

Hospital pharmacy in Sweden

- highlights and curiosities



Disclosure Statements for

Karl-Johan Lindner, Ulrika Gillespie and Anna Bergkvist Christensen

"Conflict of interest: nothing to disclose"

Outline of presentation

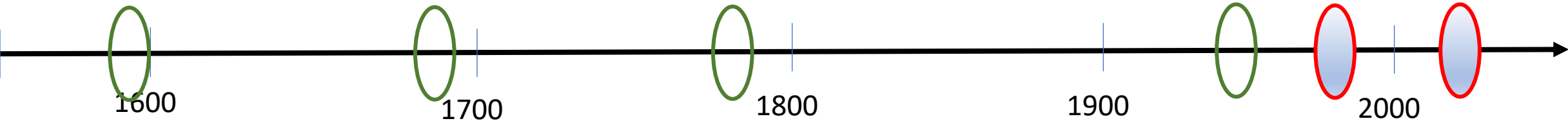
- The history of hospital pharmacy in Sweden
- Development of clinical pharmacy – from nursing homes to hospitals
- The Swedish experience of Horizon scanning and managed introduction of new medicines

- Questions and discussion!


Self-assessment questions (Yes/No)

1. Between 1970 and 2009 all pharmacies, including hospital pharmacies, were run by a state-owned monopoly chain.
2. The legislation in Sweden says that everybody >65 is entitled to a yearly medication review.
3. The filtration process in Horizon scanning is performed once every year.

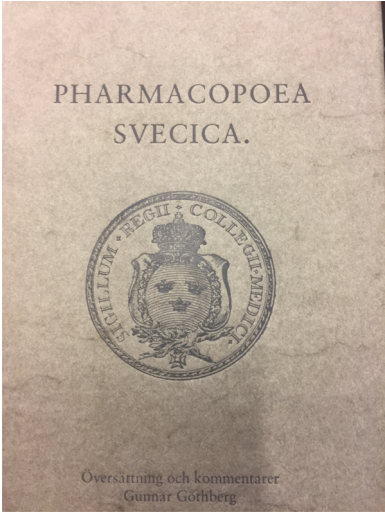
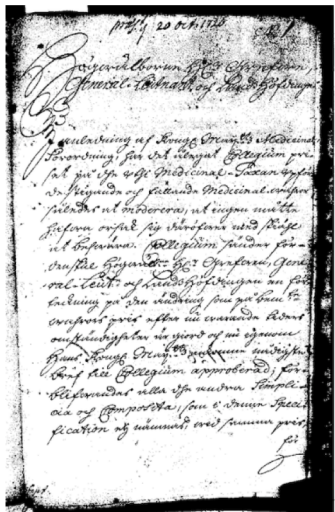
(Hospital) pharmacy in Sweden - 400 years with a "free" market

 APOTEKSBOLAGET

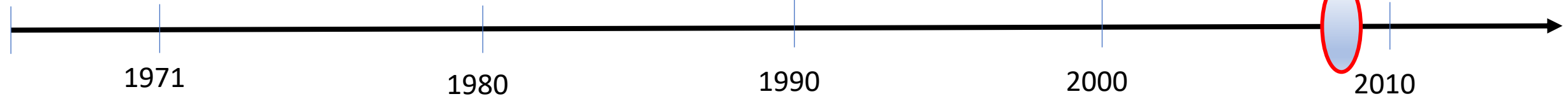
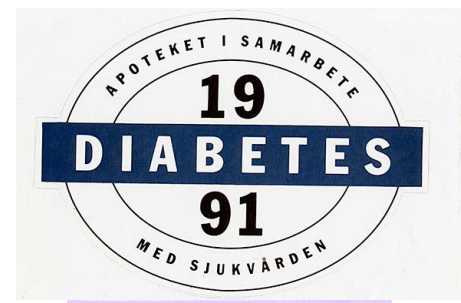
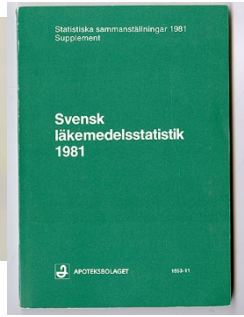
PHARMACOPOEJA
HOLMIENSIS
GALENO-CHYMICA
Complectens
Compositiones apprime ne-
cessarias, utibus hodiernis
deltinatas;
earumq; conficiendi
modos.



HOLMIÆ,
Typis JOH. G. EBERDT,
ANN O M. DC. LXXVII.

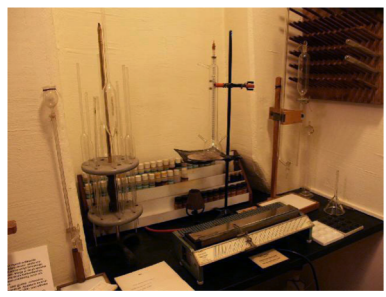


The (hospital) pharmacy developed during the monopoly

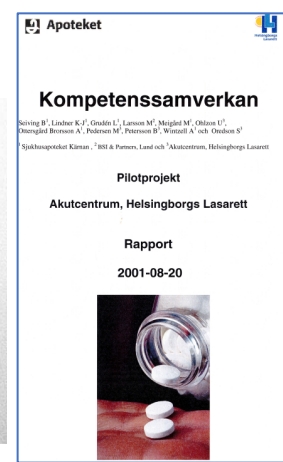


APOTEKSBOLAGET

Pharmacy/Hospital Pharmacy
Production
Compounding
QC
R&D



apoteket



PHARMA · SPECIALS

UNIMEDIC[®] PHARMA

R&D - hospital pharmacy

Hypoglycemic Activity of Glyburide (Glibenclamide) Metabolites in Humans

Tony Rydberg, MSc PHARM, Anders Jönsson, MD, Michael Röder, MD and Arne Melander, MD, PhD

[+](#) Author Affiliations

Address correspondence and reprint requests to Tony Rydberg, MSc Pharm, the Hospital Pharmacy, Central Hospital, S-291 85 Kristianstad, Sweden.

