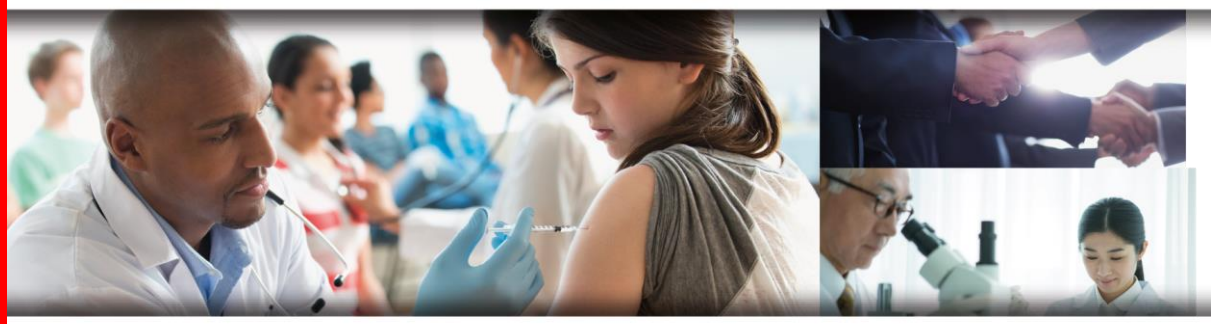
Reducing Payer Uncertainty by Predicting Disease Outcomes and Identifying the Right Patient: Fact or Fantasy?



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Tuesday, November 13, 2018

7:30 AM to 8:30 AM

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Housekeeping notes

- Turn phones to silent
- Please save questions for final discussion session
  - Microphones for verbal questions
- Taking photographs of slides is allowed

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Symposium program

Dr Mark Ratcliffe Market Access, Pricing and Reimbursement Specialist, Chief Executive Officer, PHMR Ltd., London, UK	**United Kingdom**	Opening & introductions
Ms Pauline Hernandez Inflammatory Bowel Disease patient	**Switzerland**	Patient perspective
Dr Panos Kanavos Associate Professor in International Health Policy in the Department of Health Policy at LSE and Political Science, Deputy Director at LSE Health and Programme Director of the Medical Technology Research Group	**United Kingdom**	Perspective from designers of policies
Dr Peter Clark Chair, NHS England Chemotherapy Clinical Reference Group & National Clinical Lead, Cancer Drug Fund; Former Chair of NICE appraisal committee; Consultant medical oncologist	**United Kingdom**	Payer perspective from the UK
Dr Nicky Lieberman Head of Medical Policy, Planning, Research and Innovation Division, Clalit Health Services, Tel Aviv, Israel	**Israel**	Payer perspective from Israel
Dr Peter Lindgren Professor of Health Economics at Karolinska Institutet & Managing Director at Institutet för Hälso och Sjukvårdsekonomi (IHE) - The Swedish institute for Health Economics, Stockholm	**Sweden**	Payer perspective from Sweden
Panel discussion	**Faculty and audience**	
Dr Mark Ratcliffe Market Access, Pricing and Reimbursement Specialist, Chief Executive Officer, PHMR Ltd., London, UK	**United Kingdom**	Closing & thank you note

