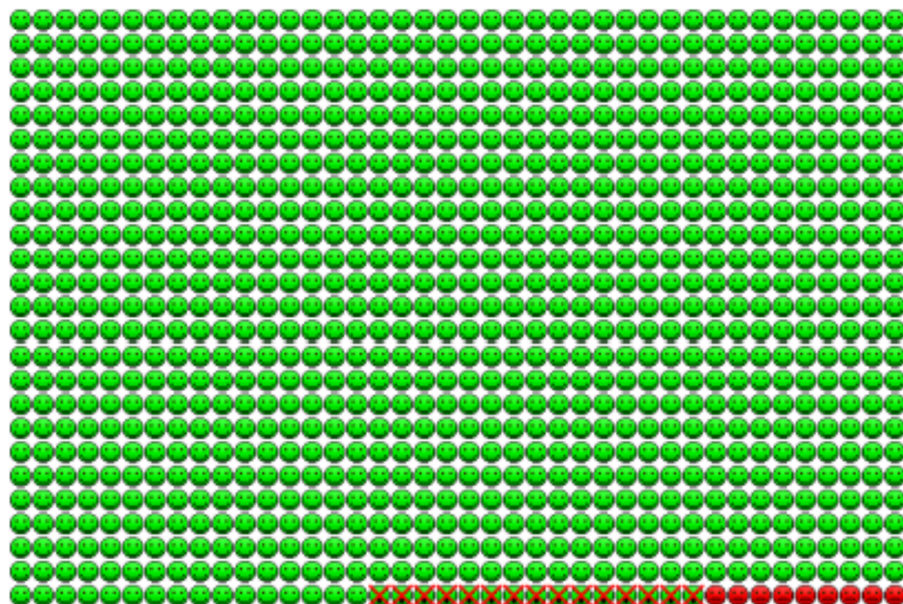
No treatment: HAS-BLED score 3



If 1000 people with AF and a HAS-BLED score of 3 take no anticoagulant, over 1 year on average:

- 991 people will not have a major bleed (the green faces)
- 9 people will have a major bleed (the red faces).

Anticoagulant: HAS-BLED score 3



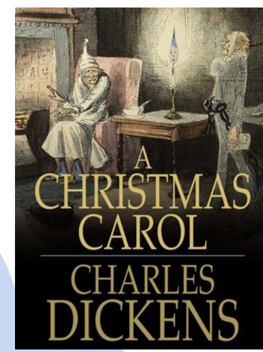
If all 1000 people take an anticoagulant, over 1 year on average:

- 976 people will not have a major bleed (the green faces)
- 9 people will have a major bleed (the red faces), just as they would have done anyway
- An extra 15 people will have a major bleed (the green faces with the red cross).

The conversation so far……..

- A movement has started, but the pace of this is variable across Europe
- Awareness of our (and others') cognitive biases is important to affect change
- Many pharmacists want to deliver more 'clinical services' but capacity (and capability) is an issue
- Can automation of supply help?
- Explaining risk and benefits of medicines choices is tricky, but can be done
- But how does this help people like Betty?

Our story continues………



Jonathan is back at home, thinking about his meetings with Cheryl.

He has an idea of what innovations are taking place elsewhere and is excited to be part of this movement that is happening in hospital pharmacy.

But he is troubled by how to help people like Betty……

Again, he falls asleep while reading Charles Dicken's ' A Christmas Carol'…

The ghost of Pharmacy future

- Pharmacists can lead the way in shared decision making around medicines choices
- Good consultation skills are vital
- Having meaningful conversations is a skill that requires practice and feedback in a safe environment
- Avatar technology can help with this

The meeting (3)

Cheryl and Jonathan have their next meeting to discuss how they can both help develop the pharmacy team to improve the care of people like Betty……….

What do people want from healthcare?

Patients

- Accessibility & convenience
- Closer to home
- Increased choice
- Tell fewer people about me
- Continuity
- Seamless care
- Active involvement & self management

National Voices
People shaping health and social care

"I can plan my care with people who work together to understand me and my carer(s), allow me control, and bring together services to achieve the outcomes important to me".