Diabetes Care 1994 Sep; 17(9): 1026-1030. <https://doi.org/10.2337/diacare.17.9.1026>



[Journal of Neural Transmission / General Section JNT](#)

February 1992, Volume 88, [Issue 1](#), pp 1-10 | [Cite as](#)

Brain kinetics of 11 C-labelled L-tryptophan and 5-hydroxy-L-tryptophan in the Rhesus monkey

A study using positron emission tomography

Authors

[Authors and affiliations](#)

P. Hartvig, K. J. Lindner, J. Tedroff, Y. Andersson, P. Bjurling, B. Långström

Br. J. Anaesth. (1987), **59**, 548-556

PHARMACOKINETICS OF MIDAZOLAM IN TOTAL I.V. ANAESTHESIA

P. PERSSON, A. NILSSON, P. HARTVIG AND A. TAMSEN



[Clinical Pharmacokinetics](#)

May 1992, Volume 22, [Issue 5](#), pp 385-395 | [Cite as](#)

Pharmacokinetics of Factor VIII in Humans

Obtaining Clinically Relevant Data from Comparative Studies

Authors

[Authors and affiliations](#)

Sven Björkman, Maj Carlsson, Erik Berntorp, Pål Stenberg



[Explore this journal >](#)

Intravenous Formulations of the Enantiomers of Thalidomide: Pharmacokinetic and Initial Pharmacodynamic Characterization in Man

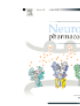
TOMMY ERIKSSON, SVEN BJÖRKMAN [✉](#), BODIL ROTH, PETER HÖGLUND

First published: July 2000 [Full publication history](#)



Neuropharmacology

Volume 37, Issue 8, August 1998, Pages 989-995



Effect of apomorphine infusion on dopamine synthesis rate relates to dopaminergic tone

Richard Torstensonabd, Per Hartvigabd, Bengt Långström, Salumeh Bastamia, Gunnar Antonia, Joakim

R&D – community pharmacy

PHARMACOEPIDEMIOLOGY AND DRUG SAFETY 2003; 12: 499–510
Published online 6 May 2003 in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/pds.852

ORIGINAL REPORT

Drug utilisation 90% profiles—a useful tool for quality assessment of prescribing in primary health care in Stockholm

Björn Wettermark MSc Pharm^{*1,2}, Åke Pehrsson BA³, Dane Jinnerot MD³ and Ulf Bergman MD, PhD^{1,2,4}

PDS Pharmacoepidemiology & Drug Safety
Official Journal of the International Society for Pharmacoepidemiology



Original Report

Antidepressant medication and suicide in Sweden

Anders Carlsten, Margda Waern, Anders Ekedahl, Jonas Ranstam

First published: 16 November 2001 | <https://doi.org/10.1002/pds.618> | Cited by



[European Journal of Clinical Pharmacology](#)

March 1993, Volume 44, [Issue 2](#), pp 141–146 | [Cite as](#)

Benzodiazepine prescribing patterns in a high-prescribing scandinavian community

Authors

[Authors and affiliations](#)

A. Ekedahl, J. Lidbeck, T. Lithman, D. Noreen, A. Melander

Journal of
Clinical Pharmacy and Therapeutics



Assessment of the clinical and economic outcomes of pharmacy interventions in drug-related problems

T. Westerlund MS(Pharm) MS PhD B. Marklund MD PhD

First published: 5 May 2009 | <https://doi.org/10.1111/j.1365-2710.2008.01017.x>

Why break the monopoly.....?



Why break the monopoly.....?

Safe and rationale use of medications

High efficiency

Price pressure

Increase accessibility



Available online at www.sciencedirect.com

ScienceDirect

Research in Social and Administrative Pharmacy (2013)

RESEARCH IN SOCIAL & ADMINISTRATIVE PHARMACY

Original Research

Pharmacist–patient communication in Swedish community pharmacies

Erika Olsson, M.Sc.*, Pontus Ingman, M.Sc., Ban Ahmed, M.Sc., Sofia Källemark Sporrang, Ph.D.

Department of Pharmacy, Uppsala University, BMC, P.O. Box 580, SE-751 23 Uppsala, Sweden

Table 2

Proportions of dialogs containing medical/pharmaceutical communication

Time	Proportion (%)
10 s or less	49.8
11–30 s	24.7
31–60 s	15.8
61–90 s	3.9
91 s or more	5.8
Total	100.0

“...there was little or no dialog regarding medicinal issues during the pharmacy encounter in Swedish community pharmacies”.

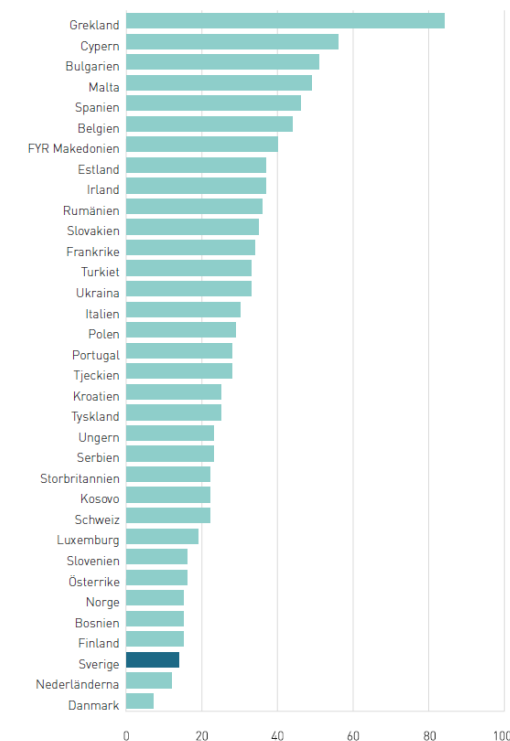


Tabell 5 Jämförelse av priser på apotek respektive online, kronor/förpackning

Läkemedel	Apotek Apoteket AB	Apotek Apoteket Hjärtat	Online Apoteket AB	Online Apoteket Hjärtat	Online Apotea
Alvedon 500 mg 20 tabletter	40,50	40,50	27	26	26
Ipren 400 mg 30 tabletter	56	56	35	35	35
Nasonex 500 mg 60 doser	119	119	83	83	83

Källa; Egen sökning gjord 2017-01-19 på www.medicinpriser.se

Apotekstäthet i Europa. Antal apotek per 100 000 invånare.



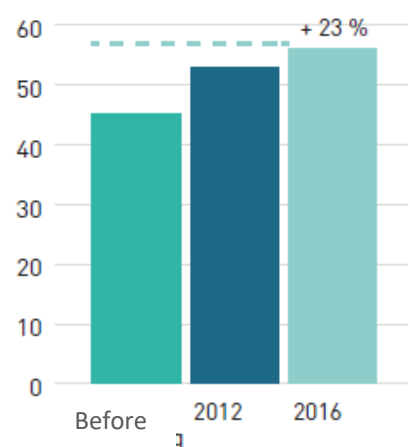
Significantly more community pharmacies



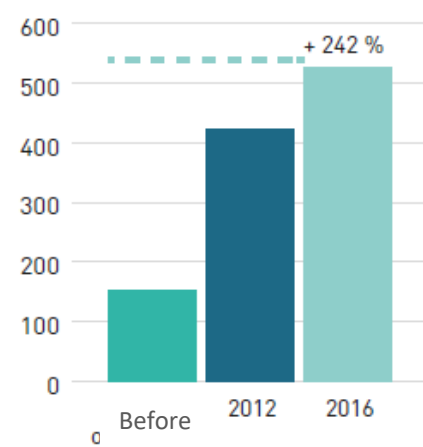
Number of community pharmacies

Apoteksaktör	"Before"	2010	2011	2012	2013	2014	2015	2016
Apotek Hjärtat ¹		256	270	277	306	307	-	-
Apoteket AB	929	345	365	375	372	370	372	387
Apoteksgruppen		150	155	158	163	165	169	177
Cura apoteket/ Apotek Hjärtat ¹		30	42	48	58	67	391	386
Kronans Apotek ²		189	209	219	300	305	309	323
LloydsApotek ³		50	81	77	79	83	80	80
Medstop ⁴		63	64	65	-	-	-	-
Vårdapoteket ⁵		24	24	27	-	-	-	-
Others		15	32	28	25	30	37	39
Summa	929	1 122	1 242	1 274	1 303	1 327	1 358	1 392