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LIVING WITH IBD – A LONG AND UNCERTAIN JOURNEY

The patient perspective

Ms Pauline Hernandez

5

LIVING WITH IBD – A LONG AND UNCERTAIN JOURNEY

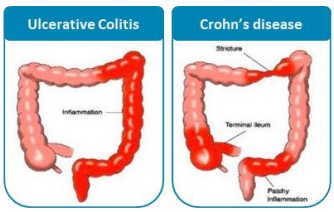
DISEASE INTRODUCTION

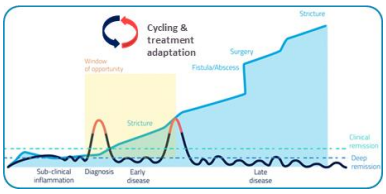
- Inflammatory bowel disease (IBD) is an umbrella term used to describe disorders that involve chronic inflammation of the digestive tract.
- Two major types of IBD are **ulcerative colitis** and **Crohn's disease**.
  - Ulcerative colitis is limited to the colon or large intestine.
  - Crohn's disease, can involve any part of the gastrointestinal tract from the mouth to the anus. Most commonly, though, it affects the last part of the small intestine or the colon or both.
- Both ulcerative colitis and Crohn's disease usually involve severe diarrhea, abdominal pain, fatigue and weight loss.
- IBD can be debilitating and sometimes leads to life-threatening complications. (1)

PATIENT JOURNEY & PERSPECTIVE

- Patients with CD and UC are usually diagnosed in their 20s and 30s (2),(3)
- **The goal of treatment** of Crohn's disease (CD) and ulcerative colitis (UC) is **achieving and maintaining symptomatic and endoscopic remission**. (4)
  - However, about 23 to 45 percent of people with ulcerative colitis and up to 75 percent of people with Crohn's disease will eventually require surgery. (5)
- **As a patient, a big part of the challenge with IBD is to manage the unpredictable course of the disease with flares & remissions.**

ILLUSTRATION





(1) IBD introduction available at : https://www.mayoclinic.org/diseases-conditions/inflammatory-bowel-disease/symptoms-causes/syc-20353315
(2) Cosnes J1, Gower-Rousseau C, Seksik P, Cortot A. Epidemiology and natural history of inflammatory bowel diseases. Gastroenterology 2011;140:1785–94.
(3) Molodecky NA, Soon IS, Rabi DM, Ghali WA, Ferris M, Chernoff G et al. Increasing incidence and prevalence of the inflammatory bowel diseases with time, based on systematic review. Gastroenterology 2012; 142:46 –54.
(4) Guideline on the development of new medicinal products for the treatment of Ulcerative Colitis, EMA 28 June 2018 CHMP/EWP/18463/2006 Rev.1 Committee for Medicinal Products for Human Use (CHMP)
(5) Surgery for Crohn's Disease & Ulcerative Colitis available at : http://www.crohnscolitisfoundation.org/resources/surgery-for-crohns-uc.html

IN THE LAST 10 YEARS, GREAT PROGRESS WERE MADE IN THE FIELD OF IBD

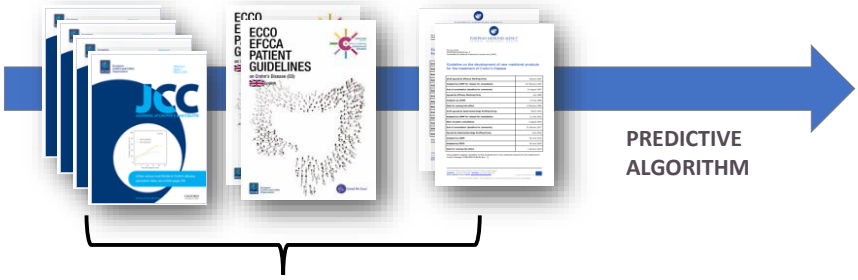
LANDSCAPE EVOLUTION

New therapies

New guidelines (clinical, patients, regulatory)

New technologies

Strong recognition from various stakeholders of the need to further develop understanding of the disease, improve clinical outcome, patient education and ensure efficient evidence generation.