WHO Challenge

www.who.int/patientsafety/medication-safety/en/

Four fundamental problems:

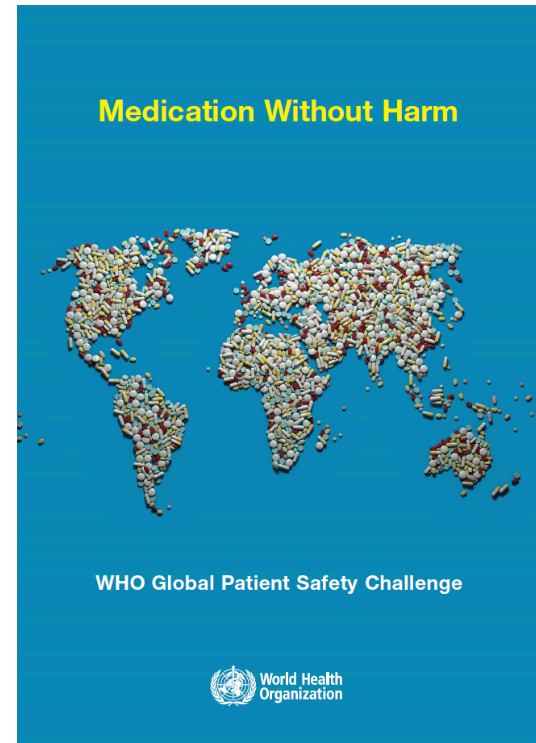
Patients and the public are not always medication-wise. They are too often made to be passive recipients of medicines and not informed and empowered to play their part in making the process of medication safer.

Medicines are sometimes complex and can be puzzling in their names, or packaging and sometimes lack sufficient or clear information. Confusing ‘look-alike soundalike’ medicines names and/or labelling and packaging are frequent sources of error and medication-related harm that can be addressed.

Health care professionals sometimes prescribe and administer medicines in ways and circumstances that increase the risk of harm to patients.

Systems and practices of medication are complex and often dysfunctional, and can be made more resilient to risk and harm if they are well understood and designed.

Reduce the level of severe, avoidable harm related to medications by 50% over 5 years, globally



What does good care look like?

Person-centred

Data and evidence

Recommendations

Explore health beliefs

Discussion and explanation of risks

Pharmacists and shared decision making………

The Northumbria Shine
Care Homes Project
www.health.org.uk/pills

The Northumbria Shine Care Homes Project

www.health.org.uk/pills

Aims:

- Reduce the amount of medicines prescribed to older patients in care homes unnecessarily
- Involve patients and their families or carers in decisions about prescribing and de-prescribing.
- Build evidence about ethical decision making in prescribing.

Outcomes

- 422 reviews carried out in 20 care homes.
- 1,346 interventions, most of which involved stopping medicines.
- An average of 1.7 medicines were stopped for every resident reviewed.
- A net annualised savings of £77,703 or £184 per person reviewed.

For every £1 **invested** in the intervention, £2.38 could be released from the medicines budget.

Evidence-based medicine

Sackett D, et al. BMJ 1996;312:71-2

Shared decision-making relies on two sources of expertise

- **The health professional** is an expert on the effectiveness, probable benefits and potential harms of treatment options
- **The patient** is an expert on themselves, their social circumstances, attitudes to illness and risk, values and preferences

Coulter A. Implementing shared decision making in the UK. A report for the Health Foundation 2009