Opening hours/week



Pharmacies open on Sundays



Hospital pharmacy: a trend toward "in-house" services

Läkemedelsverkets författningssamling

ISSN 1101-5225
Utgivare: Generaldirektör Christina Ringemark Åkerman



Läkemedelsverkets föreskrifter om sjukhusens läkemedelsförsörjning:

LVFS 2012:8
Utkom från trycket den 13 juni 2012



2009

2014

2018

apoteket

apoteket

Vårdapoteket

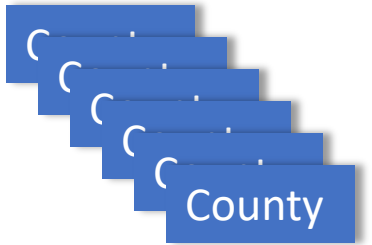
→ APOTEK

→ ICA

→ apo

County

APOTEK



Sweden



- Distribution
- Ward services
- Compounding
- Multi-dose packaging
- Self-inspection

.....hospital pharmacy has developed

Integrating pharmacy
> 500 pharmacists employed
"New" techniques
Ward-based prescriptionist
Clinical pharmacy....



The history of clinical pharmacy in Sweden

- Visits to the US – start... abrupt stop!
- Connections with Hope Hospital, Manchester (exchange programs)
- The Swedish nursing home study 1996



Christine Clark



The history of clinical pharmacy in Sweden

- The Helsingborg study (Apoteket AB)
 - Over 1000 patients included
 - Medication reviews at the emergency department



- Pioneers



Anne Hiselius

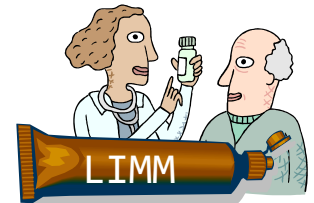
Integrated Medicines Management (IMM) in Northern Ireland (Scullin et al Journal of Clinical Evaluation 13, 781-8 (2007))

- Drug history at admission reduction of 4.2 errors per patient
- Length of stay reduced by 2 days
- Increased time to readmission (20 days)
- Kardex monitoring (inpatient) 5.5 interventions per patient
- Faster medication rounds > 25 minutes per day saved
- Faster discharge > 90 minutes quicker
- More accurate discharge < 1% error rate compared to 25% by medical staff



Mike Scott

The LIMM-model (Lund Integrated Medicines Management)



Uppsala: the 80+ study

ORIGINAL INVESTIGATION

A Comprehensive Pharmacist Intervention to Reduce Morbidity in Patients 80 Years or Older

A Randomized Controlled Trial

Ulrika Gillette, MSc Pharm; Anna Alavaara, MSc Pharm; Dan Henrohn, MD, MSc, Pharm; Hans Garmo, PhD; Margareta Hammarlund-Udenaes, PhD; Henrik Toss, MD, PhD; Åsa Kettis-Lindblad, PhD; Håkan Mellus, MD, PhD; Claes Morlin, MD, PhD

Background: Patients 80 years or older are underrepresented in scientific studies. The objective of this study was to investigate the effectiveness of interventions performed by ward-based pharmacists in reducing morbidity and use of hospital care among older patients.

Methods: A randomized controlled study of patients 80 years or older was conducted at the University Hospital of Uppsala, Uppsala, Sweden. Four hundred patients were recruited consecutively between October 1, 2005, and June 30, 2006, and were randomized to control (n = 201) and intervention (n = 199) groups. The interventions were performed by ward-based pharmacists. The control group received standard care without direct involvement of pharmacists at the ward level. The primary outcome measure was the frequency of hospital visits (emergency department and readmissions [total and drug-related]) during the 12-month follow-up period.

Results: Three hundred sixty-eight patients (182 in the

intervention group and 186 in the control group) were analyzed. For the intervention group, there was a 16% reduction in all visits to the hospital (quotient, 1.88 vs 2.24; estimate, 0.84; 95% confidence interval [CI], 0.72-0.99) and a 47% reduction in visits to the emergency department (quotient, 0.35 vs 0.66; estimate, 0.33; 95% CI, 0.37-0.75). Drug-related readmissions were reduced by 80% (quotient, 0.06 vs 0.32; estimate, 0.20; 95% CI, 0.10-0.41). After inclusion of the intervention costs, the total cost per patient in the intervention group was \$230 lower than that in the control group.

Conclusion: If implemented on a population basis, the addition of pharmacists to health care teams would lead to major reductions in morbidity and health care costs.

Trial Registration: clinicaltrials.gov Identifier: NCT00661310

Arch Intern Med. 2009;169(9):894-900

Inspired by the Beer's criteria

- Publication of "Quality indicators for good pharmacotherapy for the elderly" (2004)
Swedish National Board of Health and Welfare
(Socialstyrelsen)



The Swedish Association of Local Authorities and Regions

- National program: Better Life for Elderly Sick People (Be-Life) (2010-2014)

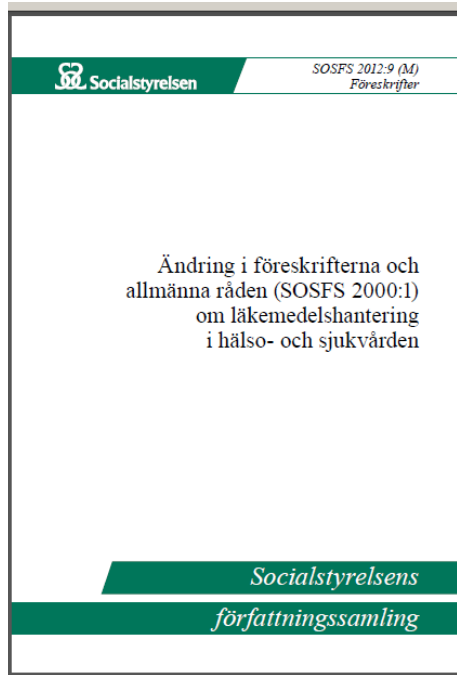
- For patients 75 years or older; minimize the use of drugs deemed inappropriate for elderly.