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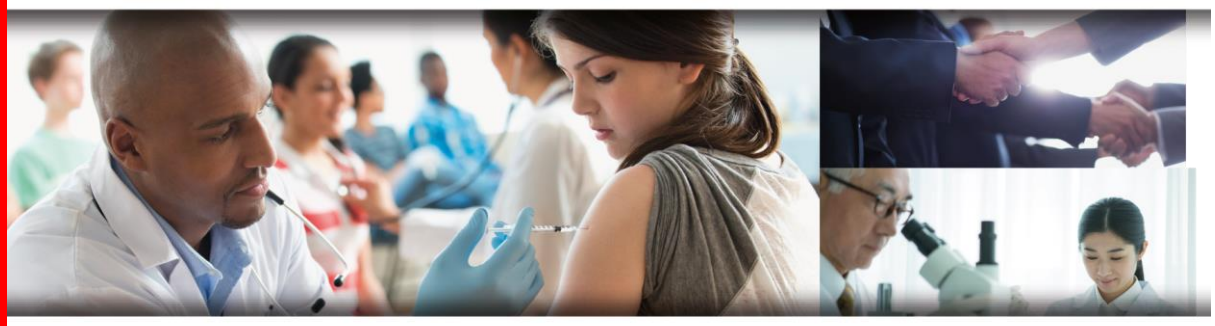

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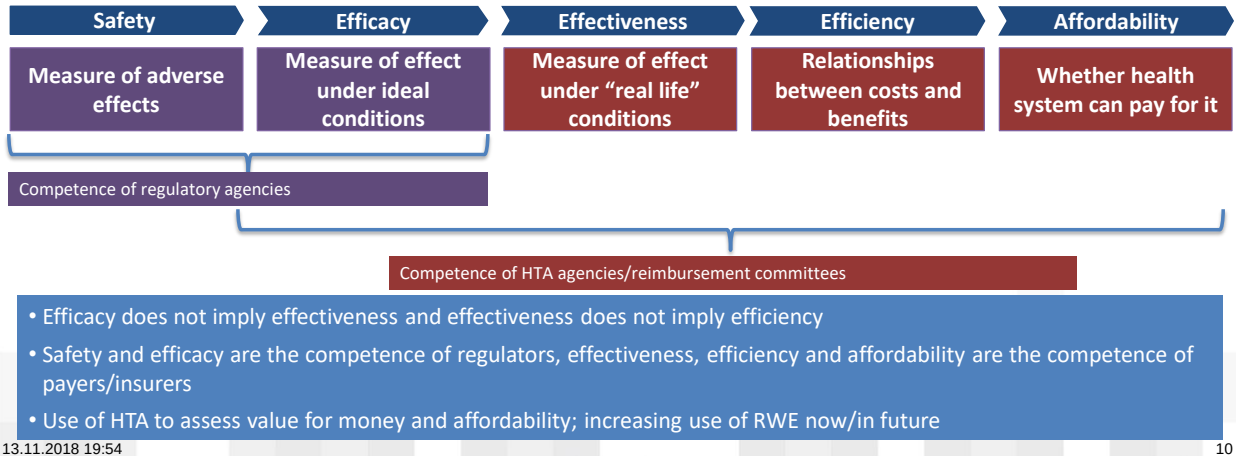
Reducing decision uncertainty by combining available data with predictive power to improve access to treatment

Panos Kanavos
London School of Economics
Takeda Symposium, ISPOR, 13 November 2018

LSE THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Observation 1: What do decision-makers want?

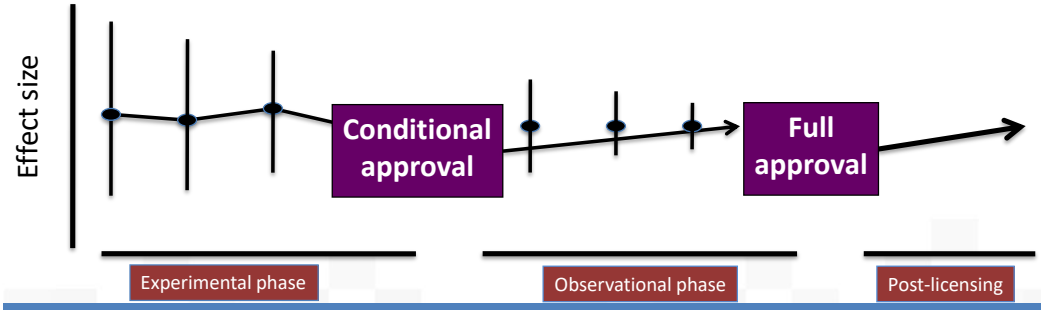
- **Safety** and **Efficacy** are *first* steps to provide evidence for a new treatment;
- **Effectiveness** and **Efficiency** need to be proven;
- **Affordability** is increasingly a requirement for coverage and may result in access restrictions
- Significant degree of **uncertainty** in value assessment;