Betty. Aged 84 years

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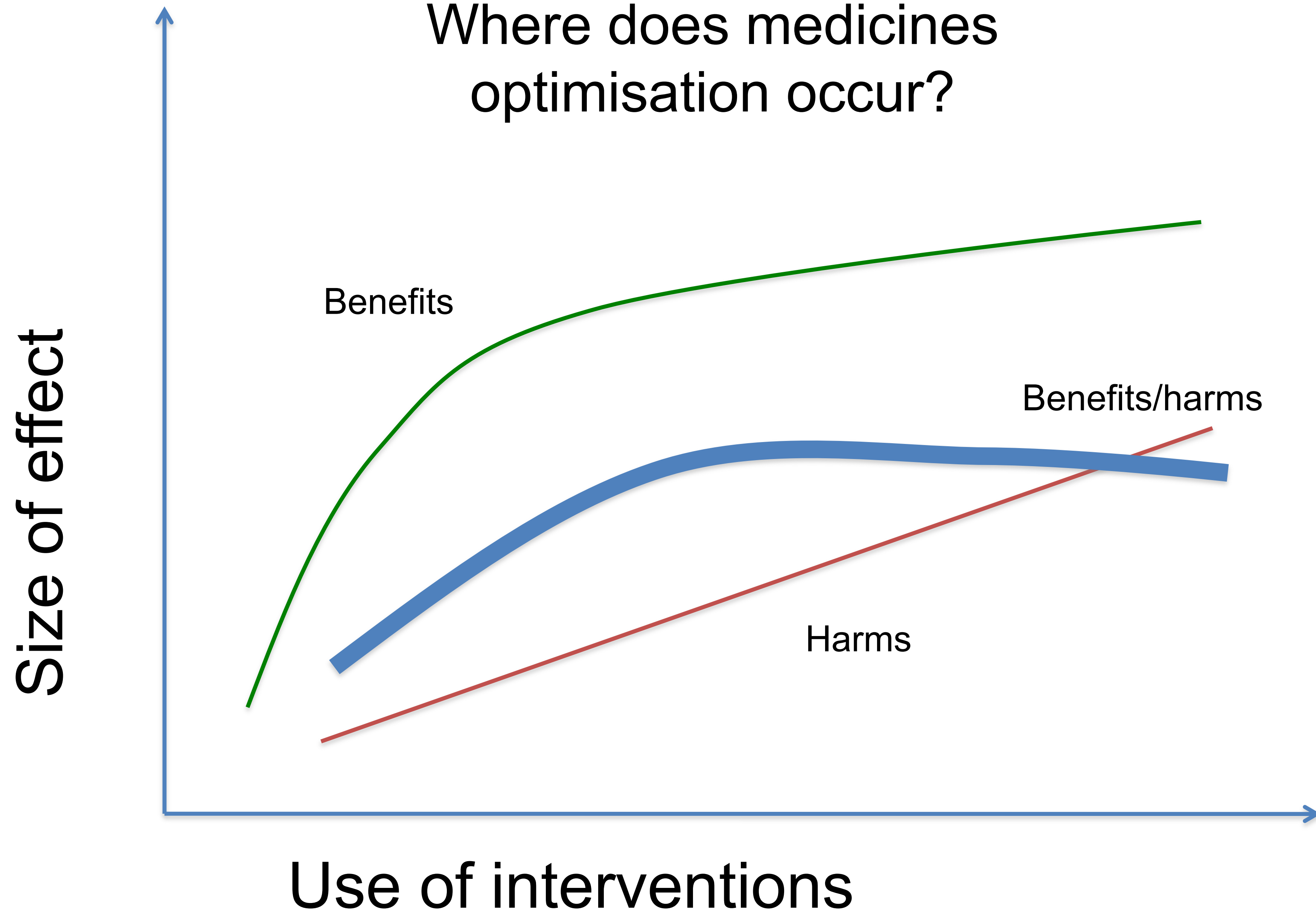
6 (now 7) separate conditions (some related)
13 medicines

Less is more


Where does medicines optimisation occur?
Benefits
Benefits/harms
Harms
Size of effect
Use of interventions

Guidelines and the generalist approach of primary care

Journal of primary health care Volume 4.Number2.June 2012

Polypharmacy is one of the biggest threats to healthy old age.

The quality of primary care in coming decades is likely to be defined not by what we do give, but by how **well we make decisions not to give treatments**.