- Counties that managed to reduce prescribing of these drugs by 10% were rewarded

Landstinget i Uppsala län Läkemedel och äldre		
Preparat som bör undvikas/förskrivs restriktivt		
Substans	Preparatexempel	Kommentar
Långverkande bensodiazepiner diazepam nitrazepam flunitrazepam	Stesolid/Apodom Nitrazepam/Mogadon Flunitrazepam/Fluscand	Risk för dagtrötthet, kognitiva störningar, muskelsvaghet, balansproblem.
Läkemedel med antikonvulsiv effekt	För samtliga grupper: Risk för kognitiv påverkan, akut konfusion, urmatation, obstipation, munrotthet som kan ge tandproblem.	
Medel mot "övaraktiv blåsa"	Dantrolol, Vesicare, Ditropan/Kamora, Tioviz	Pröva utskiftning – utvärdera.
Tricykliska antidepressiva	Anaftran/Nomipramin, Saroten/Thyptazol, Sansaval	
propiomazin hydroxyzin alfemazin prometazin	Propovan Alcaix Theralon Langigan	Risk för dagtrötthet, restlös legs.
Neuroleptika levomepromazin haloperidol flupentixol klozapin olanzapin quetiapin risperidon	Nozinan Haldol Fluanxol Laponek Zyprexa Seroquel Risperdal	Rekommenderas vid psykotiska tillstånd. Risk för parkinsonism, sedation, ortostatism. Ökad mortalitet/hjärnt-kärl-händelser vid demensjukdom.
D-interaktioner, exempel	Bör undvikas – se Cosmic, Pascal eller www.janusinfo.se.	
warfarin+ASA warfarin+NSAD verapamil+betablockare	Waran+Thrombyl, Flaxve Waran+Igren, Voltaren m fl Isoprin+Tienormin, Salsolan, Timokol (ögondroppar) Isoprin+Cligodin	Ökad blödningsrisk. Risk för allvarig hjärtpåverkan.
verapamil+digoxin kalcium-kaliumparandol-läkemedel	Spironolakton, Amilorid	Risk för hyperkalemi.
Övriga olämpliga läkemedel tramadol kodain	Tramadol/Nobilgan Citodon	Risk för kognitiv påverkan, illamående, förstoppning. Vid otillräcklig smärtlindring med paracetamol rekommenderas starkopioid.

Legislation from the National Board of Health and Welfare in 2012

For all patients 75 years or older with ≥ 5 drugs:



- Medication reconciliation
At every transition of care.
- Medication review
At least yearly + for all patients with drug related problems
- Medication report to patient
At discharge from hospital
- Updated list of medicines
At discharge from hospital + when changes have been made to therapy

MSc in Clinical Pharmacy



University of
Strathclyde
Glasgow



Steve Hudson



The old Royal Infirmary, Edinburgh



Start 2006

A screenshot of the Uppsala University website. The header includes the university logo and navigation links for Admissions, Research, Collaboration, and The University. The main content area is titled "Master Programme in Clinical Pharmacy 2018/2019" and features a photograph of a glass containing pills on a desk. A message on the right states: "Unfortunately there is no information about this programme in English." The left sidebar contains a menu with options like "Why Uppsala University?", "Master's programmes", and "Application".



Margareta Hammarlund-Udenaes



Typical internal medicine ward (Uppsala)

- 28 beds, average length of stay 5 days
- Average age 80 years
- 40% living in nursing homes
- 40% multi-dose dispensed medications*
- GFR: 30ml/min
- ≥ 3 diagnoses,
- 10 drugs on average
- **High turn over in doctors and nurses**
- → **One full-time pharmacist since 2004**