- Efficacy does not imply effectiveness and effectiveness does not imply efficiency
- Safety and efficacy are the competence of regulators, effectiveness, efficiency and affordability are the competence of payers/insurers
- Use of HTA to assess value for money and affordability; increasing use of RWE now/in future

Observation 2: New approaches to licensing of new therapies

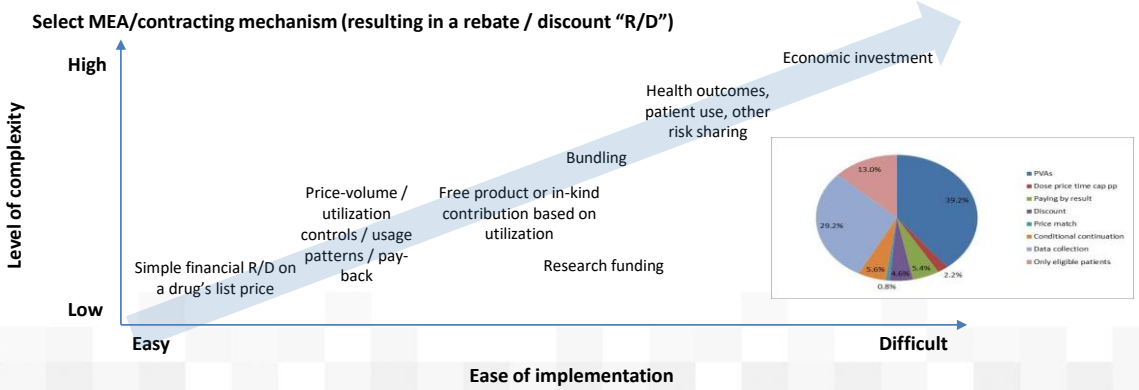
- An increasing number of new therapies are approved (conditionally) with early stage data
- Two steps in the demonstration of safety and efficacy
  - *Experimental phase*: effect size studied in conventional phase 2 studies → CMA
  - *Observational phase*: treated patients are followed to assess whether the promise shown is fulfilled
  - If initial promise is fulfilled → full MA



- Adaptive pathways and other trial designs will challenge the way HTA agencies assess value
- How do HTA bodies view RWE? What are the implications for manufacturers?

Observation 3: Increased use of managed entry to mitigate uncertainty

- Volume- or expenditure-based rebates aim to provide budgetary predictability and limit budget impact
- Outcomes-based contracts are used to address clinical uncertainty about health outcomes for new products
- Risk-sharing can include shared risk of potential overspend based on pre-defined budget, dose caps, and response rates



Towards a new paradigm: using predictive algorithms and combining data from RCTs and RWE to improve treatment pathways and access to treatment

Scientific landscape around predictive power in decision making or HEOR

- What is the potential for using predictive tools and/or methodologies in decision making?
  - Significant potential to improve the quality of care delivered to patients
  - Use of predictive algorithms and data analytics is very limited in most settings
  - There are some predictive algorithms tested in the UK, Sweden, Israel