Guidelines.
Not tramlines..

Good communication......

www.ncbi.nlm.nih.gov/pmc/articles/PMC3096184/

- Helps regulate patients' emotions, facilitate comprehension of medical information, and allow for better identification of patients' needs, perceptions, and expectations.
- Patients are more likely to be satisfied with their care, and especially to share pertinent information for accurate diagnosis of their problems, follow advice, and adhere to the prescribed treatment.
- Patients' agreement with the doctor about the nature of the treatment and need for follow-up is strongly associated with their recovery.
- Studies have shown correlations between a sense of control and the ability to tolerate pain, recovery from illness, decreased tumor growth, and daily functioning. Enhanced psychological adjustments and better mental health have also been reported.
- Some studies have observed a decrease in length of hospital stay and therefore the cost of individual medical visits and fewer referrals.
- A more patient-centered encounter results in better patient as well as doctor
- Satisfied patients are less likely to lodge formal complaints or initiate malpractice complaints.
- Satisfied patients are advantageous for doctors in terms of greater job satisfaction, less work-related stress, and reduced burnout.

Communicate better.

Conversation can “solve” most complex problems.

More data doesn’t.

Knowing Stuff

Knowing Stuff

Knowing Stuff

Knowing Stuff

Communication skills

Learning a new skill

- **Instruction** (nodes of knowledge, stringing them together, effort required)
- **Demonstration** (seeing others do it routinely and well and seeing that it works)
- **Practice** (repeated, supportive feedback)
- **Assessment**

AIR CANADA

Using avatar technology to practice conversation skills

https://youtu.be/NMa6HwGCyP0

Keele School of Pharmacy

Much to be gained with relatively simple modifications to current conversations (it's mostly recognising the technical focus isn't enough)

Dr Atul Gawande - 2014 Reith Lectures

Atul Gawande, MD, MPH is a practicing surgeon at Brigham and Women's Hospital and Professo
School of Public Health and Harvard Medical School.

In his lecture series
Medicine, Dr Atul
the nature of progr
medicine, a field de
'the messy intersec
human fallibility'.

Known for both his
vivid storytelling, he
growing importanc
medicine and argu
the medical profess
be bigger than sim
and survival.

"What is your **u**nderstanding of where you are with your illness?"

"What are your **f**ears and worries for the future?"

"What **o**utcomes would be unacceptable to you?"

"What are your goals if **t**ime is short?"

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6 (now 7) separate conditions (some related)
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What does the evidence say Betty needs for her AF?

- Based on her CHAD2VASC2 and HAS-BLED – offer anticoagulant

What does Betty actually need, or indeed want?

She says:

> "I don't want any more tablets. I feel ill all the time. I am unsteady on my feet. I need help with shopping. I need help getting into the shower in the morning. At the moment I can't stand and cook; how am I going to get a meal?"
>
> "I certainly don't want want something like warfarin. My husband was on warfarin and it was awful. I'm not interested in your pictures of benefits and risks. I'm 84 now - tell me which of my tablets are controlling my symptoms and let's stop the rest.
>
> You know what, I'm happy to take my chances now"