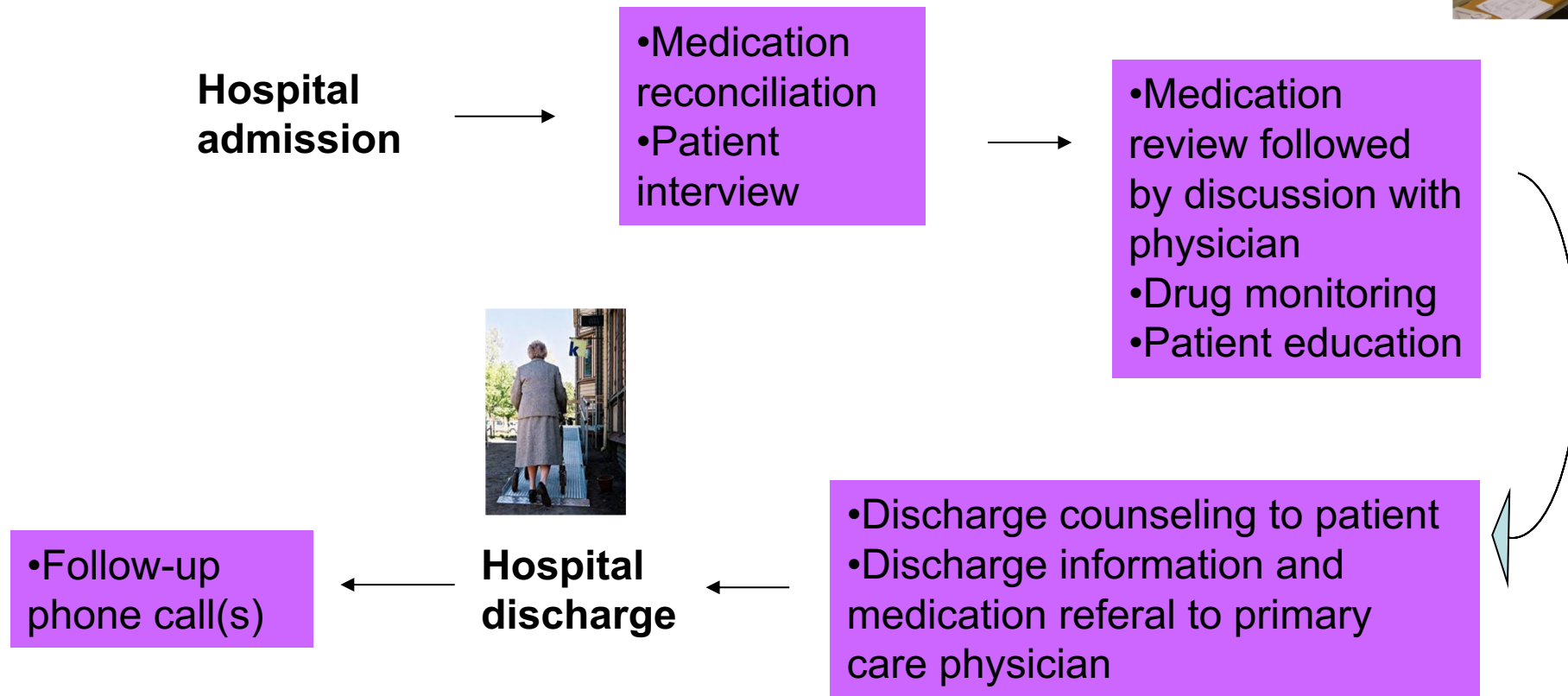
Uppsala University Hospital



*



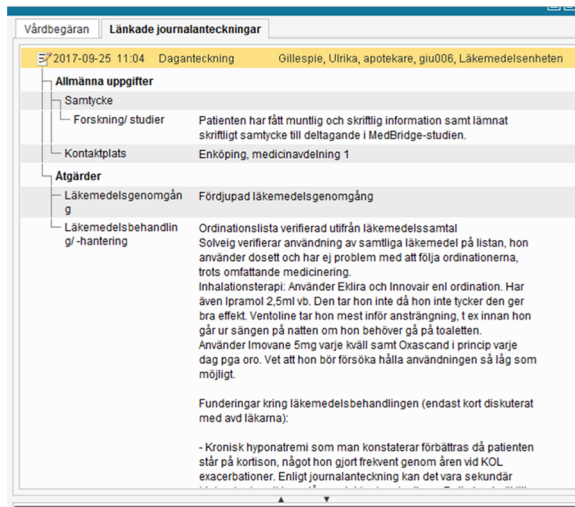
Medication review in hospital



Electronic referrals

- From GPs to clinical pharmacists based in primary care
- From hospital based clinical pharmacists to GPs (and other specialists)

Remissdatum	2017-09-27
Kontakt	Utförd, Vårdhjälp, 2017-09-24 - 2017-09-26, Medicinavdelning 1 - Lasarettet i Enköpings kommun
Remiss till	Lasarettansluten hemsjukvård - Lasarettet i Enköping
Remiss från	Gillespie, Ulrika, apotekare, giu006, Läkemedelsenheden
Remissmall	Lasarettansluten hemsjukvård (LAH) LE - vårdbegäran
Länkar	2017-09-25_Journalanteckning
Frågeställning	Läkemedelsgenomgång genomförd under vårdtiden (25/9), kort diskussion med avdelningsläkarna om de frågeställningar som jag tar upp i den länkade journalanteckningen. De hänvisade till er och därmed skickar jag denna remiss. Med vänliga hälsningar, Ulrika Gillespie
Allmänna uppgifter*	<p>Samtycke: Ja, patienten samtycker till att remittera och remissmottagare, genom så kallad sammanhållen journalföring, får ta del av relevant vårddata hos respektive vårdgivare.</p> <p>Brytpunktsamtal: Ej utfört</p> <p>Ställningstagande begränsad behandling: Ej aktuellt</p>



Vårdbegäran | Länkade journalanteckningar

2017-09-25 11:04 Daganteckning Gillespie, Ulrika, apotekare, giu006, Läkemedelsenheden

Allmänna uppgifter

- Samtycke: Patienten har fått muntlig och skriftlig information samt lämnat skriftligt samtycke till deltagande i MedBridge-studien.
- Kontaktplats: Enköping, medicinavdelning 1

Åtgärder

- Läkemedelsgenomgång: Fördjupad läkemedelsgenomgång
- Läkemedelsbehandling/-hantering: Ordinationslista verifierad utifrån läkemedelsamtal. Solveig verifierar användning av samtliga läkemedel på listan, hon använder dossett och har ej problem med att följa ordinationerna, trots omfattande medicinering. Inhalationsterapi: Använder Exlira och Innovair enl ordination. Har även Ipratol 2,5ml vb. Den tar hon inte då hon inte tycker den ger bra effekt. Ventoline tar hon mest inför ansträngning, 1 ex innan hon går ur sängen på natten om hon behöver gå på toaletten. Använder Imovane 5mg varje kväll samt Oxacand i princip varje dag pga oro. Vet att hon bör försöka hålla användningen så låg som möjligt.

Funderingar kring läkemedelsbehandlingen (endast kort diskuterat med avd läkarna):

- Kronisk hyponatremi som man konstaterar förbättras då patienten står på kortison, något hon gjort frekvent genom åren vid KOL-exacerbationer. Enligt journalanteckning kan det vara sekundär

Hot news April 2016:



Dagens Medicin | Specialistområden | Opinion

Apotekare remitterar till vården

I Uppsala kan nu kliniska apotekare skicka remiss till primärvården.

Publicerad: 2016-05-10 11:09



Läkartidningen | Kontakt | 1/5

Start | Aktuellt | Klinik & vetenskap | Opinion

Arkiv | Start | Nyheter | Patienter | Kultur | Människor & moten

Om Läkartidningen, 2016, 04, 10, 11:09

NYHETER

Farmaceuter får skicka remisser

De kliniska apotekarna inom Läkartidningen i Uppsala kan från april i år skicka remisser till primärvården. Det skriver Svensk Farmaci på sin webbplats svenskfarmaci.se.

MJ-Lite Kvalitet

Remisserna gäller läkemedelsrelaterade problem för patienter som blivit eller riskerar att bli skadade av läkemedel eller förskrivna läkemedel. De skickas efter samråd med sjukhusläkare.

Läkartidningen i Uppsala är en av de största kliniska farmaceuterna som har ett ansvar för läkemedelsanvändningen på sjukhuset, särskilt i samband med läkemedelsrelaterade problem. De 14 kliniska apotekarna, som i dag är anslutna till läkartidningen, arbetar på Akademiska sjukhuset, Örebro sjukhus och i primärvården.