- Areas where predictive tools/methodologies are already used in decision making
  - Over the past 5 years, tools to predict treatment outcomes have been developed in the following disease areas: oncology, CVD, liver disease, kidney disease (among others)
  - Methods have been developed to predict the following treatment outcomes:
    - Surgery and transplant success
    - Neurological effects
    - Occurrence of infections
    - Survival
    - Treatment efficacy/failure
  - Several studies have examined the use of these tools for predicting treatment outcomes in elderly patients
  - Scoring systems are commonly used, including bio-marker based scoring systems

Foundational pieces of evidence and their roles

- Randomised controlled trials (RCT) versus real world evidence (RWE)
  - How these can be integrated to help the algorithms and decision making
- Meaningful data for payers and patients and how can it can be used for decision making and future risk sharing agreements
- Collaboration between key stakeholders is likely to fill in such data gaps in disease areas such as inflammatory bowel disease (IBD)

Important considerations

Role of RWE	Role of HE modelling
• Impact HTA 2020 • BD4BO initiative • Prospective monitoring of predicted outcome • The role of PRO as a validator of patient – relevance	• Role of HE modelling in decision making • Potential for predictive power to evolve • Risk sharing partnerships • Role of academia

Other considerations
- The importance of iteration, as we get more data the predictions can improve (machine learning capabilities?)
- The importance of the endpoint for which more data exist vs. the endpoint of interest to decision makers, and how to integrate data that map from one to the other

Impact HTA, WP6: Methodological guidance on the analysis and interpretation of non-randomised studies to inform health economic evaluation - activities

Meta-epidemiological review	Case studies	Workshops
✓ Protocol registered on PROSPERO ✓ Database searches conducted to identify clinical topics with both RCTs and non- randomized studies ➢ Ongoing: screening through 11,000+ records	✓ Identified candidate drugs for NICE case study ✓ Defined roles for WP partners: potential to leverage diversity of jurisdictions and approaches to HTA through case studies in WP countries ➢ Case study work to start in late 2019	✓ 1st workshop planned: aims to raise awareness, provide input for WP6 work on and easy uptake of methodological guidance, and identify gaps not addressed by WP6 ✓ Participants confirmed ➢ Workshop to take place on 19 November 2018

How can this approach be put into practice and be developed into a multi-stakeholder partnership?

- Local data capacity and usage within General Data Protection Regulation (GDPR)
- Willingness to risk share with pharma (difficulty of countries willing countries than findings those that a more resistant, e.g. Sweden?)
- Incorporation of predictive power into guidelines (Rightcare in UK)
  - Managing ongoing uncertainty?
- Research on the topic and further academic guidance on how to link the dots (academia)
  - Including modelling
- Patient reported outcome (PRO) and definition of meaningful patient/payer research targets for modifying long-term disease (patient/all)
  - Will PROs be used to implement this in practice. Should they? If they are, is there a need to make the link between PROs and these patient/payer research targets? Will this approach require a change in mindset from decision makers?

How can this approach be put into practice and be developed into a multi-stakeholder partnership?

- Shared definition of the outcomes of interest?
- Quantification of the outcomes' impact on healthcare resources and use?
- Ability to track patients, share back outcome data?
- Willingness to plan and budget over a long-term horizon rather than year to year
- Shift mindset to broader disease control of a population rather than patient to patient

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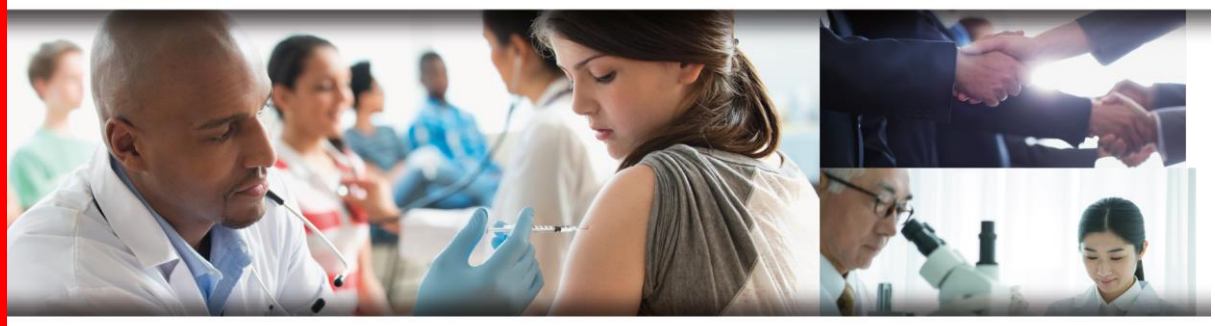