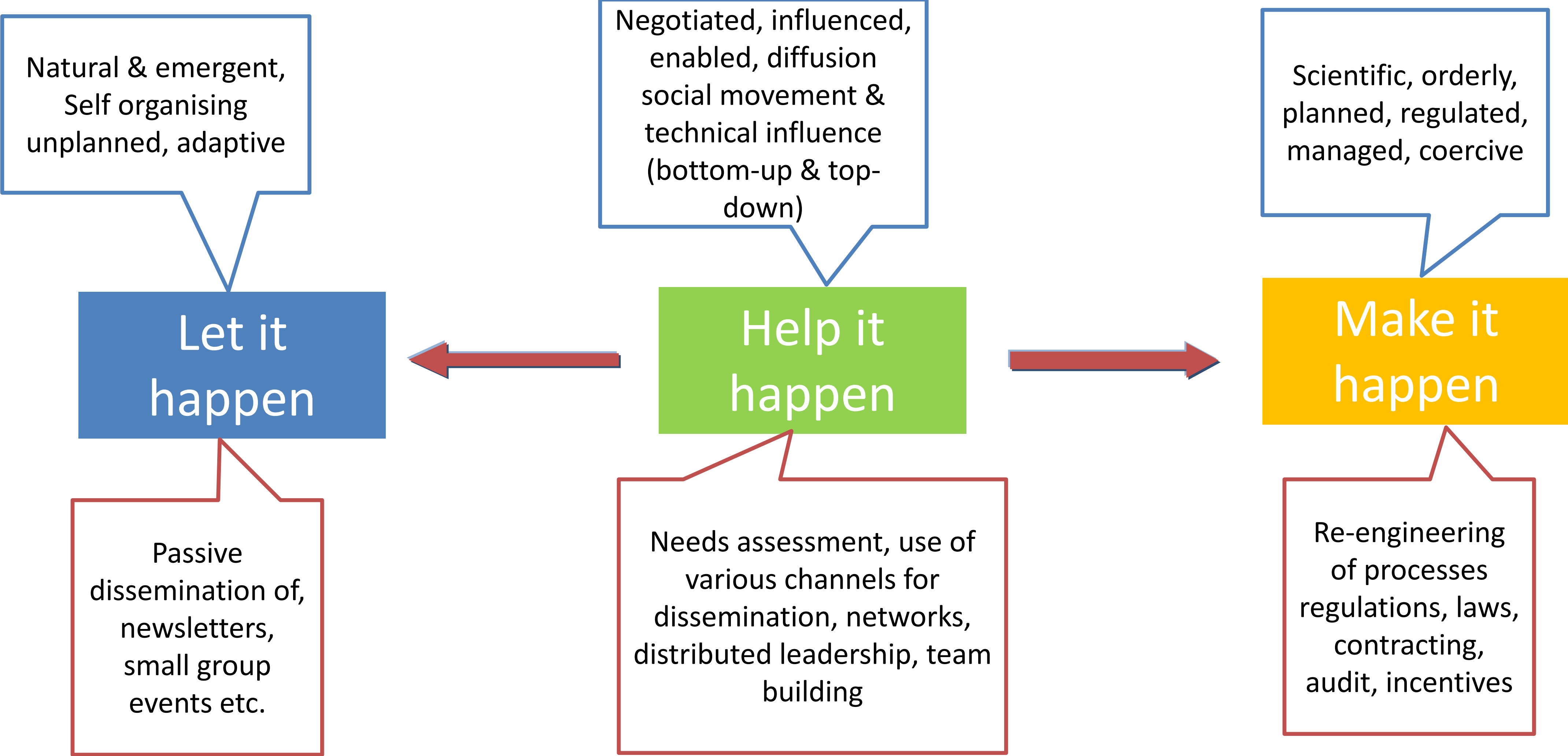
The conversation so far.......

- The **ethical care of people like Betty** is our top priority
- This demands **individualised evidence** in a format that we can understand
- It is characterised by **expert judgment** rather than mechanical rule following
- The route to truly shared decision making is through **meaningful conversations**
- Having meaningful conversations is a skill - feedback in a safe environment is essential for this

Complicated vs Complex

MeReC Bulletin 2011;22(2)

A Model for Change



Greenhalgh T, et al. Milbank Quarterly 2004; 82:581–629

Drivers for Change

Of people over 60 suffer from at least one long term condition — **58%**

Healthcare spend associated with LTCs — **70%**

Increase in no. of people with 3 or more LTCs in next 10 years — **60%**

Hospital beds occupied by Frail Older People — **70%**

Demographic projections, rise in people over 65 by 2050 — **252%**

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- Understand the role of the caregiver, the financial challenges that seniors can face, and the importance of choosing appropriate care
- Advocate healthy living and disease prevention for seniors

$ Adverse drug events (ADEs) contribute approximately $3.5 billion additional dollars to US healthcare costs.