Medication reviews in residential homes

- Always using PHASE-20 (assessment tool for possible drug-related symptoms)
<http://www.lul.se/phase-20english>
- Multiprofessional team rounds
- Increased knowledge for all staff on appropriate medication use in elderly
- Focus also on alternatives to medication use

Version for use in nursing homes

PHASE-20 — rating scale for possible drug-related symptoms

Patient name		NHS number	N.I. number	Date	
Diagnoses					
The patient has completed the document: <input type="checkbox"/> Independently <input type="checkbox"/> With some support Carers signature:					
The patient is: <input type="checkbox"/> Mobile <input type="checkbox"/> Chairbound <input type="checkbox"/> Bedbound					
Height:	Weight:	BP sitting:	Pulse:	S-Creatinine:	Kidney function results:
Date:	Date:	Date:	Date:	Date:	Date:
Tick the box next to the option that best describes the patients symptoms during the last two weeks. (Circle) the symptoms that are particularly dominant and erase out those that are not applicable. Please leave clarifying comments in the margin as necessary.					
	No problem	Minor problem	Moderate problem	Severe problem	Comments
1. Dizzy/unsteady/high risk of falls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Tired/exhausted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Poor sleep pattern/nightmares	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Abdominal pain/chest pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Headache	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Low mood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Worried/anxious	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Irritable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Forgetful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Poor appetite	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Dry mouth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Nausea/vomiting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Diarrhoea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. Constipation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. Palpitations (rapid/irregular heartbeat)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16. Swollen legs/ankles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17. Short of breath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18. Frequent urination/incontinent of urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19. Itching/rash	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20. Other symptoms, which you have experienced during the past two weeks, (for example pain), indicate which					

<input type="checkbox"/> Minor problem <input type="checkbox"/> Moderate problem <input type="checkbox"/> Severe problem					

The Uppsala example

- Research
- Series of student projects
- Perseverance...

Astrid Forsström



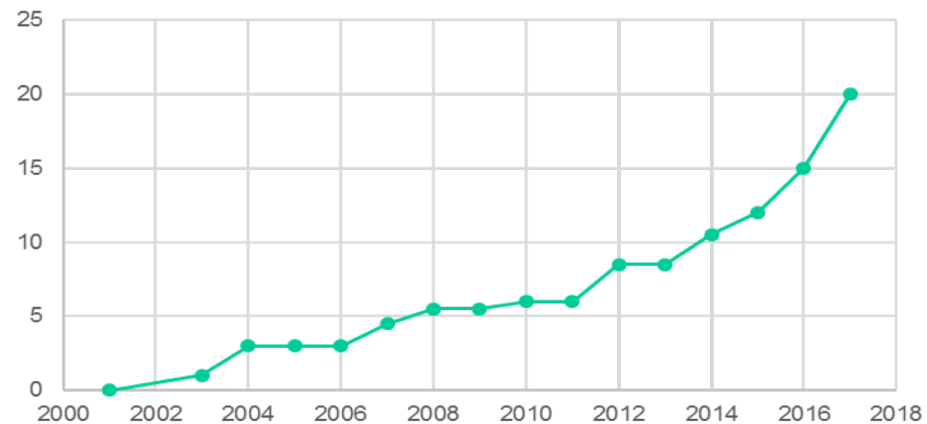
Claes Mörlin



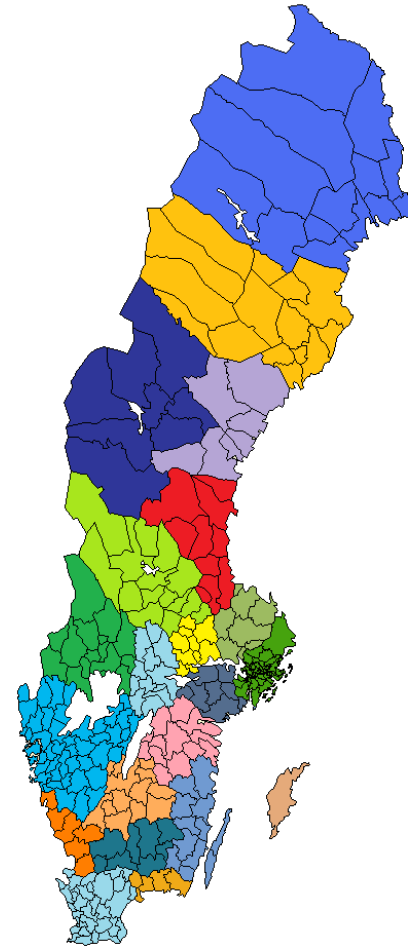
Clinical pharmacists in Uppsala 2016



Clinical pharmacy in the Uppsala region



- Current status – clinical pharmacy in Sweden?
- The future?



Horizon scanning and managed introduction of new medicines

- Background
- Swedish Healthcare in brief
- The process of Horizon scanning
- Managed introduction of new drugs – a national collaboration

How it all started...

Stockholm County visited NHSC in Birmingham in 2007 and started to work with Horizon scanning on a regional level.

Development of the Swedish Horizon scanning process

Stockholm County Council (SLL)

Region Västra Götaland (VGR)

Region Östergötland (RÖ)

Region Skåne (RS)



About 60% of the
Swedish population

- The collaboration started in 2009 to increase the effectiveness and quality in the work with Horizon scanning and models for introduction of new medicines
- In 2010 all other County councils got access to the Horizon scanning material

Swedish healthcare

- Financed by taxes
- Organized in independent counties
- Healthcare responsibilities divided at the national, regional and local level
- Most healthcare publicly owned

Sweden





Horizon scanning

The process of identifying new medicines or new uses of existing medicines that are expected to receive marketing authorisation from the Regulatory Authority in the near future and estimating their potential impact on patient care.