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UK payer perspective

Dr Peter Clark, MA, MD, FRCP

Chair, NHS England Chemotherapy Clinical Reference Group & National Clinical Lead, Cancer Drug Fund; Former Chair of NICE appraisal committee; Consultant medical oncologist

English payer perspective on predictive disease outcomes in oncology

- NICE now appraises drugs prior to granting of marketing authorisation i.e. the only data for HTA of a new drug/indication is derived from clinical trial(s). NICE could consider the use of predictive measure in its HTA but this would be based on the clinical trial data as there would be no real world evidence at time of licensing
- Marketing authorisations restrict use of some drugs to specific populations of patients e.g. HER-2, RAS, EGFR, ALK, ROS-1, PD-L1
- Few surrogate markers for robust prediction of meaningful benefit for overall survival and QOL in individuals (e.g. some leukaemias) yet most new drugs/indications licensed on other measures: progression free survival, response rate, pathological complete response rate
- NHS England translates NICE recommendations into directing how a cancer drug is to be used in practice e.g. place in the treatment pathway including previous therapies if relevant, e.g. specific populations defined by disease and patient characteristics such as patient performance status, e.g. treatment duration

Potential use of predictive measures of disease outcomes in oncology

- Robust, validated, reliable and clinically relevant measure
- Easy to measure and at a time that is relatively early in the treatment
- Clear threshold for subsequent action: stopping of treatment or activation of differential reimbursement mechanism
- Collection of data: by clinicians, hospitals, commissioners and its burden, subsequent analysis and challenge
- Practical implementability in the real world
- Limitation of pricing models in England
- Outcome-based pricing being piloted in the Cancer Drugs Fund but not of predictive measures (time for that is in the NICE HTA)

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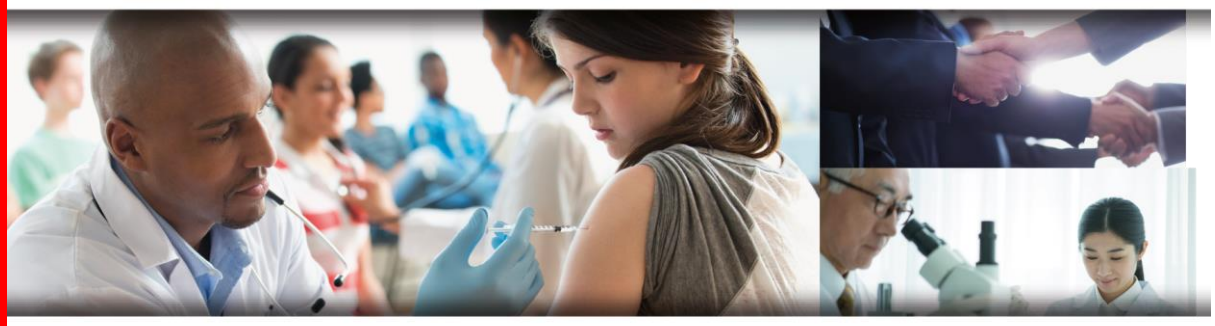

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Value in health care systems & new thoughts in treatment of IBD and autoimmune diseases

Nicky Liebermann M.D
Clalit - ISRAEL

Israel

- Reimbursement
  - ✓ All drugs according to established and approved guidelines
  - ✓ Combinations in special clinical cases, according to a "special cases" committee.
  - ✓ Clalit and the GI specialists are interested in innovation = changing the existing protocols
- Future
  - ✓ Big data analysis
  - ✓ Omics analysis
  - ✓ Patient disease journey & diary
  - ✓ Use for Microbiome ??