Older adults have the highest rate of ADEs.

28% of hospitalizations among seniors are due to adverse drug reactions

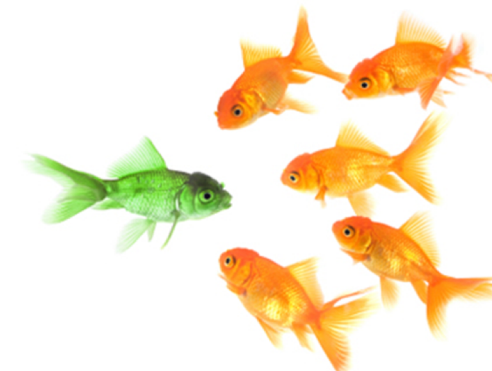
Learn more at www.ascp.com.

Create Shared Purpose

PHARMACIST PRESCRIBER

References: Viral change, Leandro Herrero. Creating Contagious commitment, Andrea Shapiro. Stephen Covey, 7 habits of highly effective people. Influencer, Grenny, Patterson et al, John Kotter

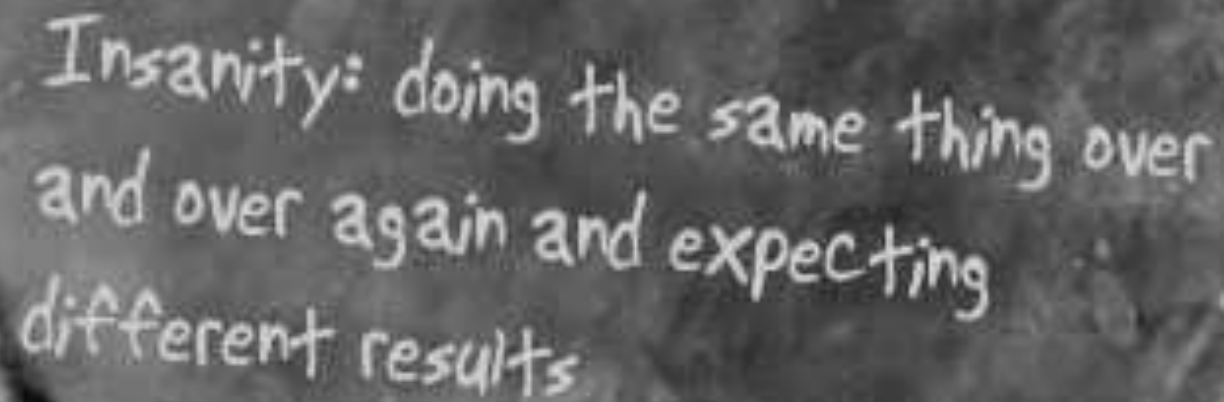
Create a Social Movement



References: Viral change, Leandro Herrero. Creating Contagious commitment, Andrea Shapiro. Stephen Covey, 7 habits of highly effective people. Influencer, Grenny, Patterson et al, John Kotter. The Power of Storytelling, Marshall Ganz.

Overcome the Hurdles

Source: Kim WC and Mauborgne R (2003) Tipping Point Leadership. Harvard Business Review.


Insanity: doing the same thing over and over again and expecting different results
www.hetemeel.com

Key Messages

- Betty is not fictional, she is real, she is our future & the future of those close to us.
- You as pharmacists have a unique skillset that can be actively involved in planning and delivering medicines optimisation to patients.
- Now is the time to act, the statements are a powerful enabler.

KAYHILL
MANAGEMENT CONSULTANCY

Keele University

"It is required of every man," the ghost returned, "that the spirit within him should walk abroad among his fellow-men, and travel far and wide; and, if that spirit goes not forth in life, it is condemned to do so after death."

Charles Dickens, A Christmas Carol

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Jonathan Underhill: j.l.underhill@keele.ac.uk