*Definition from dictionary,
Scottish Medicines consortium*

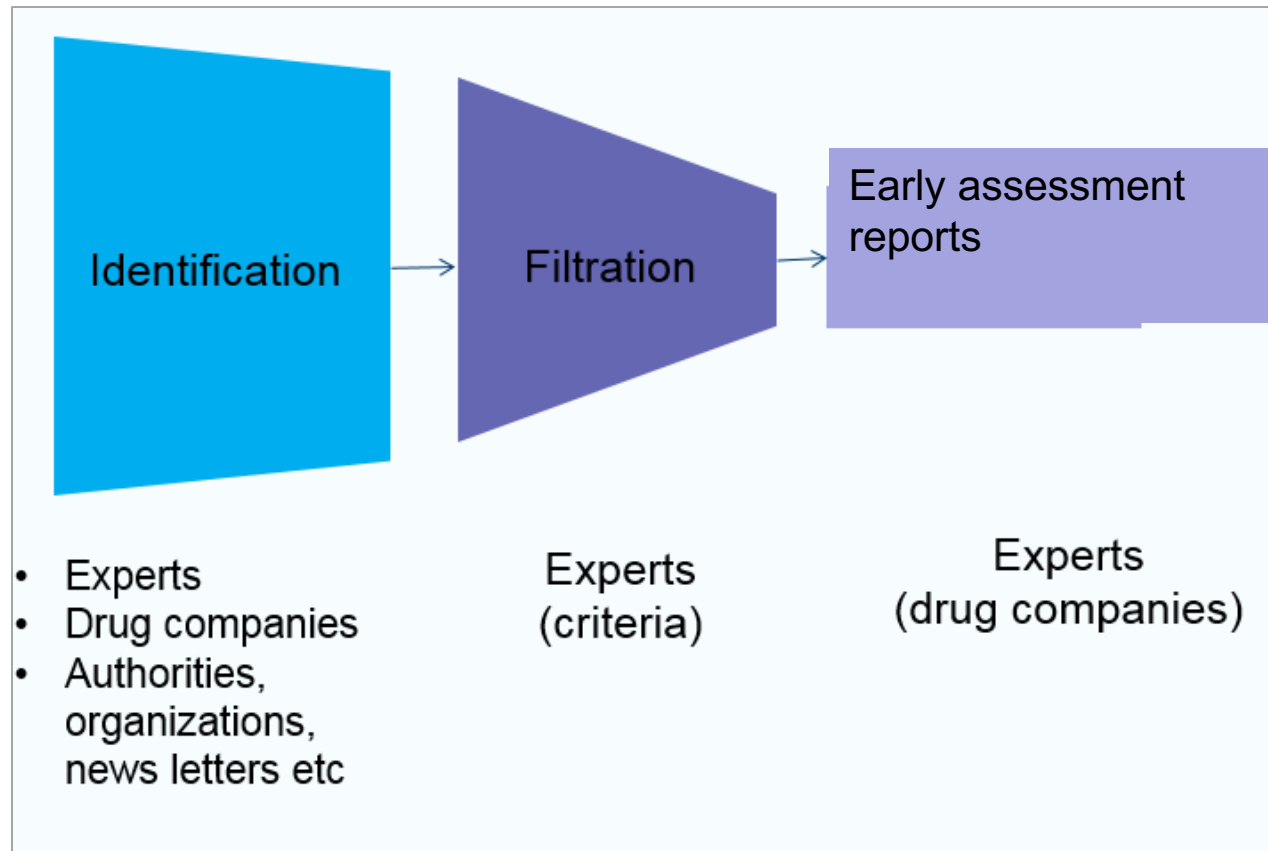
Why horizon scanning?



Time for planning and preparation

- support to prescribers
 - *recomendations, protocols, continuing education...*
- financing & budget
- structured introduction to assure best possible treatment to those patients who would gain the most of the treatment
- changes in organisation

The Swedish Horizon scanning process



Identification

- **Organizations and Authorities**

NIHR Horizon Scanning Centre, MPC, UKMi, EMA, MPA, EU, FDA

- **Other Publications**

Pharmaonline, First Word, Scrip, NeLM Headlines, Clinica Space and others

- **Clinical experts**

- **Drug companies**



Findings are entered into our database

The filtration process

- Four times every year
- Using criteria from Birmingham
- Step one – by ourselves
- Step two – clinical experts involved

The filtration process – the criteria

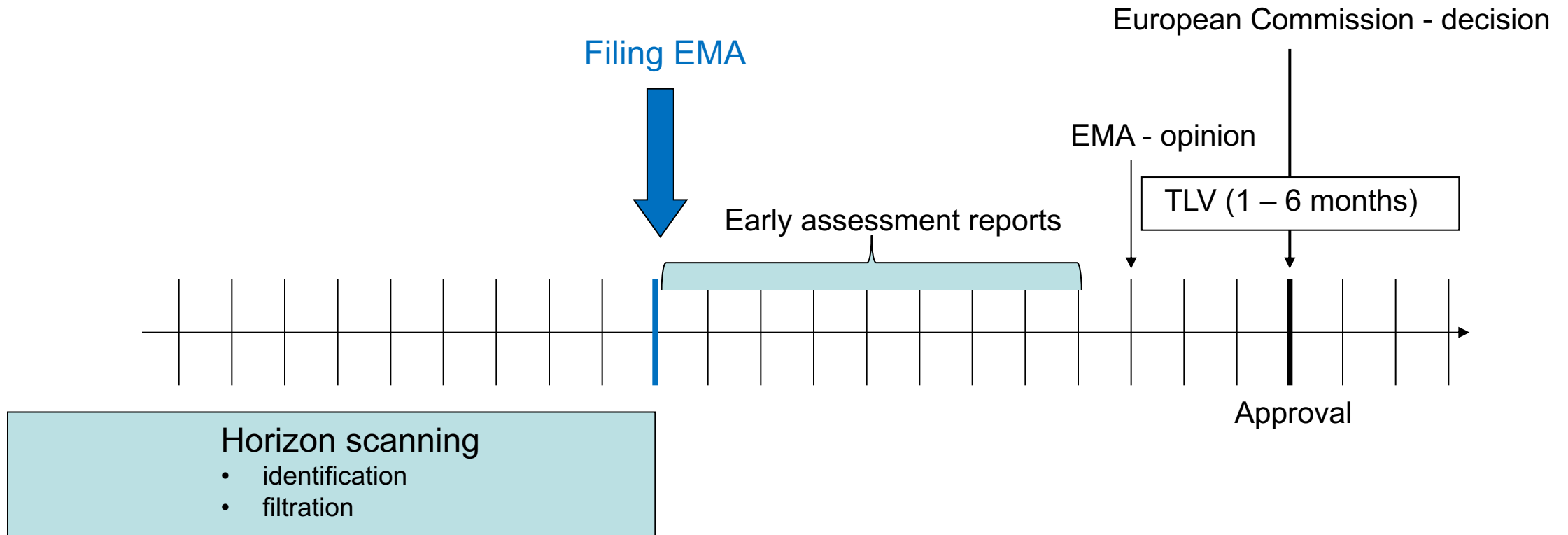
- Patient population
- Morbidity
- Clinical benefit
- Innovative treatment
- Costly therapy
- Need to reorganise the health care system
- Need to change therapy recommendations
- Safety issues
- Introduction – too fast or too slow
- Media and patient focus
- Potentially interesting from a legal, ethical or political perspective

Aim of early assessment reports

To give a preliminary idea of the potential value and consequences for the health care system, when and if the therapy would gain marketing authorisation.