Value for all

- Identifying “benign” patients and “stormy” ones
- Treating “benign” patients according to existing guidelines.
- Treating “stormy” patients with biologicals in 1st line.
- Treating to “biological remission” and “dim treatment”
- Follow up and **prevent** exacerbations

Win for patients; win for payers; win for industry

כללית 100 שנה
הכי טובה למשפחה

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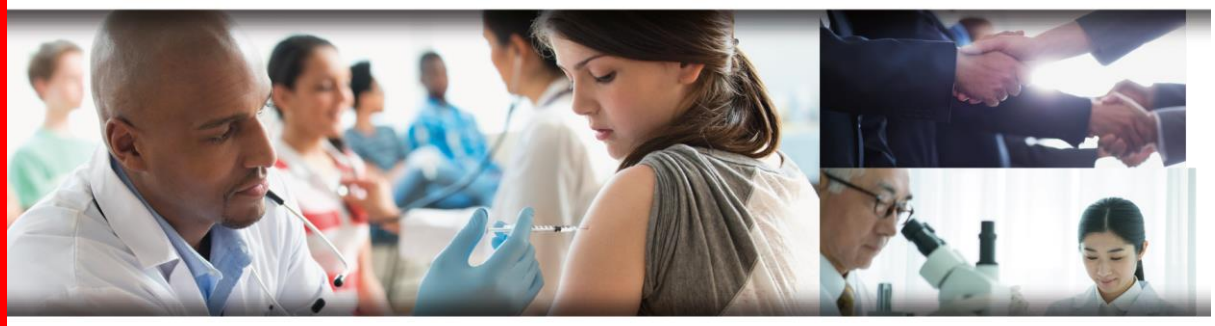

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A Swedish perspective on predictive modelling and payment models

Peter Lindgren, PhD
Managing Director, IHE & Professor of Health Economics, KI

Reducing payer uncertainty by predicting disease outcomes and identifying the right patient: fact or fantasy?

2018-11-13

THE SWEDISH INSTITUTE FOR HEALTH ECONOMICS

Predictive modelling within the standard reimbursement framework?

- Limiting coverage is a standard tool used by TLV
  - Specific treatment line
  - Specific subpopulation (high risk, specific disease characteristics)
  - In specific treatment combinations
- Reimbursement conditional on use of a predictive algorithm not fundamentally different
- Data needed on the effectiveness in the population to which the reimbursement is limited
- Key question from TLV: How can we be sure that the criteria for reimbursement are met in practice?

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What about more sophisticated contracts?

- No outcomes based agreements in MEA at the national level (from 3-party deliberations between manufacturers, TLV and regional payers)
- Key issues payers raise:
  - Fear of administrative burden (particularly in smaller county councils)
  - Fragmented IT, limitations on follow-up on disease specifics at the national level
  - Fear of adding additional burden on physicians
  - Does the cost of implementing an agreement make sense vs. for instance a simpler rebate scheme?
- Separate agreement with more interested regional payers may be more feasible

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Questions to the panellists and audience

- National versus regional/local challenges and solutions for the use of predictive techniques
- Institutional requirements that need to be addressed for this to be a success (e.g. agreement on key endpoints, use of real-world data (RWD), approach to decision making under uncertainty)
- Progress so far versus potential future implementation and success areas
- How to address institutional/systemic barriers to the implementation of these approaches
- IBD versus other therapeutic areas (i.e. from the particular problem (IBD) to the general (how the solutions can be used beyond IBD) versus oncology
- How the use of predictive techniques differs from or can be integrated with other patient selection techniques such as biomarkers to ensure more targeted healthcare

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Thank you.