- Prior to marketing authorisation
- Not an ordinary drug assessment

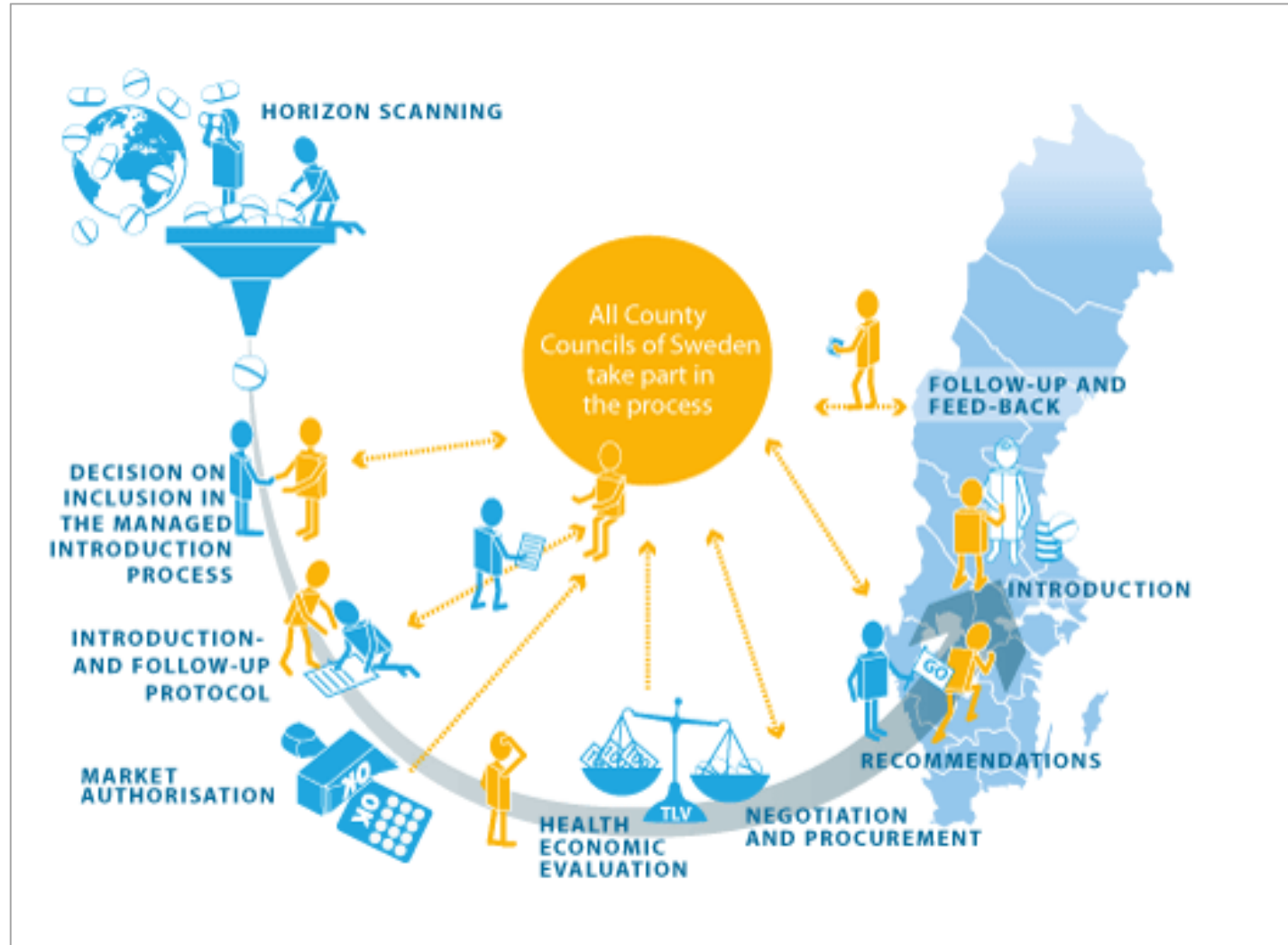
The timeline



Managed introduction of new medicines

In order to achieve an equal, cost-effective and appropriate use of new medicines for all patients in the country, all county councils, several governmental agencies and the pharmaceutical industry collaborate in a common process for the introduction of new medicines.

● LANDSTINGENS SAMVERKANSMODELL FÖR LÄKEMEDEL



The New Therapies Council

- Supports the Swedish county councils on questions concerning new drug therapies, with the aim of enabling equal drug treatment for patients throughout the country.
- The county councils have appointed one representative with medical or pharmaceutical expertise per health care region to the council. In addition, the council has members with expertise in for instance, ethics, health economy, oncology and horizon scanning.
- Commissioned to make recommendations to the county councils on the use of new drug therapies.
- Recommendations are based on ethical considerations and the health economic evaluation.

Negotiation and procurement

The county councils act jointly to develop terms, including pricing, for drugs subject to national managed introduction. The TLV is an important partner in this work both concerning prescribed medicines as well as drugs purchased by county councils for hospital care.

All county councils have one representative commissioned to represent the county council in negotiations together with the TLV and pharmaceutical company concerning prescribed medicines subject to reimbursement decision. In certain cases, the county councils carry out joint procurements of new medicines used in hospital care.

Examples of therapies in the process

- PD-1 and PD-L1 inhibitors
- New generations of drugs for Hepatitis C
- Monoclonal antibodies for asthma
- PCSK9-inhibitors for dyslipidemia

● LANDSTINGENS SAMVERKANSMODELL FÖR LÄKEMEDEL

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Janusinfo
STOCKHOLMS LÄNS LANDSTING

Kommersiellt obunden läkemedelsinformation riktad till läkare och sjukvårdspersonal

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Du är här: [Managed introduction – this is how it works](#)

[Horizon scanning](#)

[Selection](#)

[Decision on inclusion in the managed introduction process](#)

[Introduction- and follow-up protocol](#)

[Market authorisation](#)

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[Negotiation and procurement](#)

[Recommendations](#)

[Introduction](#)

[Follow-up and feed-back](#)

Managed introduction – this is how it works

In order to achieve an equal, cost-effective and appropriate use of new medicines for all patients in the country, all county councils, several governmental agencies and the pharmaceutical industry collaborate in a common process for the introduction of new medicines.

Please click on the headings to read more about how the process works.

[In Swedish](#)

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Sveriges Kommuner och Landsting

● LANDSTINGENS SAMVERKANSMODELL FÖR LÄKEMEDEL

Contact: [Sofie Alverlind](#)

[Read More](#)

[The New Therapies Council](#)

[Recommendations on new medicines](#)

Uppdaterad: 2016-07-06

Self-assessment questions - answers

Answer yes or no

1. I know the definition of Horizon scanning. YES
2. I know why Horizon scanning activities are carried out. YES
3. The filtration process is performed once every year. NO

Take home messages

Horizon scanning activities are carried out in order to facilitate the health care system's planning and preparation (support to prescribers, financing & budget, structured introduction, changes in organisation).

In order to achieve an equal, cost-effective and appropriate use of new medicines for all patients in the country, all county councils, several governmental agencies and the pharmaceutical industry collaborate in a common process for the introduction of new medicines.

The New Therapies Council supports the Swedish county councils on questions concerning new drug therapies, with the aim of enabling equal drug treatment for patients throughout the country.

Self-assessment questions (Yes/No)

1. Between 1970 and 2009 all pharmacies, including hospital pharmacies, were run by a state-owned monopoly chain. **Yes**
2. The legislation in Sweden says that everybody >65 is entitled to a yearly medication review. **No**
3. The filtration process in Horizon scanning is performed once every year. **No**

Thank you for your attention!



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